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The effectiveness of study skills courses: Do they increase general study competences?

Abstract

The present longitudinal study aims to assess the effectiveness of study skills courses in improving students' general study competences. In a pre-study, an online questionnaire was developed which measured the learning process organization, motivation, planning, and stress management on four reliable scales. The participants in the main study were 45 students from five different German universities who attended such a course and a control group of 87 students who did not. Two-way repeated measures ANOVA's indicate an increase in general study competences for students in the intervention group. The change in competences between a pre-test and post-test differ significantly between the groups.

Keywords

First-year experience, general study competences, transition

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Effektivität von Kursangeboten zur Stärkung der Studierkompetenz

Zusammenfassung

Ziel der Längsschnittstudie ist die Untersuchung der Wirksamkeit von Kursangeboten zur Stärkung der Studierkompetenz. In einer Vorstudie wurde ein Fragebogen entwickelt, der auf vier reliablen Skalen Lernorganisation, Motivation, Planung und Stressmanagement misst. Die Stichprobe besteht aus 45 Studierenden von fünf Universitäten in Deutschland, die an einem Kurs teilgenommen haben und einer Kontrollgruppe ($N = 87$), die an keinem Kurs teilgenommen hat. Zweifaktorielle Varianzanalysen mit Messwiederholung zeigen eine Steigerung in den Kompetenzen der Experimentalgruppe. Die Veränderung in den Kompetenzen zwischen den Messzeitpunkten unterscheidet sich signifikant zwischen den Gruppen.

Schlüsselwörter

Studieneingangsphase, Studierkompetenz, Übergang

1 Introduction

In the last few years, there has been increasing interest in Germany in researching and shaping the first-year experience and the transition into higher education. As part of the Quality Pact for Teaching (<http://www.qualitaetspakt-lehre.de/media/Programm-Lehrqualitaet-BMBF-Richtlinien.pdf>), the German government has financed 253 projects at 186 universities in Germany, 125 of which focus on the first-year experience of students or students in transition (for an overview see <http://www.qualitaetspakt-lehre.de/de/3013.php>). The number of students entering higher education has been growing for years, and student groups are becoming increasingly more heterogeneous (HANFT, 2015). Students differ in their abilities, and the universities need to react to this in order to ensure the quality of education and to reduce the dropout rate of students. The number of people with qualifica-

tions for higher education is rising, a tendency which is politically and socially demanded. According to a report from the year 2014 by the Federal Statistical Office, 371,812 students gained the qualification necessary to enter higher education in 2013. When including the students who received the qualifications to enter a university of applied sciences, this number increases to 477,020 students (STATISTISCHES BUNDESAMT, 2014). Additionally, since 2014 it has been possible to enter universities in every state in Germany without having a qualification for higher education if one has vocational training and work experience (DUONG & PÜTTMANN, 2014). Furthermore, one aim of the Bologna reform (1999) is to increase university access for people with different backgrounds and qualifications. This aim is manifested in the LONDON COMMUNIQUÉ (2007) as part of the aspect ‘social dimension’. Another important aspect which should be mentioned is the dropout rate at universities: 28 % of the German Bachelor students drop out of their studies (HEUBLEIN, RICHTER, SCHMELZER & SOMMER, 2014).

One opportunity to address the heterogeneous student group and the dropout rate is to provide study skills courses, which give students the chance to improve their general study competences. The aim of the present study is to explore the effects of study skills courses on self-reported general study competences. We expect students who took part in one of those courses to rate their general study competences higher two month after having attended the course than those students who did not attend such a course.

2 Theoretical background

Due to the developments mentioned above, it is obvious that universities need measures to better serve this heterogeneous student group. The transition into higher education is a radical change for first-year students, and there are many challenges to meet (HILLINGER, 2012). A careful, goal-oriented investment at the beginning of university can influence the studying process in a positive way.

As the United States is a forerunner in designing and researching the ‘first-year experience’, there are many programs supporting first-year students via first-year seminars. “This research has established the first-year seminar as one of the most important instructional vehicles for achieving the learning and developmental objectives of undergraduate education in the United States” (PADGETT, KEUP & PASCARELLA, 2013, pp. 134-135). Here, various types of first-year seminars can be distinguished: extended orientation seminars, academic seminars with generally uniform content, academic seminars on various topics, profession or discipline-based seminars, basic study skills seminars, and hybrid seminars. The first-year seminar is known as one of the high-impact educational practices in the United States, which means that it has a significant impact on the students’ success (KUH & SCHNEIDER, 2008). GREENFIELD, KEUP & GARDNER (2013) give a description of positive outcomes of first-year seminars:

- “Persistence to the second year
- Grade point average
- Satisfaction with faculty, peers, and the institution
- Use of campus services
- Interaction with faculty
- Development of academic, interpersonal, and communication skills” (p. 89).

