NICEC
Briefing

Careers Work and School Effectiveness

INSTITUTE OF EDUCATION
UNIVERSITY OF LONDON

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The National Institute for Careers Education and Counselling is a network organisation initiated and supported by CRAC. It conducts applied research and development work related to guidance in educational institutions and in work and community settings. Its aim is to develop theory, inform policy and enhance practice through staff development, organisation development, curriculum development, consultancy and research.

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Sheraton House, Castle Park, Cambridge CB3 0AX
Tel: 01223-460277 Fax: 01223-311708
E-mail: enquiries@crac.org.uk

DfEE

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Careers education and guidance in schools is primarily concerned with helping students to make and implement career decisions. There are however grounds for suggesting that it may also have benefits in enhancing pupil motivation and attainment. This suggests that it may not only be of value in its own terms, but also enhance broader school effectiveness.

This Briefing:

- elaborates the theoretical grounds for the link between careers work and school effectiveness;
- examines the existing empirical evidence on this link;
- makes recommendations for further research in this area.

The Briefing is based on a DfEE-funded study carried out by John Killeen (NICEC & University of Hertfordshire), Pamela Sammons (University of London Institute of Education) and Tony Watts (NICEC).

RATIONALE

WHY IT MATTERS

The main purpose of careers education and guidance (CEG) programmes in schools is to enable pupils to develop the skills, attitudes and knowledge which will help them to make and implement career decisions, and so to manage their progression in learning and work throughout their lives. This is an important and valid objective in its own right.

There are however grounds for supposing that careers programmes may also have beneficial effects on pupil motivation and attainment *within* the school. This is significant because it means that such programmes can be viewed more broadly as agents of school effectiveness. There is evidence that the views on this link held by headteachers and senior management are likely to influence their policies regarding the place of careers work within their school.

A NICEC enquiry identified three perspectives on the relationship of careers programmes to raising achievement as measured by attainment targets and examination passes:

- The *positively supportive* view was that careers work was not only of value in its own right, but also made a positive contribution to raising achievement.
- The *neutral* view was that it had little or no impact on the achievement agenda.
- The *distractive* view was that, while it might be worthwhile in itself, it diverted attention from this agenda.

These perspectives influenced school policy:

- Where the positively supportive view was held, careers work was likely to be seen as a *whole-school* responsibility.
- Where the neutral view was adopted, it was likely to be *segmented* as a separate activity.
- Where the distractive view was held, it was likely to be *marginalised*.

Andrews, D., Law, B., McGowan, B. & Munro, M. (1998). *Managing Careers Work in Schools*. NICEC Project Report. Cambridge: Careers Research and Advisory Centre.

THE THEORETICAL CASE

There is a *prima facie* case for supposing that careers programmes may have a positive influence on motivation and hence on performance. This can be framed in terms of motivation theory, and more specifically in terms of self-efficacy theory, expectancy-value theory, achievement motivation theory, and attribution theory.

Motivation theory attempts to explain:

- *whether* a behaviour will be initiated;
- how much *effort* will be expended on it;
- *persistence* in the face of challenging circumstances or current lack of success.

Self-efficacy theory proposes that "self-efficacy expectations" (confidence in one's ability to perform a task) are a major determinant of these behaviours. There is strong evidence of the positive effects of self-efficacy on educational persistence and performance.

Expectancy-value theory proposes that both this "confidence", and the value people attach to the outcomes, are important. When people believe that

- they *can* do something, and that
- something they value will happen as a result,

they are more likely to do it.

Achievement motivation theory proposes that motivation to engage in an "achievement task" leads people to:

- prefer "moderately challenging" goals;
- avoid goals which are perceived to be either "too easy" or "too hard".

Attribution theory proposes that:

- "achievement tasks" will only be seen in this way when success or failure depends upon "internal" factors within the individual, rather than upon "external" factors;
- approaches to the tasks will differ according to the degree to which the "internal" factors governing success can alter and are under the individual's control.

