

Creativity of the disaffected gifted

Alexander Seeshing Yeung

Hong Kong Institute of Education, Hong Kong ssyeung@ied.edu.hk

Alan Ping-Yan Chow

Hong Kong Institute of Education, Hong Kong SAR

Phoebe Ching-Wa Chow

Hong Kong Institute of Education, Hong Kong SAR

Disruptive students are often perceived to be unmotivated, low in self-concept, and lacking in creative characteristics such as originality in thinking and imagination. A total of 99 students from 6th Grade classes of a primary school in Hong Kong completed a survey asking about their effort goal orientation in school motivation, academic self-concept, originality in thinking, and imagination. Those students identified by teachers to be gifted in non-academic areas but disaffected and occasionally disruptive (n=20) were compared with the other students (n=79) in the four measures. Analysis of variance showed that students found to be disaffected and disruptive did not differ from the other students in self-concept and their effort goal orientation. However, they scored significantly higher in their self-perceptions of originality and imagination. The results cast doubt not only on the assumption of the weaknesses of disaffected students, but also challenge the appropriateness of the school curriculum to suit the needs of some gifted children. Curriculum designers and teachers should consider learning activities that may fully nurture the disaffected students' creativity components to help them become useful citizens.

Creativity, self-concept, gifted, curriculum, disaffected

INTRODUCTION

Gardner (1993) has proposed that every individual has multiple intelligences that enable the individual to display his or her talents and potentials. Thus if the school can provide a nurturing environment for the development of various intelligences, adolescents should be able to strengthen their specific talents and develop into successful individuals (Ainscow, Hopkins, Southworth, and West, 1994; Gardner, 2000; Renzulli and Reis, 1997). Nevertheless, in Hong Kong where the school system places an immense focus on intelligences related to academic work, those talents in non-academic areas may become low achievers in terms of academic performance. According to Erikson's (1963, 1968) theory of development, students aged 12 to 14 years are experiencing a critical stage in their development of a sense of competence and self-concepts. Unfortunately, for some students of this age group who do not find success in their academic achievement, their talents and potentials may be geared to some form of undesirable behaviour that may have the unwelcome function of attention seeking or establishing a self-identity in an undesirable way (Wallace, 1983; Whitmore, 1980). More unfortunately, given their originality and creativity, talented students could generate all kinds of unpredictable ways to upset the harmonious climate of the classroom. The present study examines the motivation, self-concept, and creativity of disaffected 6th grade students who have displayed some form of talents in a primary school in Hong Kong.

THE DISAFFECTED TALENTS

Educators and researchers have generally found that students can learn better if they are emotionally stable, motivated, and are able to think divergently and creatively (Freeman, 1991; Gardner, 2000). Unfortunately, not all children with the wits to think divergently and creatively manage to establish their self-identity through achieving academic excellence. Some of those who fail to achieve the desirable academic targets may become disaffected, misbehave, and are often disruptive. As suggested by some researchers, this kind of talented students is not rare in the Hong Kong classrooms (Chan and Chan, 1999; Clark and Chan, 1999; also see de Souza-Fleith, 2000). For those who have talents in some non-academic areas such as art, music and sports, their outstanding abilities are seldom recognised whereas their low achievements are often criticised. The continual denial of their special capabilities in non-academic areas could have an enormous detrimental effect on their self-concept and motivation in schooling.

In the era of education reforms, the potential of the school environment to promote students' motivation, self-concept and creativity has been emphasised for successful lifelong learning (for example, Curriculum Development Council, Hong Kong, 2001; Education Commission, Hong Kong, 1984; 2000, 2002; UNESCO, 2000). These characteristics are often believed to be typical of the talented and yet lacking in the disaffected students. Particularly for those gifted students who achieve far below average, the continual failure in academic achievement may further intensify their misbehaviour to an unacceptable level. In the following discussion, we focus on the three important factors that are believed to be crucial for lifelong education and the issues related to the gifted but disaffected students.

School Motivation

Motivation is important in schooling because students' academic behaviour and achievement are thought to be closely associated with their motivation in schoolwork (Ames, 1992; McInerney, Roche, McInerney, and Marsh, 1997; McInerney, Yeung, and McInerney, 2001; Wentzel, 1998). Compared to performance goal orientations, mastery goals are thought to be vital for students' desirable academic outcomes. Hence an effort goal orientation, as opposed to a praise orientation for example, tends to have stronger impacts on educational outcomes (for example, McInerney et al., 2001; Wentzel, 1998). For those students who have talents in the "wrong" area, their constant failure in the mastery of knowledge and skills in the academic domains of schooling probably provides a negative reinforcement that may continually diminish their motivation in schoolwork. However, given their talents in certain areas that provide them with satisfaction of excellence even though these areas may be irrelevant to academic pursuit in a traditional sense, they could possibly maintain a reasonably high level of motivation and be willing to invest an effort in schoolwork. Hence, it is unclear whether the disaffected gifted would be less motivated in schoolwork than their peers in the school.

