Education of Gifted Young Children: Contingency of Views on First-hand Experience and Conception of Giftedness

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Abstract

This article applies quantitative analysis of data from a New Zealand online survey on gifted education in the early years (Margrain & Farquhar, 2012). Questions asked participants about their role, experience, and beliefs regarding giftedness and gifted practice, valued and observed identification practices, valued and observed provisions, resources, beliefs about links with special education, and beliefs about early entry to school. A Fisher exact test of contingencies (with α = .05) was used to test the statistical significance of seven hypothesised associations. Analysis showed that current or past experience of caring for a gifted child was related to a differential view of giftedness, i.e. the view that gifted children can be differentiated from others as being significantly more advanced, above the norm, or among the very top percentile in some aspects. The finding was of statistical significance (p = .018). Analysis found no statistical significance for experience of caring for a gifted child and the following associations: a) views on whether gifted children should be given additional support within or outside of the teaching and learning programme; b) the position that gifted children should be included in the Special Education section of the Ministry of Education; and c) the opinion that some effort should be made to identify gifted young children. Analysis also determined that there was no statistical significance of association regarding whether persons with a differential view of giftedness were likely to: a) advocate the provision of additional support for gifted children within or outside of the teaching and learning programme; b) take the position that gifted children should be included in the Group Special Education of the Ministry of Education; and c) take the view that some effort should be made to identify gifted young children. There was a strong sense amongst survey respondents that there is a need to identify and provide the special support to gifted children, regardless of their current or past experience with gifted children and in spite of the lack of consensus over the conception of what giftedness in young children is. Although the notion of a gifted child was ambiguous for those without first-hand experience with gifted children, this did not diminish their advocacy for identification of and additional support to extend the gifts and talents of young children.
Introduction

This purpose of this paper is to extend the findings of the survey that were previously reported by Margrain and Farquhar (2011; 2012). Margain and Farquhar provided feedback and reported general findings of the survey in the form of qualitative data and descriptive statistics. In this paper we analyse the associations between key participant data using a Fisher exact test of contingencies (with $\alpha = .05$).

The analysis reported in this paper examines whether views on education of gifted children were contingent on person’s first-hand experience of caring for or teaching a gifted child and the respondent’s conception of giftedness; that is whether the conception was differential in nature. These aspects of analysis built on the survey data which showed: 1) 71% had first-hand experience of caring for or teaching a gifted child; 2) 74% of respondents thought gifted children should be included in the Special Education section of the Ministry of Education; 3) almost 86% think that additional opportunities should be provided either within or outside the teaching and learning programme to further develop their abilities; and 4) 82% felt that something should be done to find out if children under the age of 8 years may be gifted. However, only slightly more than 58% said that gifted children can be differentiated from others as being significantly more advanced, above the norm, or among the very top percentile in some aspects. The remaining respondents indicated either that all children were gifted or it was possible for there to be no children who are gifted in early childhood programmes or junior school classes. These responses to the survey were influenced by the first-hand experiences that a large proportion of the respondents had in caring for or teaching a gifted child.

Background

The survey reported in this paper spans “the early years” (birth to age 8), which covers both the early childhood (prior to school) and the first three years of school. The survey explored the impact of experience in gifted education, beliefs about concepts, identification and provision. The strongest advocates for young gifted children are parents, and effective partnership between parents and children is critical (Bevan-Brown & Taylor, 2009; Silverman, Chitwood & Waters, 1986). However, “the extent to which young gifted children are able to develop their potential depends on a number of factors, including the support and teaching they receive from early childhood professionals” (Department of Education and Early Childhood Development, 2013). Environmental influences of family, centre, school and community play a critical role in responding to giftedness in young children, and in supporting the development of talent (Gagnè, 2011; Morrissey & Grant, 2013).
Research on older students shows that gifted students perform below their full potential if they become bored, frustrated, and unmotivated in learning environments that are not appropriately stimulating (Rayneri, Gerber, & Wiley, 2006; Renzulli & Reis, 1991; Tomlinson et al., 2003). Research shows that the achievement levels of gifted students drop dramatically when they are expected to work at the same pace as their classmates who are not gifted (Birdsall & Correa, 2007). Gifted students may also develop poor work habits and behavioural problems when they are not adequately stimulated and become bored (Davison, 1996). Furthermore, there is a strong research-based argument for differentiated instruction for gifted students that cater to their distinct cognitive and socio-emotional characteristics (Feldhusen, 1989, Hébert, 1993; Kulik & Kulik, 1989; Rogers, 2007; Sicola, 1990). Differentiated instruction may be in the form of an educational environment that is appropriately challenging (Feldhusen, 1989; Moon, 2009) and grouping of gifted students with other highly able students for the subjects in which they excel so as to enhance their learning (Feldhusen, 1989; Kulik & Kulik, 1989). Cooper (2009) argues that curriculum for gifted students should be appropriately challenging, and should “be organized to include more elaborate, complex, and in-depth study of major ideas, problems, and themes that integrate knowledge within and across systems of thought” (p. 278).

