THE DEVELOPMENT OF A CAREER EDUCATION PROGRAM FOR GIFTED HIGH SCHOOL STUDENTS

by

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Abstract

This paper reports on the development of a career education program for gifted high school students in a New South Wales selective high school. This program replaced a previous approach which was demand responsive, generic in approach, and not aligned with student needs. A needs analysis of the school and formative evaluations (through a survey of participants, participant observation, stakeholder input, and outcome reviews) were undertaken to ensure a successful program re-development. These evaluations resulted in the following changes: earlier and more flexible career awareness opportunities; increased scope for values clarification; inclusion of psychological, psychocreative, and social elements; integration of career education and student welfare; lifelong learning emphases; aspiration enhancement for particular students; strategy employment for females; and, an expansion in community learning opportunities. The implications for school personnel, students, and parents are considered with the aim to deliver a 'best practice' career education program for gifted high school students.

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Introduction

Career education as a discrete subject or program in secondary schools developed initially in countries such as the United States of America and Canada and has been accepted as a constituent part of the Australian secondary school curriculum since the 1970s (Glover, 1980; NSW Department of Education, 1983). Career education is now a curriculum-oriented program of personal and career development operating against a background of traditional liberal education. In Australian schools, it is concerned with the development of knowledge, skills, and attitudes through a planned program of learning experiences, and aims to assist students in making informed decisions about school and post-school options and to enable effective participation in working life (Australian Education Council, 1992).

This specific form of education is now considered an important program in Australian schools, particularly in the New South Wales (NSW) state school system. All NSW state secondary schools have a trained Careers Adviser who usually provides class lessons and individual and group counselling, organises work experience, and provides audio/visual and written reference information (NSW Department of School Education, 1993). Career education programs have as a significant feature a commitment to links between and among vocational preparation, career planning and job placement in the senior years in addition to the more traditional assistance to students to choose a full-time post-school course of study (Dusseldorp Skills Forum, 1997).

Six common themes underpin best practice in career education and guidance:

- it is client focused - it is based upon the needs of clients, it consciously monitors outcomes against these needs, it uses feedback to improve practice, and it contains tangible outcomes for students such as a portfolio;
- it is mainstream and systemic - it is an entitlement for all students, it is whole-school provision;
- it is multi-faceted - it includes information, learning from the workplace and experience, personal guidance, a curriculum perspective, enterprise education, the development of the key competencies and an emphasis on post-school choices;
- it actively involves students - it gains students' perspectives on jobs, courses and careers, and uses students to gather and report on this information;
- it involves the wider school community - it embraces employers, mentors, parents, and ex-students, and on-going access to community agencies; and,
- it uses relevant, accessible and user-friendly information - it employs a variety of tools and methods to deliver information to suit different students’ needs (Dusseldorp Skills Forum, 1997).

Career education programs have, in the main, provided for the needs of the general secondary school student population. In the same way that the students at each end of the general population spectrum - those in intellectually disabled student programs and those in gifted and talented student programs - need special support to achieve at their full potential in their schooling experiences, the same students also require career education programs oriented to meet their special needs (Clark, 1992). The recognition of the special needs of gifted and talented students within their general education indicates the likelihood that these needs should extend to the provision of career education. How specialised and/or different does the career advice for gifted and talented students need to be?

A body of literature reveals that career education for gifted and talented students needs to emphasise:

- multipotentiality;
• where to focus student effort;
• the involvement of students in their program construction;
• support to reduce career stereotyping, particularly gender-based;
• development of aspiration enhancement, especially for students from low socioeconomic backgrounds; and,
• finding personal meaning and reflecting one's own values through career choices

(Clark, 1992; Dusseldorp Skills Forum, 1997; Eby & Smutny, 1990; Gross, 1993; Hoyt & Hebler, 1974; Maker, 1982; Moore, 1978; Pyryt, 1993). According to Herr and Watanabe (1979), effective career counselling programs should introduce students to various fields of occupation, successful adults who have made a range of career and lifestyle choices, real-life experiences in the workplace, and biographical research which can enable identification with those who have made great contributions whilst overcoming adversities.

