



Interest Development, Achievement, and Continuing Motivation: The Pivotal Role of Utility Value

Chris S. Hulleman, Brian P. An, Bryan L. Hendricks, & Judith M. Harackiewicz
University of Wisconsin – Madison



Poster presented at the 2007 Institute for Education Sciences Research Conference, June 6-8, Washington, DC.

The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant 144-NL14 to the University of Wisconsin-Madison. The opinions expressed are those of the authors and do not represent views of the U.S. Department of Education.

The Problem

Interest and motivation in school decline over time, particularly for students with lower competence beliefs (Jacobs et al., 2002; Lepper et al., 2005).

So What?

Interest is associated with increased attention, depth of processing, persistence, and effort (Hidi, 1990; Schiefele, 1991); enhanced learning and achievement (Schiefele et al, 1992); and future choices, such as course enrollment and academic major (Harackiewicz et al, 2000; Updegraff et al, 1996).

Thus, declining motivation not only means decreased interest and student engagement, but also may mean a decline in achievement over time.

The Solution

Teachers can create classroom environments that facilitate the development of student interest by helping students find value and meaning in their coursework (Brophy, 1999; Eccles et al., 1983).

Intrinsic value: a task is fun; enjoyable to do.

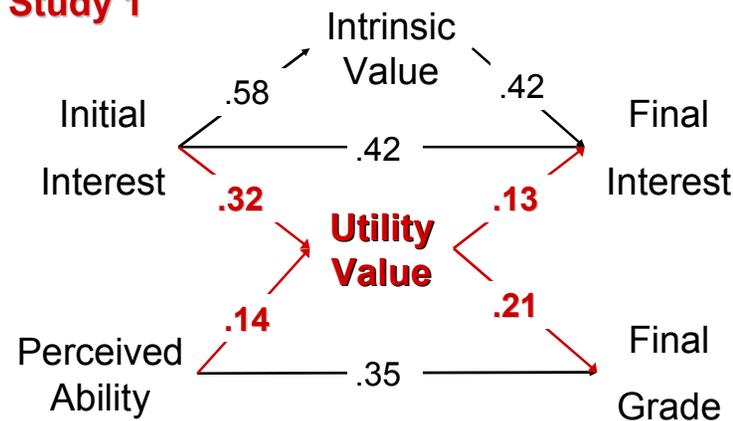
Utility value: a task is useful for accomplishing other tasks (i.e., the application of physics principles in engineering).

Method

Study 1: Participants were 175 undergraduate students enrolled in an Introductory Statistics course. Data were collected in three waves during the 15-week semester: week 2, week 8, and week 14.

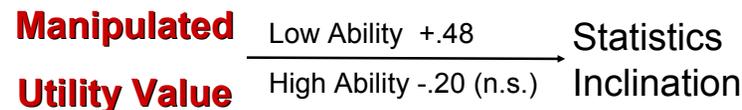
Study 2: Participants were 45 undergraduate students enrolled in an Introductory Statistics course. **Utility value was manipulated** at mid-semester, and the final measure of statistics inclination occurred during week 14.

Study 1



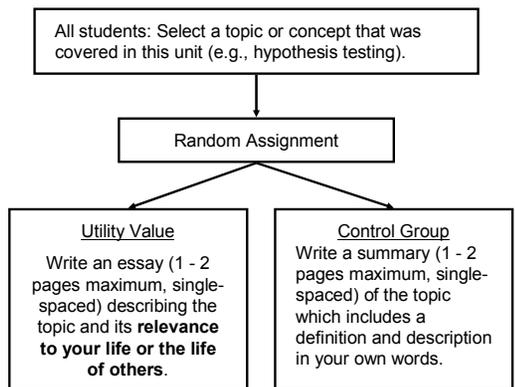
Values are standardized path coefficients from structural equation modeling (LISREL 8.72) and are significant at $p < .05$. Overall model fit statistics: $\chi^2(4) = 1.29, p > .15, RMSEA < .01$.

Study 2



Low Ability = Low Perceived Ability. High = High Perceived Ability. Multiple regression was used to analyze the data. The effects of the manipulation were moderated by students' perceived ability, $t(44) = -2.17, p = .04, (\beta = -.34)$. The simple slopes indicated that the effects of the intervention were significant for students with Low Perceived Ability ($\beta = .48, p < .05$), but unrelated for students with High Perceived Ability ($\beta = -.20, p > .25$).

Utility Value Manipulation



Conclusions

1. Utility value is correlated with both course interest and grades (Study 1).
2. Manipulated utility value increased continued interest, particularly for students with lower competence beliefs (Study 2).
3. Continued interest in a topic may subsequently promote perceptions of value (Study 1), and potentially create a positive motivational cycle.
4. Teachers can influence student motivation and performance by helping them find value and meaning in the course.
5. Future interventions aimed at increasing student achievement could include components that address motivation and interest, and thereby also influence achievement.

References

- Brophy, J. (1999). Toward a model of the value aspects in education: Developing appreciation for particular learning domains and activities. *Educational Psychologist*, 34, 75-85.
- Eccles, J., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L. & Midgley, C. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motives: Psychological and sociological approaches* (pp. 75–146). San Francisco: W. H. Freeman.
- Hidi, S. (1990). Interest and its contribution as a mental resource for learning. *Review of Educational Research*, 60, 549-571.
- Harackiewicz, J. M., Barron, K. E., Tauer, J. M., Carter, S. M., & Elliot, A. J. (2000). Short-term and long-term consequences of achievement goals: Predicting interest and performance over time. *Journal of Educational Psychology*, 92, 316-330.
- Jacobs, J. E., Lanza, S., Osgood, D. W., Eccles, J. S., & Wigfield, A. (2002). Changes in children's self-competence and values: Gender and domain differences across grades one through twelve. *Child Development*, 73(2), 509-527.
- Lepper, M.R., Corpus, J.H., Iyengar, S.S. (2005). Intrinsic and Extrinsic Motivational Orientations in the Classroom: Age Differences and Academic Correlates. *Journal of Educational Psychology*, 97, 184-196.
- Schiefele, U. (1991). Interest, learning, and motivation. *Educational Psychologist*, 26, 299-323.
- Schiefele, U., Krapp, A., & Winteler, A. (1992). Interest as a predictor of academic achievement: A meta-analysis of research. In K. A. Renninger, S. Hidi, & A. Krapp (Eds.), *The role of interest in learning and development* (pp. 183-211). Hillsdale, NJ: Erlbaum.
- Updegraff, K.A., Eccles, J.S., Barber, B.L., & O'Brien, K.M. (1996). Course enrollment as self-regulatory behavior: Who takes optional high school math courses? *Learning and Individual Differences*, 8, 239-259.

Contact Information

Chris Hulleman
Research Fellow
Interdisciplinary Training Program in Education Sciences
University of Wisconsin-Madison
1025 W. Johnson St., Suite 453
Madison, WI 53706-1796
Email: cshulleman@wisc.edu