The literature on gifted children is predominantly with older children, and the youngest of gifted children have been referred to as “forgotten children” (Radue, 2009). Te Whāriki, the New Zealand early childhood curriculum, states that activities should be “developmentally appropriate” (Ministry of Education, 1996); young gifted children also need appropriately challenging learning experiences and curriculum differentiation (Department of Education and Early Childhood Development, 2013; Harrison, 1995; Moltzen, 2011; Porter, 1999). “A curriculum that also matches a child’s abilities also promotes a sense of well-being” (Department of Education and Early Childhood Development, 2013).

Despite the strong literature and outcome-based evidence asserting the importance of curriculum differentiation for gifted children, practice consistently fails to deliver appropriate support. An Education Review Office report (2008) based on 315 schools found that “Nearly half the schools were promoting positive outcomes for identified gifted and talented students.” This also means that more than half of the schools were not able to provide evidence that they were promoting positive outcomes for identified gifted and talented students. The Education Review Office did not conduct an equivalent report in early childhood settings, however the importance of quality transition processes is consistently articulated (ERO, 2008; Peters, 2010).
Methodology

This section provides an overview of the survey design, the respondents, and the approaches to analysis. Hypotheses of associations between data sub-findings are presented.

Design

The survey was a 13 item online questionnaire, constructed using Survey Monkey. Questions asked participants about their role, experience, beliefs regarding giftedness and gifted practice, valued and observed identification practices, valued and observed provisions, resources, beliefs about links with special education, and beliefs about early entry to school. Some of the questions were single response, and others enabled respondents to select from several options. The majority of questions provided opportunities for respondents to add comments, and many were provided. Low risk ethics approval was provided by the New Zealand university where the first author formerly worked.

Respondents

Responses were received from 125 people connected in some way with the provision of, or use of, education services for children aged birth to 8 years. An invitation to respond to the survey was made available through ChildForum and giftEDnz online newsletters. ChildForum is a professional research informed early childhood education information network. giftEDnz is the professional organisation for gifted education in New Zealand. The survey was open to respondents between December 2010 and April 2011.

Most respondents (71%) were caring for or teaching a gifted child or children, or had in the past. Others (29%), who tended to be in administrative, management or academic roles, had not had personal experience of engaging with young gifted learners. Almost half of all respondents identified as being parents, a third in education management or leadership roles, and a fifth as teachers. Just under half (45%) said they were involved in tertiary teacher education or research. Respondents could, and did, identify as belonging to several roles, therefore the total percentages for responses by role add up to more than 100%.

Analysis

The purpose of this paper is to provide statistical analysis of associations between key respondent information at a deeper level than the qualitative data and descriptive statistics reported by Margrain and Farquhar (2012).

The first aim of the analysis was to determine whether current or past experience of caring for a gifted child was related to 1) a differential view of giftedness, i.e. the view that gifted
children can be differentiated from others as being significantly more advanced, above the norm, or among the very top percentile in some aspects; 2) the opinion that gifted children should be given additional support within or outside of the teaching and learning programme; 3) the position that gifted children should be included in the Group Special Education of the Ministry of Education; and 4) the opinion that some effort should be made to identify gifted young children (hypotheses 1 to 4).

The second aim of the analysis was to determine whether persons with a differential view of giftedness were likely to: 1) advocate the provision of additional support for gifted children within or outside of the teaching and learning programme; 2) take the position that gifted children should be included in the Group Special Education of the Ministry of Education; and 3) take the view that some effort should be made to identify gifted young children (hypotheses 5 to 7).

