

**THE NATURE AND IMPLICATIONS OF THE PART-
TIME EMPLOYMENT OF SCHOOL PUPILS**

**MEASURING ENTERPRISING SKILLS AND
ATTITUDES: A REVIEW**

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Submitted 2004

ABSTRACT

This paper reports on the results of a review of existing measures of enterprising skills and attitudes. The review was undertaken firstly to identify definitions of enterprising skills and attitudes and secondly to inform the design of the questionnaire of school pupils and of the focused studies. It has been written by Linda Brownlow and Sheila Semple, both members of the research team. This paper is being circulated to **advisory group members** only at this stage [2004].

CHAPTER ONE INTRODUCTION

The relationship between part-time work and the development of enterprising skills and attitudes is a key element of the research. We have therefore undertaken a review of existing work on the measurement of enterprising skills and attitudes.

This review has two purposes:

- to identify definitions of enterprising skills and attitudes;
- to review measures of enterprising skills and attitudes and assess them for potential use in our questionnaires and focused studies.

This was a time-constrained review as it was essential to identify measures in time to contribute to the pilot survey of pupils, beginning early November 2003.

To fit the purposes of this research study, throughout this review a tight focus has been kept on enterprising skills and attitudes rather than broader concepts such as personal effectiveness or locus of control.

This review builds on the evidence reported in *Determined to Succeed* (2002). It does not aim to report in any detail the evidence provided for, and identified in, *Determined to Succeed* but we have summarised relevant elements of it later in this report.

For this paper we have reviewed publicly available materials in the UK and abroad and also accessed unpublished work from two ongoing projects in Strathclyde University. Each has had to consider definitions and measures of enterprising attitudes and behaviours. These projects are:

- Research into the Educational and Economic Benefits of Enterprise Education
- Research into the definition of an Enterprising School

It has also accessed ongoing work at Kingston University (see 4.3.1).

CHAPTER TWO DEFINITIONS OF ENTERPRISING SKILLS AND ATTITUDES

In this section we look at how enterprising skills and attitudes might be defined. It is important to note that while there is an apparent consensus at a *general* level, this does not translate into an agreed and shared set of specific definitions.

We consider first the evidence of the benefits of enterprise education, from which we can extract implicit definitions of enterprising skills and attitudes. We then draw on explicit definitions from three areas: policy documents; research and evaluation reports; and materials produced to develop enterprising skills and attitudes. We have produced a matrix (at the end of this document) to show the overall pattern of descriptions of enterprising skills, attitudes and behaviours.

In this matrix we examine various existing measures, and identify whether enterprising skills and attitudes are dealt with specifically, not specifically or are not covered at all.

There is a general consensus across most young people, teachers, parents, employers and local and national policy-makers that enterprise education is a 'good thing' for the individual. It is thought to represent a successful approach to developing skills relevant for employment and for life in general. It can give scope to creativity, develop individual talents and create employment and wealth. Amongst other things it is thought to encourage the ability to work with others, improve communication skills, responsibility, decision making, problem solving and informed risk-taking, as well as leading to increased confidence. It is claimed that teaching and learning in enterprise education not only enhances the learning of desired cognitive and social skills, but also has a positive effect on pupil motivation and attainment.

Explicit definitions of enterprising skills and attitudes

There are well-established lists of core skills, employability skills and enterprise skills from a variety of sources, local, national and international. Some of these are contained in local and national policy statements; some are contained in reports on research and evaluation in this area; and others are included in enterprise in education delivery packs and materials.

Policy documents

The National Framework for Education for Work (Scottish CCC 1999) identified the following important skills, including 'core skills'

- **Communication:** oral communication (speaking and listening), written communication.
- **Numeracy:** using graphical information, using number
- **Problem solving:** critical thinking, planning and organizing, reviewing and evaluating
- Using information and communication technology
- Working with others

In addition, the following positive dispositions are identified: *teamwork, achieving quality, continuing education and training, health and safety at work, equal opportunities, the environment, views, skills and capabilities of others, change, service to others, dealing with customers.*

Personal qualities considered important include self-awareness, self-esteem, self-motivation, self-control, initiative, determination, confidence, and a sense of responsibility.

There is currently [2004] no specialist curriculum guidance on enterprise education.

HMIe, in cooperation with others, is currently developing new Quality Indicators for Enterprise in Education which will provide a framework for schools as they seek to become more enterprising environments and help their pupils to develop enterprising skills and attitudes.