Results from a study by ASIKAINEN, PARPALA, LINDBLOM-YLÄNNE, VANTHOURNOUT & COERTJENS (2014), who examined changes in approaches to learning and in how the teaching-learning environment was experienced, suggest “that organising and time management skills play an important role in Bachelor studies” (p. 32). The authors analyzed how these factors related to study success by using longitudinal data from 103 Bachelor students of a Faculty of Biological and Environmental Science.

In Germany, empirical research on the effectiveness of measures which aim at supporting students during their transition into higher education still seems to be missing. Nevertheless, a number of authors have reflected upon the importance of gen-

eral study competences, such as the organization of the learning and working process, for a successful transition. An empirical study by BOSSE & TRAUTWEIN (2014), which examined critical challenges during the first year of studying, shows that these factors play an especially important role during the transition into higher education. The major challenges identified in this study were finding a suitable learning mode, structuring one's own learning process as regards to time management and accepting and dealing with the quality of teaching and consulting. The study described a wide range of critical challenges during the transition into higher education and showed the outstanding importance of personal and organizational competences. In an article about the effectiveness of different study models supporting the first-year phase of studying, MERGNER, ORTENBURGER & VÖTTINER (2015) show that one of three key success factors for studying successfully is the promotion of competences for first-year students. Moreover, the German student survey 'Studienqualitätsmonitor 2013' (WOISCH, WILLIGE & GRÜTZMACHER, 2014) revealed that 39 % of the students ($N = 49,430$) demanded offers to practice techniques and strategies for the organization of their learning process from their universities. In sum, the studies show that students see the necessity of taking part in courses to train their general study competences, and the data confirms that participation in such courses impacts study success. Subject-specific and general study competences affect each other, and their interaction could influence the study process. If students show a deficit in the general ability to study, they may drop out of their studies, even if they are subject-specific experts. Therefore, it seems essential to provide courses in which they can practice general study competences.

Based on this research, the present study aims at assessing the specific effects of study skills courses – especially for first-year students at different universities in Germany – to improve their ability to study successfully. The study investigates the effects of study skills courses on self-reported general study competences.

The findings of this study are relevant for learning more about the influence and opportunities of study skills courses designed to support first-year students. If there is a positive influence on general study competences, such courses should become

a more relevant part of the different curricula to guarantee a greater success in studying. The current study concentrates on study skills courses which focus on the organization of the learning and working process, motivation, planning, and stress management.

In view of the aforementioned research, the central research question of this study is:

Do students who participated in a study skills course dealing with the organization of the learning process, motivation, planning and/or stress management rate their competences in these fields higher two months after having attended the courses?

The study assumes that students who took part in a course dealing with general study methods and skills (i.e., organizing the learning process, motivation, planning or stress management) will rate their general study competences higher two months after having attended the course. Concurrently, students of a control group who did not attend a corresponding course will not attain a higher level of their general study competences.

3 Methods

First, we would like to show the psychometric properties of the online questionnaire by using data from a pre-test with 103 students. We will then present the study design, the study skills courses and the sample which we used to answer the central research question.

3.1 Pre-Study: Psychometric properties of the research instrument

An online questionnaire was constructed to measure general study competences. The corresponding questions were composed of four scales: organization of the learning process, motivation, planning, and stress management. These scales were created with consideration of the different learning goals of the courses and after

consultation with teachers of the corresponding workshops. Furthermore, suitable items were composed by using modified items from existing and approved instruments for the assessment of general studying competences (WILD & SCHIEFELE, 1994; MAURER & GURZELER, 2005; GOTZEN, KOWALSKI & LINDE, 2011; NAUERTH et al., 2012).

