**Tobias JENERT[1] (St. Gallen), Liisa POSTAREFF (Helsinki),
Taiga BRAHM (St. Gallen) & Sari LINDBLOM-YLÄNNE (Helsinki)**

Editorial: Enculturation and development of beginning students

1   The crucial first year in Higher Education

In many respects, the first semesters of studying are decisive for students' further academic development (GALE & PARKER, 2012). The experiences of professionals providing guidance and counselling for incoming students show the practical relevance of students' successful transition for universities. Furthermore, a considerable body of research approaching the topic from various angles emphasizes the importance of students' first encounter with Higher Education.

Especially in the US, the first year of studying has been studied through a socio-cultural lens, investigating how students adapt and integrate into Higher Education as their new habitat. Most prominently, research into retention and attrition has highlighted the pivotal role of the students' ability to integrate into the socio-cultural environment of their Higher Education institution at the beginning of their studies. It has been shown that students who do not succeed in building an identity and social ties related to their study environment have a higher risk of dropping out than students who successfully master this process of enculturation (TINTO, 1998). In a similar vein, college effectiveness research provides evidence that the way Higher Education Institutions receive their incoming students, communicate their institutional mission, and explicate their expectations concerning performance and learning effort, has a significant impact on the time and energy students dedicate to

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[1] email: tobias.jenert@unisg.ch

their studies which is one important aspect of student engagement (KEZAR & KINZIE, 2006; KRAUSE & COATES, 2008; KUH, KINZIE, SCHUH & WHITT, 2005). Furthermore, integrating students into social learning communities from the beginning of their studies is another important factor affecting engagement (ROCCONI, 2011; ZHAO & KUH, 2004). Engagement comprises cognitive, motivational, and behavioural aspects, thus referring to student life within and outside the classroom (FREDRICKS, BLUMFELD & PARIS, 2004). Engagement, in turn, plays an important role for academic success (PASCARELLA, SEIFERT & BLAICH, 2010).

Other studies have approached the topic of beginning students in Higher Education by looking at their individual developments, studying variables such as motivation, emotions, attitudes and learning strategies. Concerning students' motivation, several studies indicate that students loose motivation throughout the first year (BRAHM & GEBHARDT, 2011; BUSSE, 2013; JACOBS & NEWSTEAD, 2000; LAU, LIEM & NIE, 2008; LIEBERMAN & REMEDIOS, 2007; MARTIN, COLMAR, DAVEY & MARSH, 2010) and that their interests narrow down from a broad range of subject areas to just a few (BUSATO, PRINS, ELSHOUTA & HAMAKER, 2000). In a longitudinal study, BRAHM et al. found negative developments in students' motivations as well as their attitudes towards studying (BRAHM & JENERT, 2013, 2014; BRAHM, JENERT & EULER, 2013). However, advanced analysis within the sample showed those developments to be quite different for distinctive student subgroups (JENERT & BRAHM, 2013). MIKKONEN and colleagues (2013) qualitatively investigated the developments of first- and second-year students' interests and goal orientations, identifying different constellations supporting or hindering commitment to their studies. Research focusing on university students' emotions has shown that emotions also play an important role in their studying (PEKRUN et al., 2002; TRIGWELL, 2012). A study by HAILIKARI, KORDTS-FREUDINGER and POSTAREFF (2014) focusing on first year students showed that they experienced a range of emotions during their first study year. Students often described positive emotions such as satisfaction and enthusiasm, but worryingly, negative emotions were described more often. Among

the emotions explicated most frequently were dissatisfaction, confusion and anxiety. The results also showed that emotions were related to study success and progress: The lesser students experienced negative emotions, the better their study success and the faster their academic progress during the first year (HAILIKARI, KORDTS-FREUDINGER & POSTAREFF, 2014).

Concerning the development of learning strategies and approaches to learning which are immediately related to learning and studying, there is no clear evidence as to whether students develop and if they do, in which direction (EDMUNDS & RICHARDSON, 2009; STRUYVEN, DOCHY, JANSSENS & GIELEN, 2006). Some studies suggest that approaches to learning are relatively stable across time and contexts (e.g. LIETZ & MATTHEWS, 2010; ZEEGERS, 2001) but a recent study found that students' deep approach to learning increased from their first study year to the third study year (ASIKAINEN et al., 2014). From a more individual perspective, it has been shown that some first and second-year students show greater variability in their approaches to learning across different courses while others show less (LINDBLOM-YLÄNNE, PARPALA & POSTAREFF, 2013; POSTAREFF, LINDBLOM-YLÄNNE & PARPALA, 2014).

Considering this body of existing research, it becomes evident, that the initial phase of studying deserves special attention. How students experience their first months at a Higher Education Institution and how they react to this experience (cognitively, motivationally, emotionally, and behaviourally) may have a strong influence on their academic future. Thus, it can be regarded as any HEI's challenge to support students so that they can realize their academic potential to the best.

