HEIR Conference
"Metrics that Matter: future directions for qualitative and quantitative institutional research"
7 and 8 September 2016, Liverpool John Moores University

Drop-out Propensity and Student Expectations: Empirical Evidence and Implications for University Didactics
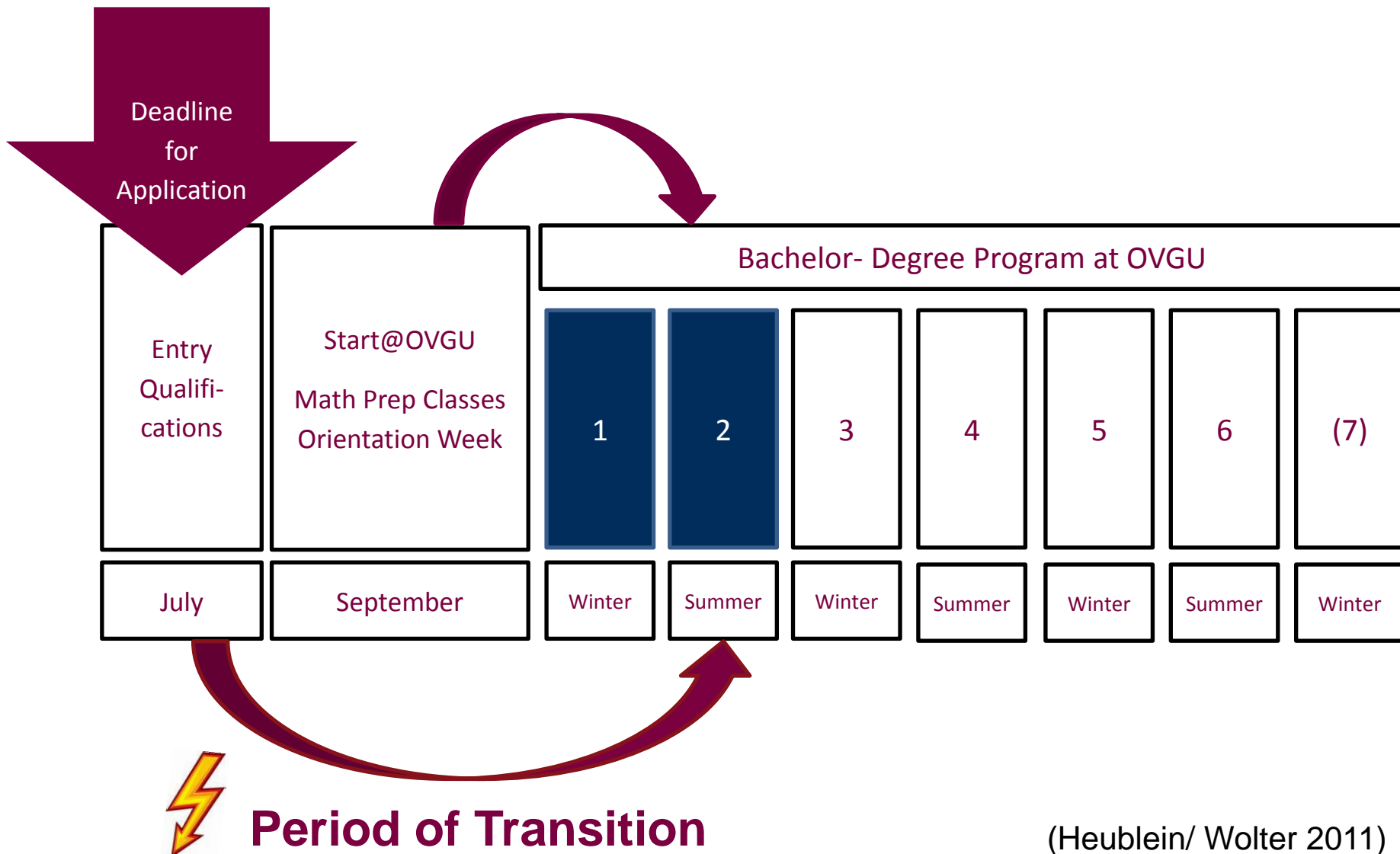
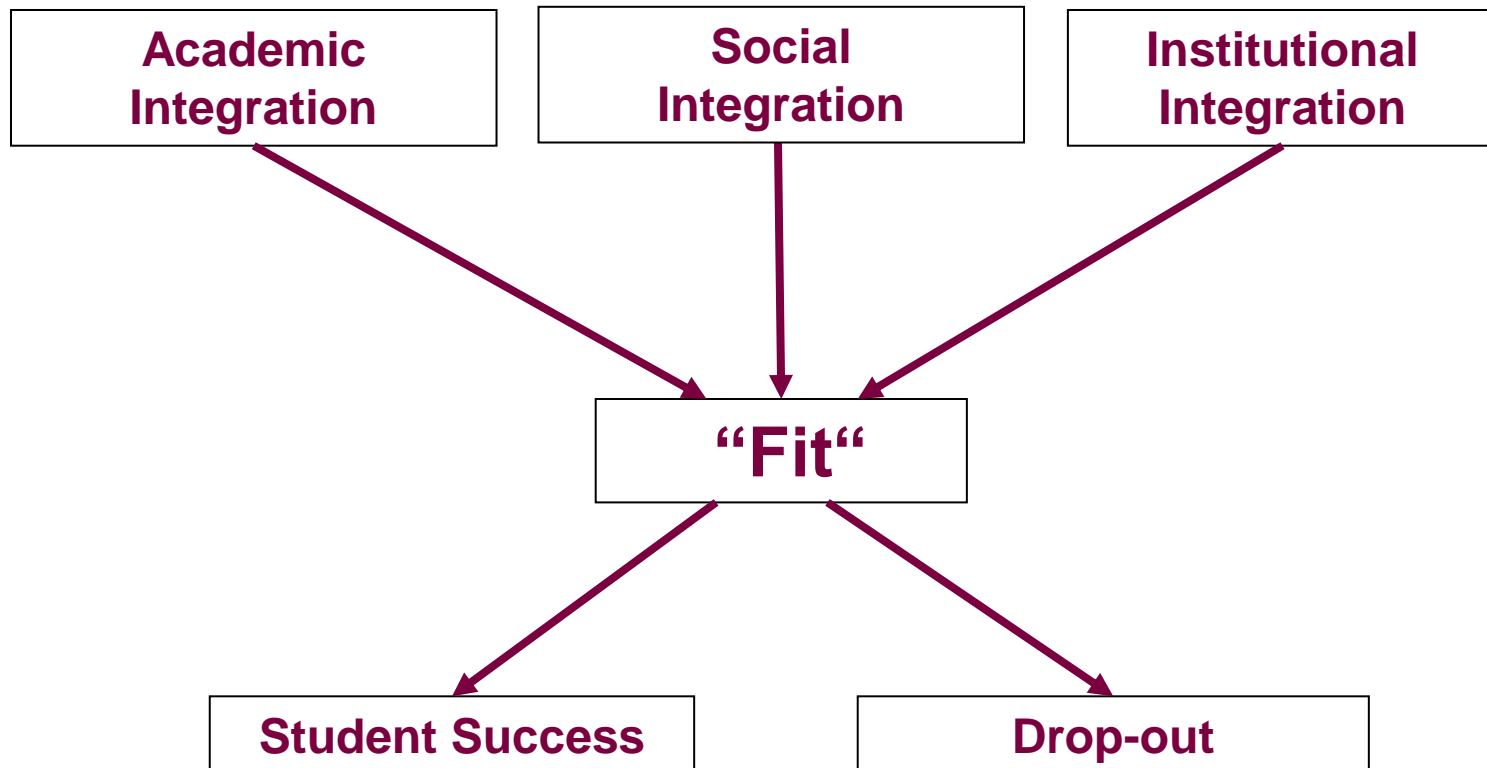Annika Rathmann and Claudia Wendt