Research Questions

The overall purpose of this study was to develop, trial, evaluate, and adopt a career education program to accommodate the needs of gifted and talented secondary students. The study intended to provide a best practice exemplar program to be available to all secondary schools to support groups of gifted and talented students, or to be amended to support individual students.

The study sought answers to three research questions:

1. **What are the steps in the development and implementation of a career education program for gifted and talented secondary students?**
2. **What content and practices need to be included in a career education program to meet the specific developmental needs of gifted and talented secondary students?**
3. **What are the implications of a successful career education program for the school, school district, and wider educational system?**

Method

This qualitative research utilised a **case study approach** which was based on a needs analysis of an existing career education program at a selective NSW high school and a formative evaluation of a resultant preliminary program developed to meet the needs of gifted and talented secondary students at that school. The evaluation provided feedback for the ongoing development and refinement of the career education program.

Such an approach to the research problem is aligned to ‘action research’ which has as its basis the search for site-level solutions to workplace problems (Kemmis, 1985). There are four basic characteristics of action research: first, it is **situational**, diagnosing a problem in a specific context and attempting to solve it in that context; second, it is **collaborative**, with teams of researchers and practitioners working together; third, it is **participatory**, as team members take part directly in implementing the research; and fourth, it is **self evaluative**, as modifications are continuously evaluated within the ongoing situation to improve practice (Brown & Dowling, 1998).

Case study research has had a long history in educational research and has widespread acceptance when the study includes participant observation (Burns, 1995a). The case study is a widely-embracing term but typically involves the observation of an individual unit (e.g., a student, a class, the participants in a program, or a school) and, as well, requires field
research (i.e., that conducted in a naturalistic setting) and contextualisation ¾ the interpretation of the results in the context of the data collection (Wiersma, 1986).

A case study approach has a number of potential difficulties ¾ amount of description, analysis and material too time consuming to consider and for readers to digest, the sensitivity and integrity of the investigator, ethical considerations, and potential to oversimplify or exaggerate (Merriam, 1998). Aware of these difficulties and seeking to obviate them, the chief investigator took the following steps:

• to ensure that the amount of material was manageable both for the chief investigator and readers, the research focussed on actions and artifacts that were readily transferable to the developing program;
• to ensure the appropriate sensitivity and integrity of the chief investigator, all research was discussed with the teachers undertaking the program as a mentor group, and regular reports were made to the Parents and Citizens' Association (P&C), and the Student Representative Council (SRC) on the progress being made;
• ethical considerations were met by the research being undertaken in-house for the benefit of the school; no external financial support was involved; and,
• the mentor group support reduced the likelihood of oversimplification or exaggeration of findings.

The context for this research was a co-educational selective high school that sought to improve its career education program to more adequately meet the needs of its gifted and talented students. There were 920 students attending this particular school in Newcastle (with a Year 7 intake of 150 selected from approximately 1 000 applicants). Years 7 to 10 had 150 students each, and Years 11 and 12 had 160 students each. Although co-educational, there were more boys than girls enrolled, with a ratio of 6:5. There were 70 teachers and 11 support staff employed at the school. While, the selection of students for the school was based on an entry test ¹ of traditional academic performance within the school, the programs devised sought to cater for a wider interpretation of giftedness through the application of the work of Braggett, Renzulli, Gagne, Gardner, and Betts.

The study commenced when the school staff and the parents accepted that there were problems with the school's career education programs which were operating in 1997. In short, those problems were:

• Year 7 - there was only one pastoral care/student welfare/career education 55 minute lesson per fortnight taught by the Year Adviser using the Careers and Life Skills syllabus (NSW Board of Studies, 1985);
• Years 8 and 9 - there was no formal program;
• Year 10 - provision was limited to a student demand responsive program provided by the Careers Adviser, together with some preparatory lessons and a Work Experience (a five day placement in the world of work);
• Year 11 - provision was restricted to the Work Studies (NSW Board of Studies, 1993) elective course, together with a student demand responsive program provided by the Careers Adviser; and,
• Year 12 - the only provision was a student demand responsive program provided by the Careers Adviser.
It was accepted that the program neither sufficiently focussed on students' career education needs nor contributed in a meaningful way to the ongoing welfare of students. A desirable program would achieve both objectives if student welfare and career education were mutually supportive and if staff members who were to be involved in the new program were chosen for their pastoral care orientation and were provided with appropriate training.

