"Evaluation of gifted students motivation: More than to be or not to be motivated"

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Abstract
In the scientific literature on giftedness, two opposite categories of population are often investigated: successful students and underachievers. As we know, motivation is central in the learning process and school achievement. Therefore, motivation is also helpful to explain the differences between successful gifted students and underachiever gifted students. (Baker, Bridger, & Evans, 1998; McCoach & Siegle, 2003). The purpose of this presentation is to identify specificities of gifted students' motivation, and stimulate researchers and educators to pay attention to this variable as a multi-faceted factor, and not as a monolithic one. The population we studied consisted of gifted young adults who completed secondary school with or without failures. A thematic analysis of their narrative about their motivation was conducted. Results showed that the subjective value they associated with the tasks (Wigfield and Eccles (1983, 2002), and the way they constructed and protected their self-...

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Evaluation of gifted students motivation: More than to be or not to be motivated

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Plan

• Theory
  • Motivation and giftedness
  • Motivation specificities
  • Achievers and underachievers
• Methodology
• Results 1: To be or not to be motivated?
• Results 2: Specificities on gifted motivation?
• Implications on motivation measurements
Motivation and giftedness

Motivation is a key concept in giftedness theories:

Motivation = catalyst, moderator
    (Gagné 1994; Heller & Perleth, 1993)
Motivation = criterion
    (Three-ring conception of giftedness,
     Renzulli, 1998)
Motivation = specific giftedness
    (Gottfried & Gottfried, 2004)
MOTIVATIONAL SPECIFICITIES?

In contrast with regular students:

↑ intrinsic motivation; academic self-concept; performance and learning goal
(e.g. Hong & Acqui, 2004; Gottfried & al, 2005; Vallerand & Gagne, 1994; McCoach & Siegle, 2003; Schunk and Swartz ,1993).

But several studies find no differences:
self efficacy and goal orientation (e.g. Gresham, Evans & Elliott, 1988), Ziegler, Heller, and Broome ,1996).

Bias of measurement:
often gifted population are achievers
Achievers and underachievers

Motivation is a major factor in understanding the differences between potential and achievement (Friedman-Nimz & Skyba, 2009; McNabb 2003; Baker, Bridger, & Evans, 1998).

Compared to gifted achievers, underachievers has lower: academic self-perception, motivation and self-regulation, goal valuation (Dowdall & Colangelo, 1982; Reis & McCoach, 2000, McCoach & Siegle, 2003; Whitmore, 1980).

But: only few studies confront their results with a nongifted population.
Aims:
Identify specificities of gifted students' motivation.

Take account of:
  . Level of achievement
  . Confront results with nongifted population
Sample (n=103)

Level of ability:
IQ test (Wechsler sale)

Criterion of giftedness: 
*Gifted*: IQ ≥ 127 (N= 43);

Level of achievement:
*Success*: no repeating a year.
*Failure*: one or more repeating a year.

A posteriori study on secondary school with young adults (M= 21,1 years old).
Measures

Intrinsic value
Attainment value
Utility value
Cost

Self efficacy
Sources of self-efficacy beliefs (Bandura, 1989, 2003)
Mastery experiences
Social modeling with peers and adults
verbal and social persuasions.

Relationship with teachers and peers.
Results 1:

To be or not to be motivated?

On gifted students (N=43)
### Results 1

|                      | Gifted: Success (N= 27) M et (SD) | Gifted: Failure (N= 16) M et (SD) | Sig (2-Tailed) |
|----------------------|-----------------------------------|-----------------------------------|----------------
| **Value**            |                                   |                                   |                |
| Intrinsic value      | 2.89 (0.93)                       | 2.24 (0.65)                       | .01**          |
| Attainment value     | 3.55 (0.95)                       | 2.43 (0.78)                       | .00**          |
| Utility value        | 3.06 (0.95)                       | 2.47 (0.54)                       | .01**          |
| Cost                 | 2.00 (0.73)                       | 3.08 (0.96)                       | .00**          |
| Expectancy/ ability perceptions | 4.58 (0.50) | 4.17 (0.51) | .01** |
| **Sources of Self-Efficacy** |                                   |                                   |                |
| Mastery Experiences  | 3.94 (0.90)                       | 2.81 (0.46)                       | .00**          |
| Social Persuasion    | 4.32 (0.50)                       | 3.84 (0.95)                       | .03*           |
| Social Modeling: adults | 3.62 (0.71) | 3.13 (0.75) | .03*          |
| Social Modeling: peers | 3.06 (0.75) | 3.14 (0.61) | .12           |
| **Relations**        |                                   |                                   |                |
| Relations with peers | 3.41 (1.18)                       | 2.73 (1.22)                       | .08            |
| Relations with teachers | 3.90 (0.74) | 2.81 (0.92) | .00**         |

*: p<.05, **p<.01
Results 1: clustering

Factor map

Dim 1 (56.28%)
Dim 2 (15.26%)

cluster 1
cluster 2
cluster 3
cluster 4
cluster 5

Failure
Success

July, 4th 2012
Cluster analysis

Cluster 1: "failure"
--- all variables
(unless utility)

Cluster 2
Higher cost ---
Lower utility ---
Lower interest ---

Cluster 3
peer relations++

Cluster 4
Girls,
self efficacy --

Cluster 5: "success"
++ all variables
(Unless peers relation)

July, 4th 2012
Summary: Results of the two analysis

Comparison of means: gifted who success have higher scores on motivation variables

Cluster analysis: motivation is important to understand underachievement. But there are different profile of motivation.

Need of evaluation on different motivational aspects to explain underachievement and help gifted students to succeed.
Results 2:

Are there specificities on gifted motivation?

Continues point of view of intellectual giftedness
Total sample (n= 103)
## Stepwise regression

<table>
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<tr>
<th>Step</th>
<th>Variable</th>
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<tr>
<td>Step 2</td>
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<td>0,39***</td>
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<tr>
<td></td>
<td>Interest</td>
<td>-4,07</td>
<td>1,42</td>
<td>-0,27**</td>
</tr>
</tbody>
</table>

R² adjusted = .09 for step 1, R² adjusted= .15 for step 2;
** p <.01, *** p <.001
Dependant variable : total IQ
Higher levels IQs tend to be associated with two relevant variables:

• **Higher self efficacy**
  Support giftedness literature

• **Lower interest toward scholastic tasks**
  In opposition with results which show higher intrinsic motivation.
  Effect of heterogeneous level of achievement of our population.
Implications on motivation measurements with a gifted population

Beyond global tendencies, there are different motivational profiles; e.g. some students present low self efficacy perception.

So evaluation of gifted students motivation is more than to be or not to be motivated

For gifted counseling: need of global evaluation on different motivational areas.
Implications on motivation measurements with a gifted population

Gifted children tend to have higher perceived self-efficacy:

› Task involvement could be better than self efficacy to predict achievement (Gagné & St Père, 2002).

To solve opposition in gifted motivation literature:

› Identify level of achievement population (e.g. achievers, underachievers, school grade, ... ).
Thank you for your attention!

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