Developing a Scholar-Practitioner Model for Career Practice and Research

Mark L. Savickas

The National Institute for Careers Education and Counselling (NICEC) has sponsored two conferences (October 1998; April 2000) to examine how developing a research culture amongst practitioners could enhance career counsellors' ability to help their clients respond effectively to the rapidly changing world of work. These conferences have sensitised practitioners and researchers to the causes and consequences of the rift between the science of vocational psychology and the practice of career counselling. Participants at these conferences have encouraged practitioners to conduct more research and apply this research in their practices. Lack of research by practitioners is only half of 'research culture' problem; the other half is what scientists choose to research. As Lucas (1996) once commented, 'Research in our journals tends to answer many questions, but few that are asked by practitioners in their offices.' Thus, the participants at the NICEC conferences also encouraged researchers to investigate career problems that are encountered in practice and to communicate their findings to practitioners in meaningful ways.

Traditional Model for Research and Its Diffusion

The recommendation to develop a research culture seems necessary because many career counsellors do not value traditional research. As Killeen & Watts (1983) indicated long ago, practitioners' attitude toward research is at best 'ambivalent'. More recently, Williams and Irving (1999, p.367) concluded that 'counsellors and psychotherapists are largely indifferent to, or suspicious about, research findings'. Practitioners have good reasons for their ambivalence about theory and research, chief among them being the lack of utility that research has in addressing the needs of a large segment of the population. Fitzgerald & Betz (1994) accounted for this shortcoming in concluding that research on career theories examines the smallest segment of the population and does not systematically attend to the role of gender, race, socioeconomic status and context in conditioning individual vocational behaviour.

The inattention to bridging the gulf between practice and research seems to be due, at least in part, to differences in the personalities and interests of counsellors and researchers. Three studies have shown that counsellors resemble 'Social' types whereas researchers resemble 'Investigative' types (Kahn & Scott, 1997; Roe & Siegelman, 1964; Thorndike, 1955). These two types are not adjacent on Holland's hexagon, meaning they are moderately inconsistent. Thus personality differences may explain researchers' greater interest in epistemology and quantitative methods in contrast to practitioners' greater interest in ontology and qualitative research methods. Given this difference in personality, we should expect practitioners and researchers to pursue different goals and prefer different activities, and they do. Scientific research and professional practice differ so much that one could claim that counsellors and researchers constitute two independent professions with distinct career paths (Peterson, 1991; Williams & Irving, 1999).

Alternative Models for Career Research

In considering how to bridge the gulf between career practitioners and scientists a few colleagues have recommended that we strengthen counsellors' commitment to the scientist-practitioner model (Beutler, Williams, Wakefield & Entwistle, 1995; Howard, 1986). However, more colleagues have suggested the use of alternative models for conducting research. For example, Lucas (1996) called for a practitioner-scientist model in which counsellors produce practice knowledge by systematically collecting case studies which could be used to develop counselling models that specify treatment protocols for distinct career problems in particular populations. Her call for practice knowledge harkens back to Williamson & Bordin's (1941, p. 8) enjoinment that counsellors answer the following question: 'What counseling techniques (and conditions) will produce what types of results with what types of students?' Rather than strengthening commitment to or revising the scientist-practitioner model, Stricker & Trierweiler (1995) concluded that the scientist-practitioner model tries to blend two antagonistic activities. As an alternative, they proposed that counsellors should not pursue generalised knowledge but instead should act as local clinical scientists in constructing local knowledge that is specific to particular groups of clients in unique contexts. Also emphasising the importance of local knowledge, Elden & Levin (1991) proposed a cogenerative learning model in which practitioners engage scientists in

collaborative dialogue that constructs new local theories focused on practical problems facing their clients.

The practice research network (PRN) model seems to have generated the most interest to date (cf. Brown & Bimrose, 2000). To form a PRN, a group of practitioners agree to use uniform research protocols to collect data from their clients. This research model has the advantage of analysing common career problems and studying interventions in their natural settings. To sustain the interest and participation of counsellors, the research issues selected must be practical as well as fit the time and resources available to practitioners. In the long term, PRN research seeks to construct websites where counsellors can identify which interventions worked with clients similar to those with whom they are now working. The networks also can foster outcome research and the development of clinical guidelines and manuals such as those generated by the empirical practice movement (Reid, 1994).

To implement these practice research networks in a way that narrows the gulf between traditional researchers and practitioners requires a resolution to the epistemological wars embodied in debates about the advantages of quantitative versus qualitative research methods. If we are to develop a research culture and improve communications between practitioners and researchers, then we must move beyond the positivist-constructivist debate that engulfs much of the social sciences. The way forward may be foreshadowed by the recovered interest in pragmatism as a research epistemology that focuses on contextualised knowledge about particular individuals and community groups in specific situations (Fishman, 1999).

Knowledge Production

To move forward with practice research networks constructing rigorous databases of solution-focused case studies, we must first change our view of research and how we talk about it. To develop a research culture, I propose that we start to talk about knowledge production rather than research. Career counsellors have produced extensive knowledge through their experience, scholarship, and reflection. This important practice knowledge gets transmitted more often at conventions and case conferences than in professional journals. Counsellors produce practice knowledge by disciplined inquiry, which may or may not include the scientific method. It is time that we articulate the fact that the scientific method is *a* method of disciplined inquiry, not *the* method. From the perspective of knowledge production, counsellors are not scientist-practitioners, practitioner-scientists, nor even local clinical scientists. Instead, they are scholar-practitioners who produce practice knowledge.

Given this perspective, one can ask what knowledge should counsellors produce. My answer is not new. Scholar-practitioners should study which interventions with which clients produce what outcomes. Although Williamson & Bordin posed this question over 50 years ago, career counsellors still cannot answer it confidently. To finally address this question in a systematic and meaningful way, we can adopt the case study as our chief method for knowledge production. After all, counsellors do case studies everyday.

The next step is to build knowledge production networks composed of colleagues who agree to contribute case studies. To begin, these career knowledge networks must decide how to systematise the case-study format. For comparison purposes, the cases must be reported similarly. Although it might be difficult to reach consensus, we also should select a few core assessment and outcome measures to use in each case. Counsellors could still use their favourite inventories and tests but would add the core measures at least to the cases they plan to contribute to the database. This agreement would avoid, right from the start, the problems currently faced in counselling outcome research which tries to compare outcomes on different measures. Having collected cases, we could cluster them around career problems (Cochran, 1994) as Osipow et al. (1975) did in constructing the Career Decision Scale (CDS) from client files. Each of the 16 CDS items describes a distinct career choice problem. The plan was to use the CDS as a type indicator to determine which type of problem a client faced and then apply the relevant intervention. Maybe this innovative idea was too far ahead of its time because researchers and counsellors immediately began using the CDS, not as a type indicator, but as a traditional psychometric inventory in which the total score indicated degree of indecision (Winer, 1992).

Adopting a typological or person-approach strategy for knowledge production would allow practitioners to contribute their case reports to databases that, in due course, could produce new practice knowledge. Furthermore, we could use the databases to construct problem-based learning cases for continuing professional education and as a basis for annual conferences. We could also invite positivist researchers to use the databases to test their hypotheses and develop generalised knowledge. In the end, we would have a new knowledge production culture with which to meet the challenges of career counselling in the information age.

References

Beutler, L.E. Williams, R.E., Wakefield, P.J. & Entwistle, S.R. (1995) 'Bridging scientist and practitioner perspective in clinical psychology' American Psychologist, 50, 984-994.

Brown, A. & Bimrose, J. (2000, April). 'Creating virtual learning environments to support a community of practice of careers guidance professionals'. Paper presented at the CRAC/NICEC Conference 'At the Cutting Edge: Research and innovative practice in managing and developing careers across the life-span', Leicester, England.

Cochran, L. (1994). 'What is a career problem?' Career Development Quarterly, 42, 204-215.

Elden, M. & Levin, M. (1991). 'Cogenerative learning: bringing participation into action research' in Whyte W. F. (ed.) *Participatory Action Research* (pp. 127-142). Newbury Park: Sage.

Fishman, D. B. (1999). *The case for pragmatic psychology.* New York: New York University Press.

Fitzgerald, L.F. & Betz, N.E. (1994) in Savickas, M.L. & Lent, R.W. (eds.), *Convergence in Career Development Theories: Implications for Science and Practice* (pp. 103-117). Palo Alto, CA: Davies-Black Publishing.

Howard, G.S. (1986). 'The scientist-practitioner in counselling psychology: toward a deeper integration of theory, research, and practice'. The Counselling Psychologist, 14, 61-105.

Kahn, J.H. & Scott, N.A. (1997). 'Predictors of research productivity and science-related career goals among counseling psychology doctoral students'. The Counselling Psychologist, 25, 38-67.

Killeen, J. & Watts, A.G. (1983). 'The place of research in careers guidance'. Careers Bulletin, Spring.

Lucas, M. S. (1996). 'Building cohesiveness between practitioners and researchers: a practitioner-scientist model' in Savickas, M.L. & Walsh, W.B. (eds.) *Handbook of Career Counseling Theory and Practice* (pp. 81-88). Palo Alto: Davies-Black.

Osipow, S.H., Winer, J., Koschier, M. & Yanico, B. (1975). 'A modular approach to self-counselling for vocational indecision using audio cassettes' in Simpson, L. A. (ed.), *A/V Media in Career Development.* Bethlehem, PA: The College Placement Council.

Peterson, D. R. (1991). 'Connection and disconnection of research and practice in the education of professional psychologists'. American Psychologist, 46, 422-429.

Reid, W. J. (1994). The empirical practice movement. The Social Service Review, 68,165-184.

Roe, A. & Siegelman, M. (1964). *The origin of interests.* Washington, DC: American Personnel and Guidance Association.

Stricker, G. & Trierweiler, S. J. (1995). 'The local clinical scientist: a bridge between science and practice'. American Psychologist, 50, 995-1002.