In order to establish an understanding of the special characteristics of the school, a needs analysis was conducted. The need for change and improvement in meeting student needs for career education was therefore identified while the aspects of a program to accommodate the needs of students, the school, and the community were highlighted.

Needs analysis (sometimes known as situational analysis) is a form of case study that examines a particular event (e.g., a teaching program, or an act of student vandalism). All sources of information about the event are accessed and form data which provide a depth of information that can contribute significantly to the understanding of the event (Burns, 1995a). Understanding can lead to the identification of areas for improvement. The main advantage of adopting this approach in the present study was its involvement of teachers, students, and parents as stakeholders in the development of an improved career education program. Utilising such a large pool of interest does, however, have the disadvantage of varying degrees of reliability in the received feedback. Trend analysis, therefore, was used to discern the more valid responses (Owen, 1993).

During the second half of 1997 students, teachers, and parents at this selective high school were consulted by questionnaire and asked to indicate their expectations and the perceived needs of the school's career education program. The SRC, the P&C, and a meeting of all staff members were briefed on the needs analysis and their opinions noted. These results, combined with a literature review and staff reflection on the existing program at the sample school, were used to develop a preliminary career education program for gifted and talented secondary students at that school. This program was taught by Year Advisers, with team input from the Careers Adviser as appropriate. During 1998, a formative evaluation of the program was undertaken.

Formative evaluation assists in detecting whether or not a program is meeting its aims and objectives and suggests ideas for improvement (Morris & Fitz-Gibbon, 1978). This study drew on the aforementioned basic characteristics of action research within the formative evaluation stage. While action research is the application of fact-finding to a practical problem in a particular social situation with a view to improving the quality of action within that social situation (Burns, 1995a), this research also sought implications with wider application in similar social settings.

During the needs analysis and the formative evaluation of the selected preliminary career education program for gifted and talented secondary students, interviews of participants provided important information which was used to develop an understanding of student needs and the ways of meeting them.

A variety of documents were also accessed including agendas, minutes, memoranda, administrative reports, files, programs, program registers, and class lists of students. Such documents may not be accurate or may be biased if they are written with a specific audience in mind or for a specific purpose (Burns, 1995a). Nevertheless, documents can specify events and issues better than interviewees since the personal views of accurate detail may vary and, therefore, the documents form an important corroboration of evidence gained from other sources.
In this study, notes were derived from interviews, observations, and documents. The data were processed using a matrix of categories to sort pertinent information. The notes were analysed within the framework established by the literature review and the questions which the study attempted to answer.

Finally, the desirable attributes of a career education program, as highlighted in the literature and synthesised with the outcomes of the needs analysis and formative evaluations conducted in this study, resulted in a ‘best practice’ program for gifted and talented secondary school students.

Figure 1 outlines the research study timeline.

<table>
<thead>
<tr>
<th>1997</th>
<th>1998</th>
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<tbody>
<tr>
<td>Term 1</td>
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<td>Term 2</td>
<td>Term 2</td>
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<tr>
<td>Term 4</td>
<td>Term 4</td>
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</tbody>
</table>

Figure 1. Research study timeline

Results

As outlined above, this case study employed a needs analysis, the development of a preliminary (trial) career education program for gifted and talented high school students, and a formative evaluation of that program. Finally, a ‘best practice’ program was suggested.

Needs analysis

The needs analysis was conducted in five steps.

