Autonomy and Expertise in the English Workplace

Christopher Winch (corresponding author)

School of Education, Communication and Society

King's College London

Strand WC2R 2LS

christopher.winch@kcl.ac.uk

Mark Addis

Faculty of Wellbeing, Education and Language Studies

The Open University

Milton Keynes
MK7 6BJ

mark.addis@open.ac.uk

Autonomy and Expertise in the English Workplace

Abstract

Exercising autonomy in the workplace is a prerequisite for the acquisition of complex perceptual, judgement, and decision making skills widely agreed to be criteria of vocational expertise. It has wide workplace relevance. Despite the importance of autonomy for developing vocational expertise there is virtually nothing on methodologies for measuring autonomy in the British workplace in the literature. This article reports on a new approach using an application of the methodology of the Transformers Project to measure workplace autonomy in England. Workplace know how broadly distinguishes into skills required to perform particular types of tasks, and transversal level abilities, both those generally encompassed by planning and individual ones such as communication, critical thinking, evaluation, problem solving and teamwork. Agency in the workplace is the formation and implementation of intentions over relatively extended periods. Such agency is manifested as the ability to form and carry through projects involving planning and other transversal abilities. The conceptual approach to workplace autonomy taken here is that a reasonable proxy for and measure of it is the display of transversal abilities.

Introduction

Exercising autonomy in the workplace is a prerequisite for and centrally involved in the acquisition of complex perceptual, judgement, and decision making abilities widely agreed to be criteria of vocational and professional expertise (hereafter abbreviated to vocational expertise) (Addis and Winch 2018). These include planning, co-ordinating, considering alternatives, considering advantages and disadvantages, communicating and evaluating (Addis and Winch 2018, pp.1-2). These abilities which we call 'transversal' play a critical role in enhanced employee agency and are, in turn, we argue, a prerequisite for workplace autonomy. Due to its connection with vocational expertise, autonomy has wide workplace relevance in areas such as union bargaining for skills (Trades Union Congress 2016). Higher levels of autonomy and expertise in the workplace have the potential to make positive contributions towards addressing long standing and intractable problems in the UK of productivity, skills development for employees and the quality of VET provision. The UK has a well recognised serious, long standing and ongoing productivity problem which is partly due to job design and the opportunities for and preparation for autonomy in the workplace, together with a degree of worker voice (Bosworth and Warhurst 2020, Felstead 2020, Felstead et al. 2020, Layard, McIntosh and Vignoles 2002 and Finegold and Soskice 1988). There are similar, related problems about skills development opportunities and provision for employees which make the tasks of upskilling and job redesign more of a challenge (Hodgson and Spours 2019, Dromey, MacNeil and Roberts 2017). Without the opportunities afforded by a degree of workplace autonomy including during Initial Vocational Education (IVET), it is difficult to see how employees can extend their agency in the workplace so that they are in fact capable of exercising their own initiative, both individually and in teams in taking advantage of such opportunities. It is well documented by labour economists and others involved in research in skills and training that the UK has a poorly functioning occupational labour market. This causes

a variety of problems such as young people not being particularly engaged with their own skills and training development due to a lack of work experience and insufficient opportunities for training in the workplace (Pullen and Dromey 2016, Keep and James 2012). In contrast a well functioning occupational labour market is one where employers and employees have a shared understanding of the capacities related to qualifications and preparedness for work. For example, Germany has one with 348 occupations recognised by employers and employees (Bundesagentur für Arbeit 2020). VET provision in the UK is well known to have a long history of being poor, fragmented and lacking clear direction (Oates 2013, Bailey 2003). There is a well-documented and long-standing lack of coherent skills and training narratives at both national and local level (CIPD 2019). This is both a cause and consequence of the fact that current British skills and training provision is piecemeal and fragmented. Failure to recognise the importance of a coherent skills and training narrative has the result that skills and training are often thought to be someone else's problem. Governments suggest that it is the responsibility of employers, employers claim the government should do more and unions sometimes regard skills and training as being the prerogative of the employer. Well documented research indicates that the piecemeal and fragmented nature of skills and training provision coupled with a lack of coherent skills and training narratives results in many employers often having difficulty in understanding what training is available, how it is regulated and how it is funded (Policy Connect 2020). Despite the importance of autonomy for developing vocational expertise there is virtually nothing on methodologies for measuring autonomy in the British workplace in the literature. The reasons for this remain a matter for surmise but it would seem plausible to conclude that they are related to the general poor skills development and VET provision that exists in England.

Although concepts of agency and autonomy are covered in the philosophical literature it is very hard to apply some of these discussions to workplace situations. However, it is possible to describe a robust enough framework for dealing with these issues by making a clear distinction between agency and autonomy. Workers who are agents have the ability to act on their own initiative, using their own knowledge, experience and powers of judgement to determine a course of action in situations where alternative choices are often available and problems are presented. Agency is thus a property of workers acting either individually or collectively. On the other hand, to say that workers are autonomous means that they are allowed to act to some extent without supervision, that is, they can act on their own initiative, using their knowledge and know-how without constantly referring to higher managerial authority for permission. Worker agency is needed in order for autonomy in the workplace to be meaningful. On the other hand it is unlikely that employees will develop extended forms of agency unless they are given opportunities to do so both in IVET and in the fully operational workplace. Employee agency and workplace autonomy are tightly bound to each other. This is why in VET systems designed for workplaces with relatively high expectations of autonomy this is prepared for by the development of what we call 'transversal abilities' iterated into project management cycles as manifested in the 'Lernfelder' (learning fields) approach to pedagogy introduced in German VET in 1999, but already foreshadowed by one of the founders of German VET, Georg Kerschensteiner in 1908 (Kerschensteiner 1908). The Lernfelder pedagogic approach adopts a project-oriented, project management strategy which encourages apprentices to develop such ability both individually and in teams.