Thorndike, R. L. (1955). 'The structure of preferences for psychological activities among psychologists'. American Psychologist, 10, 205-207.

Williams, D. I. & Irving, J. A. (1999). 'Why are therapists indifferent to research?' British Journal of Guidance & Counselling, 27, 367-376.

Williamson, E.G. & Bordin, E.S. (1941). 'The evaluation of vocational and educational counseling: a critique of the methodology of experiments'. Educational and Psychological Measurement, 1, 5-24.

Winer, J.L. (1992). 'The early history of the Career Decision Scale'. Career Development Quarterly, 40, 369-375.

The Relationship between Theory, Research and Innovative Practice – Some notes responding to Professor Mark Savickas's paper

Audrey Collin

I should like to thank Professor Savickas for his thoughtful and rich analysis of the relationships between theory, research and practice. His exciting proposals for the development of a 'clinical science of career counselling' will, I am sure, have struck chords with many people. In many respects, they closely match the interests, activities and aspirations of many in the British career field, and in particular some of the new developments here, such as the Career Research Network, and the Centre for Guidance Studies at the University of Derby.

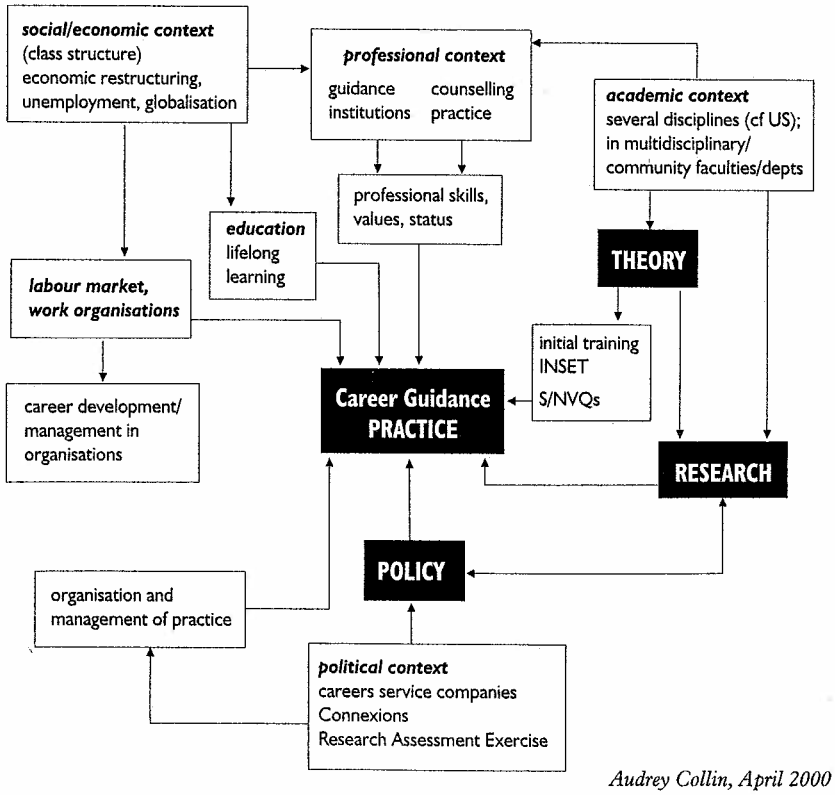
In exploring how we could take his proposals forward in meaningful ways, of course, we have to consider how compatible they would be with the character and needs of the field of career education and guidance (CEG) in Britain at this point in time. In North America, the discipline and institutions of psychology largely shape career theory and practice, giving them a degree of coherence and shared identity – perhaps even clout. Here, not only do we have few 'home-grown' major theories of career, but they draw upon several disciplines. This eclecticism may reflect the historical development of CEG here, but it creates a sense of fragmentation in the thinking about, and application of, theory in research and practice. Moreover, the British culture generally seems to have an anti-academic bias. Another characteristic of British CEG is shared with the North American: it operates largely in isolation from the practice and practitioners of career development and management in work organisations. The 1998 NICEC/CRAC consultation on Developing a Research Culture in Career Education and Guidance spelt out some of those characteristics of the field. To those I think we now also need to add others. The CEG field has experienced – and is again facing – considerable, perceived-as-threatening change to its internal and external boundaries and core tasks. Hence, there is increasing consideration being given in our research and literature to (government) policy in attempts to map or predict its outcomes, and (possibly) influence its direction.

To achieve innovative practice, then, I suggest that we have to take these characteristics of our field into consideration. Moreover, I suggest that we need to consider them not piecemeal but as a systemic whole. This is what I have tried to do in the accompanying map of the field. The development of a 'clinical science' would both call for and initiate changes throughout the system as a whole.

When looking at this map, it is evident that CEG practitioners have to negotiate several – and often conflicting – discourses, a task for which they may have been largely unprepared in initial training:

- an academic discourse – decontextualised and abstract knowledge;
- a professional discourse – knowledge, skills, values; client-centred practice;
- a managerial discourse – relevance, performance, value for money.

A Conjectural Map of the CEG Field



Audrey Collin, April 2000

These discourses reflect not just different language communities, but different goals and values. Recognising this, it is salutary to enquire what 'career' means to these different communities. Is it anything more than a rhetoric concerning the relationship between individual, organisation, and society? What, then is 'career guidance'? What difference does it make, to whom and for whom? Whose purposes does it serve?

What are the implications for research and innovative practice of this acknowledgement of the discourses and rhetorics of the career field? I work in management education, in which similar discourses and dilemmas are not unknown. Managers are often recommended to distinguish between efficiency and effectiveness – doing things right and doing the right things (questioning existing purposes and norms). Efficiency is clearly essential, particularly perhaps in the short term, but we must not ignore the crucial need to challenge whether what we are doing is effective. It is not just a matter of whether we are going about things in the most efficient way, but whether we are effective, whether what we are trying to achieve – our goals and values – is still appropriate and desirable, particularly when contexts are changing. Very often, rhetoric disguises the insufficiency of efficiency, leaving us to be drawn along by contextual changes that we have not recognised or challenged.

I would strongly argue that, in exploring ways forward, we need to consider whether our existing theory, research and practice are efficient and effective, and ensure that whatever is proposed for the future will be both efficient and effective. Given the present political and organisational context of CEG, there could be some danger that clinical research leads to innovative practice that is efficient, but not effective.

Hence, to sharpen our focus on the needs of the British field of CEG, my response to Professor Savickas's paper is to ask us to consider the following questions as we debate his proposals:

- Do we currently have appropriate theories that would underpin clinical research? Are the theories currently used in guidance efficient in addressing the current, and changing, social and economic context, and the implications of it for individuals? Are they effective in challenging old, and offering new, ways of understanding?
- If not, how should we set about stimulating new theory development – not just to inform practice in the short-term, but to explain the long-term changes in society and their implications for individuals? Who should do this?
- How can we ensure that clinical research would be both efficient and effective? How can we develop independent long-term research? Where would it take place, and who would do it?
- Are practitioners ready for their part in effective clinical research? Have they the appropriate orientation and skills – and resources?
- Has their training prepared them to recognise, deconstruct, and negotiate the discourses that construct their practice? Should initial and in-service training focus on challenging their assumptions and developing their critical thinking? (This could be done in part by examining the different perspectives of theorists and different methodologies of researchers.)
- Could greater synergy across the field be achieved by eradicating the existing boundary between CEG and organisational career theory and practice? How could we set about this?
- Is there any way in which we could seize the opportunity afforded by the new wave of change that is about to break to rethink our goals and position, so that we could truly 'make a difference'?

Notes

To help me identify something of the complexity of the British field so that I could respond to Professor Savickas's paper, I consulted with a number of people who have informed and varying perspectives upon the field. They are named below. I wish to thank them and acknowledge their help in informing me, challenging me, and clarifying my thinking. Nevertheless, they are absolved from the responsibility for the interpretations I have made here!

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The Relationship between Contexts, Finalities, Theory and Innovative Practice in Career Guidance and Counselling

Jean Guichard and Christine Rieu Fichot

The relationship between theory and practice in guidance is complex. Guidance practices are actually social practices. This means that they occur within economic, technical, organisational, social and cultural contexts. And these social practices are aimed at certain finalities (social, economic, personal, etc.) which are specific and about which questions can and must be asked.

The fact that guidance practices are social practices has a major consequence: there is no necessary link between theoretical research and guidance practices. There are two main reasons for this. Firstly, guidance practices can develop independently of any reference to theoretical models. They may, for example, be based upon diverse beliefs as to the efficacy of a particular type of intervention. Secondly, theoretical research tries to explain 'how things happen' rather than to say 'what ought to be done'.

Any consideration of the links between theory and practice in guidance requires reference to two factors which are very important:

- **the contexts in which specific guidance questions arise; and**
- **the finalities attributed to these practices.**

The first part of this paper will deal with the links between contexts, finalities and practices in career guidance and counselling. The second looks at dialectics between theory and practice in guidance. It will show the various types of links between theoretical knowledge and guidance practices during the 20th century.

Links between contexts, finalities and practices in guidance

Guidance practices are responses to social problems arising in a particular society at a certain time. For example, it was certainly no accident that Alfred Binet published a major reflection on guidance in 1908 and that Parsons' book *Choosing a Vocation* was published about the same time (1909). Both seek to answer the same question: In view of industrial development and major changes in work, what can be done to help young people choose the job best suited to them? Such a question could obviously not arise in a rural society where the son traditionally succeeded his father and the daughter her mother.

Three factors seem to play a major role in the emergence of social questions which guidance practices seek to answer. These are:

1. How the education of young people and adults is organised

Different choices have been made in the organisation of schooling from one industrialised country to another. Differences in the structure of educational systems give rise to different scholastic guidance problems and, by implication, differences in the practices of guidance counsellors. Henri Eckert (1993) clearly shows that the practices of German and French counsellors are different because of this difference of organisation.