2 Student development and the role of educational environments in the first year

With this special issue, we aim at expanding the knowledge on students' first year in Higher Education. Decidedly, our call focused on students' developments after they have entered their studies, excluding issues such as selection processes or

preparation during secondary education. Emphasizing research on students who are already within the Higher Education system is motivated by our keen interests for

(1) diagnosing and differentiating beginning students according to various characteristics relevant to their academic development,
(2) students' development throughout the initial phase of Higher Education as well as
(3) interrelations between educational environments and beginning students' experiences.

In accordance with those main points of interest, contributions were required to address at least one of the following questions:

- How do students develop throughout the initial phase of their studies concerning e.g. motivation, emotions, attitudes, learning strategies, approaches to learning?
- What are important variables according to which subgroups of beginning students can be distinguished?
- How do subgroups within student cohorts differ with regard to study-related variables?
- What kind of challenges do students encounter during their enculturation/adaptation to the Higher Education environment?
- What provides guidance and orientation for students during their enculturation/adaptation to the Higher Education environment?
- Which factors are crucial for beginning students' study success and academic progress?
- How does the teaching-learning environment enhance or impede beginning students' studying?

The papers in this special issue consist of both qualitative and quantitative contributions. They cover three main topical areas as outlined above:

Diagnosing and differentiating beginning students

Building on previous research, *Stephanie Aymans* and *Simone Kauffeld* investigate whether factors for student drop-out and retention affect first-generation students in the same ways as students with an academic family background. Their findings indicate similar mechanisms influencing drop-out and retention for both groups (first-generation and non-first-generation students). Thus, the authors confirm previous research on the predictability of student drop-out and retention. Despite this finding, the study still indicates a higher drop-out risk for first-generation students. Explaining this phenomenon, Aymans and Kauffeld discuss practical implications regarding how to support first-generation beginning students.

Applying a qualitative research design, *Elke Bosse* investigates how diversity influences students' experience of the first year in Higher Education. Distinguishing a total of eight different dimensions of diversity (such as maturity, internationality or part-time enrolment), the study provides a fine-grained analysis of 25 students' individual experiences during their first year at university. This leads to a taxonomy categorizing challenges beginning students typically encounter when entering Higher Education. In accordance with the findings presented by Aymans and Kauffeld, the study does not reveal any systematic differences between the challenges experienced by traditional and non-traditional students. Rather, the author reports complex interrelations between individual and institutional factors leading to very specific first-year experiences. Accordingly, Bosse argues for developing multi-factorial "risk scenarios" to offer support for diverse student cohorts rather than providing isolated offerings for non-traditional students.

Manuel Förster and *Andreas Maur* investigate whether gender and socio-cultural background play a role in beginning students' attitudes towards statistics. Based on a quantitative survey, they illustrate the strong influence of gender on statistics anxiety. Regarding students' socio-cultural background, there are little differences with regard to statistics-related anxiety and self-concept. Yet, the authors were able to establish significant differences when it comes to proactive behaviour (e.g. asking questions) in learning situations.

Studying 152 preservice teachers' motivation for choosing their degree, *Britta Fischer* and *Miriam Bisterfeld* aim at discovering specific motivational characteristics of sports students compared to other disciplines. Their findings suggest that prospective sports teachers' degree choice is primarily motivated by intrinsic subject-related interest. Concerning their own ability-beliefs, however, sports students appear to be less confident than students within other subject areas. The authors suggest that while in general high subject-related interest is a positive predictor for academic success, sports students might also be at risk to start their studies with wrong expectations concerning the subject and should therefore be well-informed about the content and the demands of their study programme.

Franz Krämer presents a qualitative study looking into beginning students' conceptions of science. Analysing 33 texts, the author identifies two main orientations: The fist, termed "essentialist-answering" conceives of science as finding clear, unambiguous definitions and theories. In contrast, the "questioning" orientation towards science focuses on the processes of producing scientific insights and the multiplicity of perspectives any problem can be defined through. Concerning these orientations, Krämer finds considerable heterogeneity within his sample, suggesting that explicating and discussing beginning students' orientations may be a great chance to help their development within scientific subjects.

Student development throughout the initial phase of Higher Education

To unveil what helps students to continue their studies in the face of challenging experiences, *Caroline Trautwein* and *Katrin Stolz* conducted a qualitative interview study. While previous research has shown a steady decline in student motivation during the first year in Higher Education, a majority of students continue their studies; i.e. they are able to cope with demotivating experiences. The authors establish that volition plays a crucial role, helping students to persevere despite losing their motivation to study. The shift from (intrinsic) motivation to volitional control may have detrimental effects on students' educational experiences: studying becomes a rather unreflected act of self-discipline rather than a critical discovery of the sub-

ject. The authors provide suggestions how the organisation of study programmes might be altered in order to counter such negative developments.

Employing metaphors, *Elisabeth Wegner* and *Matthias Nückles* investigate how students' conceptions of learning change over the first year of studying. Classifying and structuring 30 students' metaphors for learning at two measurement points, the authors are able to show significant developments during the first year. Interestingly, students adapt their conceptions of learning to the learning culture they encounter at university, increasingly emphasizing the need for structuring and discovering new knowledge by themselves. Furthermore, the results indicate that students whose conceptions at the first measurement point are more congruent to the university's learning culture tend to be more self-efficacious learners in the second year than those students who showed more divergent conceptions at the beginning of their studies. This emphasizes the necessity to enculturate students to the kind of learning they encounter at university.