Both agency and autonomy come in degrees with workers being able to have more or less of each. For example, a worker may have wide powers of agency but little autonomy such as a highly experienced teacher who is obliged to teach protocol driven lessons. There is some evidence of declining autonomy in the English workforce in recent years (Felstead et al. 2020). Theoretically agency and autonomy are most usefully understood in a broadly Aristotelian framework of reflective choice and decision making where this is both a matter of acquired habits and dispositions leading to deliberative and choice making ability (Aristotle 1925). Various versions of this framework are possible and reasonable but all should share an emphasis on the combination of deliberation with habits. To exercise agency within a structure that encourages autonomy is to be able to engage in reflective choice and decision making without external managerial constraints in conditions where a certain uniformity of action is also required.

Given the well-understood classification of the English economy as a low skill equilibrium (Finegold and Soskice 1988) and its recent elaboration by Sissons (2020) as a local or regional phenomenon, it is to be expected that a large proportion of employers will not be interested in heightened autonomy and agency in the workplace. However, we also know from other studies (such as UKCES 2015, p.8) that some SMEs operate on a high skill basis and that generally, the skill configuration of SMEs in England is very varied. This matters because generally SMEs are an important feature of local economies. One can thus expect to find limited and variable interest within this large and heterogenous sector in projects to enhance worker agency and autonomy. It is, perhaps, more surprising to find that enterprises which employ highly skilled and highly qualified workers are also sometimes hesitant in this respect.

The Transformer Project (details given below) aimed to build connections between vocational educators and employers to support work based learning in the English context of employer led skills development (Transformers Project 2019). It identified and analysed a number of aspects of work based learning particular highlighting the significant dependence between skills and training, and workplace cultures and practices. This paper reports on a new approach using an application of the methodology of the Transformers Project to measure workplace autonomy in England (Transformers Project 2019).

Autonomy and Abilities

Workplace know how is usually understood by both practitioners and commentators as skills applied to work related tasks. Most of the literature on workplace abilities conceptualises them as skills, even though many commentators are aware of the inadequacy of this term for the wide variety of attributes that are needed in the workplace (Leitch 2006 and for critical views see Grugulis and Stoyanova 2011, Payne 2017). Some of the more nebulous of these skills are sometimes referred to as 'soft skills' as if they are nothing more than the exercise of a kind of technique. We reject this view and argue below that such abilities as those of being able to communicate, collaborate or co-ordinate are better thought of as transversal abilities. A skill in this narrower sense is to be partly understood as a technique (a way of doing something) that is applied to a task. To say then, that someone has a skill is to say that they possess a way of carrying out a task. One can have the skill of laying bricks in a straight line, for example, if one possesses the technique for doing so. Of course, workplace skills are more than this because they have to be applied in realistic workplace conditions before they are of any use. It is not enough for a bricklayer to be able to lay bricks in a college workshop, he must be able to do so

at heights, in variable weather, under temporal and financial constraints for example. But we still have the paradigm of a technique applied to a task, albeit in variable and often demanding conditions (See Brockmann et al. (2010) for more detail in relation to bricklaying). We shall see below that this is not an adequate way of understanding all workplace abilities.

What are Transversal Abilities?

The exclusively skill-oriented of understanding workplace know-how leaves out important attributes that enterprises need, the ability to cope with the unexpected and to solve problems, for example. Other attributes include the ability to work independently, to co-ordinate with others, to plan, to evaluate and to carry through projects. These are precisely the kinds of extended abilities that one would expect workers capable of exercising their agency in the workplace in an autonomous way to exercise. These attributes are vital to extended agency in an autonomy enabling workplace. A tempting way of thinking about these attributes would be to describe them as 'skills, such as 'problem solving skills', 'communication skills', project management skills' and so on. However, treating these abilities as if they were just another set of skills is unlikely to be successful and it is worth investigating why. Let us take 'communication skills' as an example. As a trainee doctor you may be assessed on your ability to maintain eye contact, adopt appropriate posture, use a reassuring tone of voice, minimise the use of technical jargon and to time your encounter with a patient. It would be quite possible for someone to 'tick the skill boxes' that make up the whole called 'communication skills' and still fail to be a good communicator (see for example General Medical Council 2017). Similar considerations would apply to planning, assessing and other attributes. Problem solving might be slightly different because it would be hard to see how one could solve workplace problems without some knowledge of work processes and the technical background of the workplace operations, although it is common to hear talk of 'problem solving skills' in educational circles as if this were some kind of generic ability (but see Payne 2017 fn.7 for a contrary view).

The problem with these skills is that they are not the same as the abilities that they aim to capture. One can focus on eye contact, posture, tone of voice and so on while failing to focus on (or even caring sufficiently about) communicating what one wishes to communicate to the patient. The goal of communicating with someone is to convey information, reassurance or whatever it might be, so that the audience understands what you are saying and what are its most important implications. Failure to focus on this jeopardises one's ability to communicate. In other words, a good communicator needs to focus primarily on the overall point of their conversation, not just on the skills needed to communicate. Similar points can be made about planning, assessing and so on. Furthermore, a focus on skills suggests that there is just one way of communicating, planning or problem solving, when in fact there may be many different ways, some being more suitable to some contexts than others and some being more suited to the characteristics of some individuals than others. Some workers may plan their work systematically, using aids like flow charts or diagrams (thus making use of 'planning skills'), others may find note-making helpful while others again may be able to form and execute plans effectively through reflection and conversation with colleagues. Exercising these less clearly defined abilities means paying attention to context and individuality. Few writers in the English-speaking world have paid much attention to these attributes. A notable exception is Ryle (1979) in his discussion of 'adverbial verbs'. Ryle emphasises that abilities such as communication and co-ordination can be realised in different ways, which are themselves sensitive to context. One needs a certain degree of freedom of judgement and decision-making

to act in this way, in other words, not just a broad capacity for agency but the conditions in which to exercise it or what we call 'autonomy'.

