LOSING MOTIVATION – MATHEMATICS RELATED VALUES OF STUDENTS WHO DROPED OUT FROM UNIVERSITY

Lara Gildehaus[1], Michael Liebendörfer[1], and Sebastian Geisler[2]

[1]Paderborn University, [2]University of Hildesheim

Motivation is a relevant factor for study dropout in mathematics. Common conceptualizations frame this motivation within the situated-expectancy-value framework (Eccles & Wigfield, 2020). Accordingly, a dropout decision is related to the individuals' expectancy for success and the importance or value the individual attaches to the various options. Herby low values and expectancies, as well as decreases in those, are known as high risk factors for study dropout. Specifically, the individual hierarchy of values emerged from the specific social background is assumed as relevant, but underrepresented in research on study dropout from mathematics (Eccles & Wigfield, 2020). Understanding these hierarchies of values and their development in the social context, might help to prevent motivation-based dropout decisions.

Our research goal is to investigate how expectancies and individual hierarchies of values emerge in the social context of the transition to university mathematics. We draw on semi-structured interviews with seven students (4 female) that were originally conducted by the third author between 2016 and 2018 at a large public German university (Geisler, 2017). All students dropped out from university mathematics after having attended at least the first weeks and at most four semesters of their studies (proof-based, formal mathematics courses). We coded their interviews deductively in line with the situated-expectancy-value theory. Our findings suggest that especially attainment value, as well as psychological costs and expectancies may be highly influenced by the social context experienced during transition to university mathematics and may thus lead to dropout: Students that leak social references, may devalue the subject, even when performing extremely well and thus showing high expectancies. Low expectancies were associated with high psychological cost, while both were highly depending on social references as well. Moreover, values may have different dimensions, related to one's specific self-image as well as beliefs about mathematics. Addressing these dimensions in quantitative studies, may give clearer insights about student's dropout decisions. Value-interventions may as well focus on the overall social context, rather than the individual. Further results and implications well be given more detailed in the presentation.

References

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