2. How production is organised

The organisation of work is even more important than the organisation of schooling in its effect on guidance practices. In 1955, the sociologist Alain Touraine published an article describing the three main work systems which have developed during the 20th century: the occupational (crafts and professions), Fordist (after Henry Ford) and technical (automated) work systems. In his article, Touraine shows that each of the work systems can be related to a different conception of 'qualification'. It can also be shown that each of these work systems can be related to a different conception of guidance practices.

The occupational work system at the beginning of the century required workers to possess skills, 'have the knack' and undergo a methodical and long training or apprenticeship. Their work role contributed to the definition of their identity, i.e. being a carpenter or a lawyer was at the centre of their being. In this system, the role of the guidance counsellor was to make reliable and objective predictions about the aptitude of a young person for a craft or profession they would have for the rest of their life.

With Fordism, each worker is an assembly line operative. He no longer has a craft or profession but a job. The notion of 'qualification' no longer relates to their identity as a worker but to the job they do. In this context, the focus of guidance is to determine if the young person can adjust to the working conditions, so guidance tools are developed in terms of values, interests and occupational typology.

Recently, the development of computers has been one of the major factors in the evolution of the production process. It has had major consequences on the organisation of work. Touraine noted that automation has led to the creation of a new work system which he called 'technical'. Within this system, qualification becomes a recognised status in a social system of production. Work activity takes the form of an occupational function inserted into a network. The worker is required to have a number of specific abilities. As noted by Loarer & Huteau (1997) and Zarifian (1988), certain competencies become fundamental. These are:

- sociability and the ability to communicate;
- flexible adaptability and the ability to cope with unexpected events by developing new know-how;
- taking responsibility for results.

In this context, the worker is perceived as having a certain number of competencies but can also get new ones. This leads to the consideration of lifelong learning. Occupational interactions rather than the occupational actor now appear to be central.

Techniques for the assessment of competencies as well as procedures for the validation and recognition of expertise are the key focus of guidance practices in this technical work system. These three work systems have developed in succession over the course of the century. This does not mean that each emerging system gradually took the place of that preceding it. Today, these various work systems coexist. This has a major consequence regarding guidance practices: they can only be pluralistic. They must be based upon relatively heterogeneous concepts and theories (aptitudes, interests, values, lifelong development, competencies, etc.).

3. How ideological conceptions relating to individuals and society have developed

Independently of the organisation of schooling and of production, there is a third context which influences guidance practices: the general ideological context which determines the way in which guidance challenges are conceived. Three of these contexts play a fundamental role in the definition of guidance practices in industrialised countries today:

- the responsibility assigned to individuals for their personal development;
- the pivotal role of occupational activity in identity construction and social integration;
- perception of the future as being relatively unpredictable and unstable.

Most people will find themselves confronted by transitions of various types throughout their personal and occupational lives. This has led to the conception of guidance throughout life for which young people should start to be prepared when still at school. Donald Super (1980) calls it 'life-span career development'.

The notion that each individual is responsible for his/her personal development determines many guidance practices. Guidance activities are focused on the personal development of the individual. Starting from the 'client's request', the aim is to help individuals to make the best of their available assets, taking into account the constraints of the contexts in which they find themselves. It seems fundamental to emphasise that, although this finality seems obvious to us, it could also be different. It is actually possible to imagine very different finalities of guidance practices. For example, one might imagine, at a time when 4/5ths of humankind live in increasing misery, that the objective of these practices could be to encourage collective development rather than individual development.

The purpose of these few remarks is not to settle the question of the finalities of guidance practices. It is only to emphasise that guidance practices, in the same way as any other social practices, necessarily aim at certain ethical, social, economic and political goals and that, at any event, theoretical scientific research cannot define these aims.

The dialectic of relations between theories and guidance practices

The picture just given emphasises the importance of organisational and ideological contexts as well as social finalities in the definition of guidance practices. However, this does not mean that these practices necessarily have no link to theoretical research. Guidance practices certainly are able to develop independently of any scientific research, but the question nevertheless arises of the efficacy of practices with only an empirical basis. This concern has led to the considerable growth of research in the field of guidance throughout the 20th century. Indeed, most of the social questions affecting guidance practices have been modelled within the framework of human sciences and psychology in particular. There is an apparent distinction between two broad categories of

guidance questions which have given rise to major work in the field of psychology. The first series of questions concerns the link between the individual and occupations, and the second concerns the cognitive and identity development of an individual during the various transitions that they experience.

It nevertheless seems that this link between psychology and guidance practices has become somewhat over-stretched recently. Conceptions of the subject underlying many tools used in guidance seem distant from those which now dominate in psychology. Also, the notions and questions raised by certain innovative guidance practices do not give rise to conceptual elaborations or theoretical modelling in psychology.

Differential psychology and the question of the link between individual and occupation

Historically, the first question that guidance psychology had to deal with was that of the link between individual and occupation. As is well known, this question was perfectly formulated by Parsons (1909). From his point of view, the essential scientific question is how to determine what kind of link does exist between individuals and occupations. This expectation of guidance is perfectly consistent with the 'occupational work system'.

This question was formulated scientifically in the context of differential psychology where the individual was considered to be endowed with a stable personality which could be described by a certain number of attributes. Various traits generally lead to the identification of different personality types. In the special field of vocational guidance, differential psychology has led to the specific study of aptitudes, values, interests and occupational types.

The first of these features – aptitude – corresponds with the concept of an essential link between individual and occupation.

Models in terms of values, interests, types, etc. tend in contrast to consider this link as being more of a representative nature. John Holland's questionnaires are the prototypical examples of such a concept. They are the tools most widely used in guidance throughout the world. This model is also at the heart of various guidance software programs and a good many career education methods.

Holland's (1973) basic hypothesis is the existence of six personality types (realistic, investigative, artistic, social, enterprising and conventional) corresponding to six types of occupational environment. The dominant personality types of an individual determine the main directions of their educational or occupational choices. The problem is that this approach in terms of types of individuals is too removed from the challenges dominating psychology today.

The question of cognitive and identity development of individuals during transitions

Starting in the 1950s, other questions influenced guidance psychology research. These involved the formation of future intentions and career preferences and the way in which individuals cope with transitions throughout their occupational and personal lives.

The study of Ginzberg, Ginsburg, Axelrad & Herma (1951), concerning the formation of occupational choices of boys from affluent backgrounds, was certainly the first in this field. Since then, these questions have been modelled in many different ways, e.g. by Donald Super (1980), John Krumboltz (1979) who was inspired by Albert Bandura (1977), Michel Huteau (1982, 1995) who incorporated George Kelly's (1963) personal construct theories, and Serge Moscovici (1961, 1976).

The question of the individual in psychology today

Most of these career development theories are the result of the construction of guidance questions in a defined conceptual framework, the origin of which is societal. In turn, the development of new concepts in psychology has certainly played a role in the way guidance questions are conceived.

It nevertheless seems that very recently a certain gap has opened up between the concepts of human sciences and guidance practices. A prototypical example is the distance between the conception of the individual as postulated by the currently dominant guidance model, i.e. that of Holland, the chief presupposition of which has been summarised above, and theories relative to the self or identity which now prevail in human sciences.

Three main traits actually seem to characterise the individual as seen today by human sciences (see Guichard, 2000).

Firstly, the individual is a social actor who constructs himself/herself in forms or determining conceptions of self which are organised according to the individual's social insertion in structured fields of social relations. These psycho-social analyses consider that it is impossible to grasp self-schemata without taking into account the diversity of social worlds making up the society in which the person lives, as he/she represents them to himself/herself.

Secondly, the subjectivity of the individual is nevertheless relatively malleable. This is what concepts such as that of the 'working self concept' seek to grasp. 'Relatively' malleable means that the stability or malleability of the 'self' seems to depend upon three basic factors, i.e.:

- the degree of complexity of the society;

- the degree of integration of the various fields of social relations of this society;
- and the variety of interactions in which the subject participates.

Thirdly, when confronted with a changing environment, the individual deploys constant activity seeking identity forms in which to 'crystallise'. This conception of the individual makes the questions which guidance must deal with more complicated. The idea of a client whose main personality dimensions could be described is gradually being replaced by the conception of a 'multivocal' individual (to use the terminology of Bakhtin) whose identity is never permanently constructed.

Should the practitioner's aim be to help the client to stabilise in certain identity forms (as postulated notably by John Holland's model) or, on the contrary, should each individual be helped to diversify the subjective system of identity forms in which they are constructing themselves, as suggested, for example, by Michel Foucault's political philosophy?

Answering these questions will determine the objectives and finalities of guidance practices. But as we have seen, the problem here again seems to be thorny.

Notions without concept, social questions without scientific construction

The example mentioned above shows that the conception of the subject as it occurs in current approaches to psychology and social psychology is different from the models underlying most of the tools used at present in guidance (e.g. questionnaires, software programs, educational methods, etc.).

Reciprocally, during the past decades guidance counsellors have developed innovative practices raising important theoretical questions which research psychologists have tended to neglect up to now.

This applies in particular to the area of practices related to the emergence of the 'technical system of work'. This organisation of work has produced new notions in the field of guidance, such as 'competencies' or 'qualifying organisation'.

This same organisation of work, combined with the rapid evolution of employment linked to globalisation of the economy, has given rise to two major social questions which guidance practitioners have tried to answer. The first is how to help the person to assess their competencies, i.e. how to best help them to review their current situation for the purpose of defining certain personal and occupational goals. The second question is how to give adequate recognition to competencies acquired while employed in this 'work qualifying' organisation.