Verena Schmied and *Martin Hänze* report a longitudinal study to determine the effects of courses to improve study skills on students' general competencies for studying. Using a validated survey, the authors assessed whether 45 students participating in an interdisciplinary course at five different universities improve different study skills (such as planning and motivation to learn). The longitudinal design measured the level of study skills just before and two month after having completed the course and results were compared between the treatment and a control group. The findings confirm significant improvements with the treatment group. Despite these positive results, the authors emphasize that in a between-group comparison the treatment groups' level of study competencies had already been higher at the initial (pre-intervention) measurement, confirming the well-known phenomenon that additional offerings are often employed by those students who do not necessarily need extra support.

Educational environments and beginning students' experiences

Venicia Flora McGhie, Salo Moodley and *Hilary Naidoo* present a study inquiring into the relationship between academics' demands and 40 South African students'

first-year experience. In accordance with the study by Wegner and Nückles, the case study revealed that students are challenged in multiple ways (e.g. in terms of language, modes of studying a.o.) by the need to adapt their learning styles to the requirements of their new academic environment. This adaptation can be facilitated or inhibited by the faculty's teaching style. In the reported case study, faculty primarily displayed classroom behaviours that led especially Black students to disengage with the academic environment, feeling incapable to succeed in Higher Education. The authors suggest that in order to make students more resilient against adverse situations during their studies, the first year should provide positive educational experiences especially to those students who are at risk of dropping out.

Tobias Kärner, Marc Egloffstein, Florian Binöder, Clemens Frötschl, and *Thomas Schley* investigate to which degree beginning students are able to take advantage of an open online introductory course on scientific methods. Data was gathered from more than 500 students via learning diaries. The study explores the workload students invested in the online course as well as the relationship between time on task and students' learning outcomes. The results indicate that most students invested much less time in learning than intended by the course design. Time on task showed a small but significantly positive interrelation with the quality of students' learning outcomes. The authors conclude that open online courses are a challenging environment for beginning students as they obviously lack the study skills necessary to successfully use such a learning environment. In order for first-year students to exploit the potentials of open online environments, especially their flexibility, additional guidance seems to be called for.

3   Conclusion

With regard to *diagnosing beginning students*, the contributions show that the challenges of the first year as well as the diversity of the student body are getting mapped ever more clearly. An increasing number of quantitative instruments are developed for or adapted to the Higher Education context in order to evaluate beginning students' expectations, perceptions and prerequisites for studying with

regard to different dimensions. Qualitative studies, in turn, show the complexity of beginning students' realities and warn against oversimplified conceptions of the first year of studying.

Concerning *student development* during the first year, longitudinal studies provide interesting insights into how diverse starting conditions or different educational experiences influence further academic developments. Yet, the methodical design and the effort needed to conduct such research remain a huge challenge.

The last years have seen an increasing number of *interventions that aim at supporting students' transition* into the Higher Education system. The papers in this issue show that often beginning students' challenges are caused by specific elements of the academic environments they encounter. Also, students often do not respond to support and guidance in the way educational developers initially intended them to do. Therefore, studies that combine the design of educational interventions with systematic studies on students' experiences with those interventions are necessary.

Viewed together, the papers presented in this issue confirm that from a students' perspective, entering Higher Education is a very complex phenomenon (GALE & PARKER, 2012). And it is becoming ever more complex with increasing student diversity and cross-disciplinary study programmes. Looking into the future, a major challenge for practitioners will be to develop educational designs addressing these issues. At the same time, researchers will have to come up with research designs that are able to tackle the complex questions resulting from increasing diversity. Such studies could combine the diagnosis of students' prerequisites with the design of adequate interventions for supporting the initial phase of studying and longitudinal assessments of students' academic development. Yet, such research endeavours would require ample resources as well as complex multi-method and multi-level designs.

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Editors

Dr. Tobias JENERT ‖ Universität St. Gallen, Competence Centre for Educational Development and Research in Higher Education – CEDAR ‖ Dufourstrasse 40a, CH-9000 St. Gallen

www.hochschulentwicklung.ch

tobias.jenert@unisg.ch

Dr. Liisa POSTAREFF ‖ University of Helsinki, Centre for Research and Development of Higher Education ‖ Siltavuorenpenger 1A, FI-00014 University of Helsinki

www.helsinki.fi/yty/english/index.htm

liisa.postareff@helsinki.fi

Dr. Taiga BRAHM ‖ Universität St. Gallen, Competence Centre for Educational Development and Research in Higher Education – CEDAR ‖ Dufourstrasse 40a, CH-9000 St.Gallen

www.hochschulentwicklung.ch

taiga.brahm@unisg.ch

Prof. Dr. Sari LINDBLOM-YLÄNNE ‖ University of Helsinki, Centre for Research and Development of Higher Education ‖ Siltavuorenpenger 1A, FI-00014 University of Helsinki

http://www.helsinki.fi/yty/english/index.htm

sari.lindblom@helsinki.fi