In these terms, CEG programmes can help young people to:

- understand the relationship of educational goals to access to occupational goals (opportunity awareness);
- clarify valued outcomes – i.e. occupational goals to which they wish to gain access (self awareness of values, interests, etc.);
- set attainable educational goals by relating their capacities to these goals (self awareness of abilities);
- understand the relationship of current educational effort and performance to the achievement of these goals.

In the course of doing so, it:

- helps pupils to develop a sense of purpose (i.e. valued goals);
- challenges inhibiting beliefs – e.g. undue attribution to external and/or uncontrollable factors as against internal and controllable ones (e.g. effort);
- enables pupils to form "moderately challenging" goals with high intrinsic motivational force;
- minimises entry into educational options which will result in diminished effort and persistence, leading to course switching, drop-out, etc.

HYPOTHESES

These theories lead to a series of testable hypotheses concerning the effects of CEG programmes in schools:

Beliefs and perceptions

- That CEG leads to changes in causal attribution for educational achievement, towards internal and controllable factors such as effort.
- That CEG heightens beliefs about the connection between educational performance and personally valued outcomes.
- That CEG has an impact on understanding of the relevance of education to employment.
- That CEG increases the perceived range of educational options and potential vocational goals.
- That CEG has a positive influence on self-efficacy.
- That CEG increases the perceived relationship between effort and performance.

Intentions

- That CEG has a positive influence on intentions to continue participating in education.
- That CEG has a positive influence on the adoption of educational goals and/or educational "decidedness".

Participation

- That CEG has a positive effect on actual post-compulsory participation in education.
- That CEG reduces:
  - truancy;
  - behaviour and conduct in school contrary to efforts in education;
  - non-deployment of discretionary time (on homework etc.);
  - drop-out.

Attainment

- That CEG has a positive effect on attainment as measured by public examinations, attainment tests, basic skills tests, etc.

THE EVIDENCE

LIMITATIONS

The evidence available to test these hypotheses is currently very limited, not only in the UK but also internationally. Few studies have been commissioned specifically to do this, and such studies as have been conducted often suffer from various methodological limitations: e.g.

- Samples that are too small.
- Lack of control groups.
- Lack of adequate controls of other, confounding factors.
- Lack of clear specification of CEG inputs (especially where they are "part of something else").
- Lack of adequate measures of outcomes.

NEED FOR MODESTY

It is important to be modest and realistic in expectations of what the impact of CEG might be. Differences between schools account for only around one-sixth of variability in students' progress. When set against the total investment in the education of each young person, the resources devoted to CEG are modest, and variations in this provision are just one of many ways in which schools differ. Any effects are therefore likely to be "at the margin", in aggregate terms, and accordingly difficult to detect.

Modesty is particularly important where:

- The measures are fairly crude. For example, in the UK effects on attainment are often measured through banded performance in public examinations. This may be too insensitive to detect limited but worthwhile gains in attainment.
- There is inadequate time for full effects to occur. For example, where CEG programmes are concentrated mainly in the final year or so of compulsory schooling, it is unrealistic to expect them to have an easily detectable impact on achievement.

Also, since all schools can be assumed to provide *some* form of CEG programme, most studies are measuring not the effect of having a CEG programme against not having one, but the differential effects of different programmes. This limits the range of variability, and the extent of the measured outcomes that can be anticipated.

These points need to be borne in mind in what follows.

EFFECTS ON BELIEFS AND PERCEPTIONS

There is evidence that CEG can have a positive effect on relevant beliefs and perceptions. However, the ways in which attitudes and "personal agency" are considered in published studies do not map well on to the categories suggested by the theoretical case outlined earlier. This is not a criticism of past research, but indicates that there is more to be done.

EFFECTS ON INTENTIONS

There is a vast amount of evidence that CEG does have a positive impact on young people's decidedness *about* educational options. Studies of effects on intentions to participate are far fewer. Results here are mixed, but this is partly because participation is so heavily determined by other factors (home background etc.) that adequate study designs need to be correspondingly sensitive. The best study (below) indicates a small positive effect on intentions, though caution is needed in generalising from a single US study.