Structure

1. Relevance of Students' Expectations for the Opening Phase of Higher Education and Student Success.

2. Self-Determination Theory (Deci & Ryan).

3. Methodical Design: First-Semester-Survey and Panel Survey.

4. Empirical Results: Student Experience, Expectations and Drop-out Propensity

5. Conclusions and Discussion

1. Relevance of Students Expectations for the Opening Phase of Higher Education and Student Success

Opening Phase of Higher Education

		Bachelor- Degree Program at OVGU					
Entry Qualifi-cations	Start@OVGU Math Prep Classes Orientation Week	1	2	3	4	5	6	(7)
July	September	Winter	Summer	Winter	Summer	Winter	Summer	Winter

Deadline for Application

Period of Transition

(Heublein/ Wolter 2011)

Theoretical Approach: Student–University–Fit–Model
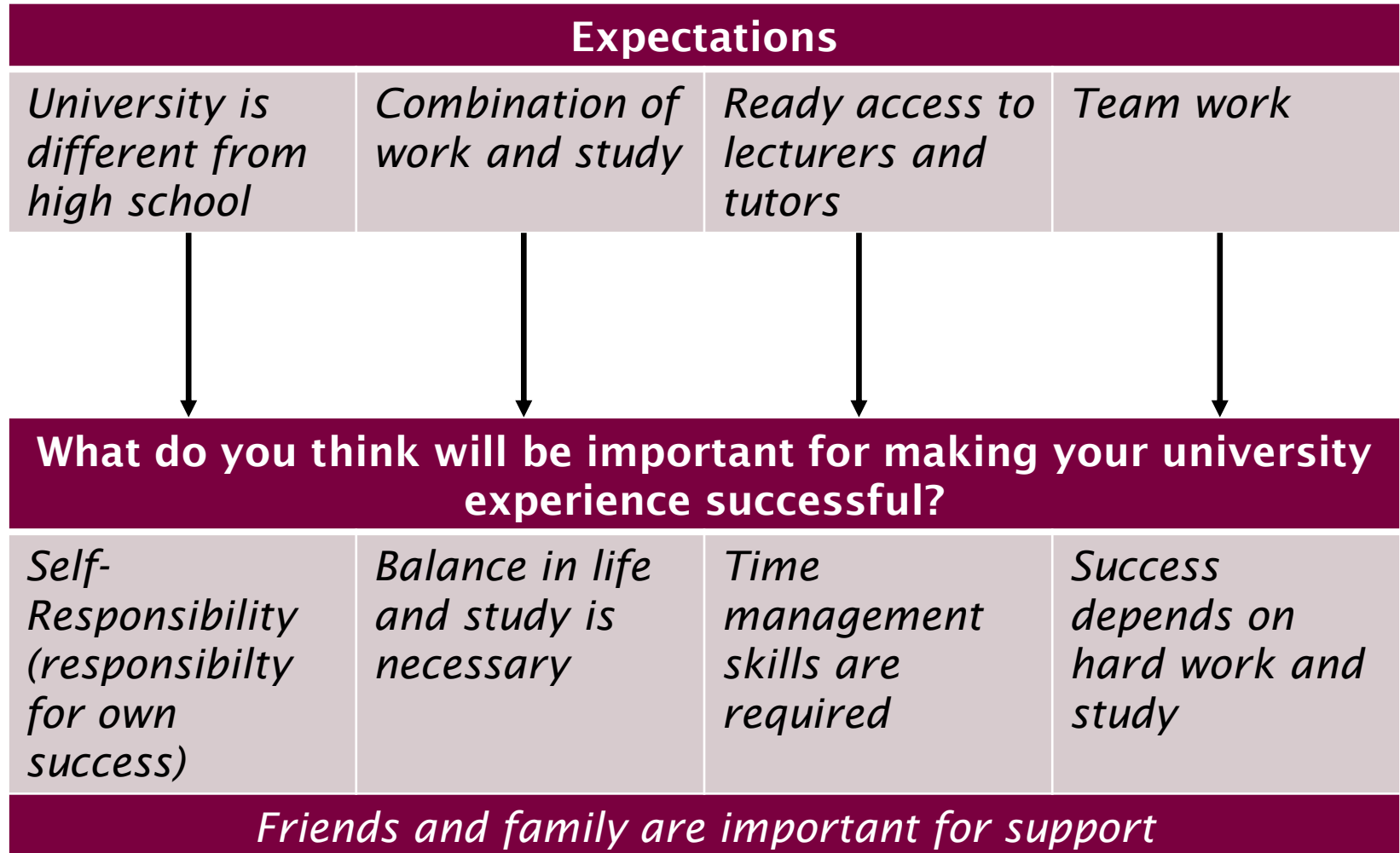