Step 1: Student surveys

Students were surveyed during their respective Year assembly times. Student responses (72% response rate) indicated that:

- there was a need for a Year 7-12 career education program;
- there was a link with student welfare needs as being a helpful component; in particular, senior students requested a program embracing career education, tertiary study and life skills;
- senior students supported the individual counselling interview process but expressed the desire for greater confidentiality of the interview setting;
• senior students considered that tertiary education settings orientation skills (e.g., which university, accommodation and travel, living away from home, and living on an allowance) were an important program component;
• some junior students saw a need for greater information on alternate study modes for the senior school (e.g., accumulating the Higher School Certificate over a number of years, joint secondary schools TAFE programs, and post-school study options);
• there was concern about work experience, the common career education activity for Year 10 students, which attracted much comment from students (i.e., it was felt to be useful and should be retained but with greater emphasis on vocational decision making and workplace awareness skills; targeted work experience opportunities were also requested for Year 11 and Year 12 students); and,
• there was scope for improved facilities for the career education program (e.g., career reference centre, confidential counselling facilities, and improved technology) and even further open access to information as potential improvements.

Step 2: Consultation with the SRC

The SRC was an elected body of 35 members, with one councillor per student roll class, representing student opinion in the school. The SRC was addressed by the Student Adviser to the council, similar to the process conducted by the Year Advisers with their Year and, as a unit, provided a more focussed response than the general student survey. The SRC consultation indicated:

• support for developments to improve the career education program;
• an interest in a student welfare relationship in the career education program; and,
• a desire for a more meaningful work experience component (i.e., reflecting student wishes to have work experiences at their level of interest, which could be at variance with the workplace's ability to provide).

Step 3: Parent surveys

Parents were surveyed through a school newsletter mailout resulting in only a 7% response rate. A reminder was placed in a subsequent school newsletter with little success in terms of returned survey forms. Enquiries of parents by Year Advisers indicated that many parents had little confidence in their own knowledge of their sons' and daughters' career education needs and, as a consequence, they did not participate in the survey.

Parent responses (N = 51) provided the following suggestions: one, there should be class lessons in career education (35); two, the program should take account of gifted and talented students' needs (24); three, use should be made of guest speakers, excursions, etc. to make work real to the students (20); and four, the program should be offered in all years (10).

Parent responses also indicated:

• that, while generally supportive of the demand-responsive career education program and its Year 10 work experience component, 68% of respondent parents wanted more class contact time;
• a desire for a more structured program indicative of a core of career education skills that took account of the unique needs of gifted and talented students;
• a few parents emphasised the need for a continuous Year 7 to Year 12 program; and,
• the use of 'real life' connections (e.g., through visiting speakers and on-site visits) was a popular suggestion for improving the career education program.
Step 4: P&C consultation/questioning

The P&C, a voluntary group consisting mainly of students' parents meeting monthly with the Principal and some teaching staff, provided an opportunity for parent opinion and feedback in school affairs. The association meeting with 43 people in attendance was questioned by the chief investigator about issues raised from the needs analysis survey and the limited parental survey responses. The P&C consensus response indicated:

- an interest in a specific gifted and talented student career education orientation; and,
- that links between career education and student welfare would be beneficial.

Step 5: Staff survey

Staff members were individually surveyed through internal school communication channels with a 33% response rate. A follow-up reminder was needed to gain this response. Head Teachers advised that, because the evaluation of the career education program had been discussed at faculty meetings and also reported at Executive Committee meetings, many staff felt that the staff survey was redundant. Staff responses (N = 22), nevertheless gleaned these suggestions:

- the program should involve the Year Adviser and provide support for the Year Adviser (21);
- work experience supervision required greater staff training (18);
- social preparation for university was needed (10); and,
- the program should be tailored to suit the school's peculiar needs (2).

Development of a preliminary (trial) program for gifted and talented students

Using the needs analysis, and a review of the pertinent literature, the chief investigator developed a broad range of desirable career education program components for the group of students. He met with the Year Advisers and Careers Adviser on three occasions as the desirable components were discerned from the gathered data. General agreement on inclusion in the program was reached to accommodate the school's time available to implement the proposed program, including the training of teachers in the various program facets, and the school's available teaching resources.