In sum, the following hypotheses were examined in the analysis:

- **Hypothesis 1:** Those with current or past experience caring for a gifted child are more likely to hold a differential view of giftedness.
- **Hypothesis 2:** Current or past experience caring for a gifted child is positively associated with the view that gifted children be given additional support within or outside of the teaching and learning programme.
- **Hypothesis 3:** Current or past experience caring for a gifted child is positively associated with the view that gifted children should be included in the Group Special Education of the Ministry of Education.
- **Hypothesis 4:** Those with current or past experience caring for a gifted child are more likely to say that some effort should be made to identify gifted young children.
- **Hypothesis 5:** A differential view of giftedness is positively associated with the view that gifted children be given additional support within or outside of the teaching and learning programme.
- **Hypothesis 6:** A differential view of giftedness is positively associated with the view that position that gifted children should be included in the Group Special Education of the Ministry of Education.
- **Hypothesis 7:** Those who hold a differential view of giftedness are more likely to say that some effort should be made to identify gifted young children.

The hypotheses are visually illustrated in Figure 1, presented within the results section of this paper.

A Fisher exact test of contingencies (with $\alpha = .05$) was used to test evaluate each hypothesis because of the small sample size and the existence of low expected frequencies in the data.
(Fisher, 1922; Gray & Kinnear, 2012). For the sake of brevity, only tabulated test results for the first two hypotheses are presented.

Limitations
The findings of this study are limited by the sample size and potential self-selection bias. The sample was drawn from a target population of persons who were connected in some way with education or caring for children and the findings cannot necessarily be generalised to the larger population.

Findings
The statistical significance for each of the seven hypotheses described in the analysis section of this paper are reported in this section.

Hypothesis 1: Those with current or past experience caring for a gifted child are likely to hold a differential view of giftedness.
A Fisher exact test of contingencies (with $\alpha = .05$) was used to evaluate whether experience with gifted children was related to the view that gifted children can be differentiated from other children. The Fisher exact test was statistically significant ($p = .018$).

<table>
<thead>
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<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
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<td>4</td>
<td>.003</td>
<td>.007</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
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<td>4</td>
<td>.037</td>
<td>.025</td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>7.870$^b$</td>
<td>1</td>
<td>.005</td>
<td>.018</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>106</td>
<td></td>
<td></td>
<td>.007</td>
</tr>
</tbody>
</table>

a. 4 cells (44.4%) have expected count less than 5. The minimum expected count is .08.
b. The standardized statistic is 2.805.

Hypothesis 2: Current or past experience caring for a gifted child is associated with the view that gifted children be given additional support within or outside of the teaching and learning programme.
A Fisher exact test of contingencies (with $\alpha = .05$) was used to evaluate whether current or past experience caring for a gifted child was associated the view that there should be provision of additional opportunities within the teaching and learning programme and/or
families should be encouraged to seek opportunities outside of the early childhood programme to extend their child. The Fisher exact test was statistically insignificant (p = .327).

**Hypothesis 3: Current or past experience caring for a gifted child is associated with the view that gifted children should be included in the Group Special Education of the Ministry of Education.**

The Fisher exact test was statistically insignificant when used to evaluate whether the view that gifted children should be included in the Group Special Education section of the Ministry of Education was dependent on current or past experience caring for a gifted child (Fisher exact test with α = .05, p = .696).

**Hypothesis 4: Those with current or past experience caring for a gifted child are likely to say that some effort should be made to identify gifted young children.**

There was no statistically significant association between experience with gifted children and the view that some effort should be made to identify gifted young children under the age of 8 (Fisher exact test with α = .05, p = .246).

**Hypothesis 5: A differential view of giftedness is associated with the view that gifted children be given additional support within or outside of the teaching and learning programme.**

The Fisher exact test was statistically insignificant when used to evaluate whether a differential view of giftedness was associated the view that gifted children be given additional support within or outside of the teaching and learning programme (Fisher exact test with α = .05, p = .579).
Hypothesis 6: A differential view of giftedness is associated with the view that position that gifted children should be included in the Group Special Education of the Ministry of Education.
There was no statistically significant association between a differentiated view of giftedness and the position that Group Special Education should include gifted children (Fisher exact test with \( \alpha = .05, p = .753 \)).

Hypothesis 7: Those who hold a differential view of giftedness are likely to say that some effort should be made to identify gifted young children.
The Fisher exact test was statistically insignificant when used to evaluate whether the opinion that some effort should be made to identify gifted young children was dependent on a differentiated view of giftedness (Fisher exact test with \( \alpha = .05, p = .847 \)).

Figure one illustrates the seven hypothesised associations, showing that the one statistically association was of that between having past experience caring for a gifted child, and holding a differential view of giftedness. The absence of a statistically significant association for the remaining hypotheses, is nevertheless a valid finding indicating independence of the particular variables involved with hypotheses two to seven.