Up to now, there has been no meticulous scientific work on these questions and the notions they suggest. There is every reason to think that this inadequacy of research is limiting the scope of new guidance practices. Here is one example concerning the notion of competence. This notion is now omnipresent. It is nevertheless an extremely vague notion prompting many questions. What does this notion precisely cover? Should it be preserved overall or must it be differentiated to take into account 'types of competencies' of different natures (e.g. some would be essentially linked to contexts, others to 'abilities' requiring long apprenticeship, etc.)? If the notion of competence can be kept, how many sorts (and which) can be identified? How should we take into account the origin of these 'competencies'? If, as it is postulated, their development is closely linked to interactions in a work context, what part of this development should be attributed to individuals, interactions and the structuring of the context? To what extent are competencies learned in a work situation transferable to another? What are the conditions, obstacles and incentives for such a transfer?

Conclusion: the necessary dialogue between social questions and scientific questions

Four proposals seem to summarise the main points described above:

1. There is no immediate link between theory and practice in vocational guidance. Guidance questions are socially created. They are the outcome of certain contexts and lead to the application of certain practices aimed at ends which may or may not be clearly explained.

2. Scientific constructions of these social questions are most often based upon psychological models. They enable the development of practices which are certainly more effective than 'strictly empirical' practices.

3. Questions which have been and are being dealt with by guidance psychology seem to be closely linked to problems raised by the organisation of work at any given time. The occupational work system of the beginning of the last century led to research into the link between the individual and their occupation – a link which was then conceived in terms of ability. With Fordism, research turned to a less 'essentialist' and more representative conception of this link: concepts of interest, values and types became central. With the technical work system and the globalisation of employment, fundamental questions have become those of the development of personal goals and competencies and flow to

handle transitions throughout life. Many theoretical models have been created on this subject. They have given rise to widely diverse empirical research.

4. Most recently, the link between psychological research and guidance practices has become notably over-stretched. The subject model underlying those tools most widely used in guidance has become distant from currently dominant concepts in psychology. The most innovative guidance practices lead to research questions of major interest. However, they do not appear to have generated much interest among researchers as yet.

This gap between guidance questions and scientific research is very regrettable. Will they come back together? Might applications be found, for instance, in guidance practices for some of the tools designed for today's research psychology? Will currently emerging models of subjectivity give rise to theories or methods constituting a post-modern psychology of vocational guidance? Will the problems raised by the assessment and certification of competencies lead to unexpected developments in the field of cognitive psychology? Developments in psychology could certainly have consequences for the ways in which vocational guidance is conceived and practised even if the link between theory and practice may not be instant.

References

Bakhtin, M. M. (1981). In Holquist, M. (Ed.) *The Dialogic Imagination.* Austin: University of Texas Press.

Bandura, A. (1977). *Social Learning Theory.* Englewoods Cliffs, New Jersey: Prentice Hall.

Binet, A. (1908). 'Préface'. L'Année Psychologique, 8. Paris: Masson.

Eckert, H. (1993). *L'Orientation Professionnelle en Allemagne et en France.* Paris: L'Harmattan.

Foucault, M. (1982). 'The subject and power' in Dreyfus, H. & Rainbow, P. *Michel Foucault: Beyond Structuralism and Hermeneutics.* Chicago: University Press.

Foucault, M. (1988). 'Technologies of the self' in Hutton, P.H. Gutman, H. & Martin, H. L. (Eds.) *Technologies of the Self: a seminar with Michael Foucault* (pp. 16-49). Amherst: University of Massachusetts Press.

Ginzberg, E., Ginsburg, S., Axelrad, S. & Herma, J. (1951). *Occupational Choice: an approach to a general theory.* New York: Columbia University Press.

Guichard, J. (2000 in press) 'Adolescents' scholastic fields, identity frames and forms and future projects' in Nurmi, J. E. *Navigating through Adolescence: European Perspectives.* New York and London: Garland Publishing.

Holland, J. L. (1973). *Making Vocational Choices: a theory of careers.* Englewoods Cliffs, New Jersey: Prentice Hall.

Huteau, M. (1982) 'Les mécanismes psychologiques de l'évolution des attitudes et des préférences vis-à-vis des activités professionnelles'. L'Orientation Scolaire et Professionnelle, 11, 2, 107-125.

Huteau, M. (1995). *Manuel de Psychologie Différentielle.* Paris: Dunod.

Kelly, G. A. (1963). *A Theory of Personality: the psychology of personal constructs.* New York: Norton.

Krumboltz, J. D. (1979). 'A social learning theory of career decision making' in Mitchell, A. M., Jones, G. B. & Krumboltz, J.D. (Eds.) *Social Learning and Career Decision Making.* Cranston, Rhode Island: The Carroll Press.

Loarer, E. & Huteau, M. (1997). *Comment Prendre en Compte la Notion de Comportement Professionnel?* Paris: INETOP.

Moscovici, S. (1961, 1976). *La Psychanalyse, son Image et son Public.* Paris: PUF.

Parsons, F. (1909). *Choosing a Vocation.* Boston: Houghton Mifflin.

Super, D. (1980). 'A life-span, life-space approach to career development'. Journal of Vocational Behaviour, 13, 282-298.

Touraine, A. (1955). 'La qualification du travail: histoire d'une notion'. Journal de psychologie normale et pathologique, 13, 27-76

Zarifian, P. (1988). 'L'émergence du modèle de la compétence'. In Stankiewicz, F. (ed.) *Les Entreprises Face aux Ressources Humaines.* Paris: Editions Economica.

Note

A fuller version of this article will appear shortly in the British Journal of Guidance and Counselling.

ICT in Careers Education and Guidance: Potential and Research Needs

Marcus Offer

ICT is a collection of our most interactive guidance resources if we exclude those that require face-to-face contact. Even that is an understatement if we include videoconferencing. So it is clearly something we need to understand, monitor and evaluate, train people carefully in the use of, and integrate fully within our policy and practice.

One reason for giving importance to it is that ICT-based resources include a wide range of activities and interventions relevant to careers education and guidance (CEG) as we know it. These include:

- self-assessment exercises;
- psychometric tests and assessments (increasingly administered, scored and interpreted on-line – Bartram, 1997);
- programs to match self against opportunities;
- various powerful methods of managing and retrieving individually relevant information from vast resources now available (including hundreds of millions of pages of data on the World Wide Web);
- games and simulations (including virtual interviews and multimedia work experience);
- relatively content-free decision aids and prioritisation exercises;
- skills training for job search and application;
- dedicated word processing packages with on-line tutorials.

There are also many facilities to enable the user to develop their own materials, do-it-yourself teaching resources and authoring programmes and, above all, a wide range of channels for interpersonal communication and experience exchange across the world. What is surprising is not that ICT is high on our list of resources, but that so little of its potential has been exploited by the guidance community so far.

In part this is because of a continuing lack of research. We do not really have conclusive proof that using any specific UK computer-assisted guidance program, let alone the Internet, actually delivers guidance outcomes or that it is better at doing so than any other resource. This situation would be much worse if it had been left to UK researchers: most of the work done so far comes from outside Europe, and much of that focuses on the effectiveness of individual systems, rather than the general validity or added value of using ICT in CEG. The honourable exception of PROSPECT is the exception that proves the rule: it is the one UK system that most resembles in its comprehensiveness and theoretical grounding the sort of systems that have been evaluated in the USA. It has been more thoroughly evaluated and analysed than most (e.g. Watts & Jackson, 1999). In the UK, in the main, we have allowed a thousand flowers to bloom and flitted from one to the other on the shifting breezes of government policy and 'pump-priming' without worrying too much apparently whether what the money was spent on delivered the goods, or delivered it better than cheaper alternatives. It is even difficult to establish what exactly is used or available for use, given the large numbers of smaller programs in this country which deliver various individual guidance outcomes, let alone to find out how good this use is.

The most recent evaluative research of this kind in the UK, a government-funded project carried out by a team from the Scottish Council for Research in Education and JIIG-CAL (DfEE, 1998), confirms what Garis & Niles and others in the USA had been saying for some time: 'computer-assisted guidance (CAG) systems may be most effective when they are not used as "stand-alone" interventions'. (Garis & Niles, 1990). The SCRE research suggests that computer support by itself is insufficient to make a significant difference to the overall level of career preparedness of students and that it is likely to be more effective when integrated within a good careers education programme. An additional point to notice is that the 20 or so items of software reportedly available in this survey of 22 schools in eight careers service areas in the UK represent only a small proportion of the estimated 150+ items available for use at that time (Offer, 1997) and largely focus on matching people to possible careers or heightening their awareness of career opportunities – a fairly narrow range of the possible activities listed above. The programs concerned are free-standing CAGS. Since then, the Internet has added vastly to the quantity of such resources available.

On the other hand, ICT is not essentially different from all other resources in guidance: to decide when and how to use it, we need a prior notion of what we are about in CEG – the outcomes and process of guidance – against which the relevant materials and interventions offered by it can be mapped. There have been very few attempts in the UK to relate the use of

ICT to theories of guidance or career choice, though trait-and-factor approaches implicitly underpin many of the principal programs in use. Can it be shown that European, as opposed to transatlantic, use of computer-assisted guidance and the Internet is based on a thorough analysis of the careers education and guidance process and that it delivers the required outcomes? Does it, moreover, deliver these by itself or in conjunction with what other resources and forms of intervention?

Watts (1996) listed four models of integration of computer systems into guidance programmes – stand-alone, supported, incorporated, and progressive. These terms were entirely reasonable at the time, but the increasing use of the Internet in CEG since then, despite a sluggish and patchy response from the guidance community in the UK, raises some questions about these as definitively different modes. Is a computer-based resource standing alone when connected by e-mail, or by a conferencing link or by a hotlink to a Web-based tutorial, and so on? Modes and quality of 'support' can also vary widely now: the context may not be a guidance centre, school or college. 'Guidance Otherwise' mirrors the growth of 'Education Otherwise' and 'kitchen table guidance' may have access to a range of resources that surpasses what was once available only in a formal career library. 'The computer system' which is 'used within another guidance intervention' (Watts, ibid.) may itself incorporate and convey that intervention, as a resource used within it, and the developmental or 'progressive' sequence could start with e-mail, move to the World Wide Web, and end with videoconferencing.