Self-Concept

Numerous studies have shown good relations of academic self-concept to academic achievement and academic behaviour (for example, Chapman and Tunmer, 1997; Eccles and Wigfield, 1995; Marsh and Yeung, 1997a, 1997b; Yeung and Lee, 1999). Whether a student finds himself, or herself competent in academic work tends to impact on academic achievement. Thus recent research has provided ample evidence that an individual's academic self-concept is developed primarily on previously successful experiences in academic work (Marsh and Yeung, 1997a, 1997b; Yeung and Lee, 1999). On the basis of the evidence, the constant failure in academic work renders those students who are about or less than average in academic ability but gifted in non-academic areas difficulty in developing a positive self-concept associated with academic work. Nevertheless, self-concept in the school setting needs to be considered in general terms and in

terms of specific curriculum domains (Yeung and Lee, 1999; Lee, Yeung, Low, and Jin, 2000). Since a global school self-concept would probably represent cognitively a combination of self-concepts in a wide range of curriculum areas in the high school, it is unclear whether the disaffected gifted would maintain a reasonably high school self-concept, given their talents in certain areas, whether they be recognised as important or not in the school setting.

Creativity

Many educators argue for the importance of creativity in the curriculum (Hughes, 2001). However, the implementation of a curriculum with an emphasis on creativity is difficult because basic education tends to strictly follow highly structured contents and teaching methods that inevitably inhibit possibilities of creativity (Tan and Law, 2000). This could be even more difficult in Hong Kong, given the highly competitive, segregated, and outcome driven features of the Hong Kong schooling (Tsang, 1992). Furthermore, creativity may be threatened by the increased emphasis on the objective criteria of assessment in all aspects of learning (Runco, 2001) together with the generally lack of time and opportunity of students to exhibit their creative abilities (de Alencar, 2001). Thus for those students who are gifted in any non-academic area, their capabilities of creativity would not have any chance to flare.

The literature on creativity has identified various factors that may contribute to student creativity (Giorgis and Johnson, 2001; Goertz, 2000; Kusa, 1999; Runco, 2001). Among these factors are two important constructs that are the focus of the present study. They include originality and imagination.

Originality

This construct is characterised by an ability to initiate original ideas. Many researchers have identified originality as a major indicator of creativity (Goertz, 2000; Joy, 2001; Runco, 2001).

Imagination

This construct is characterised by thinking in a non-traditional way. Researchers have implied the importance of non-traditional thinking in creative children (for example, de Souza-Fleith, 2000; Morse, Morse, and Johns 2001; Runco, 2001; Stokes, 2001; Winebrenner, 2001).

Unfortunately, these factors that reflect, at least partly, children's creativity may not be associated with academic achievement (Saeki, Fan, and Van Dusen, 2001). Hence, those gifted students who are able to perform outstanding tasks only in non-academic areas may have these specialties undetected in the conventional school setting of Hong Kong. The gifted students' original ideas that do not comply with expectations based on an academic perspective and their ways of thinking that do not match traditional recognition would remain but a source of vigor for undesirable behaviours.

THE PRESENT STUDY

The present study examines the self-concept, motivation, and creativity of 6th Graders in a primary school of Hong Kong who are disruptive low achievers in class. Conventional thinking anticipates that these students would have low self-concept, poor school motivation, and deprived creativity. Nevertheless, based on Gardner's (1993, 2000) theory of multiple intelligence, we might expect that these disaffected students would be similar to other students in their self-concept and motivation, but particularly strong in their creativity so that they would have higher perceptions of their originality and imagination.

METHOD

The participants were 99 sixth Graders from primary schools in Hong Kong (age ranging from 11 to 16 years). They responded to a survey administered in class. Based on comments and ratings obtained from the teachers of the 6th Grade classes, 20 students were chosen to represent the most disruptive of the 6th Grade students. These students were identified to be disaffected, inattentive, and disruptive but possessed some 'peculiar' abilities in various non-academic areas. Typically, they were found to be relatively stronger than their peers in areas such as sports or art, which were unfortunately not usually treated as important as the more academic curriculum areas such as language and math in the schools of Hong Kong. Apart from demonstrating their talents in some non-academic areas in the school curriculum, these students were particularly witty in spontaneously generating ideas and developing behaviours that are not socially acceptable. Hence to the teachers and their peers, these students were so disruptive that even with the presence of only a few of them, teaching and learning processes in the classroom were often seriously hampered. This sub-sample of disruptive students was compared against the other 6th Graders ($n=79$). About 75 per cent of the disaffected group was over-aged (age > the normal age of their peers of about 12 years).