Figure 1. Hypothesized associations and statistical significance for survey responses on gifted education in the early years.
Discussion

The study shows that the view that gifted children can be differentiated from others as being significantly more advanced, above the norm, or among the very top percentile in some aspects is dependent on whether the person had first-hand experience caring for or teaching gifted children. Although this association does not provide any causal explanation, it is logical that a person’s experience with gifted children would lead him or her to believe that children who are gifted can be differentiated in some ways from other children. This finding may also suggest that adults without first-hand experience with gifted children are less likely to subscribe to the notion of a gifted child than those who have. If there is no conviction that giftedness can be observed or even exists, gifted children will not be acknowledged or supported. Therefore, there are risks for gifted children and their families if they are placed in a setting in which the educators and educational leaders do not already have experience working with gifted children. Continued education and information-sharing is needed to support professionals to acquire appropriate knowledge about gifted education, and continued advocacy from families on behalf of their children,

Despite the reliance on experience to validate beliefs about giftedness, teachers are encouraged to draw on research and to engage in evidence-based practice. Previous research has consistently shown that gifted students can be distinguished from their peers by their: 1) capacity to deal with complexity and abstraction; 2) ability to learn content more quickly and link the new knowledge to previously mastered skills and knowledge; 3) advanced performance in one or more areas; and 4) high self-efficacy (Feldhusen, 1989; Moon, 2009; Rakow, 1989; Rogers, 2007).

A further finding of the study is that the view that gifted children should be identified and given special support is independent of current or past first-hand experience with gifted children despite the large proportion of the respondents in the survey who had some form of direct experience with gifted children. Participant responses to this question are likely to be influenced by personal beliefs about equity or equality of provisions (Gagnè, 2011) and potential disillusionment about whether special support would be forthcoming at all.

The views on whether additional opportunities should be provided within or outside of the early childhood programme for gifted children, or whether gifted children should be included in the Special Education section of the government, are independent of first-hand experience caring for or teaching gifted children. These findings indicate that diverse approaches are needed to respond to differing contexts and communities. Although respondents who advocated for inclusion of gifted education within special education believed that integrated service provision would be advantageous for gifted children, others were concerned about whether such integration would actually yield support for gifted

children. However, as long as uncertainty exists regarding best practice, it is unlikely that progress will gain momentum. Any such policy integration would need to be adequately funded and ensure equity of provision.

The analysis of findings supports the position that more needs to be done to support gifted children and presents pedagogical and practical implications for educators and policy-makers. The current educational system needs to do more provide support to educational professionals so that they can identify and provide additional opportunities for gifted children, and not rely on ad hoc prior experience. Without national advocacy and initiatives for effective support of young gifted children in early years education settings, these children remain vulnerable. The lack of gifted education provisions ignores the risk that gifted children potentially face, including the risk of gifted underachievement. There is little justification why programmes for gifted students are in most cases targeted at the senior primary school or secondary students and generally not made available for the under 8 year-olds.

Amongst survey participants, the support for differentiated treatment of gifted children and identification of gifted children was independent of conception of giftedness in young children. This finding could be interpreted as indicating that defining giftedness was considered to be of lesser pedagogical and practical significance than the general agreement that more should be done for gifted children. The finding also reflects the belief amongst some educators that there is no distinct difference between young children who are gifted and who are not, but instead consider that the strengths of all children should be identified and given special support. This illustrates a potential disconnection between educators’ philosophical and pedagogical perspectives of gifted children; egalitarian views versus research literature. “It is wishful thinking to suppose that hard-working teachers without sufficient content knowledge, without special knowledge of gifted children, without time to plan programs, and with limited assistance from supervisory personnel, will be able to alter the educational situation for gifted children to any meaningful degree” (Rogers, 1989, cited in Porter, 2009).

**Conclusion**

There was a strong sense amongst survey respondents that there is a need to identify and provide the special support to gifted children, regardless of their current or past experience with gifted children and in spite of the lack of consensus over the conception of what giftedness in young children is. Although the notion of a gifted child was ambiguous for those without first-hand experience with gifted children, this did not diminish their advocacy for identification of and additional support to extend the gifts and talents of young

Children. There was a need for further discussion surrounding the notion of giftedness among educators, policy-makers and the general public.

Giftedness is not likely to be identified and supported if there is no consensus on whether and how gifted children can be differentiated from their peers despite the general agreement that children should be identified and given additional support. There is need for research into how the understandings educators and parents hold in relation to the notion of giftedness are translated into supportive and influential behaviours in schools and at home. It is neither valid nor equitable to rely on ad hoc experience to provide understanding of gifted education.

References


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