These abilities are sometimes misleadingly referred to as 'transversal skills'. The new European Skills, Competences, Qualifications and Occupations. Framework (ESCO), for example does not currently recognise forms of know-how other than skill (European Commission 2019). We have already indicated why the term 'skill' could be inappropriate. What about 'transversal'? Unfortunately, there are some problems here as well. The term 'transversal' is commonly used to indicate two different attributes of abilities that exist independently of each other. On the account given above, a transversal ability may be realised in multiple ways, depending on availability of skill set, personal inclination or context. When the term is used synonymously with 'transferable' on the other hand, something different is meant. A 'transferable skill' is one that can be used in multiple contexts. Literacy and numeracy are often described as 'transferable skills' because of this very characteristic: they are kinds of techniques required in a great variety of occupations for a great variety of tasks. However, their transferability should not be exaggerated. Although basic literacy and numeracy (say at level 1 or perhaps 2) can be thought of as necessary attributes (encompassing a variety of skills) for engagement in a wide variety of occupations, as one moves towards specialised occupations requiring a higher level of education, they no longer become sufficient. Advanced computing requires advanced knowledge and ability in mathematics and logic, economic analysis requires mastery of specialised writing genres, often relating to particular economic sectors.

We should not, therefore, assume that transversal abilities in the above sense are also transferable. For example, someone who is an able, sensitive and flexible communicator in relation to health matters for the general public may not be so successful in advising officials of the salient points in an emergency situation. Restrictions on the transferability of skills are an aspect of the domain specific nature of expertise and its exercise. A plausible account of expertise which supports this view is that expert knowledge is held in discrete chunks which are gradually built upon and integrated as expertise increases (Gobet 2015), these chunks being located within a particular domain of activity. Transversal abilities can be realised through different skill sets and are necessary for forms of agency such as problem solving, decision making and project management. However, they are clearly prized in many occupations and are considered necessary in some jurisdictions such as Germany (Hanf 2010) as a key element in the kind of agency required by workers operating in environments where a relative degree of workplace autonomy is expected. But employers and employees will be interested in knowing whether or not such attributes are transferable. The answer, we think, is 'yes', but not perhaps in the way expected. We will return to this at the end of this section, but as a preliminary, suggest that the successful practice of transversal abilities leads to a form of self-knowledge which has more general application in one's career.

Problem Solving

One of the most important, and arguably under-rated groups of these abilities are those associated with problem solving. We argue that there is no such thing as a generic and transferable problem solving ability, let alone skill since this kind of ability is domain specific, depending as it does on knowledge both local and theoretical, as well as relevant experience of the domain (Payne 2017). This perspective contrasts with the apparent stance taken by the designers of the PISA tests who conceptualise problem solving ability as an array of skills that

do not depend on pre-existing in-depth knowledge of the problem area (OECD 2015, pp.6-14). However, the ability to solve workplace problems as they arise is undoubtedly a very important attribute of an employee who can be trusted to get on with the work without close supervision. There is no one way to solve problems. Indeed there may not, as yet, be a known way of solving a given problem. If practising a skill is to practise a technique (a way of doing things) in workplace conditions, then problem solving could not be a skill or even a group of skills, since it involves finding a way to do something, not using an already existing way. The ability to solve a problem might well involve the exercise of existing skills. One might need, for example, to be able to gather and analyse data. However, the ability to solve problems typically involves finding, not applying a way to a solution. If it were the latter, then there would be no problem to solve. It might be replied that the exercise of any skill involves adaptation to new circumstances (Ryle 1976) since, even in the most humble of abilities such as being able to turn a door-knob, the circumstances of each turning differ (Hornsby 2011, Addis 2018). It is important to realise that problem solving ability is not the same as adaptability. Someone who knows how to turn a door-knob can do so under a variety of conditions, not just once (see for example, Stanley and Williamson 2017 on skill) , and as we saw in the case of skill, the practice of a skill involves more than just practising a technique in benign conditions. A problem is a barrier which is not passable through existing skills or ways of acting. It requires discovery of a new way of practising, that goes beyond improvising on an existing technique in slightly novel conditions.

This means that someone capable of solving a class of problems within their occupation will be able to do at least some of these things: applying own knowledge to the context, acquiring knowledge relevant to the problem, examining alternatives, forming and testing hypotheses, assessing results, making judgements as to the advantages and disadvantages of a course of action, consulting with others, persisting with a course of action, acting on advice and many others. A little reflection shows that these are transversal abilities (they are realisable in different ways) not skills. They are essential to extended forms of agency and thus to autonomy in the workplace. Workers who can solve their own problems consume less management time (and hence require fewer managers), lead to less downtime on key processes and less expenditure (see for example Mason, van Ark and Wagner 1994) and thus contribute to greater productivity. A problem solving worker is an under valued asset in the UK and the US, although much less so in countries such as Germany, Austria and Switzerland.

Iterating Transversal Abilities into Project Cycles

An important feature of workplace autonomy is the ability to rely on one's own (and that of colleagues) judgement over extended phase of activity. Activities which involve extended sequences ranging from planning for an objective, to carrying it through and evaluating success depend, not just on skills, but on articulated sequences of transversal abilities. Typically, if not universally, projects can be conceptualised as cycles of activity. They are initiated through a scoping analysis, followed by planning, implementation through for example co-ordination and control, leading to evaluation of success. It is probably not a good idea to see these as completely discrete elements. Communication within and beyond a team will, for example, occur throughout. Planning may take place throughout a project and whether or not it has been well planned may not emerge until it is completed (Hasselberger 2014). Just as the difference between improvising and solving problems is more than just a matter of degree, although there are probably borderline cases, so also is the distinction between task and project (Winch 2014).

