## Taking Humor Serious: Effects of Humor on Anxiety, Motivation, and Learning in Statistics

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Research has shown that humor and the resulting laughter can reduce tension and increase wellbeing. If humor could also reduce anxiety the use of it may be especially beneficial for the students in dread courses like statistics. This paper reviewed studies about the effect of humor used in statistics lectures on motivation, statistics anxiety, and learning. Results showed that humor has a positive effect on motivation and it further can reduce anxiety. Humor has also been shown to have a memory-enhancing effect but findings about the effect on learning and recall in statistics classes are inconsistent and require further research.

Keywords: humor, anxiety, motivation, learning, statistics

Penelitian menunjukkan bahwa humor dan tawa yang dihasilkan dapat meredakan ketegangan dan meningkatkan rasa nyaman. Bila humor juga dapat mengurangi kecemasan, pemanfaatannya mungkin bermanfaat khususnya untuk para mahasiswa dalam kuliah menakutkan seperti statistik. Artikel ini mereview kajian-kajian tentang efek humor yang dipakai dalam kuliah statistik terhadap motivasi, kecemasan terhadap statistik, dan belajar. Hasil menunjukkan bahwa humor menimbulkan efek positif terhadap motivasi dan selanjutnya mampu mengurangi kecemasan. Humor juga telah menunjukkan mampu meningkatkan ingatan, namun temuan tentang efek terhadap belajar dan mengingat kembali dalam mata kuliah statistik tak konsisten dan membutuhkan penelitian lebih lanjut

Kata kunci: humor, kecemasan, motivasi, belajar, statistika

During adolescence the students' motivation and academic achievements tend to decline (Peetsma, Hascher, van der Veen, & Roede, 2005). This is especially the case after the transition from elementary to junior high school (Eccles & Midgley, 1989). What might be the reasons for this motivational decline? Eccles & Midgley proposed that this decline may be explained by an interaction between physical maturation and the changes in the social environment that adolescents experience. But when we think about how school was in elementary school and how it became in secondary school one may get a gist to understand this motivational decline. In elementary school children are taught with play, school is "fun" and children are eager to learn more. Thus, intrinsic motivation is much supported in the first years of elementary school. By the transition from elementary to junior high school the pupils' confidence in their math abilities and their interest in learning mathematics dramatically declines (Eccles & Midgley). Eccles and Midgley proposed that systematic differences between elementary schools and junior high schools may account for the motivational problems. However, the authors were not able to specify what exactly those systematic differences are. But one could expect that it may have to do with the instructions at school which may not wake as much interest in pupils as it is the case for instructional material in elementary school. Another possibility may be that the role of extrinsic rewards (e.g. good grades, social comparison) after the transition to junior high school decreases the pupils' intrinsic motivation for learning mathematics (Myers, 2010).

Intrinsic motivation has often been associated with interest, because intrinsically motivated people do things out of interest and not because they are expecting a reward (Carr, 2011). The behavior of the intrinsically motivated

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