The content components of the program and the justification for including them are identified in Table 1 below.

<table>
<thead>
<tr>
<th>Content</th>
<th>Justification</th>
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<tbody>
<tr>
<td>Time management</td>
<td>Berger (1989), Burns (1995b), off-line school program</td>
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<tr>
<td>Topic</td>
<td>Reference</td>
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<tr>
<td>------------------------------------------------</td>
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<tr>
<td>Study skills</td>
<td>Students' response in needs analysis, Burns (1995b), off-line school program</td>
</tr>
<tr>
<td>Planning for post-school studies and jobs</td>
<td>Hoyt &amp; Hebler (1974), Braggett (1997), students' response in needs analysis, teachers' response in needs analysis</td>
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<tr>
<td>Decision making</td>
<td>Berger (1989), Burns (1995b), off-line school program</td>
</tr>
<tr>
<td>Job studies</td>
<td>Berger (1989), Burns (1995b)</td>
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<tr>
<td>Participation in talent searches</td>
<td>Clark (1992)</td>
</tr>
<tr>
<td>Detailed information about selecting universities</td>
<td>98% of the Year 12 cohort enrol in university studies. Braggett (1997), students' response in needs analysis, teachers' response in needs analysis</td>
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<tr>
<td>Obtaining scholarships</td>
<td>As above. Support aspiration enhancement</td>
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<tr>
<td>Accelerated coursework</td>
<td>Clark (1992), Gross (1993), students' response in needs analysis, parents' response in needs analysis</td>
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<tr>
<td>Balancing extra-curricular activities</td>
<td>Clark (1992), students' response in needs analysis</td>
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<tr>
<td>Entry requirements for different occupational fields</td>
<td>Clark (1992), Braggett (1997), Vick (1996), students' response in needs analysis</td>
</tr>
<tr>
<td>Lifestyles related to different careers</td>
<td>Clark (1992), Pyryt (1992), parents' response in needs analysis</td>
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<tr>
<td>Differentiated counselling for girls</td>
<td>Clark (1992), girls' supervisor's response in needs analysis</td>
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<tr>
<td>Learning opportunities in the community</td>
<td>Parents' response in needs analysis, Hoyt &amp; Hebler (1974)</td>
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<tr>
<td>Involvement of staff, students and parents in planning and implementation</td>
<td>Dusseldorp Skills Forum (1997), Gross (1993), Hoyt &amp; Hebler (1974)</td>
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<tr>
<td>Development of a more flexible career-oriented curriculum</td>
<td>Hoyt &amp; Hebler (1974)</td>
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</table>
Activities designed to assist students to develop increased self-awareness and career awareness | Braggett (1997), Hoyt & Hebler (1974), parents’ response in needs analysis
---|---
Values clarification in search for meaningful career | Kerr & Clairborn (1991), Moore (1978), identifying the aspects of a career that are personally important
Work experience | Braggett (1997), students' response in needs analysis, SRC response in needs analysis, parents’ response in needs analysis

**Formative evaluation of the preliminary career education program**

The preliminary Years 7 to 10 Career Education program and Years 11 and 12 Career Education and Personal Development Studies program were taught in 1998 and a formative evaluation involving all school stakeholders was carried out. The major findings of the evaluation were:

- an acceptance of a combination of student welfare and career education content;
- general acceptance of program structure with an increased emphasis on career education;
- general agreement on the roles of Year Advisers, the Personal Development Teacher, and the Careers Adviser in program delivery;
- the need for aspiration enhancement for students from lower socioeconomic backgrounds;
- program content improvement suggestions;
- improvement in the contextual relationship between career education and student welfare units; and,
- provision for support for female students facing unique challenges in career choice and preparation.

The preliminary program was developed, trialled, evaluated, and modified over a period of 18 months with the resultant refined program displaying the following characteristics.