A project can be distinguished from a task through temporal duration, structural complexity and the range of know-how required. One can distinguish, for example, between installing a section of piping (task) and plumbing a building (project), between planting a field of crops and establishing and implementing a planting cycle on a farm, between teaching a lesson on vowel digraphs and implementing a programme of teaching of English spelling.

These somewhat abstract considerations can be made clearer through considering German VET. Project management is a key part of vocational education within the dual system in Germany. Apprentices are given extended projects that require them to initiate and carry through a project management cycle, to solve problems and find and apply relevant knowledge along the way. In this way they learn to become relatively autonomous in their practice through the development of extended forms of workplace agency. A typical example is the 'Lernfelder' (fields of learning) approach which organises the curriculum on a project basis, incorporating problem solving elements (Handwerk und Technik (2014)). The fact that employees have been educated to and are expected to work in such a way in turn leads to the organisation of the enterprise to take account of such abilities, with ramifications for staffing and management structures (see Prais, Jarvis and Wagner 1989). Any introduction of such an approach in the English workplace could have considerable implications for job design and staffing schedules.

Transversal Abilities and Workplace Autonomy

In the previous section it has been claimed that extended forms of worker agency make possible the introduction of greater autonomy in the workplace. If the arguments above are at all persuasive then there are potentially great benefits to be had from getting away both from exclusively rigid 'command and control' management approaches and a conceptualisation of workplace know-how as the practice of a limited set of skills. Employees endowed with a range of transversal abilities are better able to manage themselves, to work with others, to solve problems and to manage projects as can be seen by the studies of Mason et al, Prais et al referenced in the following section. It is now possible to consider whether or not transversal abilities are also transferable. It has already been observed that the ability to, for example, communicate in one context does not automatically transfer into another or that the ability to solve engineering problems does not transfer to solving personnel problems or that project management in farming does not transfer into project management in railway timetabling. But does an employee endowed with transversal abilities in one occupation develop the ability to develop them in others? The answer is a qualified 'yes'. First, because many occupations are related to each other and particularly when occupations are broadly conceived, have overlaps with other occupations and have common elements with other occupations. Second, because the autonomy required of someone who exercises transversal abilities requires a considerable degree of self-mastery, ability to work in teams (such as to take account of other points of view, to negotiate and to compromise) and knowledge of one's own strengths and limitations, it develops personal characteristics that make that employee more ready to adapt to a new occupational context. Although not directly transferable, transversal abilities have the potential to make employees more adaptable and able to practise different occupations, which is clearly a great benefit to themselves but also to the labour market.

Agency in the Workplace

As previously discussed the concepts of agency and autonomy covered in the philosophical literature are very hard to apply to workplace situations. It follows that a generally different type of theoretical approach is required to develop a methodology for measuring workplace autonomy in England. This approach accords a central role to the different types of workplace know how and to how autonomy relates to the exercise of agency. Workplace know how can broadly be classified into skills required to perform particular types of tasks, and transversal abilities, both those generally encompassed by project management and problem solving and individual ones such as communication, critical thinking, evaluation, and teamwork (Winch 2010). More complex agency in the workplace involves the formation and implementation of intentions over relatively extended periods especially within the context of project management (Winch 2014). For example, complex agency is evident in the formulation and completion of a complex bricklaying project such as can be found in VET for the French macon (bricklayer), (see Brockmann et al. 2010). Crucially, workplace agency is manifested as know how in the sense of the ability to form and carry through projects involving planning and other transversal abilities combined in sequences that can be iterated, that necessarily involve the exercise of autonomy or the mandate to exercise one's own judgement (Winch 2014). It follows from this that the theoretical approach taken here is that a reasonable proxy for and measure of workplace autonomy is the exercise of transversal abilities in complex combinations such as project management cycles and problem solving activities.

Transversal abilities include planning, teamwork, coordination, communication, control of work, supervising others, evaluating the standard of work, judging whether work meets required standards together with exercising all these abilities as required. The presence and use of these abilities in the workplace can then be empirically assessed using questionnaires, semi-structured interviews and case study methods. The potential value of this approach to measuring workplace autonomy can be demonstrated by considering some examples of occupations demonstrating low and high levels of autonomy from a number of different occupational classification schemes (such as European Commission 2019). For example, a university lecturer is considered to have more autonomy than a ticket sales person in a railway station and a comparison of transversal abilities involved in these occupations confirms this. A company director is thought to have more autonomy than a car park attendant and comparing transversal abilities involved demonstrates this. Even within the same sectors where product strategies, qualifications and job design vary greatly, this difference can be seen, for example in biscuit-making (Mason, van Ark and Wagner, 1994, pp.71-75) and the hotel industry (Prais, Jarvis and Wagner 1989, pp.58-62), where it was evident in a comparison between Britain and Belgium on the one hand (Mason et al.) and Britain and Germany on the other (Prais et al.) that workers in each of the second of the two comparison pairs had greater agency that was exploited through greater autonomy, thus giving rise to greater productivity. This is evident when considering how much these higher level abilities, such as responding to emergencies, re-ordering priorities, supervising others, and evaluating the standard of work are demonstrated in routine occupational practice.

Transformers Project

The Unionlearn funded Transformers Project was a collaboration between the National Education Union and partners that aimed to build associations between vocational educators and employers to support work based learning given the British context of employer led skills development (Transformers Project 2019). A fundamental assumption of the project was that

the levels and character of employer engagement with skills and training, use of funded productivity initiatives and training tools, and employment of higher level abilities within workplaces was significantly dependent upon workplace cultures and practices. For this reason the theoretical orientation of the Transformers Project was towards the sociology and politics of both workplace cultures, and the context of skills and training policy. The project had a distinctive standpoint within work on skills and training as it included both employer and employee perspectives, and in doing so identified key questions for the future development of skills and training policy. Project findings are detailed in various reports (see Transformers Project 2019).

