

Towards a Comprehensive Taxonomy of Study Goals of University Students

A Synthesis of existing Study Goal Classification Systems and New Data

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Theoretical Background

- SIDDATA Project (www.siddata.de): Goal setting for university students with a digital data-driven assistant
- Goal setting increases performance (Locke and Latham, 2002).
- Goal setting can have beneficial effects on general point average and affect (Morisano et al., 2010)
- students have difficulties to name their individual study goals (Olos et al., 2014).

Research Questions

- 1) What kinds of individual study goals do German university students have?
- 2) How can these study goals be categorized in a study goal taxonomy (by a digital study assistant)?
- 3) How frequent are different types of study goals?

Methods

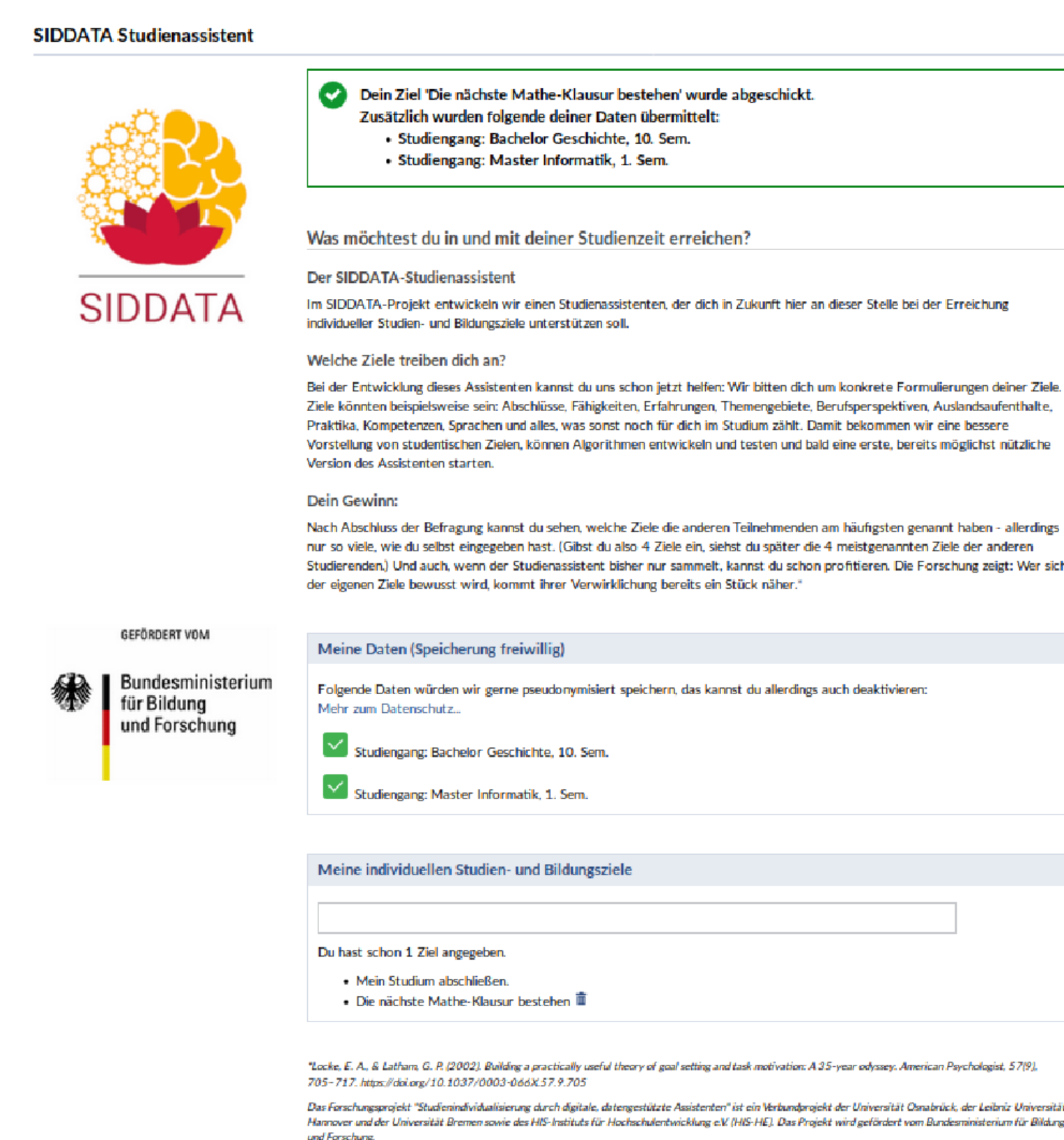


Fig. 1: This survey, implemented in PHP was integrated into the learning management system (LMS) Stud.IP at the universities of Bremen, Hannover and Osnabrück. Students were encouraged to enter individual goals in natural language.