The OECD document *Towards an Enterprising Culture: A Challenge for Education and Training* (1989) identifies enterprise learning as a project or task-centred process which produces outcomes additional to the gaining of academic and/or vocational knowledge and/or experience, for example in the form of greater understanding of the values and benefits of being enterprising, for the individual and/or society more generally.

Research and evaluation reports

Early consideration in Scotland of what pupils might gain from Enterprise Education activities included an evaluation of the Primary Enterprise programme in 1990/91. This indicated that:

- pupils had grown in confidence, had learned to identify their own and others' strengths and weaknesses, and had taken responsibility for their own decisions
- many pupils developed and displayed new skills eg organizing themselves and others and dealing with adults effectively many pupils had been given the opportunity to display previously unrecognized qualities and had gained from personal satisfaction and peer group status

The Centre for Education and Industry (CEI: Warwick University, 2001) was commissioned by the DTI to research and identify a set of attributes, skills and behaviours essential to the development of an entrepreneurial workforce. Their research identified the following sets

- *Attributes:* self-confident, autonomous, achievement orientated, versatile, dynamic, resourceful
- *Skills:* problem-solving, creativity, persuasiveness, planning, negotiating, decision taking
- *Behaviours:* acting independently, actively seeking to achieve goals, flexibly responding to challenges, coping with and enjoying uncertainty, taking risky actions in uncertain environments, persuading others, commitment to make things happen, opportunity seeking, solving problems/conflicts creatively.

They state that 'there is little doubt about the connection between these qualities and employability'.

The CEI definitions echo the views expressed in the *'Attributes of Youth'* report (Anderson Consulting, 1998), where the attributes identified as important were enthusiasm, initiative, honesty, commitment, positive attitude, adaptability, flexibility and willingness to work. While a small minority of employers saw qualifications as the most important attribute, many more mentioned communication and interpersonal skills as top priority in potential employees.

These closely match the key attributes of enterprising people which were identified earlier by OECD (1989 p36). These include the ability to be positive, flexible, confident, at ease with risk and uncertainty, creative, responsible and an effective communicator, influencer and organizer.

An earlier literature review of the characteristics of the entrepreneur (Caird, 1991) noted that these were many and broad-ranging. These include a need for achievement; need for autonomy; need for power; dedication; creativity; decision-making; confidence; goal-setting; innovation; problem-solving; planning; risk taking; responsibility acceptance, inner locus of control; and insight.

The Evidence Report from Determined to Succeed notes that the contribution of enterprise education to the development of enterprising attitudes skills and behaviours was through: development of confidence, discovery of new abilities, strengthening of communication and inter-personal skills, improved ability to resolve conflict, increased willingness to take responsibility and greater understanding of how business operates. The evidence which was provided for the Determined to Succeed review also suggests that taking part in enterprise activities encouraged positive attitudes towards business generally and towards entrepreneurship.

Delivery packs and materials

Recent resource materials created for Careers Scotland have placed an emphasis on the assessment of knowledge and understanding, skills and attitudes which should be assessed, although it is clearly stated that 'it can be more difficult to assess specific enterprise skills and attitudes'. A more general picture of what should be assessed is documented in the Teachers' Guide for each set of materials.

- *Knowledge and Understanding:* of the context of the enterprise project, of the organization and management of the project
- *Skills:* enterprise skills such as teamwork, problem solving, decision making and leadership
- *Attitudes:* to the context, to self and others, to business, to employment and self-employment.

The Changemaker programme in England (1999) has produced a set of workbooks which focus on what is identified as the 14 enterprise skills which are 'key to enabling young people to develop skills relating to employability, citizenship and lifelong learning'. This supported study programme aims to improve young peoples' motivation, build self-esteem, help them become more effective learners and raise attainment. The 14 skills which they consider to be important include; working effectively in a team, assessing strengths and weaknesses, seeking information and advice, making decisions, planning time and energy, carrying through responsibilities, developing negotiating skills, dealing with people in power and authority, solving problems, resolving conflict, coping with stress and tension, evaluating your own performance, using communication skills to give and take feedback, developing presentation skills. This list also has links with citizenship and employability.