Methodologically the research basis of the Transformers Project was to access data via the testimony of both employers and employees and thus to approach employers and employees in the same organisations to elicit information about job design, vocational education and training opportunities, and the scope for agency and autonomy within existing workplaces. The authors designed the questionnaires, analysed the data and managed the project. Given the resources available, together with the number of organisations that engagement was sought with, it was decided to use a survey method. To this end, online employer and employee questionnaires were designed, piloted and analysed, but also complemented by some semi-structured interviews and in depth case studies of the participating organisations where Transformers Project contacts made this possible. Employer and employee questionnaires were sent to participating organisations with a request for an employer representative to complete the employer questionnaire and for the organisation to ask as many employees as possible to complete the employee questionnaire. Given this it was not possible in principle to ensure that employees at different levels of seniority and in diverse functional areas always completed the employee questionnaire but in practice this was highly likely due to the number of questionnaire completions. As an incentive, participants received a confidential bespoke report analysing their organisation and making recommendations relating to job design, management structures and training policy. All participation was entirely voluntary and free of charge. Ethical clearance was obtained for the research partners and confidentiality and anonymity were maintained. All participants gave informed consent. The questionnaires covered organisational information such size, sector and geographical location, minimum qualifications required for occupations at various organisational levels, recruitment to such occupations, transversal abilities, mandatory and discretionary training including levels of take up, apprenticeships, and relations with unions particularly in the area of workplace learning. The transversal abilities that were focused upon included planning, teamwork, coordination, communication, control of work, supervising others, evaluating the standard of work, judging whether work meets required standards plus displaying all these abilities as required. They were also asked about iterations of transversal abilities into project management cycles.

Table 1. Nine employers from various industrial sectors took part in the study.

Organisation	Size	Sector (NACE code)	Location
Commercial printing business	51-250	C Manufacturing	Yorkshire and the Humber
Specialist printing group	11-50	C Manufacturing	South East
Bus Company	11-50	H Transportation and Storage	South West
Engineering and Consultancy Company	0-10	M Professional, scientific and technical activities	South West
A Business Support Service	51-250	N Administrative and Support Services	South West
Further Education College	More than 250	P Education	South West
Military Personnel Development Centre	51-250	P Education	South West
Professional Membership	11-50	Q Human health and social work activities	West Midlands
Conservation Organisation	0-10	S Other service activities	South West

Nine employer and one hundred and fifty employee questionnaires were received and eight semi-structured interviews were conducted. Employer questionnaires were completed by a designated employer representative who was usually the director in a small organisation and a training or human resources manager in a larger one. Due to the number of employee questionnaire completions all organisations had questionnaire completions from employees at different levels of seniority and in diverse functional areas. The semi-structured interviews were conducted about a month after the participating organisations received the confidential bespoke report and were directly informed by the survey findings. Two in depth studies triangulated quantitative and qualitative data to further investigate organisational culture and processes including the effect that participating in the research had on changing practices in the organisation. There was good qualitative data about the process of employer engagement and the role of transversal abilities with a number of key questions and themes emerging. Organisations involved in the project indicated that it encouraged thinking about training and skills which was helpful for their longer term development and preparing organisations for Brexit in terms of anticipating skill shortages and taking preventative action. The evidence suggested that there is considerable scope for employers and employees to make use of higher level abilities particularly through the use of apprenticeships.

The project findings suggest challenges that have already been identified in other research and literature concerning job design, labour utilisation and workforce development (such as UKCES 2015). Evidence from the organisations suggested that there are considerable differences in the degree of initiative and independence which employees are expected to show. Generally speaking, workers with higher qualifications tend to have more task and project

management discretion. However, qualification levels do not necessarily map on to level of seniority or job role an employee has within an organisation. Although there is evidence of significant sectoral differences with respect to autonomy which makes cross industry generalisations difficult (see for example van Hoorn 2018) this was not demonstrated in the project findings. There were no consistent patterns of qualifications, level of seniority and job roles across organisational sector and/or size and this is consistent with findings about the heterogeneity of the SME sector (UKCES 2015). Project evidence however indicated that even among employers with extensive higher level qualifications in existing employees there were no clear expectations about the transversal abilities new staff and apprentices were expected to display and this strongly correlates with the absence of any training and VET policies in the organisations in the study. It is likely that this lack of clear expectations was at least in part a consequence of the lack of coherent skills and training narratives within the organisations. Higher levels of trust within the organisation can reduce management costs and costs associated with quality assurance (Covey and Conant 2016). However, this is not to say that organisations which do not require operatives to have qualifications at level 3 and above might not benefit from greater task discretion, provided that employees are properly prepared for redesigned roles which is where carefully targeted VET can make a difference. As a result of one report on their organisation that the team prepared, such an approach was adopted by one medium sized employer. Although there are organisations that aim high in the value chain and recognise the importance of staff development and VET in achieving and maintaining that position, there are many that have a different business model (UKCES 2015). The project research suggested a variety of different kinds of organisations including ones which have a high value added model that relies on highly qualified and motivated staff, organisations which have ambitions to carve a distinctive and high quality niche in their area of expertise, organisations in high-tech activities which do not necessarily make full use of the potential within-organisation expertise available to them and organisations which provide a basic service but do still however have potential for providing a better service and/or productivity growth. All these organisations in their diversity had scope to improve their position and performance through both IVET and CVET investment. Despite this there was strong evidence of a general demand side issue amongst the employers around skills and training that accorded with the extensive discussion of this topic in both the academic and policy literature. There was also evidence however of dissatisfaction amongst a significant proportion of employees about the opportunities that they were given to develop and the VET opportunities available to them.