→"Fit" leads to student satisfaction

Wendt et al. 2016
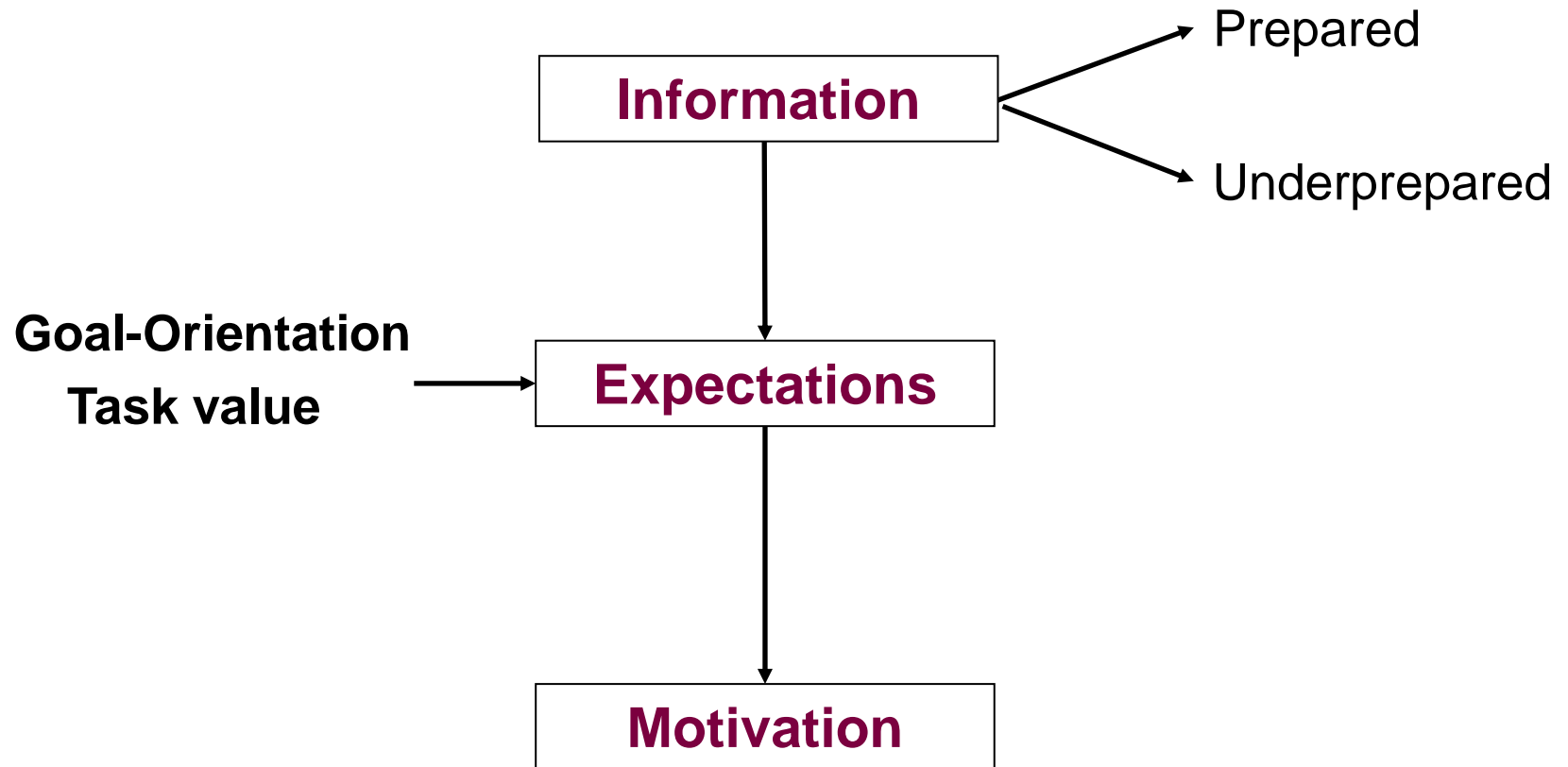
Student Expectations

- **Student Expectations** are:
  - mental anticipations of upcoming events (Ludwig 2010)
  - based on experience and information (Gawrilow et al. 2009)

- **Findings** (Hasenberg/ Schmidt-Atzert 2013):
  - Realistic expectations can lead to a higher fit between student and study program
  - The higher the fit of student and study program are, the higher is student satfisfaction
  - The more realistic the expectations are, the higher is student satisfaction (leads to student success)

Student Expectations

Expectations			
University is different from high school	*Combination of work and study*	*Ready access to lecturers and tutors*	*Team work*

What do you think will be important for making your university experience successful?

Self-Responsibility (responsibilty for own success)	*Balance in life and study is necessary*	*Time management skills are required*	*Success depends on hard work and study*

Friends and family are important for support

(Crisp, Palmer et al. 2009)

Student Expectations & Motivation

(Howey, 1999, 2008; Garcia et al. 1991)

2. Self–Determination Theory (Deci & Ryan)

Self Determination Theory

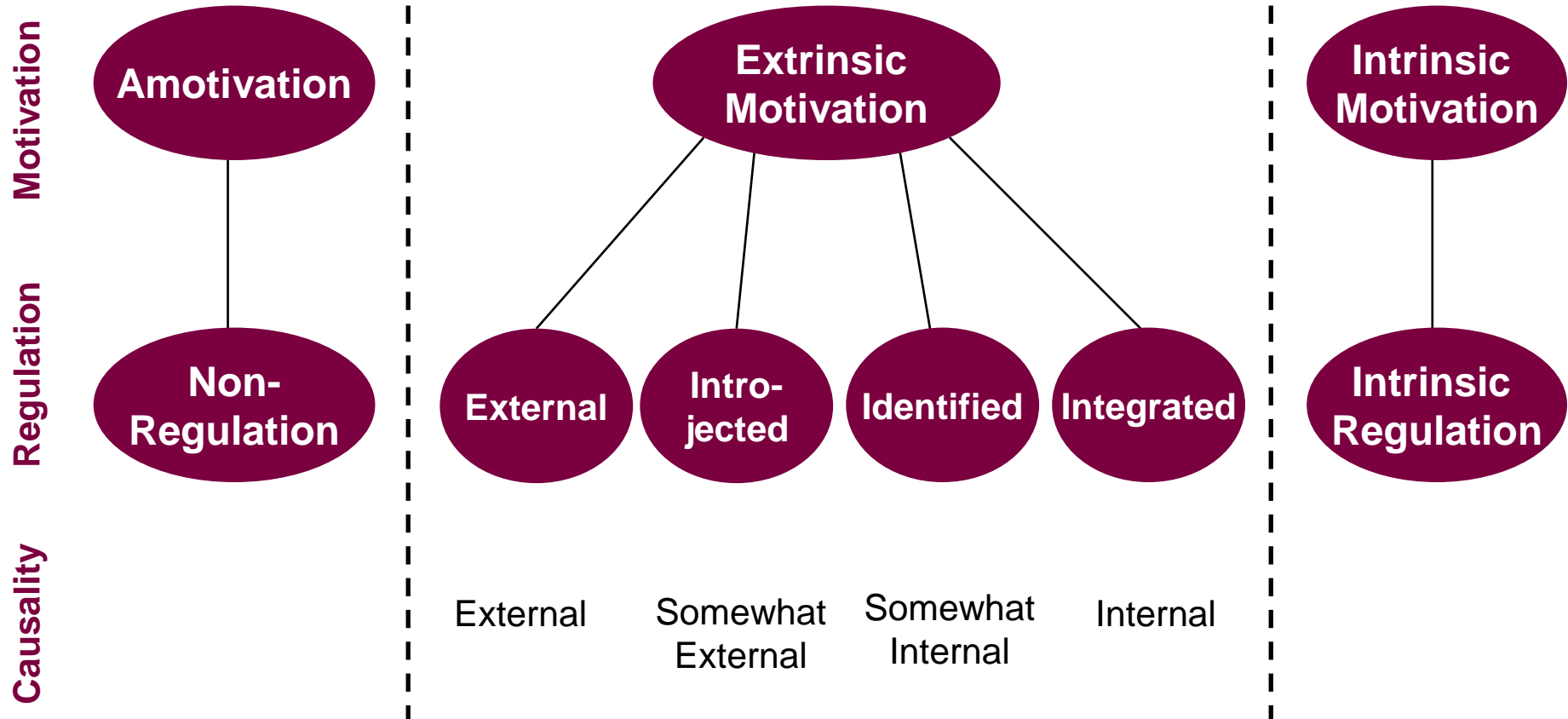|		
Competence	*Relatedness*	*Autonomy*

Theory is based on 4 „mini-theories"
- Cognitive evaluation theory
- Organismic integration theory
- Causality orientations theory
- Basic needs theory