To tackle the practical problem of integration we need to look at how we diagnose guidance needs anyway and map them on to resources. The readiness of the user to handle the resource or make a decision, the complexity of their external situation, and the phase of the guidance/career decision cycle they have reached, have a bearing on this, as does the difficulty, complexity and style of the resource itself. The work of Sampson et al. (1999) on this has led to a renewed interest by some Midlands careers companies in diagnostic systems and processes, and, along with my own 'Resource Matrix' (Offer, 2000) coincides with concerns about how the needs of average guidance seekers can be met when specialist guidance resources are refocused on the most disadvantaged. How do we avoid under-serving some and over-serving others? Is ICT most appropriate as an outreach tool to people and communities in times and places where guidance did not go before? Or is it a way of providing a (second-best?) alternative for those mainstream users who are not deemed to have urgent or major needs for support? The increased use of the Internet means that such users could potentially meet their needs on-line and get information, advice and guidance from anywhere in the world.

What is new about the situation is that CEG resources are now essentially beyond the control of a guidance community based on privileged access to information, yet the essentially non-hierarchical nature of the Internet raises the old problems of trial and error which guidance was essentially invented to resolve. We need to think hard about how quality can be defined, let alone assured, in the new ICT context.

Some, again outside the UK, have drawn up detailed standards for the quality of labour market and related information on the Web (CLFDB, 1999). Is this King Canute all over again? Or can kite-marking deliver the goods? Millions of interactive households will soon have access to everything from their TV sets, regardless of such standards. How will we get them to pay it any attention? The 'Good Guidance Guide' or some such kite-marking programme will require regular and systematic monitoring as well as a consensus about criteria: we may disagree with the detail of what the CLFDB has developed but such work has a valuable role at a superordinate level.

Guidance Council quality standards have been developed for the use of ICT and for 'guidance at a distance', but the most difficult part of doing so has been the definition of what we are evaluating. Is guidance delivered solely from a web site essentially different in terms of what we might regard as quality in guidance given via a telephone helpline, or got from a (self-help) book?

One really crucial problem for research is how 'information' in guidance is individually constructed from 'data'. If we knew more about the principles of this process, perhaps we would have a better idea of how to design effective Web-based guidance. Typically each person 'does not simply register new information, but actively constructs meaning out of it by making an effort to interpret it within his or her existing knowledge base .. (and this) .. will always be a personal one' (Boreham & Arthur, 1993). It follows that 'it is not sufficient simply to offer career decision-makers the information which, from an external point of view, they need in order to make a decision. If they are actually going to make use of it, they also need to be educated to make use of it, in the sense of developing an appropriate set of concepts for understanding it' (ibid.). As far as possible, then, the general context of use of ICT in guidance should be interactive, not passive, and should engage users in an educational process in the broadest sense. We need to work out how best to do this.

It may help to look at what ICT has to offer, as opposed to raw information/data (in overload), a 'non-human' or 'mechanical' process. The Internet has also created vastly increased opportunities for social contact (via e-mail, chat, conferencing, etc.) and the format of a guidance web site should perhaps include an on-line forum to encourage interaction about the informational content. New forms of guidance interaction, one-to-one or in groups, in real time or asynchronously,

are practicable. What are the new skills? What should the content of training for guidance counsellors, teachers and personal advisers of the future be, in the light of this?

On the one hand, this is a problem long since faced by designers of traditional distance learning material – how to motivate and engage learners, when you are not there in person to give feedback, ask and answer questions, sort out misunderstandings. As Tait (1999) argues, new technologies provide the potential for 'enormously enriched interaction, which is of course human albeit at a distance'. He goes on: 'While clients may be working at a distance in the literal sense, distance in a range of metaphorical senses may be diminished by the new technologies .... distance can be understood as a metaphor for the varied and interlocking ways in which inclusion and exclusion in society operates .... Rather than assume that crucial elements are lost when human relationships are mediated by technologies, it seems more fruitful to examine how they have changed.'

At the same time there is clearly as much a careers education as a careers guidance task here. What we should be seeking to develop are educated, critical users, capable of deciding for themselves whether what they are being told is true and in whose meaning of that word, as well as where to seek corroboration, check credentials, and find alternatives. They also need to be able to assess their own needs, and take effective steps to get appropriate resources to meet them. This is a task familiar to classical liberal education, of course.

As Watts (1996) suggested, we may have reached the point at which 'the locus of control in the usage of such systems – which in the first period belongs to the system, and in the second to the interactive interface between system and individual – passes to a much more significant extent to the individual.' But will someone now provide us with the evidence, please?

References

Bartram, D. (1997). 'Distance assessment: psychological assessment through the Internet'. Selection and Development Review, 13, 3, 15-19

Boreham, N.C. & Arthur, T.A.A. (1993). 'Information Requirements in Occupational Decision Making'. Sheffield: Employment Department, Research Series No. 8.

Canadian Labor Force Development Board (1998). 'Standards for Electronic Labor Market Information. Final Document for Review and Approval' - Meeting of the Working Group.

Garis, J.W. & Niles, S.G. (1990). 'The separate and combined effects of SIGI or DISCOVER and a career planning course on undecided university students', Career Development Quarterly, 38, 261-274.

Offer, M.S. (1997). A Review of the Use of Computer-Assisted Guidance and the Internet in Europe. Dublin: National Centre for Guidance in Education.

Offer, M.S. & Sampson J.P. Jr (1999). 'Quality in the content and use of information and communications technology in guidance'. British Journal of Guidance & Counselling, 27, 4, 501-516.

Offer, M.S. (2000). 'Developing a framework: relating resources to stages of the guidance process'. Assessment Matters, 11, 22-24.

Sampson, J.P. Jr, Palmer, M., & Watts, A.G. (1999). 'Who Needs Guidance?' Occasional Paper, Centre for Guidance Studies, University of Derby.

Scottish Council for Research in Education (1998). Effective Use of Computers in Careers Guidance: a Research Report. Sheffield: Department for Education and Employment.

Tait, A. (1999). 'Face to face and at a distance: the mediation of guidance and counselling through the new technologies'. British Journal of Guidance & Counselling, 27, 1, 113-122.

Watts, A.G. (1996). 'Computers in guidance' in Watts, A.G., Law, B., Killeen, J., Kidd, J.M. & Hawthorn, R. *Rethinking Careers Education and Guidance. Theory, Policy and Practice.* London and New York: Routledge, 1996.

Watts, A.G. & Jackson, C. (2000). 'Networking a computer-aided guidance system within higher education institutions: practice and potential'. British Journal of Guidance & Counselling, 28, 1, 55-73.

PrediXions - The National Labour Market Information Service

Terry Collins

Dear Fred,

You asked about labour market information. I have been, I am and I will be a client of careers guidance and career development services. By courtesy of these mostly public services, I have at my disposal a continuously updated National Labour Market Information Service, which has a particular title as you see and which in our country is designed for the use of the population at large. I can access this service on the Web through our digital TV set in the lounge at home or through any PC screen at any of the information points in public centres, large stores, libraries and the like throughout the town. In the schools and colleges it gets projected on to wall-screens whenever our children have work-related education sessions, civic studies or lessons about economic developments and the like. It is useful. It is even more useful when careers experts are present and can underline pieces of information particularly relevant to any one of us as individuals. They use the same information source and are very familiar with the changes taking place, on a day-by-day basis.

The opening screen is an introduction to the service in simple, plain language, which tells you what it is, what it contains and how to use it. We usually skip these pages now but there is a useful flashing icon which tells you about any significant changes or new developments in the service. Pressing the "NEXT" button gives you a choice of different pathways to follow, depending on what the questions are which you have in mind at the moment. You can choose:

- National and Global – which deals with longer-term changes happening over something like a ten-year period. These are mostly structural changes in work and training and gives you a chance to see how things are developing in other countries as well.
- Regional – which gives you information about the trends in demand and supply in whatever region of the country you care to select. It's a sort of snapshot about what is going up and down in opportunities over a five-year period. Invariably, we go for trends in our own region but the children get curious and look elsewhere when they decide they are going to live in Cornwall or somewhere, usually after some sort of altercation with their parents!
- Local – and here you are given two options, which relate to a chosen travel to work area, in any part of the country. You can select either 'Annual Recruitment Expectations' or 'Vacancies Now'. The 'Annual Recruitment Expectations' route tells you about what is expected to arise as vacancies and opportunities from the patterns of the last year or two in that area. Ella said this was particularly useful when she was coming up to her 'last year at school'. And 'Vacancies Now' is in fact a sort of employment agency service, with live vacancies or opportunities available in the district – or in any other district you choose to look at.

So that provides the initial options, which are time-related in the sense that they reflect the urgency or otherwise of any decisions you are thinking of making. I should point out that in all four of these routes, the individual entries contain information about job vacancies or training opportunities or courses of vocational education. It's all there but you can opt if you wish to search on just the job vacancies or the college places, etc. I once heard it suggested in expert circles that actual vacancies, available today, was not what was really meant by 'labour market information'. It used to be regarded as a separate system – but as far as I'm concerned it's very real labour market information and one of the most interesting parts of the service. It isn't necessarily because one is thinking about a job change right now. Out of curiosity, our children often wander up and down the screen looking at the salary scales and the perks. Because it is immediate information: if you are 'on line', you can press buttons at any particular vacancy or opportunity on offer and get an enquiry form or application form sent off by e-mail in the usual way. I have only done this a couple of times, but you get two types of response. Sometimes, you get a direct response from whoever is offering the vacancy, and sometimes you get a reply from the 'Co-ConneXions' Service, which is presumably when the employer or whatever is setting some sort of filter in between the advert and the response. One of the good things about this searching on different main options is that, when you are into any particular entry, you can use an icon on the screen to switch directly between the very short-term and the longer-term types of information.