Implications of the Transformers Project for Work Practices

As previously indicated the Transformers Project is too small scale and too unrepresentative of the range of enterprises in England to be anything more than suggestive of the directions that future enquiry might take. This however does not mean that it is without value in illustrating some important features of the workplace that should concern us. The first is that training and VET policies are not well embedded in many organisations as evidenced by the complete absence of these in the employers surveyed. Neither is an audit of the abilities (both accredited and unaccredited) of employees. Part of the reason could be that prior VET is not sufficiently taken account of in job design (as opposed to hiring decisions) and partly because established ways of working tend to occlude the possibilities of alternative ways of doing so. A third reason is that there is relatively little capacity on the part of employers, particularly in smaller enterprises, to investigate what may or may not be available on the training market to enhance

the ability of workers to operate more autonomously. In fact, the lack of awareness may extend to the availability of training and VET more generally, let alone to the quality of what is on offer (compare Green and Henseke (2019) on the quality of apprenticeship provision). This observation also raises questions concerning the ability of VET providers to engage with potential clients and their ability and willingness to offer them programmes that actually suit their needs. Felstead et al. (2020, p.103) note the strong link between training and innovation and the link to productivity.

The firms which responded to the Transformers Project were self-selected and it is reasonable to assume that they were sufficiently interested in the possibilities of job redesign in order to promote greater worker autonomy for them to expend time and the good will of employees in doing so. Most firms approached did not have that interest. The reaction of enterprises taking part in the survey varied greatly from enthusiasm about the possibilities offered by job redesign to a reinforcement of belief in already existing practices. One pattern that emerged was that enterprises with a high proportion of highly qualified employees (with a majority at level 4 and above) did, on the whole, allow a higher degree of autonomy to their employees than those that did not. Again, however, we need to take account of the self-selecting nature of our sample. We cannot assume that low levels of autonomy do not exist in for example the public education sector and note that only one educational institution engaged with the survey, although expressions of interest were received from many more.

Firms and Individuals Recognising the Potential of Transversal Skills

One encouraging feature of the survey exercise is that there does not appear to be any difficulty on the part of either employers or employees in grasping the nature of the abilities that the survey sought to tap. The survey did not use any 'skills jargon' in framing questions about transversal abilities but this did not prevent respondents from understanding how these categories of ability related both to their jobs and to the ways in which jobs could be reconfigured. This suggests that this is not an investigation of an esoteric and little understood aspect of working practices but of what could be a significant element in the work of far more employees than is currently the case. This gives us reason to believe that the approach adopted by the Transformers project could have much wider application if greater employer 'buy-in' could be secured. Our confidence is enhanced by the findings of Bosworth and Warhurst (2020 p.17), that job design on the one hand and voice and representation on the other have a positive effect on productivity. The approach adopted by the Transformers Project suggests that the relationship between these two factors requires further investigation, preferably at enterprise and plant level. Better job design enhances voice and representation.

Possible Barriers to Greater Workplace Autonomy

There are a large number of factors operative in the English context that militate against greater employee autonomy. There are endogenous factors that are firm-specific, but probably more important are those exogenous factors in the economic environment that inhibit it. We comment briefly on some of these. First, the nature of IVET. Although the recent move in England away from the low-quality outcomes-based approaches such as NVQs and Framework apprenticeships is welcome, there is still a long way to go in creating IVET programmes at level 3 that in any way match the best of Western European practice. Such programmes generally support the development of employee autonomy. England is still very much dependent on employees with level 2 qualifications that do not to a large degree prepare their

holders for autonomy in the workplace. The CVET market is very difficult for employers and employees to navigate. It is not well regulated and there are too many examples of poor and unacceptable practice in the marketplace. The intricacies of, for example, regulated versus non-regulated qualifications are not well understood and the labour market value of qualifications is hard to discern (Department of Business, Innovation and Skills 2011). As noted above, we saw little evidence of a positive engagement from training providers with small employers who themselves have very limited resources for identifying good quality VET provision at the appropriate level. This is consistent with existing literature on skills and training development in small employers which indicates tensions between production and training coupled with a lack of effective strategies to mitigate this (see for example Baumeler and Lamamra 2019).

Generally speaking, England has weak employee representation at workshop, plant and company level in comparison with other European countries (Conchon 2013) and a relatively limited engagement on the part of trade unions on VET policy and practice within organisations. It could be said however that VET, job satisfaction and mental health as well as pay and job security ought to be central concerns of unions. The weakness of trade unions and employees more generally leads them to be largely excluded from decision-making processes within enterprises. In our survey, the 'suggestion box' seems to be ubiquitous but there is not very much consultation activity beyond that. The prevalence of stricter surveillance in the workplace and in the public and quasi-public sector, the prevalence of Public Choice Theory attitudes (Stretton and Orchard 1994) and New Public Management practices (Ferlie 2017) have led to the prevalence of protocol-following and the gaming of incentive structures to the detriment of co-operative working, risk-taking and the development of individual and team initiative. The poor response of the public sector to the Transformers project suggests an unease on the part of employers and managers to the suggestion of greater worker autonomy.

Productivity

The Transformers project provides no direct evidence of the impact of job design and workplace autonomy on productivity, but our findings complement those of the Felstead et al. (2020) study of the antecedents of poor productivity growth in the UK economy and Bosworth and Warhurst's (2020) identification of factors associated with higher productivity. Felstead et al. point to the decline in worker autonomy over the past ten years or so and suggest a link between this and the failure of productivity to grow:

"This proportion of employees reporting a great deal of say in decisions that affect the way they carry out their work has fallen from 14% in 2006 to 12% in 2017." (Felstead et al. p.103).