1. Client focussed - all member groups of the school community who were involved in the needs analysis and subsequent formative evaluation be consulted. As clients, the students gained a number of tangible outcomes from their involvement in the program (e.g., personality inventory, aptitude test results, resume, and interview skills). Employers, mentors, parents, ex-students, and community agencies were involved through work experience, mentoring and shadowing placements.

2. Mainstream - career education should be an entitlement for all students giving them an opportunity to increase their knowledge and skills. The fact that students indicated in the evaluation that they wanted more class time for careers indicated the program's mainstream acceptance.

3. Involvement - actively involved students in its teaching and learning practice and in its evaluation; the program presented many opportunities for individual responsiveness.
4. Flexible - relevant, accessible and user friendly information, as well as a variety of needs-based methods of delivery were considered essential.

**A best practice program**

In determining what content and practices needed to be included in a best practice program that would meet the developmental needs of the gifted and talented students, the current research findings and the formative evaluation of the preliminary program were all considered. The following eight implications for program improvement were noted as a result of this synthesis:

- there is a need for earlier and more flexible career awareness opportunities (i.e., Years 7, 8, and 9);
- greater opportunities for values clarification would be beneficial and both student welfare and career education units could provide opportunities for values clarification based on course content;
- Perrone’s (1997) psychological, psychocreative, and social factors affecting the career development of gifted and talented secondary students need to be borne in mind and fostered as appropriate;
- career education and student welfare should continue to be integrated in a flexible manner with an emphasis on individualised support;
- aspiration enhancement should be available for students requiring support and be provided on an individualised basis by Year Advisers and the Careers Adviser;
- a lifelong career development orientation is required (i.e., an emphasis on ‘becoming’ rather than ‘being’);
- the unique challenges associated with developing successful careers for gifted and talented girls should be the focus of suitable support strategies, including both formal coursework and individual student support; and,
- community learning opportunities such as mentoring and shadowing should be expanded through variations to work experience.

**Concluding Comments**

This case study of the development of a career education program to meet the needs of gifted and talented secondary students originated from the perceived need in an academically selective high school to provide improved quality outcomes for the students. It was apparent that the existing demand-responsive and generic career education program lacked alignment with the students’ perceived needs and required re-development.

What followed was a study that brought together the two concepts of career education and gifted and talented students in the contemporary Australian context which, from a search of the literature, appears to be the first such study. However, further research on the appropriateness of career education experiences for gifted and talented secondary students is strongly merited. Would the findings remain consistent if the research were replicated across a range of schools? Would research in single-sex schools result in different findings with relation to specific gender needs of students? Would research in capital city schools, and country schools, as opposed to a provincial city support this study’s findings? Different and varied educational settings should be considered for further research to ensure that appropriately specific knowledge is available to underpin curriculum development of career education for gifted and talented students.

This paper sought to provide answers to the three research questions:
1. What are the steps in the development and implementation of a career education program for gifted and talented secondary students?

2. What content and practices need to be included in a career education program to meet the specific developmental needs of gifted and talented secondary students?

3. What are the implications of a successful career education program for the school, the school district, and wider educational system?

It will be noted that the first research question broke new ground in that the steps in the development and implementation of a career education program for gifted and talented secondary students were nowhere discussed in the available literature.

As the literature revealed, gifted children have special needs that are not usually met in regular career education programs. Clearly then, gifted and talented secondary students require a differentiated career education program that should be presented sequentially within a developmental framework and integrating student welfare components. These basic concepts were readily accepted by students, staff, and parents at the case study school.

As far as the implications of a successful career education program for the school, the school district, and wider educational system are concerned, the revised career education program is readily transferable for adoption and adaptation in a variety of learning settings for gifted and talented secondary students. Within the school, ongoing adaptation will ensure current relevance, while other schools are already adopting the program and will hopefully adapt it to meet local student needs. Further verification of this study's outcomes through comparative studies, in both educational and social settings, would assist the accumulation of relevant information for development into theory of the career education needs of gifted and talented secondary students.
REFERENCES