- Data collection: Web-based acquisition of university students' goals in natural language ($n=1314$)
- Top-down generation of goal categories based on literature (Ahn et al., 2012; Bloom et al., 1973)
- Bottom-up creation of categories based on study goals
- Goal taxonomy: 7 super-categories and 28 categories
- Rating: Six raters assign categories for each of 1314 goals
- Calculation of Krippendorff's Alpha as measure of inter-rater-reliability for each category
- Calculation of relative frequencies for each category

Results

Taxonomy		Categories ordered by inter-rater-reliability		Categories ordered by relative frequencies	
		Category	α	Category	rel. freq.
educational goals	knowledge	learning a foreign language	0.889	professional / private (s)	0.3847
	understanding	going abroad	0.860	educational goals (s)	0.3307
	skills	duration of studies	0.855	career goals (s)	0.3260
	personal development	achieving a degree	0.829	professional goals (s)	0.3219
career goals	grades	nonsense	0.826	temporal scope (s)	0.2211
	duration of studies	career goals (s)	0.755	concrete goals (s)	0.2016
	achieving a degree	grades	0.754	knowledge	0.1621
	orientation	programming	0.742	achieving a degree	0.1563
	job chances	communication, contact	0.721	personal development	0.1517
	networking	concrete goals (s)	0.713	others (s)	0.1465
	status/wealth	practical experiences	0.701	during university studies	0.1383
	professional and financial safety	social goals (s)	0.695	job chances	0.1009
social goals	communication, contact	networking	0.652	beyond university studies	0.0792
	engagement, idealism	engagement, idealism	0.642	social goals	0.0780
	temporal scope	learning scientific methods	0.639	skills	0.0768
	within this semester	job chances	0.609	private	0.0647
	during university studies	professional and financial safety	0.604	SMART: specific, measurable, achievable	0.0608
	beyond university studies	fun, happiness, satisfaction	0.601	communication, contact	0.0509
professional / private	professional	status, wealth	0.526	going abroad	0.0478
	private	personal development	0.521	practical experiences	0.0475
concrete goals	practical experiences	understanding	0.515	grades	0.0456
	going abroad	orientation	0.500	Learning scientific methods	0.0445
	learning a foreign language	educational goals (s)	0.494	learning a foreign language	0.0409
	learning scientific methods	professional goals (s)	0.489	programming	0.0392
others	programming	within this semester	0.481	fun, happiness, satisfaction	0.0381
	nonsense	knowledge	0.450	orientation	0.0380
	fun, happiness, satisfaction	skills	0.381	understanding	0.0351
	SMART: specific, measurable, achievable	professional / private (s)	0.350	too vague	0.0326
	during university studies	others	0.340	engagement, idealism	0.0279
	temporal scope (s)	too vague	0.264	networking	0.0211
		private	0.226	status, wealth	0.0190
		SMART: specific, measurable, achievable	0.195	nonsense	0.0158
		beyond university studies	0.146	duration of studies	0.0130
		during university studies	0.059	professional and financial safety	0.0074
		temporal scope (s)	0.044	within this semester	0.0040

Table 1: Left: Our taxonomy, super-categories bold with gray background, Middle: Categories sorted by highest inter-rater-reliability (reliable if $\alpha \geq 0.800$ with dark gray background, tentative conclusive if $0.800 > \alpha \geq 0.667$ with light gray background) Right: Categories sorted by highest frequency

Discussion

- The results of the research described on this poster will be used for the natural language interface of a digital data-driven study assistant.
- Inter-rater-reliability may be increased by clarifying the rater instructions. This may lead to a higher inter-rater-reliability.
- The findings will be replicated with a larger dataset.

References

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GEFÖRDERT VOM



FÖRDERKENNZEICHEN

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