Viewed from the perspective of transversal abilities this is not difficult to understand. Jobs with a degree of employee autonomy tend to provide more satisfaction, promoting more engagement with the firm's objectives, better mental health and less absenteeism. Added to this is the ability of versatile employees to take on different roles as needed, thus reducing manpower needs or freeing up employees to undertake different tasks (Mason, van Ark and Wagner 1994, Prais, Jarvis and Wagner 1989). Making use of employees' ability to solve problems at the workplace decreases downtime and expense, for example, by obviating the need to spend more on extra staff and management time. A greater degree of project management by employees again promotes more engagement and lessens the need for steep and hierarchical management structures, thus promoting quicker decision-making and less expense.

Conclusion

This paper has argued that worker agency, workplace autonomy and productivity are strongly related. Drawing on research, this paper reports exploratory research which aims to show that there is scope for improving worker autonomy in the English workplace. This paper has also aimed to establish proof of concept for the plausibility and value of exploring a new approach to measuring workplace autonomy in the UK using an application of the methodology of the Transformers Project. The methodological approach taken is based on the difference between know that and know how, the particular types and levels of know how, and their combinations within transversal abilities and project management. It thus has a clear philosophical grounding whilst being straightforward enough to be practically usable. Despite the limitations of scale and representativeness, analysis of the employer and employee questionnaires and the case studies strongly suggested the validity of this methodological approach for identifying transversal abilities, including project management abilities and thus degrees of autonomy, with distinct differences between these depending on sector and organisational level. Further work in the form of larger studies to validate proof of concept would be valuable. Those working in and around VET should consider trailing it as an approach to improving workplace practices such as incorporating it in the theory and practice of union bargaining for increased workplace autonomy, improved VET and job redesign.

Our experience suggests that it is a major challenge to engage employers and organisations at scale with this kind of activity. At this stage we can do no more than speculate about the causes, but the literature does provide some important clues. First, a general lack of interest in VET and training issues within organisations (something also evidenced in our research) means that such matters often go to the bottom of the 'to do' pile on managers' desks. Second, the VET training market, with its welter of qualifications and training organisations seems (and is) intimidating for those without detailed local knowledge of the nature and quality of the provision. Third, organisations whose product strategy lies within a low skill paradigm will often struggle to see the benefits of upskilling and increased investment in VET. Finally, there is probably a fear that tried and tested or at least familiar 'command and control' management techniques will come under scrutiny. No doubt there is a prize of increased productivity for those prepared to tackle these issues, but it will require a more co-ordinated approach than currently exists. The involvement of trade unions in pushing for more such research would also be welcome. There is good evidence that the TUC is aware of the need to tackle some of the challenges and inadequacies in English work practices and VET practices (Green and Henseke 2019), but those unions directly involved in sectors where development is needed could play a greater role.

References

Addis, M. and Winch, C. (eds.) (2018). *Education and Expertise*. Wiley: Chichester.

Addis, M. (2018). 'Activity Concepts and Expertise' in *Education and Expertise*. Wiley: Chichester, pp.21-37.

Aristotle (1925) *Nichomachean Ethics*. London: Dent.

Bailey, B. (2003). 14-19 Education and Training: Historical Roots and Lessons, *Nuffield Review of 14-19 Education and Training Working Paper 3*.

Baumeler C. and Lamamra N. (2019). Micro Firms Matter. How do They Deal with the Tension between Production and Training?. *Journal of Vocational Education and Training*, 71,3, pp.464-481.

Bosworth, D. and Warhurst, C. (2020). 'Does Good Work have a Positive Effect on Productivity? Developing the Evidence Base'. In Irvine, G., (ed.) (2020) *Can Good Work Solve the Productivity Puzzle?*, pp.10-19.

Brockmann, M., Clarke, L., and Winch, C. (2010). *Bricklaying is more than Flemish Bond*. Brussels, CLR.

Bundesagentur für Arbeit (2020). *Beruf Aktuell*. Nürnburg: Bundesagentur für Arbeit.

CIPD (2019). *Productivity and Place: The Role of LEPs*. London: CIPD.

Conchon, A. (2013) *Workers' Voice in Corporate Governance: A European Perspective*. London: Trades Union Congress.

Covey M. and Conant D. (2016). The Connection Between Employee Trust and Financial Performance. *Harvard Business Review* 2016/07. https://hbr.org/2016/07/the-connection-between-employee-trust-and-financial-performance

Department of Business, Innovation and Skills (2011). *Returns to Intermediate and Low Level Vocational Qualifications*. BIS Research Paper Number 53.

Dromey, J., McNeil, S., and Roberts, C. (2017). *Another Lost Decade? Building a Skills System for the Economy of the 2030s*. London: IPPR.

European Commission (2019). *ESCO Handbook: European Skills, Competences, Qualifications and Occupations*. Brussels: European Commission. DOI:10.2767/934956.

Felstead, A. (2020). 'Fair work, Low Pay and Productivity in Wales'. In Irvine, G., (ed.) (2020) *Can Good Work Solve the Productivity Puzzle?*, pp.51-55.

Felstead, A., Gallie, D., Green, F. and Henseke, G. (2020). 'Unlocking Potential: Ways of Tapping into Employees' Ideas to Enhance Productivity'. In Irvine, G., (ed.) (2020) *Can Good Work Solve the Productivity Puzzle?*, pp.97-100.

Ferlie, E. (2017). 'The New Public Management and Public Management Studies'. *Oxford Research Encyclopedias, Business and Management*. DOI:10.1093/acrefore/9780190224851. 013.12

Finegold, D. and Soskice, D. (1988). 'The Failure of Training in Britain: Analysis and Prescription'. *Oxford Review of Economic Policy* 4,3, pp.21-53.