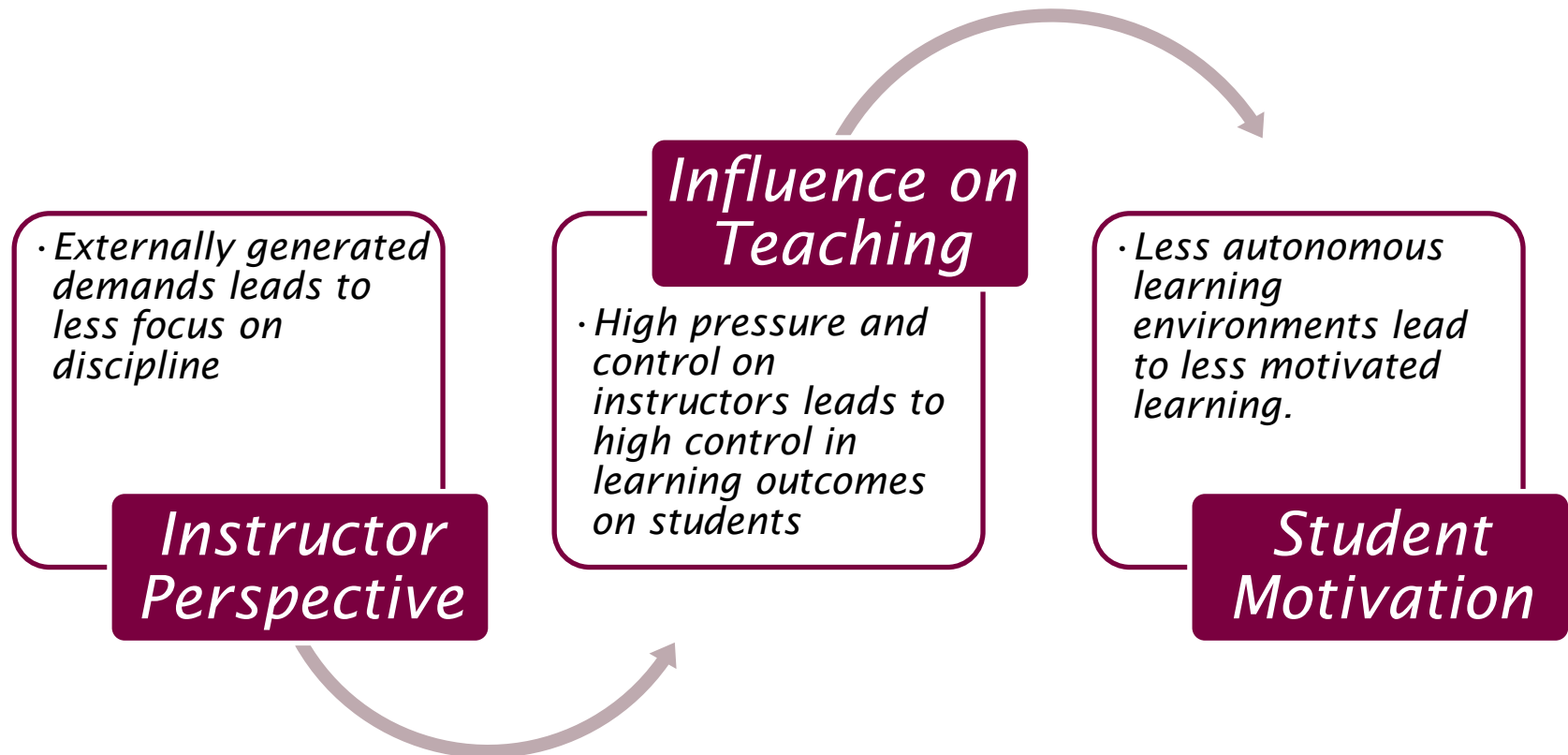(Deci et al. 1991, Deci & Ryan 2002)

Motivation Continuum

(Ryan/Deci 2000)

Learning Motivation & Control

Influence on Teaching

Instructor Perspective
- Externally generated demands leads to less focus on discipline

- High pressure and control on instructors leads to high control in learning outcomes on students

Student Motivation
- Less autonomous learning environments lead to less motivated learning.

(Jenert 2014, Deci/Ryan 2002; Deci et al. 1994)

Learning Motivation & Autonomy

- „intrinsic motivation and autonomous types of extrinsic motivation relate positively to important outcomes" (Niemic/ Ryan 2009: 149)
- Satisfaction of basic needs (competence, relatedness, autonomy) improve motivation
- Valid for all levels of education and across diverse cultures

Enhancement of basic needs	Means/ Tools
Competence Enhancement	*Feedback, optimally challenging tasks (no excessive demands)*
Relatedness Enhancement	*Respect and esteem towards self and others*
Autonomy Enhancement	*Give choice and meaning (context) in learning activities; minimize pressure and control*

3. Methodological Design: First-Semester-Survey and Panel Survey

First–Semester–Survey and Panel Survey

- **Opening Phase**

  – Expectations, Backgrounds, Requirements
  First-Semester-Survey winter 2014/15

- **Course of Studies**

  – Success Factors (Pursuit of Studies)
  First-Year-Survey summer 2015

  – Learning Styles, Learning Methods, Program Achievements

- **Study Degree**

  – Success Factors (Exams)

  – Transition (Labor Market, Master's Degree)