Material

A questionnaire was designed for the purpose of the present study. Apart from items for collecting demographic data, there were a total of 16 items forming four constructs. They were Academic Self-concept, Effort (that is, an important mastery goal orientation), Originality, and Imagination. The students responded on a Likert-type scale from 1=absolutely disagree to 5=absolutely agree. The items of the four constructs are presented in the Table 1. The responses were coded such that higher scores reflected more favourable perceptions.

Table 1. Response Items and Alpha Reliabilities of Factors

Factor	Items	Alpha
Self-concept	I am good at most school subjects. Most school subjects are easy to me. I learn quickly in most school subjects. I have always done well in most school subjects.	0.69
Effort	I work hard to try to understand something new at school. I am always trying to do better in my schoolwork. I try hard to solve problems. The harder the problem the harder I try.	0.73
Originality	I sometimes solve problems in a way nobody else has tried before. I can think of many new ideas. I sometimes see things quite differently from other people. I have many innovative ideas.	0.73
Imagination	I like to imagine things I like to do. I like to think that I will be a person very different from others. When I read a story or watch a movie, I like to think I am the person in the story. When I grow up, I wish to do something people have never thought about.	0.66

Preliminary Analysis

We first examined the alpha reliability of each of the four constructs. Then we conducted a principal components analysis to test the ability of the 16 items to form 4 distinct factors. Based on the constructs established in the preliminary analysis, the scale mean of each construct was computed by taking the average of the items pertaining to each construct.

Comparisons Between Groups of Students

The critical concern of the present study was whether students perceived by teachers as disruptive differed in their academic self-concept, effort goal orientation, originality and imagination from the other students at the same level of schooling. To test potential between-group differences, a one-way analysis of variance (ANOVA) was conducted for each of the four constructs as dependent variables and group as the independent variable. The analysis was conducted with SPSS (Norusis, 1994a, 1994b; Nie, 1994).

RESULTS

Preliminary Analysis

The alpha reliability estimates for the four constructs were good (alphas=0.69, 0.73, 0.73, and 0.66 respectively for Self-concept, Effort, Originality, and Imagination). Principal components analysis of the 16 items with varimax rotation (Nie, 1994) revealed four distinct factors with eigen values of 4.46, 1.76, 1.43, and 1.26 respectively explaining 56 per cent of the total variance. As expected, the 16 items formed four distinct a priori constructs. The factor loadings were 0.78, 0.72, 0.60, and 0.60 for Self-concept, 0.68, 0.75, 0.75 and 0.57 for Effort, 0.62, 0.81, 0.52, and 0.69 for Originality, and 0.70, 0.70, 0.79, and 0.50 for Imagination. The items of each of the four constructs were averaged to form a scale score for subsequent analysis. The correlations among the four scale scores were then examined. The correlations were small to moderate (ranging from 0.28 to 0.47), providing support for the discriminant validity of the four constructs. Results of the preliminary analysis thus provided support for the construct validity of the measures that were used in the subsequent analyses.

Between-Group Differences

To test whether students with disruptive behaviours differed from the other students in their self-concept, effort, originality and imagination, an ANOVA was conducted for each variable. The means and standard deviations of the scores for the two groups of students are presented in Table 2. The One-way ANOVA found that the two groups of students did not differ in their academic self-concept, $F_{(1,97)}=0.13$, $MSE=0.93$, and in their effort goal orientation, $F_{(1,97)}=3.84$, $MSE=0.84$, $p > 0.05$. However, the group differences were statistically significant for Originality, $F_{(1,97)}=5.40$, $MSE=0.99$, $p < 0.05$ and for Imagination, $F_{(1,97)}=12.63$, $MSE=0.94$, $p < 0.001$. Thus the students who were perceived to be disruptive showed higher levels of originality and imagination and they were no lower than the other students in their self-concept and school motivation.