General Medical Council (2017). *Generic Professional Capabilities Framework*

(www.gmc-uk.org/-/media/documents/generic-professional-capabilities-framework--0817_pdf-70417127.pdf)

Gobet, F. (2015). 'Cognitive Aspects of Learning in Formal and Non-formal Contexts: Lessons from Expertise Research'. British Journal of Educational Psychology, Monograph Series II, Number 11, *Learning beyond the Classroom*, pp.23-37.

Green, F. and Henseke, G. (2019). *Training Trends in Britain*. University College London: LLAKES Research Paper number 22.

Grugulis, I., Stoyanova, D. (2011) Skill and Performance, *British Journal of Industrial Relations* 49, 3 0007–1080 pp. 515–536

Handwerk und Technik. (2014). *Lernfeld Bautechnik Stuckateur Fachstufen*.

Hanf, G. (2010). 'The Changing Relevance of the Beruf'. In Brockmann, M., Clarke, L., Hanf, G., Mehaut, P., Westerhuis, A., and Winch, C. (eds.) (2010) *Knowledge, Skills and Competence in the European Labour Market. What's in a Qualification?*. Abingdon: Routledge, pp.50-67.

Hasselberger, W. (2014). 'Human Agency, Reasons and Inter-subjective Understanding'. *Philosophy* 89,1, pp.135-160.

Hodgson, A., and Spours, K. (2019). 'Further Education in England: At the Crossroads between a National, Competitive Sector and a Locally Collaborative System?'. *Journal of Education and Work* 32,3, pp.224-237.

Hornsby, J. (2011). 'Ryle's Knowing How and Knowing How to Act'. In Bengson, J. and Moffett, M. (eds.) *Knowing How: Essays on Knowledge, Mind, and Action*. Oxford: Oxford University, Press, pp. 80–98.

Irvine, G. (ed.), (2020) *Can Good Work Solve the Productivity Puzzle?* London: Carnegie Trust and RSA.

Keep, E. and James, S. (2012). 'A Bermuda Triangle of Policy? 'Bad Jobs', Skills Policy and Incentives to Learn at the Bottom End of the Labour Market'. *Journal of Education Policy* 27, 2, pp.211-230.

Kerschensteiner, G. (1908) Der Schulwerkstatt als Grundlage der Organisation der Fortbildungsschule, (The school workshop as the basis for the organisation of the further education school) in Kerschensteiner, G., *Ausgewaehlte Paedagogische Texte*, Band 1, (1964) Paderborn, Schoeningh, pp.116-129.

Layard, R., McIntosh, S., and Vignoles, A. (2002). *Britain's Record on Skills*. London School of Economics and Political Science: Centre for the Economics of Education Discussion Paper number 23.

Leitch, A. (2006) *Prosperity for all in the global economy - world class skills*, London, HMSO.

Mason, G., van Ark, B. and Wagner, K. (1994). 'Productivity, Product Quality and Workforce Skills: Food Processing in Four European Countries'. *National Institute Economic Review*, 147, 1, pp.62-83.

Oates, T. (2013). *Education, Assessment and Developing a Comprehensive Qualifications Framework*. Cambridge: Cambridge Assessment.

OECD (2015). *Draft Collaborative Problem Solving Framework.* https://www.oecd.org/callsfortenders/Annex%20ID_PISA%202015%20Collaborative%20Problem%20Solving%20Framework%20.pdf

Payne, J. (2011) *Scotland's Skills Utilisation Programme: an Interim Evaluation*, Skope Research Paper No. 101. Cardiff, Skope.

Payne J. (2017). The Changing Meaning of Skill: Still Contested, Still Important, in *The Oxford Handbook of Skills and Training* (eds.) Buchanan, J., Finegold, D., Mayhew, K., and Warhurst, C.

https:www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199655366.001.0001/oxfordhb-9780199655366-e-3

Policy Connect (2020*). England's Skill Puzzle: Piecing together Further Education, Training and Employment*.

Prais, S., Jarvis, V. and Wagner, K. (1989). 'Productivity and Vocational Skills in Services in Britain and Germany: Hotels'. *National Institute Economic Review* 130,1, pp.52-74.

Pullen, C. and Dromey, J. (2016). *Earning and Learning: Making the Apprenticeship System Work for 16-18-Year-Olds*. IPPR: London.

(www.ippr.org/files/publications/pdf/earning-and-learning_Nov2016.pdf)

Ryle, G. (1976). 'Improvisation'. *Mind* 85, 337, pp. 69-83.

Ryle, G. (1979). *On Thinking*. London: Duckworth.

Sissons, P. (2020). 'The Local Low Skills Equilibrium: Moving from Concept to Policy Utility'. *Urban Studies*. DOI: 10.1177/0042098020915859

Stanley, J. and Williamson, T. (2017). 'Skill'. *Nous* 51,4, pp.713–726. DOI: 10.1111/nous.12144

Stretton, H. and Orchard, L. (1994). *Public Goods, Public Enterprise and Public Choice.* London: Macmillan.

Trades Union Congress (2016). *The TUC Workplace Manual: A Practical Handbook for Union Representatives*. London: Trades Union Congress.

Transformers Project (2019). https://neu.org.uk/transformers-project.

UKCES (2015). *Growth Through People: Evidence and Analysis*, London: UKCES.

van Hoorn, A. (2018). How Much Does Job Autonomy Vary Across Countries and Other Extra-organizational Contexts?. *The International Journal of Human Resource Management*, 29, 2, pp.420-463.

Winch, C. (2010). *Dimensions of Expertise: A Conceptual Exploration of Vocational Knowledge*. Continuum: London.

Winch, C. (2014). Education and Broad Concepts of Agency. *Educational Philosophy and Theory* 46,6, pp.569-583.