> In a well-controlled study, high-school counsellors had more contact with students with lower targets for post-compulsory education, and had a modest effect on these plans in favour of higher targets associated with continued educational participation.
>
> Rehberg, R.A. & Hotchkiss, L (1972). Educational decision makers: the school guidance counselor and upward mobility. *Sociology of Education, 45*, 339-361.

EFFECTS ON PARTICIPATION

There is UK evidence that formal careers advice to stay on raises the probability of doing so, to a small degree. There are also a few encouraging signs that CEG may have an effect on truancy and work habits. Again, however, caution is required because the most favourable indications come from very small American samples.

> In an intensive (1 class per day, 1 term, 100 hours) CEG programme in a US high school where over four in five pupils were from ethnic minorities, absences were reduced by 30%, and lateness by more than 50%.
>
> Hamdani, A. (1977). Facilitating vocational development among disadvantaged inner-city adolescents. *Vocational Guidance Quarterly, 26*, 60-67.

EFFECTS ON ATTAINMENT

No methodologically sound UK evidence is available. There are however numerous US studies of the effects on attainment of career education (which tends to start earlier than CEG in the UK, and to be defined more broadly to include basic skills etc.). These show clear evidence of small but positive effects.

> A meta-analysis (i.e. pooling of results) of 67 studies of the curriculum infusion of career education showed modest but significant effects on academic achievement, amounting to around 1% of the total variability in the attainment tests used.
>
> Evans, J.H. & Burck, H.D. (1992). The effects of career education interventions on academic achievement: a meta-analysis. *Journal of Counseling and Development, 71*, 63-68.

There is also positive evidence from the US of the effects on academic achievement of comprehensive guidance programmes (which run throughout compulsory schooling).

> A study involving 236 high schools indicated that schools with more fully implemented guidance programmes had students who were more likely to report that they had earned higher school grades.
>
> Lapan, R.D., Gysbers, N.C. & Sun, Y. (1997). The impact of more fully implemented guidance programs on the school experiences of high school students: a statewide evaluation study. *Journal of Counseling and Development, 75*, 292-301.

It is however unclear how far these differences (and especially their scale) can be generalised to more limited forms of CEG delivered in the UK towards the end of compulsory schooling.

CONCLUSIONS

- It is important to note that there is *no* evidence that CEG has *negative* effects on academic attainment or on the related variables reviewed here.
- It seems *likely* that CEG has *small but positive* effects on these variables.

RECOMMENDATIONS

More robust evidence is required on the relationship between CEG and school effectiveness. Further and more satisfactory studies are therefore needed. In planning such studies, attention should be paid to the following:

- The studies need to be large-sample multi-level research which permits statistical control for differences between young people, school classes, schools, and Local Education Authorities. This has become the standard approach to school effectiveness research.
- More detailed information is needed on the nature of the CEG programmes under examination. This is in order to counter the risk that aggregating different levels, standards and forms of provision may obscure small but significant effects.
- In this respect, attention should be given to the potential utility of relevant items from the growing OFSTED schools database, although other sources of evidence would also be required.
- More work is needed on designing appropriate *outcome* measures relating to beliefs associated with motivation, direct reports of attitudes to school, and measures of effort and associated behaviour. Pilot studies are needed on the conceptual basis of possible measures, the quality of existing instruments, and the practical aspects of data collection from schools.
- Work is also needed on appropriate *attainment* measures. Ideally, GCSE examination performance should be supplemented by measures of the key skills that are of particular interest to employers.
- It is however important that studies should examine not only attainment gains but also the mechanisms (i.e. intervening variables) through which they occur.
- Longitudinal studies are therefore desirable. These should cover the full period of CEG interventions in schools.
- A minimum sample size of 50-60 schools is likely to be required.

FURTHER INFORMATION

The full report on which this Briefing is based is:

Killeen, J., Sammons, P. & Watts, A.G. (1999). *The Effects of Careers Education and Guidance on Attainment and Associated Behaviour*. Cambridge: National Institute for Careers Education and Counselling.

It is available from NICEC, Sheraton House, Castle Park, Cambridge CB3 0AX, price £6 (inc. p&p).

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