The CITY programme in South Australia (1998) identifies twelve enterprise skills which include assessing strengths and weaknesses, seeking information and advice, making decisions, planning time and energy, carrying through agreed responsibilities, negotiating, dealing with people in power and authority, problem solving, resolving conflict, coping with stress and tension, evaluating performance and communicating.

CHAPTER THREE KEY ISSUES TO CONSIDER

Before we look in detail at the usefulness of the measures identified through this review, there are some key issues to be noted.

While there appears to be considerable consensus on the general concepts which describe enterprising skills and attitudes, there is much less evidence of a shared understanding of how these may be more specifically defined, or evidenced in practice. Concepts such as ‘autonomy’, ‘responsibility’ and even ‘informed risk-taking’ are capable of many interpretations and researchers have operationalised these concepts in different ways in different studies.

One of the reasons why there may be different understandings of these concepts is because the assessment of skills and attitudes is very context related. For example, a young person who is asked by a teacher in her school about the extent to which she is ‘willing to take responsibility’ may answer in the context of her behaviour as a school pupil: she may reply quite differently if asked this in the context of her home life. So the context for each individual might change the definition. Similarly, different people are coming from different perspectives; an employer may define ‘being willing to take responsibility’ differently from an employee, and differently from another employer in another sector, or of a different size. Both definitions and measurement of skills and attitudes are heavily context-related.

While the research and policy communities may broadly agree on the wording of the concepts, many of these cannot be ‘translated’ into a form that all young people can easily understand when asked to self-report. Words and concepts such as ‘autonomy’ remain problematic. Therefore, research instruments such as questionnaires have to focus on what can reasonably be understood. There is also a difference in what can be done when the whole purpose of a study is focused on the measurement of enterprising skills and attitudes compared with a study (such as this one) where this is only one of many areas to be covered in a questionnaire. The primary form of data collection at this stage of the research is a questionnaire and this limits the depth to which we can explore concepts of enterprising skills and attitudes.

CHAPTER FOUR MEASURES TO ASSESS ENTERPRISING SKILLS AND ATTITUDES

We now consider the nature of some of the approaches currently in use to measure these skills and attitudes, and comment on their usefulness for this study.

The measures examined are categorized as follows:

- self-report only
- observation and triangulation in addition to self-reporting
- psychometric evidence

The majority of existing measures are either wholly or partially self-report. The preponderance of self-report measures, despite their limitations, reflects the difficulty of designing and using observation/ triangulation approaches and psychometric measures.

We have added a comment in italics giving our assessment of the possible use of each of the measures to our research. With respect to the focused study element of the research, this is an initial assessment. More detailed consideration needs to be given to other aspects, for example, how the validity of using only *parts* of existing measures.

Self-report measures

The Changemaker materials in England (1999) include, for each of the 14 enterprise skills, four exercises; identifying the skills, developing the skills, the transferability of the skills and reviewing the learning. They are designed to be used in any real projects which have been chosen by and are led by the learners. Facilitators help the young people to consider their own development in relation to each of the skills.

Elements of the wording of the skills are useful, but the exercises are more appropriate when attached to an educational activity.

The Evaluation of new Approaches to Work-Related learning at Key Stage Four in England and Wales (2002) used questionnaire materials for pupils, asking them to rate themselves on a 5 point scale (excellent, good, ok, poor, very poor) against various enterprise skills and abilities. This was completed following an experience of work-related learning. A similar approach was used in the evaluation of the *Earn and Learn* programme at Bathgate Academy and of the Motivator programme at Inveralmond Community High School in Livingston. Young people who had taken part in the programme were asked to identify how it had helped to: prepare them to go out into the adult world; make them more aware of their potential; make them more employable. They were presented with a list of ‘enterprising’ skills and asked to rate themselves against each of these on a 4 point scale.

Elements of this have been used in questionnaire items.

The Learning Gains Research (2002, Semple et al) used open questions on a self-report questionnaire to identify skills and attitudes towards work and ‘enterprise’ broadly defined.

These open questions could not be used in our pupil questionnaire because of the cost that would have been involved in coding and analyzing them given the large sample size.

The Employability Skills Toolkit, developed by the Conference Board of Canada (2001) is a resource which has been devised jointly by business and education, due to concerns about the

gap between employers' needs and pupils' skills. It was designed with a view to helping young people begin to manage the process of knowing themselves, recognizing their strengths and weaknesses, seeking feedback and planning further development.