Pilot Group

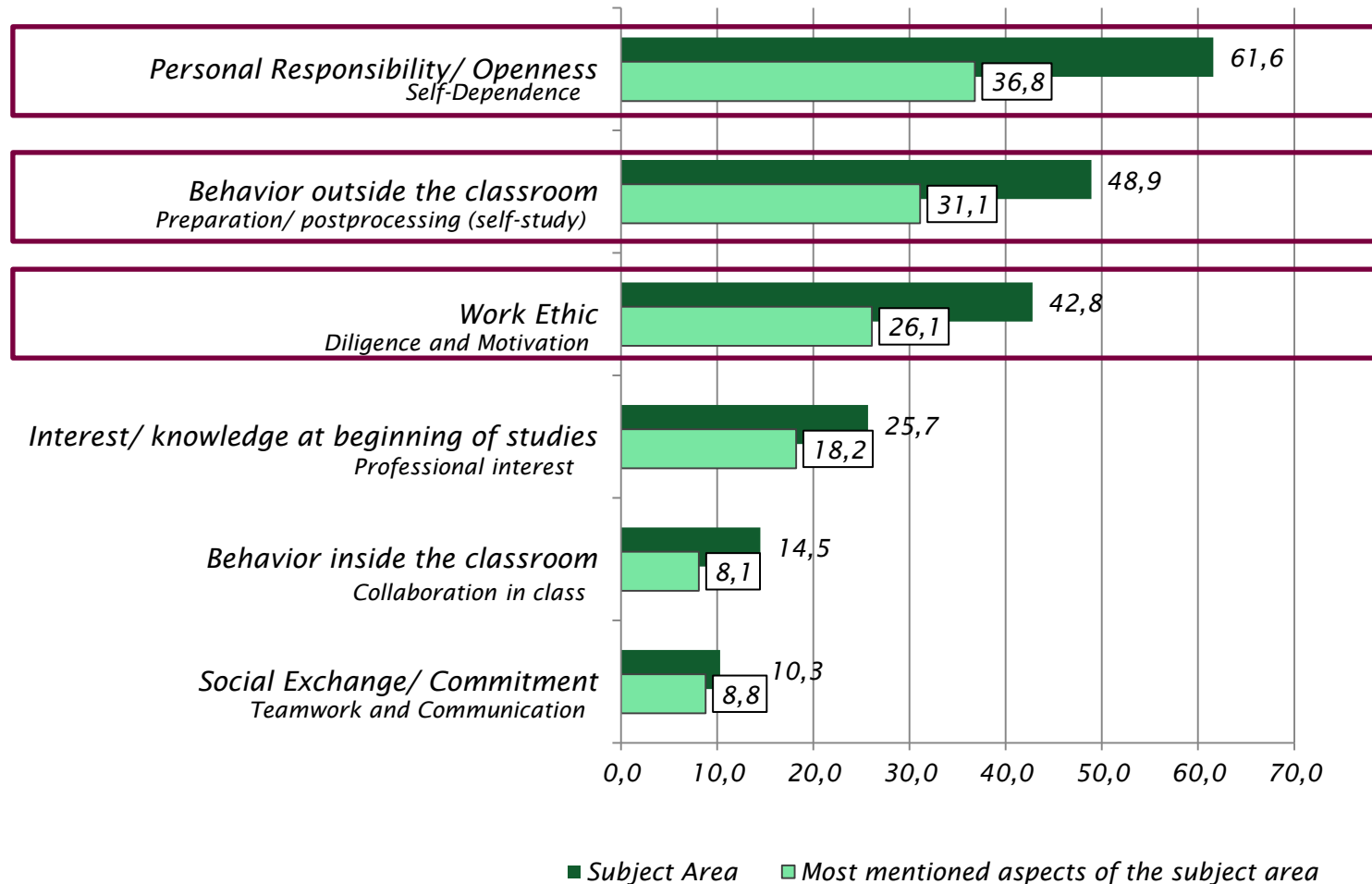| Survey	First-Semester-Survey: winter term 2014/2015	First-Year-Survey: summer term 2015
Mode	*Semi-standardized Online-Survey*	*Semi-standardized Online-Survey*
Field Research	*10/2014 - 12/2014*	*07/2015-10/2015*
Return	*N = 562 (approx. 24 percent)*	*N = 420*

Model of Variables for the Study
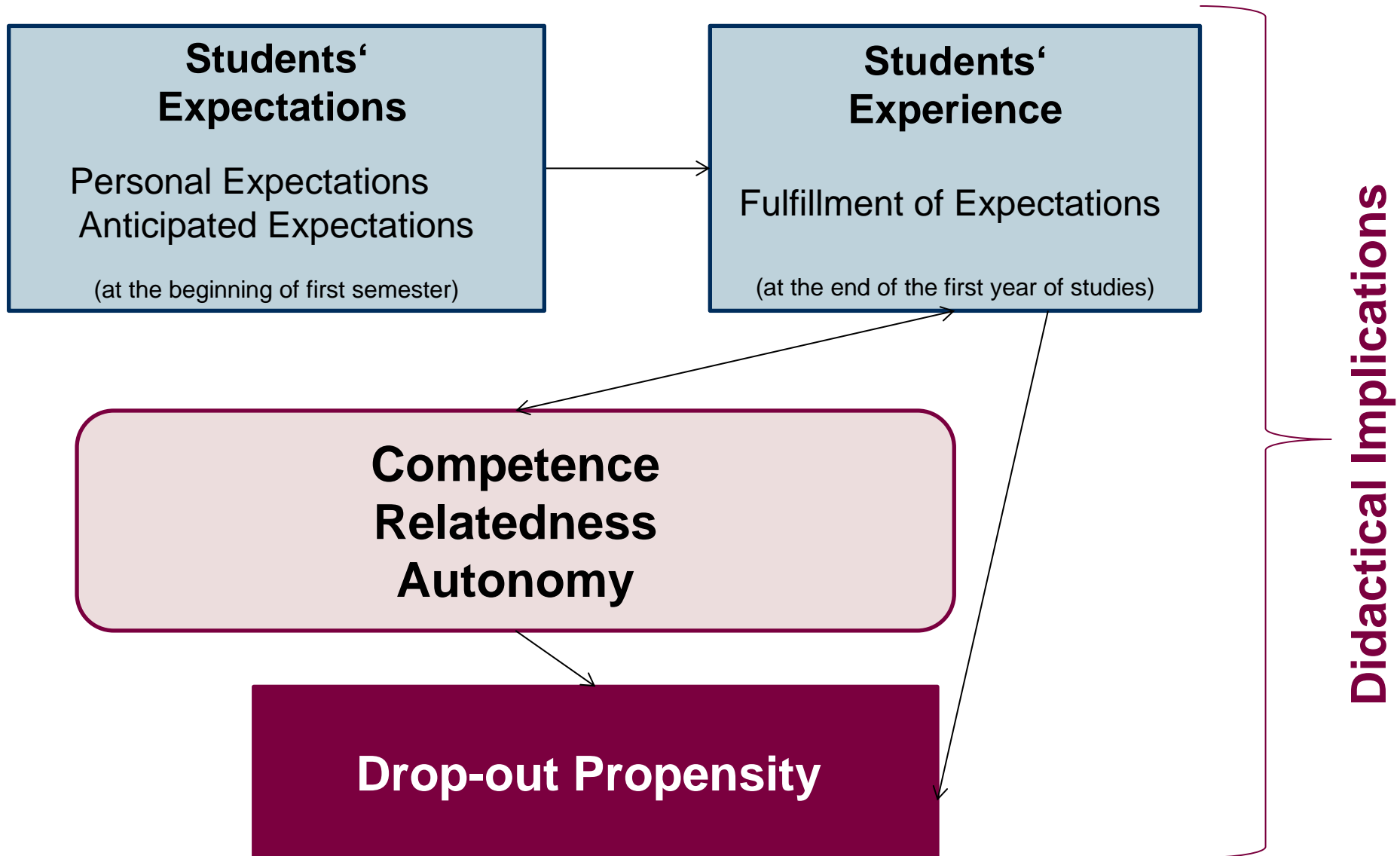
4. Empirical Results:
Students Experience, Expectations and Drop-out Propensity

Personal Expectations of First–semester–students towards their Studies (N 456). Expressed in Percent.