Whichever route you choose, when you first get into the labour market information itself, the options are not classified under job titles or industry title. Instead you have to choose from what is called a 'Vocational Skills Focus'. I've put a copy of these for you on the accompanying chart. As you see, this gives you seven main types of vocational skills to consider. If you are

Vocational Skills Focus

PRACTICAL SKILLS		INFORMATION SKILLS		PEOPLE SKILLS		PERFORMANCE SKILLS
A **Practical and Scientific - Material Things** Making, Building, Installing, Operating, Testing, Repairing Maintaining, Measuring, Calculating, Protecting, Driving, Loading – with machines, materials, equipment and structures, Researching and Creating new understandings and things in the material world	**B** **Practical and Scientific - Living Things** Growing, Nurturing, Looking after, Operating-on, Healing, Harvesting, Treating, Preventing diseases of – plants, animals and living tissues, Caring for the natural environment, Creating and Applying new understandings in the world of living things	**C** **Organisation of Information** Obtaining, Storing, Retrieving, Checking, Manipulating, Entering, Organising, Monitoring, Preparing, Presenting, Translating, Conveying, Scheduling, Classifying – information and data, Managing and Creating new solutions to solve complex problems of organisation	**D** **Dealing with Ideas and Concepts** Visualising, Analysing, Evaluating, Illustrating, Formulating, Designing, Developing – for concepts and strategies, Producing plans, charts and graphical representations, Researching and Creating new models and ideas for organisation, products or services	**E** **Duty of Care** Helping, Caring, Empathising, Assessing and Diagnosing, Showing warmth, Counselling, Being sensitive and supporting – interacting with individuals or groups who need personal support, Encouraging independence, Creating new understandings, dispositions and behaviours	**F** **Duty of Service** Advising, Informing, Welcoming, Assisting, Explaining, Communicating verbally and in writing, Influencing, Interpreting, Promoting and selling, Persuading, Coaching, Advocating Negotiating – with individuals or groups who require a service, Creating new understandings and attitudes	**G** **Performance and Arts** Performing to entertain, enlighten or compete – in drama, sport, music, speech, fine arts, creative writing, dance and other means of human expression, Creating new works, designs and ideas in performance and the arts

Within the processes of careers education and guidance – and of employers' recruitment and selection – each 'Vocational Skills Focus' is interpreted at each of the five NVQ related levels of performance. Each 'type' and 'level' of skill, thus defined, may then be placed in a particular 'Industry Setting', the classification of industries used by National Training Organisations. Specific opportunities for employment or training may then be further defined as a Job Title and description, for a given set of circumstances.

starting training for work for the first time, like a school leaver, or even if you are going for some sort of deep specialism, then it is possible that you would choose only one of these skill areas as your main focus. On the other hand, people who have had some experience are much more likely to select a combination of two or perhaps even three of these main areas. So there is a range of the more usual combinations to choose from as well. Altogether, there's about thirty main options or combinations to select from. Anything more subtle than that and you'd have to probe separately into several choices. I have had jobs in the past where one could honestly say that there was a certain amount of all seven of these contained in them somewhere. But if asked which were the dominant skill areas, those which were the essential first base, then I'd have no difficulty in picking those out also. It's very much a pragmatic approach but there are few people familiar with an occupation who cannot immediately identify the two, very occasionally three, key skill areas for any one specific job. Whilst on the subject of 'key skills', there's no attempt in this classification to include what is called the basic skills or generic skills, which go across the board in all skill areas and at different levels. If these need to be emphasised then this information is included within the text of a particular entry.

So that gets you as far as choosing the main type or types of skill area you want to look at. You then get another choice, which is to select the level of that skill you want to look at. Here you get five choices which are related to the NVQ levels and their academic equivalents, if I dare use that word in NVQ speak. Now you've got a type of work and a level of work selected, which includes training opportunities or vocational education courses as I said earlier. You can now scroll down a host of individual entries which carry job titles with them as well as identifying the industry in which the particular opportunity is set. Of course, when you are using the Regional or the National/ Global search routes, the information given about trends is of a more general nature but nevertheless also refers to particular jobs with their titles and industries. It is also sectionalised, so that you don't have to scroll down screen after screen until you come to the bit you want.

I've mentioned this business about being able to press buttons to get into other related programs or information sources. In 'PrediXions', when you are into any particular labour market information entry, there are a set of search options down the side of the main screen. This gives you a chance to search a particular file in front of you on the basis of a job title or a particular industry setting if you wish. You can also search for information on the basis

of specific salary ranges, or where flexitime options are offered or child care facilities are made available. There are a number of these specific search routines. They change over time and as bright ideas emerge but these are always sign-posted at the first entry screen to the service if something different or new is possible. At each skills focus and level section you get into, there are also icons on screen which can link you directly across into other websites like the UfI site or the colleges and universities, the National Training Organisations and careers information encyclopedia-type sites. Some of these links are very clever and they take you to that part of another website which relates to the skill focus and level area which you are looking at in 'PrediXions'.

I have to admit that it took a little while to get used to this idea of searching out work options on the basis of the skills involved instead of familiar job titles. I say 'familiar' but the way things are changing, half the job titles I see bounced around these days I have never even heard of, even in my own present industry! And I can appreciate now how job titles can carry with them some very old-fashioned stereotypes in most people's minds. I've come across jobs with exactly the same job title but where the skills mix can be entirely different and vice versa. The biggest bonus though is coming across examples of a particular skills focus being in demand in jobs and industries I previously knew little about. As they say, skills are now far more transferable or portable across all sorts of different industries. Young Max - still very competent in the maths and physics area but most disinclined to become an 'oink engineer' as he called it – changed his mind somewhat when he searched these skill areas, at my insistence, but against his current preference for the 'entertainment industry'. In the 'PrediXions' Service, when you get into the skill focus and skill level choices, there are 'Help' buttons, which are good explanations about what it all means and the factors likely to arise in making a selection. They even have video clips and careers teacher chat stuff, if you're used to that sort of thing.

I don't know too much about it, although I'm grateful for the effort, but it would seem this National Labour Market Information Service relies heavily on what was known as 'joined up thinking'. All the information for the two 'Local' routes to information has to be continuously and directly fed in from every one of the travel-to-work districts. The regional information is distilled and entered at the regional level and all the national and global stuff comes from the 'Co-ConneXions' lot at the central Government Department for Education and Industry. The information we take for granted, therefore, comes from all over the place, though I suppose that having four distinct files makes it easier to manage the updating. What I like about it though is that this national effort seems to work bottom upwards, so that what starts out at people's ground level reality gets progressively put together into the regional and national trends as well. There must be some very smart types somewhere working back down again to pick up the predictions about the way the labour market is moving – hence, no doubt, the title. The ICT boffins I know say that it isn't any big deal by way of technology, though they'll admit it's complex by volume of information. Almost as complex as the National Insurance system but not quite.

The real achievement was getting all the agencies and bureaucracies to work together. Employers and their organisations now have a commonly accepted way of describing work in terms of skills needs and gaps. Career guidance experts are also now using exactly the same 'Vocational Skills Focus' language when they are recording the career choices and destinations of the younger part of the population. That has meant that qualitative and quantitative comparisons can routinely be made between what the country's economy would appear to need and what the newcomers to the labour market are actually choosing to do. These in their turn get fed back into the labour market information service itself and into the 'careers education' provided in the schools and the planning of 'post-school' provision. A virtuous circle – bingo! The youngsters in schools take it for granted now that they will first consider the broad choice of a 'skills focus', then go into debate about the level of those skills they think they could reach and finally the industry setting in which they would like to use those skills. Understanding the distinction between the skills they could use and the different industries where they could use them is quite an eye opener for some. Only lastly comes the choice of a selection of specific job titles, as and when they get to that stage. Very young kids often start with job titles, of course, but in working their way back into the skills categories, I think they learn an awful lot more than we ever did about options in the labour market.

Having a single national service like this gives it an enormous presence in the lives of ordinary people. And joy of joy, it's a one-stop shop. I don't have to go trailing around hundreds of different sites any more when I'm in a career mood. It's all accessible from one place which starts with labour market reality and then links back into all the specialist sites if I need them. It's easy to use when you've tried it once or twice and of course all the youngsters leaving school these days have been tapping into it regularly for the last three years or so. The whole debate about changing skills needs in the new and global economy used to be a bit of a mystery to most folk. It was the sort of chat that economists and HRD people had. Now it's different. Everyone seems to be more familiar with what the score is in the job market and people even talk about their 'skills portfolio'. No-one uses 'PrediXions' on a daily basis, except the 'Co-ConneXions' people perhaps, but it's there like Yellow Pages. As a service for ordinary people in ordinary language and available all over the place, I think it's great. Don't you think so too?

Yours,

Terry

The Vocational Card Sort used in Career Counselling with Disabled Ex- Services People

Migel Jayasinghe

Abstract

Persons who are medically discharged from HM Forces having acquired a disability of some kind, and other ex-Services men and women who become disabled later in civilian life, are at risk of unemployment and floundering in the labour market without targeted vocational assessment, guidance and counselling. Alongside a number of normative psychometric tests and instruments selectively used, a Vocational Card Sort developed in-house at the RBLI Vocational Assessment Centre, appears to have been especially useful in helping this client group achieve appropriate career development goals. A rationale for the use of the Vocational Card Sort with outcomes based on concrete examples is outlined in this paper.