It outlines a range of personal skills and qualities and provides a framework for self-assessment which gives suggestions as to what relevant academic, personal management and teamwork skills might 'look like' and how they might be demonstrated at home, at school, at work or in the community. This paper-based aid is used in various ways;

- one to one coaching for disaffected pupils in school
- a personal development tool for careers guidance
- in a process of work based learning
- one of the key strengths of the toolkit is that it helps pupils to see the connections between competences, skills and behaviours as they apply in different situations.

While this tool refers to some enterprising skills and attitudes, it has a much greater focus on employability and is therefore less useful for this research.

Observation and triangulation in addition to self-reporting

The ongoing study being undertaken by staff at Strathclyde University, looking at the economic and educational benefits of enterprise in education includes examination of teacher and pupil perceptions of what 'being enterprising' means in a representative sample of schools. The next phase of data collection will include specific questions for teachers about what they consider important to assess during enterprise activity and how they do this. This will provide an indication of both the extent of the consensus on the definition of being 'enterprising' and the measures employed for a variety of groups.

These measures are still under development, and have been designed for a younger age group than the present study.

Resource material for Careers Scotland, created by the National Centre: Education for Work and Enterprise at Strathclyde University, with the aim of providing support for enterprise activity with young people from the ages of 5-25, includes various tools for assessment, including self-assessment, peer assessment, group assessment, teacher assessment/ observation and observation by adults other than teachers. These tools range from observation schedules, with an expectation that evidence of particular types of behaviour should be identified along with dates on which they were observed, to ratings against various enterprise skills and attitudes. The aim of this range of tools is to try to ensure that by including the views of a variety of people, a more complete picture of pupils' development can be developed.

Elements of the self-assessment tools have been incorporated into the pupils' questionnaire.

In Opening Minds, (1999) the set of 10 core competences defined by Halifax plc are detailed. These competences are relevant to all grades within the organization, but also give an indication of the desired qualities of potential employees. The framework defines key 'attributes, characteristics, behaviours and knowledge exhibited by successful performers'. There are three categories of competence: people, personal and process.

People: direction setting, developing self and others, communication and working with others

Personal: achievement orientation, customer orientation and change orientation

Process: forward thinking, judgment and quality process.

*There is a structured assessment process, with each of these competences having 5 progressive levels, becoming increasingly complex and demanding, each describing a different type of behaviour. The system is designed to help participants set goals for the future, thereby increasing motivation. This **may** be a useful basis for elements of focused study element of the research work.*

In Scotland, knowledge, skills, attitudes and understanding in relation to enterprise may be measured and accredited through the formal examination system. This can take place at secondary level, in options within Standard grade Social and Vocational Skills and Business Management Intermediate 1 and 2.

*There **may** be elements of this which could be used in focused studies.*

In addition, there are a number of units within the National Qualifications catalogue: Enterprise through Craft; Enterprise Activity; Considerations for Self-employment; and Identifying Opportunities: Recognising Entrepreneurial Potential. These units are still fairly new and to date only a few pupils have taken these. Within Higher Still and National Qualifications, core skills are embedded in the subject. Discrete core skill national units can be taken at certain levels. The Scottish Qualifications Authority is currently (December 2003) consulting on the development of a Scottish Progression Award in Enterprise.

*There **may** be elements which might be used in focused studies.*

Young Enterprise Scotland has an exam and award scheme, although not linked to the SQA framework. Some of this is workshop based, much web-enabled and all linked to Core Skills.

This is likely to require more time to use than will be available in the focused studies.

The Pathways to Enterprise programme in Canada uses observation records and ratings sheets for each pupil to build up an overall picture of some enterprising skills and attitudes, the main ones being self-confidence, showing initiative, taking responsibility and showing perseverance. The key participants in the assessment and evaluation process are identified as being pupils, teachers, parents and other community members. The role of each of these participants is described, along with the specific instruments which are regarded as appropriate for their involvement.

Key enterprise skills and qualities are rated during and/or after an enterprise project, while individual personal and team qualities can be graded at any point. Evidence of such skills and qualities are rated on a 5 point scale (1=never, 3 = sometimes, 5 = always).

*Elements of this **may** be appropriate for focused studies.*

Psychometric measures

Psychometric measures tend to be expensive to use and analyse – both in time and money resources. They also normally require an extensive set of questions and to be administered under particular conditions. There are some examples of psychometric measures which focus on either enterprise or entrepreneurial skills.