Category	Value
Contents of Program — Knowledge Acquisition (Subject Area)	61,0
Contents of Program — Knowledge Acquisition (Most mentioned aspects)	48,9
Surrounding Conditions — Teaching and Teachers (Subject Area)	41,9
Surrounding Conditions — Teaching and Teachers (Most mentioned aspects)	17,3
Personality Development — Satisfaction/ Well-being (Subject Area)	34,0
Personality Development — Satisfaction/ Well-being (Most mentioned aspects)	19,5
Social Environment — Making friends (Subject Area)	28,9
Social Environment — Making friends (Most mentioned aspects)	17,5
Career Planning — Preparation for future profession (Subject Area)	28,3
Career Planning — Preparation for future profession (Most mentioned aspects)	21,9
Performance Requirements — Good degree/ performance (Subject Area)	21,3
Performance Requirements — Good degree/ performance (Most mentioned aspects)	12,1

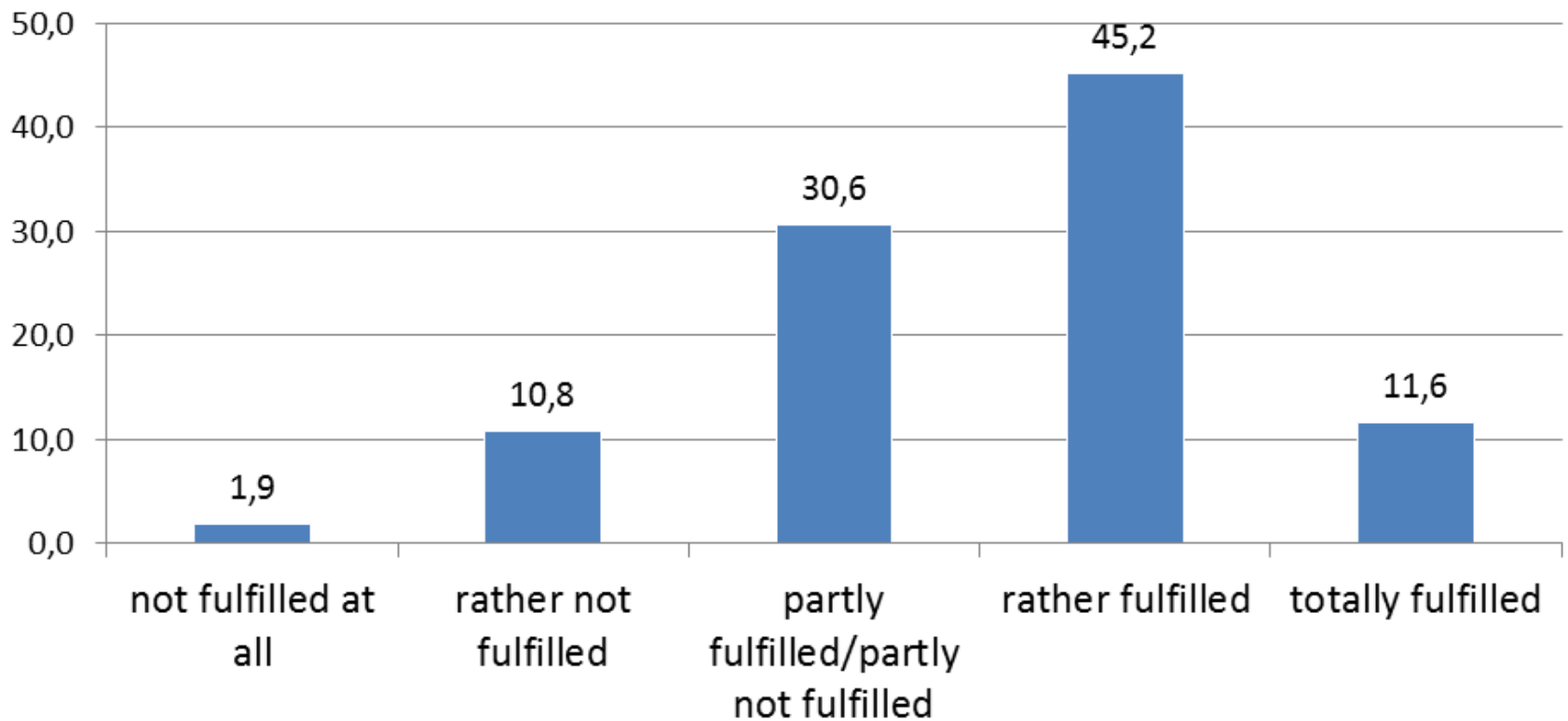■ Subject Area   □ Most mentioned aspects of the subject area

Questions: „What matters to you personally concerning your studies?" (v18)
Open question, personal categorization.

Anticipated Expectations of First–semester–students towards their Studies (N 456). Expressed in Percent.

Chart data:

Category	Subject Area	Most mentioned aspects of the subject area
Personal Responsibility/ Openness — Self-Dependence	61,6	36,8
Behavior outside the classroom — Preparation/ postprocessing (self-study)	48,9	31,1
Work Ethic — Diligence and Motivation	42,8	26,1
Interest/ knowledge at beginning of studies — Professional interest	25,7	18,2
Behavior inside the classroom — Collaboration in class	14,5	8,1
Social Exchange/ Commitment — Teamwork and Communication	10,3	8,8

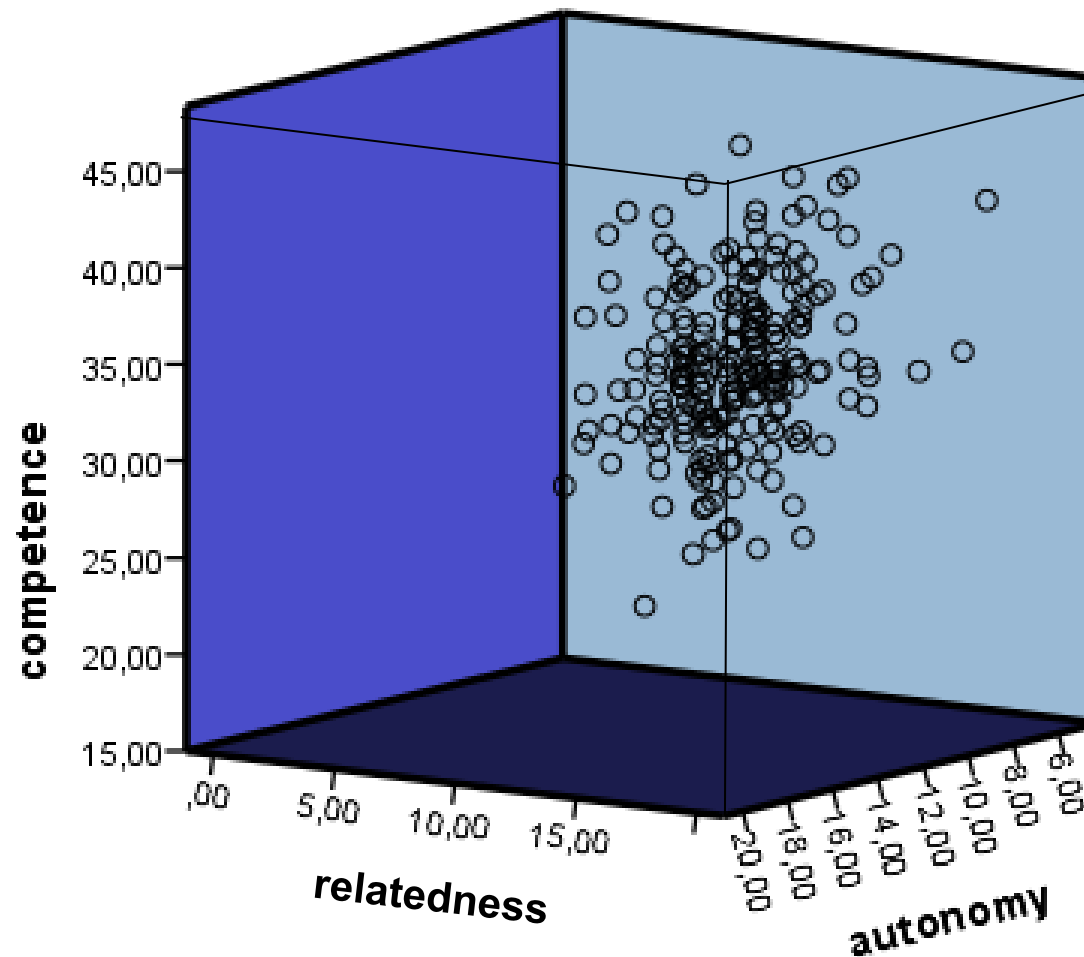■ Subject Area □ Most mentioned aspects of the subject area