Background

I was invited to establish on a greenfield site The Royal British Legion Industries' Vocational Assessment Centre (in March 1996) to serve ex-Services personnel with disabilities facing problems in gaining and retaining appropriate civilian employment. About 400 ex-Services women and men of rank equivalents from Private to Lieutenant-Colonel have undergone vocational assessment guidance and counselling over the last four years. Although a few took up employment soon afterwards, the vast majority identified latent potential, skills, strengths and interests, which enabled them to chart a more demanding but fulfilling career path for the future. Many took up vocational re-training and further education, with a significant minority securing university places for degree-level study in disciplines ranging from Electronics and Sports Injury Rehabilitation to Psychology. A wide range of psychometric tests of ability, aptitude, personality, and interests including work samples, are selectively administered over two-and-a-half days of intensive, tailored intervention with each individual client. With guidance, most prepare their own CVs towards the end of the assessment period. The Measure of Guidance Impact is routinely used as a pre- and post-guidance instrument to evaluate the assessment programme and has consistently yielded statistically significant positive results (Jayasinghe 1998; Jayasinghe & O'Gorman 1998). Over the last four years, as a reflective practitioner, I have begun to appreciate the advantages of the social constructionist paradigm, and the narrative approach to career counselling, as being best suited to meet the needs of this client group (Cochran, 1997; Crossley, 2000; Jayasinghe, 2001, in press; McLeod, 1997). While not disdaining nomothetic psychometric tests, which continue to form the bedrock of psychological assessment, I have increasingly resorted to experimenting with idiographic procedures, with far greater face validity and effectiveness within a counselling approach.

Vocational Card Sort

One of the procedures I have found useful is derived from the vocational card sort first introduced by Leona Tyler at her 1960 Presidential Address to the APA Division of Counselling Psychology. Although she had tried to place her work within the individual differences tradition of experimental psychology, it was evident that she had been influenced by the work of George A. Kelly (1955) who, as a clinician, had advocated an idiographic stance in eliciting construct systems which govern people's behaviour. This is quite at variance with the nomothetic approach of mainstream psychology and cognitive behaviourism, the dominant paradigm in psychology for most of the 20th century. Even so, Kelly's Personal Construct Theory, described as a 'major superordinate theory for many psychological phenomena' (Scheer & Catinal, 1996: 13), has become very influential over the last 40 years with adherents in several European countries and Australasia.

'Man (and woman) as scientist' is the central tenet in Kelly's Personal Construct Theory. Just as the scientist aims to control more and more of reality by predicting events through experiment, every person tries to predict the course of events in their life and therefore to control outcomes that are important to them. All of us hold explicit, or for the most part implicit, theories about the world around us including significant others, while we develop hypotheses to test against 'reality'. We anticipate events and experiences, and our expectations may be unique to ourselves, or like some others', or like most others' within a culture or subculture. Our perceived constructions may be validated or invalidated, in some contexts but not in others, and we adjust our responses, attitudes and behaviour accordingly. Kelly gave the philosophical label constructive alternativism to the idea that, given our experiences, we choose to construct our own picture of the world, and relate to it in our own way. There are obviously many possibilities for growth and development in such a position, especially in a rapidly changing environment.

Unlike orthodox psychologists, Kelly does not separate human psychological processes (for example) into cognition, emotion and conation. His systemic, holistic approach defines human 'constructs', not as a theoretical concept as against an observable variable, but as a functional tool. In Kelly's theory, constructs are binary, or bi-polar. We invariably comprehend the world in terms of contrasts. For instance, we cannot grasp the concept of 'large' without simultaneously having some idea of what 'small' is. 'Fast' versus 'slow' depends very much on context. Constructs replicate events in our imagination, which shape our view of the world by continuous confirmation or disconfirmation. Like storytelling in narrative psychology, it is a never-ending process with possibilities for constantly shifting viewpoints and emphases. Constructs may be organised hierarchically, and may at times be contradictory or incompatible. These central tenets lead to a number of corollaries, which are outside the scope of this paper.

The locus of interest in Personal Construct Psychology is 'the analysis of the construct systems which an individual uses to analyse, understand, structure, change his/her environment' (Scheer & Catina, 1996: 15). Kelly introduced the Repertory Grid technique to explore the constructs, ideas, values and beliefs that make up an individual's personal construct system. The Repertory Grid has been used in many areas of human behaviour including psychotherapy and business applications. Applied to the careers domain, how it works is outlined below.

The Repertory Grid is a framework, which consists of three components:

1 The 'elements' or in our case 120 job titles printed on cards and a category labelled the 'Ideal Job'.

2 The 'constructs' or how the client construes and differentiates among elements or jobs which are usually elicited by asking the client to say how two jobs are similar to and different from a third.

3 A numerical score on a rating/ranking scale, (we use a five-point scale with 5 at the positive end of the scale and 1 the negative pole). They show how each of the jobs is subjectively assessed by the client in terms of his/her constructs.

From my perspective, I felt that it was futile to attempt statistical analyses just because quantitative data were available for a number of clients. Indeed, there are several computer software programs which attempt cognitive mapping, or make explicit people's mental models of a domain on the basis of scores on the Repertory Grid. Those interested need only to access the Internet for a vast array of information on PCT, Repertory Grid and computer programs such as Ingrid, Omnigrid and WebGrid.

Examples

The following are composite profiles to preserve confidentiality, but are based on the records of real clients.

One of my ex-Service clients, aged 47, was recovering well from a head injury, but was no longer as physically active as he used to be. He had been a Corporal with the Royal Logistic Corps. On the Repertory Grid, he scored equally highly on 'Restaurant Manager' and 'Transport Manager', identical to his score for the Ideal Job. The positive constructs elicited were listed as 'excitement', 'sociability', 'communication', 'creativity', 'variety/activity', and 'team work'. On the contrasting negative pole were 'dull/boring' 'non-co-operative', 'negative/rude', 'destructive', 'routine/repetitive' and 'being alone'. Having discussed and obtained more information on the two jobs he clearly preferred, and making allowances for some practical considerations, he decided to prepare for a career as a 'Transport Manager'. He accessed the local training information database on how to gain the appropriate qualifications on a relatively short evening course at a further education college. When he was offered an even shorter course on a residential basis at the Royal British Legion Training Company Tidworth College in Hampshire, he took this up straightaway. He gained the Certificate of Professional Competence in Transport Management at the end of the course. However, with full family agreement, he had to relocate to Kent, before he could obtain a job as a Fleet Manager.

A 30-year-old ex-Service woman who had been an office worker with her Regiment had been strongly advised by her Resettlement Officer to remain in such work as a civilian. She was told that she could earn 'good money' as a temporary secretary in London. She had suffered from a prolapsed disc and was due to be medically discharged. Scoring 58 items correct on the 60-item Ravens Standard Progressive Matrices Test, she showed herself to possess a very high level of 'fluid' intelligence. With good scores on other aptitude tests, she showed clear potential for tertiary academic education, a possibility that she had not entertained before. The Vocational Card Sort pointed to expressive, creative and artistic interests allied to publishing and book editing. A three-month follow-up revealed that she had taken up an Open University Degree course in the Humanities having decided on a long-term perspective regarding a future career, a position fully supported by her partner.

Conclusion

Traditionally, a career intervention has been time-limited, technique-oriented, often fragmented, and isolated from other aspects of a client's life. Investigators into the theory and practice of career counselling have pointed to the lack of research on the importance of the quality of client-counsellor relationships (Slaney & MacKinnon-Slaney, 2000: 375). That this is an important parameter is revealed in the comment at the end of her assessment by the young woman client above, that the 'counsellor must be proud of what he does for a living'. The ex-Corporal in his characteristic way said that he came to assessment like Mickey Rooney, but left feeling more like John Wayne. These were both unsolicited feedback.

Career counselling, especially when one uses the Vocational Card Sort, becomes not just an interview but more a conversation between equals. It helps the counsellor relate to the client as a whole person who needs to be understood and involved in the counselling relationship. The Vocational Card Sort used as a basis for exploring the unique personal space of the client is interesting and involving for both client and counsellor. It is hoped that the new government initiatives in developing Personal Adviser roles for a wide range of clients seeking vocational guidance will incorporate a counselling element, which enhances the quality of the encounter. In such a context, it is empirical validity that should be sought and not the mechanical reliability and validity of mainstream experimental psychology.

References

Cochran, L. (1997). *Career Counselling, A Narrative Approach.* Crossley: Sage Publications.

Michele L. (2000). *Introducing Narrative Psychology; Self, trauma and the construction of meaning.* Milton Keynes: Open University Press.

Jayasinghe, M. (2001, in press). *Counselling in Careers Guidance.* Milton Keynes: Open University Press.

Jayasinghe, M. (1998). 'Vocational assessment and the ex-services disabled – the use of MGI as an evaluative tool'. Assessment Matters, Spring, 15.

Jayasinghe M. & O'Gorman, J. P. (1998). 'Vocational guidance of the disabled ex-service person at the Royal British Legion Industries'. The Occupational Psychologist, 35, 22 - 27.

Kelly, G. A. (1955). *The Psychology of Personal Constructs.* New York: Norton.

McLeod, J. (1997). *Narrative and Psychotherapy.* Crossley: Sage Publications.

Scheer, J .W. & Catina, A. (Eds.) (1996). *Empirical Constructivism in Europe - The Personal Construct Approach.* Giessen: Psychosocial Verlag.

Slaney, R. B. & MacKinnon-Slaney, F. (2000). 'Using vocational card sorts in career counseling' in Watkins Jr, Edward, C. & Campbell, V. L. (Eds.) Testing and Assessment in Counselling Practice (2nd Edition) (371 - 428).

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Girls on Top? Girls, Career Aspiration, and Achievement at School

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In recent years a growing concern about social change involving men and boys, dubbed 'the crisis of masculinity', has been reflected in the British media. Two recurring themes in this debate are those of boys' 'underachievement' at GCSE level, and the impact of the decline in manufacturing on the future working lives of young men. Particularly regarding the issue of GCSE achievement, the debate has largely focused on boys: there has been little attention devoted to the reasons for female success at this level. This article suggests that it is girls' practices, rather than those of boys, that have changed. It is argued that social changes and shifts in girls' career aspirations can explain the improved performance of girls at age 16.

Underachievement?