Research currently being undertaken at Kingston University, aimed at measuring young people's attitudes to enterprise, is piloting the use of the newly designed ATE test (Athayde 2003). This measure considers the expression of enterprising attitudes, skills and behaviours in teaching and learning. This is done through an extensive questionnaire which covers varied aspects of a young person's life, with considerable focus on the school experience.

*If available within an appropriate timescale, this measure, once piloted, **may** be useful for focused study work with pupils since it recognizes and uses the school context. It could not be used to compare responses with other groups such as parents. The measure is still under development. The research team is maintaining a link to the work.*

The Entrepreneurial Spirit programme being piloted at present in Scotland uses a psychometric measure normed against adult entrepreneurs. It includes two elements. The first is DISC which covers Dominance, Influence, Steadiness and Compliance. The second is PIAV which covers values and attitudes reported through a six element profile analysed under the headings of Theoretical, Aesthetic, Traditional, Social, Utilitarian, and Individualistic. The entrepreneurial individual is seen as individualistic and utilitarian in approach. These headings have proved difficult to add to the matrix but the best approximation has been made.

This measure is perhaps focused more narrowly on 'entrepreneurship' rather than the broader 'enterprise'. It requires formal training and accreditation for its use and would therefore not be appropriate for this study.

CHAPTER FIVE THE NEXT STAGE

It has proved difficult to find measures of enterprising skills and attitudes that would be appropriate for this research mainly because of the limited availability of such measures. The lack of measures to assess enterprising skills and attitudes has been recognized, for example, one of the main conclusions of the EC 'Best Procedure' project on Education and Training for Entrepreneurship (2002) was that 'the development of indicators and the collection of quantitative data in this field are still very limited.'

There are, however, some encouraging developments. For example, the ENTREVA project at the Turku School of Economics and Business Administration in Finland is currently surveying evaluation and measurement methods, tools and practices of Enterprise Education in Europe, with the intention to provide theoretical analyses and presenting the results in a database later in 2004 (www.entreva.net). The research team is maintaining a link with this work.

The research team has drawn on this review to construct the items for the relevant questions in the pupil survey. These items have been piloted and amended as required. The research team will continue to review measures of enterprising skills and attitudes in the context of what will be required for the focused studies.

Addendum

Since 2003 the Scottish Executive has commissioned other research projects related to the evaluation of its Determined to Succeed strategy which have focussed on the potential to measure entrepreneurial attitudes and behaviours. The findings from these projects will be published separately during 2006

Measures of enterprising skills, attitudes and behaviours

	Responsibility	seeing opportunities	initiative	self confidence	perseverance	to willing accept challenge	risk taking	decision making	learning from mistakes	competition	innovation	asking advice	target setting
Enterprising Infants (Careers Scotland)	yes	yes	yes	yes	yes	not specific	not specific	yes	yes	not covered	yes	yes	yes
Go for Enterprise (Careers Scotland)	yes	yes	yes	yes	yes	not specific	yes	yes	yes	not covered	yes	yes	yes
Get into Enterprise (Careers Scotland)	yes	yes	yes	yes	yes	yes	yes	yes	yes	not specific	yes	yes	yes
Changemaker	yes	not covered	not covered	yes	yes	not specific	not covered	yes	yes	not covered	not covered	yes	yes
Work related learning at Key stage 4	not specific	not covered	not specific	yes	yes	not covered	not covered	yes	yes	not covered	not covered	yes	yes
Earn and Learn evaluation	not covered	yes	yes	yes	not covered	not covered	yes	yes	yes	not covered	yes	yes	yes
Halifax plc	not covered	not covered	yes	yes	not specific	not covered	yes	yes	yes	not covered	not covered	yes	yes
Employability Skills toolkit	yes	yes	yes	yes	yes	not covered	not covered	yes	not specific	not covered	yes	not covered	yes
Pathways to Enterprise	yes	yes	yes	yes	yes	not covered	yes	yes	yes	not covered	yes	not covered	yes
Kingston University research	yes	yes	yes	yes	yes	yes	yes	yes	yes	not covered	yes	yes	yes
Entrepreneurial Spirit	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	not specific	not specific
Self assessments of participants on enterprise training courses	yes	yes	yes	yes	not covered	not covered	yes	yes	yes	not covered	yes	not covered	yes

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