Table 2. Means, Standard Deviations and Analysis of Variance Results

Groups	N = 99	Disruptive 20	Control 79	Univariate $F_{(1,97)}$ df	MSE
Self-Concept	M	3.33	3.41	0.13	0.93
	SD	(1.08)	(0.93)		
Effort	M	4.43	3.98	3.84	0.84
	SD	(0.91)	(0.92)		
Originality	M	4.04	3.46	5.40*	0.99
	SD	(1.06)	(0.98)		
Imagination	M	4.79	3.92	12.63**	0.94
	SD	(0.84)	(1.00)		

Students responded to the items on a 5-point scale with higher ratings reflecting more favourable responses.

* $p < 0.05$, ** $p < 0.001$

DISCUSSION

The results reflect that the disaffected students perceived themselves as no different from their 6th Grade schoolmates in self-concept and effort goal orientation that are believed to be crucial for study in the school setting and for lifelong learning. Both groups had mean scores well above 3 on a 5-point scale for both constructs. Interestingly, however, whereas the groups did not differ in the scores of self-concept and effort, those disaffected students scored significantly higher in originality and imagination. The disaffected students seemed to have a high creative capability that may not be detected in their schoolwork performances.

These findings not only cast doubt on the assumption of the weaknesses of those disaffected students, but also queries the ability of the school in making a difference on students' learning outcomes (Coleman et al., 1966; Rutter et al., 1979; Mortimore et al., 1988). The findings also challenge the adequacy of the school curriculum, the teaching approaches, the assessments, and the relevance of existing policies on teaching and learning. Given the reasonable levels of self-concept and motivation and the superiority in creative attributes, why have the disaffected students performed academically weaker than the other students? What has gone wrong in the school curriculum or was there something missing in the assessment system such that the strengths of these particular students have been neglected? Has the school system failed to cater for those students who have the potential to excel in non-academic areas of learning? Has the current school curriculum been so limited in scope such that too much emphasis has been placed on academic excellence and too little attention has been paid to other valuable learning outcomes? With the current education reform emphasising the development of the whole person (Curriculum Development Council, Hong Kong (2001), it seems that curriculum designers would need to seriously reconsider the current school curriculum. It would be a disaster to disregard the needs of the gifted and talented and allow the school system to destroy them and turn them into underachievers instead.

Apparently, the findings are consistent with earlier research on underachieved students (for example, Torrance, 1965; Wallace, 1983; Whitmore, 1980). Although academically weak compared to other students, underachievers could have outstanding abilities in some non-academic areas. Unfortunately, in a vigorously competitive school system with a strong focus on academic work, the talents of students who are gifted in non-academic domains are seldom recognised. The high originality and imagination scores of those gifted but disaffected students with low academic performance in the present study seems to imply that:

- The current provisions of the schools may not suit the needs of all students, and may be even deficient in meeting the needs of some gifted students.
- Some of the disaffected students may be able underachievers (Torrance, 1965) who are not provided with the opportunity to demonstrate their abilities in the conventional tests and exams.
- Despite being creative, the output of these students may not be recognised by their teachers. This may be due to the fact that they have a poor relationship with their teachers such that their performance and behaviour are mostly perceived to be negative.
- The disruptive behaviour and misconduct of the students could be a means of attention-seeking, and perhaps revenge for being unrecognised; and for those new immigrants, a gesture of accusing the inequality and inequity of schooling.
- For some students, in order to remain affiliated to their peer group, they would avoid being outstanding, so they tended to perform as badly as their peers. This could be perceived as meeting their safety needs in a social context.

As supported by the literature (Erikson, 1963, 1968; Gardner, 1993; Wallace, 1983; Whitmore, 1980), there are reasons to believe that the disaffected students in the present study could be the unfortunate able underachievers to whom special attention has not been given. They not only demonstrated the characteristics of underachievers (Torrance, 1965) in terms of their academic performance, but they also had poor high absence rates, disruptive behaviours and poor relationships with teachers and peers. Furthermore, many of such students have unfortunately misused their creativity such that it has unfortunately become an unwelcome resource for generating discipline problems in the classroom.

In sum, this study has revealed a new area of concern to educators and curriculum designers. The fact that disaffected students could be gifted children who have not been provided with the opportunity to exercise their talents calls for a re-consideration of the current school curriculum and pastoral care. It is clear that at least some able underachievers may not have received the necessary educational support. Their creativity has not been respected, and their potentials are not being tapped to their fullest extent. Curriculum designers, teachers, educators and policy makers should consider ways to provide these students with adequate learning opportunities by creating the necessary conditions in the school to exercise their creativity and multiple intelligence (Gardner, 2000; Renzulli and Reis, 1997). By doing this, we can hopefully nurture the disaffected students' creativity components fully and help them become useful citizens in future.

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