The notion of boys' underachievement is a controversial one (1). It is certainly the case that girls do better than boys at English and other language subjects at GCSE level. However, this was also the case twenty years ago before the introduction of the National Curriculum. What has changed is that at GCSE level girls have now largely caught up with boys at Maths and the 'hard' Sciences. As recently as two decades ago, boys were out-performing girls at 'O' levels in these subject areas, and this was causing concern among feminist educationalists. However, as Walkerdine et al. (1989) pointed out, girls were actually doing better overall than boys at 'O' level even at this time. It was simply that this achievement tended to be in the 'wrong' subject areas, e.g. Domestic Science, and consequently was not viewed as 'real' achievement. Since the introduction of the National Curriculum in Britain, girls and boys have been forced to take the same core subjects, and girls have shown rapid improvements in traditionally 'masculine' areas. As Epstein et al. (1998) observe, boys' performance has actually been improving year on year, yet is still perceived as underachievement in comparison with girls.

It is also important to remember that, once free to choose which subjects to take at 'A' level, girls largely revert to traditional patterns with the majority choosing Arts and Humanities subjects at the expense of Maths and Science. This has important implications for their futures as I shall discuss below.

Very little has been said about the reasons for girls' improved achievement at GCSE level. What little speculation there has been has usually focused on the apparent success of equal-opportunities programmes, or on the coursework component of GCSE assessment (the argument being that girls are better than boys at written presentation, and worse at exams – this argument is belied by the lack of change in achievement patterns since the recent reduction in GCSE coursework). Arnot et al. (1999) make the more general argument that economic and social change, including the introduction of the National Curriculum, has impacted on girls' performance. Developing this point, findings from my study suggest a more specific argument: that girls' increased career ambition, coupled with a feeling that they may be disadvantaged as women in the workplace, is providing girls with the impetus to achieve. Of course, this argument supposes two things: firstly, that girls want jobs and see their future employment as important; secondly, that girls believe success at school will help them to gain employment. This article discusses these questions.

The Study

The findings presented here are drawn from a study of Year 10 and 11 pupils' constructions of gender and learning, which was funded by the Economic and Social Research Council. Pupils' behaviour during top and middle-band Maths and English classes was observed at three different London co-educational state schools. 100 of these pupils (50 girls and 50 boys) were then interviewed about their views of school and learning, their career aspirations, and their perceptions of gender issues. Full details of the findings can be found in my book *Boys, Girls, and Achievement: addressing the classroom issues* (Francis, 2000).

Job Choice

When asked what job they wanted to do when they completed their education, girls listed 36 different jobs, and boys 34. This diversity of choice supports my findings from a previous study in primary schools (Francis, 1998), showing that girls now consider a far wider range of occupations than they did in the 1980s (according to studies at the time, e.g. Spender, 1982). And where Spender (1982) and others found that secondary school girls largely aspired to stereotypically feminine, non-professional jobs, I found that 30 girls chose jobs which

normally require a degree (nearly two-thirds). (This trend was even stronger among the boys, with 35 choosing jobs which usually require a degree). Some traditionally feminine jobs listed by Spender in the 1980s were represented among girls' choices: for example, hairdresser, nurse and air hostess. However, their choices also included traditionally masculine occupations such as pilot, computer scientist, soldier and business person. 'Doctor' was the most popular choice among girls: six girls said that they wished to pursue this occupation. Solicitor and actress came joint second, with four votes each. The choices of doctor and solicitor illustrate girls increasing interest in professional careers, observed by Lightbody & Durndell (1996).

This picture demonstrates a dramatic shift in girls' career aspirations over the last twenty years. While Spender (1982), Gaskell (1992) and others found girls preparing to work until they were married, and then to stop work or assume the role of secondary bread-winner, my findings in the primary and secondary school show that girls are now far more career-oriented (Francis, 1998; 2000). The majority appear to see their chosen careers as reflecting their identity rather than viewing paid work as a stop-gap before marriage. This may be partly the result of equal-opportunities programmes and a larger availability of role models as increasing numbers of women participate in, and succeed in, the labour market. However, it may also stem from changes in society which bring a new materialism and realism. The increasing divorce rate and number of single-parent families seemed to have had an impact on the thinking of some girls in my primary-school study who argued that women must fend for themselves as you 'cannot rely on a man' (Francis, 1998). Moreover, in two-parent families it is now far more usual for both parents to work full-time than was the case even a decade ago.

Gender Discrimination

When asked whether they believe that their gender impacts on their lives in any way, two-thirds of the girls said that it does. They provided various explanations, ranging from arguments that they face greater restriction from their parents than do boys, to bemoaning the hypocritical values which lead sexually active boys to be admired, where girls risk being branded 'slags'. However, it was gender discrimination at work which most of the students alluded to when maintaining that gender makes a difference to one's life. This was particularly true of girls, of whom 21 raised the issue of discrimination against women in the workplace (compared to only six boys).

Girls talked about the possibility of sexual harassment in the work place and discrimination in employment practice. Regarding the latter issue, girls voiced three areas of concern: some girls argued that men are paid more than women, others that men are given the best jobs or preferred to women by employers, and others claimed that more jobs are available to men than to women. Many girls also drew on personal or anecdotal evidence to argue that there is still discrimination against women when attempting to enter traditionally masculine occupations. A number of girls had ready examples of sisters, cousins and the like who had attempted to get jobs traditionally seen as male, and who had been unsuccessful (though some had apparently persevered and had gone on to excel in these occupations). The diversity of issues raised by girls, and the numbers of girls voicing these anxieties, indicates a strong concern with the future work environment on their part of these students. These findings lend support to Pickering's (1997) speculation that a possible explanation for girls' higher levels of motivation in the secondary school might be a feeling that they have to do better than boys in order to compete with them on even terms in the workplace. Athena (a mixed-race, Year 11 girl) specifically supported this interpretation. She described the current jobs market as gender-discriminatory. When I asked her whether she thought this situation will change, she replied: "I think it will change, because girls are doing better, so they [employers] will have no choice". Girls are doing better because "girls have realised that they have to work that much harder than boys to get somewhere".

It is arguable, then, that if girls seek dynamic careers, yet see the adult workplace as gender-discriminatory, they might pursue ways of minimising their gender disadvantage by increasing their likelihood of resisting employer discrimination. In terms of education, such investments or weapons might be knowledge and experience, and qualifications.

In fact, my findings show that virtually all students, both male and female, believed that participation in further education is important. Many pupils stressed the importance of being 'educated', valuing 'an education' in its own right. But the majority of pupils talked in terms of the qualifications provided by further education, arguing that these help you to get a better job in what is often seen as a highly competitive employment market. For example, when I asked what difference further education makes, Joseph (Afro-Caribbean, Year 10) replied that, "without further education, you'll probably end up working in Sainsburys". Many students were aware of the issue of youth unemployment. These pupils presented the world of employment as hard and competitive: Maisie (Anglo, Year 10) explained, "the way things are going at the moment, with um, sort of, employment and that, you have to have good grades and that, to get, like, just a job really. So many people doing college and everything you've got to start keeping up with them otherwise you won't get a job".

Although boys and girls appeared equally positive concerning further education, it does not appear unreasonable to suggest that girls in particular may see the gaining of qualifications as imperative in securing their future careers, given the high proportion that said gender discrimination exists in employment practices.

Discussion

It is true that boys were equally ambitious in terms of their careers, and also placed a high importance on further education in the belief that qualifications would earn them better jobs. However, my main point is that girls' similar preoccupation with qualification and careers marks a change for girls. It may be this change in their post-secondary school aspirations which partly explains their swift acceleration in achievement at GCSE level, and their increasing continuation to higher education. Moreover, their awareness of the issue of work-place discrimination may provide them with an extra spur in their efforts in education, which does not apply to boys.

Whether girls' investment in their futures does in fact pay off is debatable. As Rees (1999) observes, men still hold the vast majority of top jobs across Europe, though women have increasingly broken into middle management. Moreover, the different types of post-16 courses and careers pursued by men and women mean that particularly highly remunerated or high-status jobs continue to go to men. In this sense, girls' fears about future gender disadvantage in the workplace, and male complacency about the future, appear justified.

A further finding from my study was that, although girls' job choices were diverse and often ambitious, caring and creative jobs were over-represented at the expense of business-oriented and technical jobs (while the reverse was true for boys). This trend is of course reflected in the continuing high numbers of young women choosing arts and humanities courses, and young men science courses, at 'A' level and degree level; and the larger proportion of young men that take up vocational training. As many of the skills shortages in the European workforce are located in the IT and engineering sectors (and as these jobs tend to be particularly well remunerated), girls' avoidance of these subjects in post-16 education and in their career aspirations is significant.

Work needs to be done in schools to show students of both sexes the current and developing patterns of job availability and skill shortage, and the way in which their choices of course and career can influence their future career prospects.

Notes

(1) For an up-to-date, considered debate on the extent of 'gender gap' at GCSE level, see Arnot et al. (1999).

References

Arnot, M., David, M. & Weiner, G. (1999). *Closing the Gender Gap.* Cambridge: Polity Press.

Epstein, D., Elwood, I., Hey, V. & Maw, I. (1998). *Failing Boys?* Buckingham: Open University Press.

Francis, B. (1998). *Power Plays.* Stoke-on-Trent: Trentham Books.

Francis, B. (2000). *Boys, Girls and Achievement: addressing the classroom issues.* London: Routledge.

Gaskell, I. (1992). *Gender Matters from School to Work.* Buckingham: Open University Press.

Lightbody, P. & Durndell, A. (1996). 'Gendered career choice: is sex-stereotyping the cause or the consequence?' Educational Studies, 22 (2), 133-146.

Pickering, I. (1997). *Raising Boys' Achievement.* Stafford: Network Educational Press.

Rees, T. (1999). *Mainstreaming Equality in the European Union.* London: Routledge.

Spender, D. (1982). *Invisible Women?* London: Writers and Readers.

Walkerdine, V. & the Girls and Mathematics Unit (1989). *Counting Girls Out.* London: Virago.

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