Question: „ What do you think, is being expected from you " (v19)
Open question, personal categorization.

Fulfillment of Expectations. Views of students after the first your of studying (N 420). Expressed in Percent

Source: student panel survey at Otto-von-Guericke-University of Magdeburg, 2015

Competence, Relatedness and Autonomy of Students (N 420)

Source: student panel survey at Otto-von-Guericke-University of Magdeburg, 2015

Competence, Relatedness and Autonomy of Students → Depending on Extent of Fulfillment of Expectations

Correlations

		1	2	3	4
1 - competence	Pearson Correlation	1	,338**	,152*	,230**
	Sig. (2-tailed)		,000	,013	,000
	N		235	270	290
2 - relatedeness	Pearson Correlation		1	,569**	,415**
	Sig. (2-tailed)			,000	,000
	N			268	276
3 - autonomy	Pearson Correlation				,423**
	Sig. (2-tailed)				,000
	N				336
4 - extent fulfillment of expectations	Pearson Correlation				1
	Sig. (2-tailed)				
	N				

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: student panel survey at Otto-von-Guericke-University of Magdeburg, 2015

Drop–out Propensity of Students (N 420). Expressed in Percent.
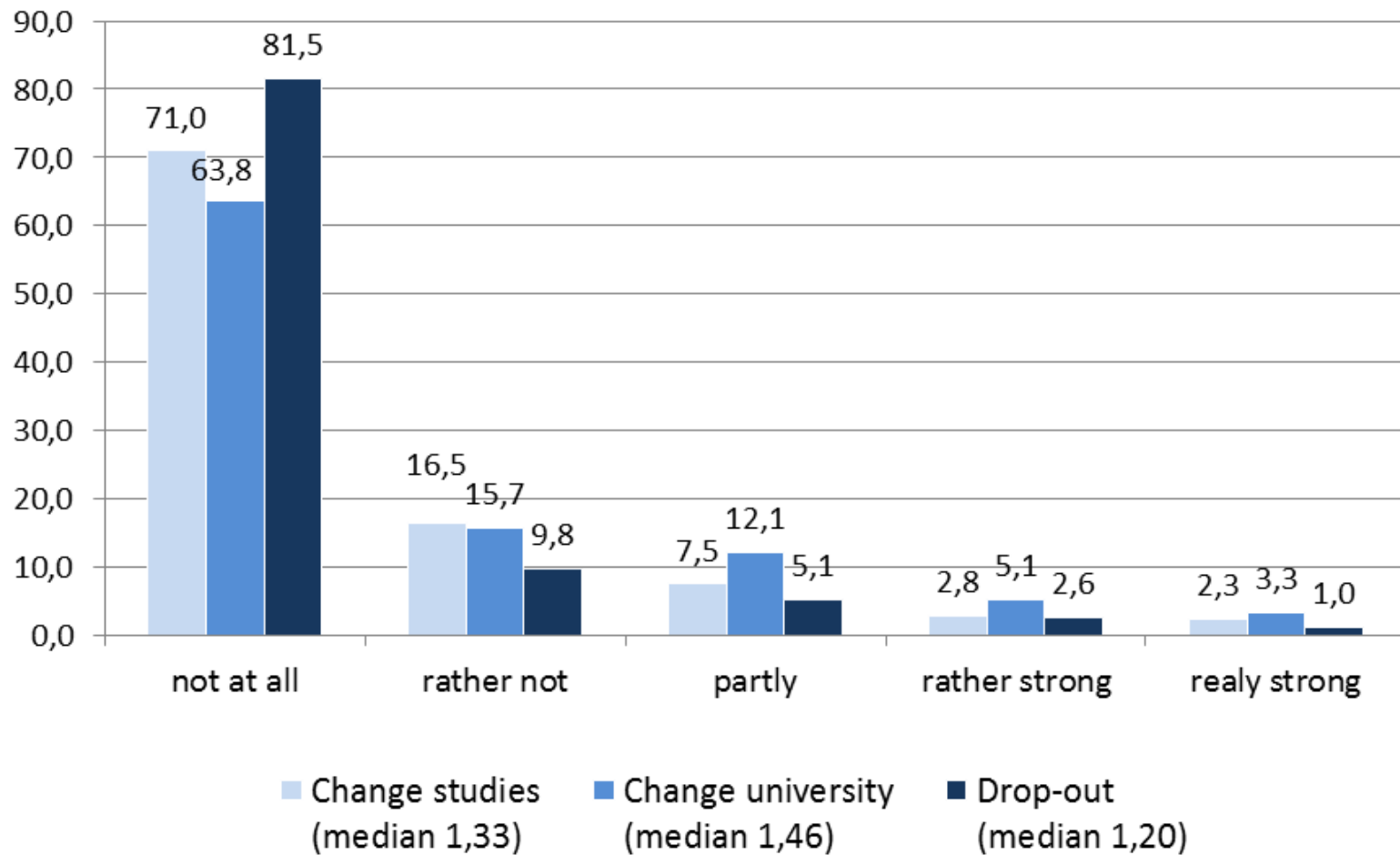
Question: „To what extend do you actually seriously consider to... " (w9)
Response format as shown.
Source: student panel survey at Otto-von-Guericke-University of Magdeburg, 2015

