

Student Motivation Improves While Using Accelerated Reader

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Available online: <<http://drbrem.ml1.net/renlearn/publications/AEQip.pdf>>.

Independent research conducted during the 2003–2004 school year

Introduction

During the course of a semester, classrooms using Accelerated Reader (AR) and research-based best classroom practices maintained high mastery goal orientation scores, while performance approach and performance avoid goal orientation scores dropped significantly. In addition, perceived teacher goal orientation was associated with both positive and negative student goal orientation.

Study Description

This study examined the effect of AR on the goal orientations of 239 elementary students in grades three through six. While the participating school initially approached the researchers to investigate the effect of AR and best classroom practices on students' reading performance¹, a number of teachers, parents, and students expressed concerns about the effects of this progress-monitoring tool on student motivation. Specifically, concerns revolved around the software's comprehension quizzes and the points they bestow when completed successfully. Would these quizzes, a mode of formative assessment, foster mastery goal orientations in students ("learning for learning's sake"), or would students instead become more performance goal oriented ("working for the grade")²? The researchers theorized that like most types of assessment, Accelerated Reader could do either, depending on how teachers presented it to their students. Furthermore, because students' goals may be influenced by those of their teachers, the researchers also decided to investigate the correlation between the students' perceived teacher goal orientations and the students' own goal orientations.

The researchers used adapted versions of the Patterns of Adaptive Learning Scales (PALS) to gauge student goal orientation and perceived teacher goal orientation. The surveys were adjusted to accommodate the reading levels of the students involved, as well as to make the instrument specific to Accelerated Reader. The PALS surveys were administered twice during the school year, once in the middle of the first nine-week grading period, and a second time in the middle of the third nine-week grading period.

(more information on back)

Main Findings

- Student mastery goal orientation remained high during two semesters of implementing AR according to recommended best classroom practices.
- Student performance goal orientation decreased during two semesters of implementing AR according to recommended best practices.
- Students' personal goal orientations were significantly related to their perceptions of their teachers' goals.

Educator Backgrounds

Dr. Jenefer Husman is an Assistant Professor in the College of Education at Arizona State University. An Educational Psychologist, her research focuses on students' academic motivation and the influence their thoughts about their personal futures have on their motivation for learning. She is the author of a number of journal articles, book chapters, and technical reports. She serves on the editorial board of the *Journal of Educational Psychology*, *Contemporary Educational Psychology*, and has served as the guest editor of *Educational Psychology Review*.

Dr. Sarah Brem is an Associate Professor in the College of Education at Arizona State University. A cognitive scientist, her research focuses on public use and understanding of scientific and technical information. She is the author of a number of journal articles, book chapters, and technical reports, and is the recipient of a National Science Foundation Early Career Award.

Mary Anne Duggan is a doctoral student in the College of Education at Arizona State University. She is also the Assistant Director of Arizona State University's Beginning Educator Support Team (BEST) program. Prior to this position, Duggan worked for 17 years as an elementary school teacher and staff developer in the public school system.

Results

Results supported the theory that the impact of an evaluation (such as the quizzes in Accelerated Reader) on student motivation has more to do with the way the evaluation is delivered, than with the evaluation in and of itself.

Students were significantly less performance approach oriented ($F=17.33, p<.001$) and less performance avoid oriented ($F=6.04, p<.05$) at the end of the year. Students' mastery goal orientation, while remaining high, did not change significantly ($F=2.28, p=.13$) during the course of the study.

Students were also asked to assess their teachers' goal orientations. When the researchers compared the students' perceptions of their teachers' goal orientations to the students' personal goal orientations, they found that student orientation tended to reflect perceived teacher orientation. The relationship held true for performance avoid ($r=0.22, p<.001$) and

performance approach ($r=0.34, p<.001$) goal orientations, as well as for mastery goal orientation ($r=0.38, p<.001$). Surprisingly, the researchers discovered that the perception of mastery orientation in teachers was also related to students' performance approach ($r=0.26, p<.001$) and performance avoid ($r=0.20, p=.001$) goal orientations, possibly because students may misinterpret the encouragement given by mastery oriented teachers.

Conclusion

Based on the fact that student mastery goal orientation remained constant, and student performance orientation decreased, the authors concluded that the participating school had little reason to worry that the assessment component of Accelerated Reader would directly affect student motivation in a negative way. The results also led the researchers to conclude that teachers should carefully consider the ways in which they use evaluations in their classrooms.

¹ Brem, S.K., Husman, J., & Duggan, M.A. Findings from a three-year study of Reading Renaissance in a Title I urban elementary school: The effects of Reading Renaissance on students' standardized reading performance and motivation towards independent reading (Tech. Rep.). Tempe, AZ: Arizona State University, Division of Psychology in Education. Available online: <<http://drbrem.mll.net/renlearn/publications/rr2005.pdf>>.

² There are two types of performance goal orientations including performance approach orientation and performance avoid orientation. Performance approach students seek out challenges as a way to establish themselves as top students, and may learn in the process. On the other hand, performance avoid students are more concerned with not failing, and will run from challenge or engage in self-sabotaging behavior in order to excuse poor performance.



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Renaissance Learning, Inc
PO Box 8036 • Wisconsin Rapids, WI 54495-8036
(800) 656-6740 • www.renlearn.com