Grade Expectations: The Motivational Consequences of Performance Feedback on a High-Stakes Assessment

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significance

• Assessment is prevalent and salient
Significance

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Assessment is prevalent and salient

their lives together. The society should allow them to enter into a marriage which not only includes sharing of income and property, but also inheritance and tax.

Great addition! Stephen Hawking, a theorist at Princeton, just came out this year with a book in which he argues against your position, but that position (even so) is nonetheless hard to refute. Perhaps we could argue (any)
that if a multiple-person marriage harmed some of the individuals in it (one or more "wives," for...
significance

• Assessment is prevalent and salient

• Resulting importance of understanding performance feedback and its influence on academic motivation
significance

• Assessment is prevalent and salient

• Resulting importance of understanding **performance feedback** and its influence on academic motivation

  performance-specific evaluative information conveyed to students on an assessment in the form of a grade, comment, or combination of the two
significance

• Assessment is prevalent and salient

• Resulting importance of understanding performance feedback and its influence on academic motivation

“the process whereby [academic] goal-directed activity is instigated and sustained”

Schunk, Meece, & Pintrich (2014), p. 5
prior work

• Meta-analytic investigation
  - Grades versus no feedback
  - Grades versus comments

Koenka et al. (under review)
prior work

- Meta-analytic investigation

- Grades versus no feedback
- Grades versus comments

Comments alone: $d = 1.14$ *
Grades accompanying comments: $d = -.04$ (not significant)

Koenka et al. (under review)
unanswered questions

- Moderating effect of feedback stage
unanswered questions

• Moderating effect of feedback stage

   1. Random assignment

   2. Feedback receipt

   3. Motivation measurement
unanswered questions

- Moderating effect of feedback stage
  - Confounds form with valence

Butler (2006)
unanswered questions

- Moderating effect of feedback stage

- Confounds form with valence

Butler (2006)
unanswered questions

- Moderating effect of feedback stage

1. Random assignment
2. Feedback receipt
3. Motivation measurement

1. Random assignment
2. Feedback anticipation
3. Motivation measurement
unanswered questions

- Moderating effect of feedback stage
  - Confounds form with valence
  - Capturing fluctuations in motivation during a single assessment

Brookhart & DeVoge (1999)
unanswered questions

• Moderating effect of feedback stage

• Impact of performance feedback on high-stakes, summative assessments

• More nuanced investigation of pairing grades and comments

• Impact on self-efficacy

Schunk et al. (2014)
overarching objective

What is the motivational impact of grades, written comments, grades and comments, or no feedback on a high-stakes math or science assessment?
theoretical framework

- Social cognitive theory
  self-efficacy
- Achievement goal theory
  goal orientations
- Self-determination theory
  intrinsic motivation

Maehr & Zusho (2009); Ryan & Deci (2000); Schunk et al. (2014)
method

• 161 students at an all-female, private secondary school
method

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  - 7\textsuperscript{th}, 8\textsuperscript{th}, or 9\textsuperscript{th} grade

  - 13 math or science classes
design and conditions

• Cluster-randomized experimental design

• Four experimental conditions

  1. Grades
  2. Comments
  3. Grades and comments
  4. No feedback
design and conditions

- Cluster-randomized experimental design
- Four experimental conditions
  - Teachers conveyed information
  - Students believed that assessment would count towards grade like a typical classroom assessment would
procedure

<table>
<thead>
<tr>
<th>Time 1: Baseline</th>
<th>Time 2: Anticipation</th>
<th>Time 3: Receipt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics, self-efficacy, goal orientations, intrinsic motivation</td>
<td>Self-efficacy, goal orientations, intrinsic motivation</td>
<td>Self-efficacy, goal orientations, intrinsic motivation</td>
</tr>
</tbody>
</table>

Butler (2006); Lepper et al. (2005); Midgley et al. (2000)
target assessment

• Teacher-designed

• High in stakes
nature of grades and comments

• Criterion-referenced grades

• Task-focused comments

Hypothetical example: “You have clearly demonstrated your understanding of calculating the volume of a cylinder”
nature of grades and comments

• Criterion-referenced grades
• Task-focused comments
• Fidelity implementation
data analytic approach

- Multilevel modeling
- Calibration and baseline motivation
results

- self-efficacy
results

- self-efficacy
results

- performance-approach
results

- performance-approach
results

- mastery
results

- mastery

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<table>
<thead>
<tr>
<th>Mastery Goal Orientation</th>
<th>Grades + Comments</th>
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<tbody>
<tr>
<td>Anticipation</td>
<td>Feedback Stage</td>
</tr>
<tr>
<td>4.05</td>
<td></td>
</tr>
<tr>
<td>4.10</td>
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<td>4.15</td>
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<tr>
<td>4.40</td>
<td></td>
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<tr>
<td>4.45</td>
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</tbody>
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results

• intrinsic motivation
• intrinsic motivation

![Graph showing intrinsic motivation over stages](image-url)
conclusions

• Motivational fluctuation within single assessment

Bernacki et al. (2015)
conclusions

• Motivational fluctuation within single assessment

• Grades and comments led to most favorable motivation outcomes
Conclusions

- Motivational fluctuation within single assessment

- Grades and comments led to most favorable motivation outcomes
  - Providing written comments is worth the extra time
conclusions

• Motivational fluctuation within single assessment

• Grades and comments led to most favorable motivation outcomes
  - Providing written comments is worth the extra time
  - Essential to consider the broader assessment context
conclusions

• Motivational fluctuation within single assessment

• Grades and comments led to most favorable motivation outcomes

• Grades and comments also led to a decline in self-efficacy
conclusions

• Motivational fluctuation within single assessment

• Grades and comments led to most favorable motivation outcomes

• Grades and comments also led to a decline in self-efficacy

  - Such a thing as too much feedback?
conclusions

• Motivational fluctuation within single assessment

• Grades and comments led to most favorable motivation outcomes

• Grades and comments also led to a decline in self-efficacy

  - Such a thing as too much feedback?

  - More accurate perceptions of current understanding?
caveats

- All-female sample

Roberts & Nolen-Hoeksema (1994)
caveats

• All-female sample

• Academically selective school

• Failed to disentangle valence from feedback form
caveats

- All-female sample
- Academically selective school
- Failed to disentangle valence from feedback form
thank you!

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