Drop–out Propensity
→ Depending on the Extent of Fulfillment of Expectations

Correlations

		1	2	3	4
1 - change studies	Pearson Correlation	1	,409**	,449**	-,399**
	Sig. (2-tailed)		,000	,000	,000
	N		388	389	371
2 - change university	Pearson Correlation		1	,374**	-,360**
	Sig. (2-tailed)			,000	,000
	N			388	371
3 - Drop-out	Pearson Correlation			1	-,417**
	Sig. (2-tailed)				,000
	N				371
4 - extent fulfillment of expectations	Pearson Correlation				1
	Sig. (2-tailed)				
	N				

**. Correlation is significant at the 0.01 level (2-tailed).

Source: student panel survey at Otto-von-Guericke-University of Magdeburg, 2015

Drop–out Propensity
→ Depending on Competence, Relatedness and Autonomy

Correlations

		1	2	3	4	5	6
1 - competence	Pearson Correlation	1	,338**	,152*	-,186**	-,166**	-,264**
	Sig. (2-tailed)		,000	,013	,001	,004	,000
	N		235	270	296	296	296
2 - relatedness	Pearson Correlation		1	,569**	-,131*	-,262**	-,192**
	Sig. (2-tailed)			,000	,026	,000	,001
	N			268	290	290	290
3 - autonomy	Pearson Correlation			1	-,176**	-,283**	-,228**
	Sig. (2-tailed)				,001	,000	,000
	N				349	349	349
4 - change studies	Pearson Correlation				1	,409**	,449**
	Sig. (2-tailed)					,000	,000
	N					388	389
5 - change university	Pearson Correlation					1	,374**
	Sig. (2-tailed)						,000
	N						388
6 - Drop-out	Pearson Correlation						1
	Sig. (2-tailed)						
	N						

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: student panel survey at Otto-von-Guericke-University of Magdeburg, 2015

Influencing Factors on Drop–out Propensity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,411[a]	,169	,153	,641

a. Predictors: (Constant), fulfillment of expectations, competence, relatedness, autonomy

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,196	,386		8,286	,000		
	fulfillment of expectations	-,206	,055	-,275	-3,712	,000	,729	1,372
	competence	-,022	,011	-,140	-2,063	,040	,873	1,145
	relatedness	-,007	,019	-,032	-,382	,703	,578	1,730
	autonomy	-,025	,018	-,106	-1,333	,184	,633	1,580

a. Dependent Variable: w9_3 Drop-out?

Source: student panel survey at Otto-von-Guericke-University of Magdeburg, 2015

5. Conclusion and Discussion
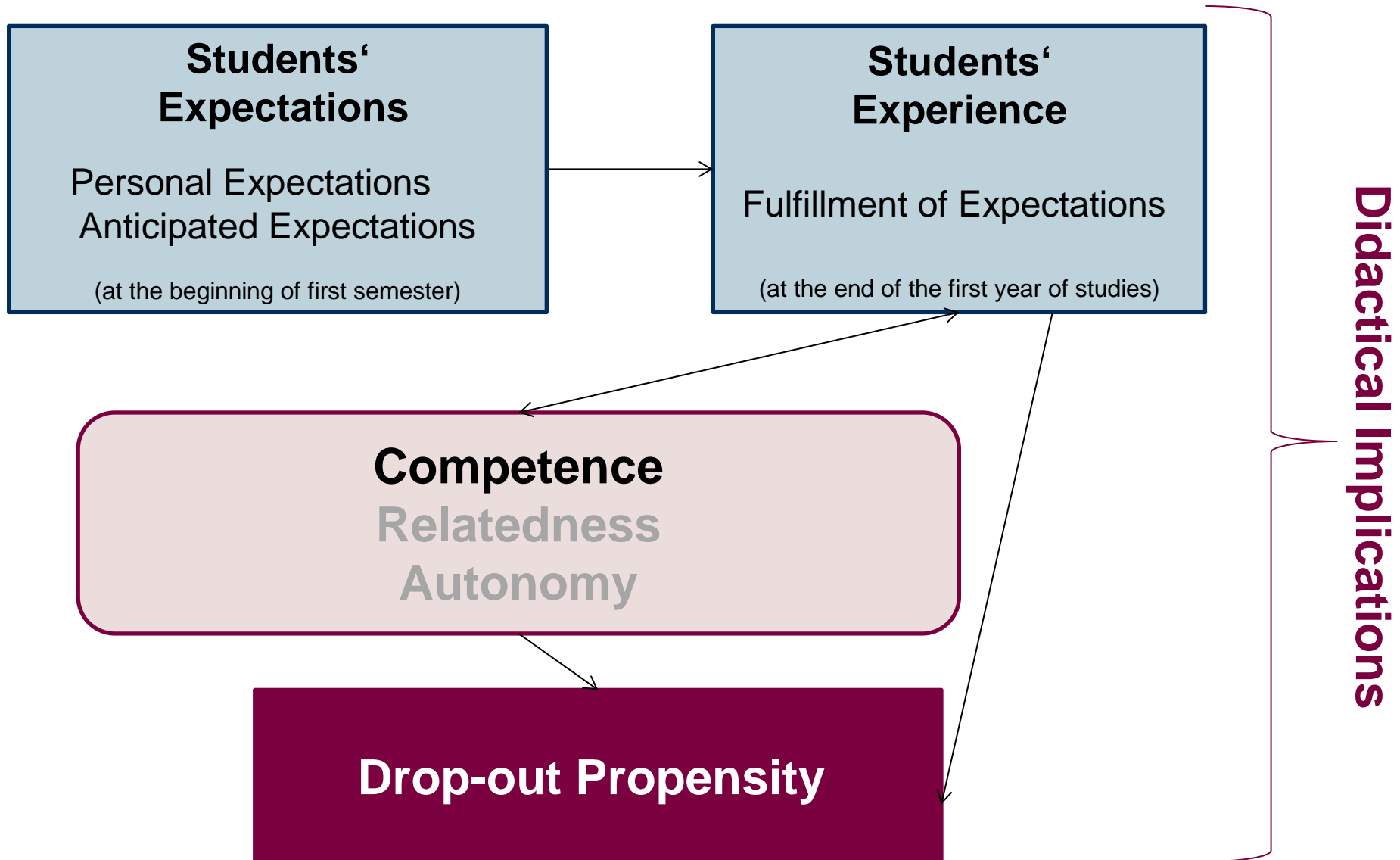
Implications: Expectations

- Students' Expectations:

  - Extent of fulfillment has influence on motivation and drop-out

  - Fit of aspects of students' expectations and the university's demands towards students

  - Identification of incongruence can help filling gaps in institutional structures and academic culture

  - → an interdependent fit between university and students

Implications – Motivation

- Motivational learning settings:
    - Learning: active, collaborative
    - Teaching: competence-based: skill acquisition and practice

- Motivation can be enhanced by:
    - Feedback, optimally challenging tasks (no excessive demands)
    - Respect and esteem towards self and others
    - Provision of choice and meaning (context) in learning activities; minimization pressure and control

- Limitation: teacher motivation → student motivation

We thank you for the attention!

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Picture References:

- https://e-watchman.com/wp-content/uploads/2015/05/un-expected.jpg

Competence acquisition, social inclusion and autonomy of students (N 420)