The scale ‘organization of the learning process’ included statements which explore students’ learning behavior and the control over one’s own learning process. Fundamentally, it was about dealing with different learning material and how to handle difficult tasks during the learning process. ‘Students’ motivation’ was assessed by asking them about techniques for self-motivation and persistence regarding their studies. The aspect ‘planning’ focused on the way students organized their time during studying and how they organized themselves by using different instruments (e.g. weekly or monthly schedule). At the core, this indicated what they spent time on and whether there were periods of procrastination. The scale ‘stress management’ assessed how students reacted to stressful situations during their studies and whether they had techniques to cope with exam anxiety, for example. Table 1 shows two exemplary items of each scale.

The instrument was tested beforehand using data from a pre-test ($N = 103$ students) with 66 female participants, 33 male participants and 4 who did not indicate their sex. The ages of the participants ranged from 20 to 51 ($M = 23.66$, $SD = 4.38$), with 7 students providing no information about their age.

The object of the pre-test was to reduce the data and test the constructed scales. Parallel analyses suggest that the scales are one-dimensional (HORN, 1965). Cronbach’s Alpha was used to determine the reliability of each scale. Table 1 shows Cronbach’s Alpha for the full version and for a 3-item version of each scale (see BRAHM & JENERT, in press). The items are self-rated items, and students answered them on a Likert-type scale from 1 “strongly disagree” to 5 “strongly agree”. Due to this fact, this study focuses on a self-reported ability to study or knowledge about one’s own study competences. Different studies confirm the close relationship between self-reported measures of competences and a simultaneous

assessment of these competences in tests (SCHAEPER & SPANGENBERG, 2008). Students learn about their study competences by interacting with fellow students and instructors. Furthermore, we can assume that students are able to rate their competences quite reliably because they have already had experience in dealing with success or failure during their educational career.

Table 1: Reliability of the scales

Scale	Sample items (Likert-type scale from 1 “strongly disagree” to 5 “strongly agree”)	# of items (original scale)	Cronbach’s Alpha (original scale)	Cronbach’s Alpha (3 items)
Organization of the learning process	<i>I regularly examine my learning goals and monitor my progress.</i> <i>I make sure that my learning process includes time intervals during which I relax or do something different from learning.</i>	12	.76	.64
Motivation	<i>If my motivation is low during my learning process, I know how to motivate myself again.</i> <i>I do not give up, even if the subject I am working on is very difficult and complex.</i>	12	.86	.69
Planning	<i>I use specific instruments (e.g. a weekly or monthly schedule) to plan and operate my study tasks.</i> <i>When performing study-orientated tasks over a longer period of time (e.g. term paper) I regularly check to see if I am on schedule.</i>	9	.82	.75
Stress management	<i>When the work requirements are getting too much for me, I look for opportunities to relax (e.g. doing sports).</i> <i>When I achieve my learning goals, I give myself a reward.</i>	10	.76	.71

3.2 Study design

The present study uses longitudinal data from a survey which started in October 2014 and will be finished by the end of 2015².

Students who took part in a study skills course answered the online questionnaire before attending the course and then again two months after the course. Students of a control group did not attend a course but answered the questionnaire independently in the time interval of two months. The questionnaire consists of 43 self-rated items that measure students' general study competences. There was an additional paper-pencil questionnaire at the end of every workshop, which gathered socio-demographic information. A personal code on each questionnaire made it possible to link them to a database.

To analyze the central research question, two-way repeated measures ANOVA's were computed with the independent factors 'testing time' (pre-test vs. post-test) and 'group' (intervention group vs. control group) and the dependent variable of the general study competences. Testing time (pre-test vs. post-test) served as an intra-subject factor and group (intervention vs. control) served as an inter-subject factor.

3.3 Study skills courses and sample

The participants in the intervention group ($N = 45$) were students from five different universities in Germany who attended a course to improve their general study competences, such as time management or the organization of the learning process.

Depending on the corresponding institution, there were differences in the thematic emphases and durations of these courses, which are shown in table 2.

² Only one part of the main questionnaire was used in the current study.

Table 2: Characteristics addressed by the different institutes

University	Participants	Courses	Duration (in hours)
Göttingen	8	Stress management Time management	24
Bielefeld	9	Time management Unusual learning strategies to assimilate information	4
Cologne	4	Reaching goals through consistent self and time management	15
Frankfurt	12	Time management Stress management during the studying process Learning strategies to deal with the amount of study materials	6 or 8
Kassel	12	Exam preparation Organization of the learning and working process Time and self-management Stress management	8 or 16

The purpose of the courses is to improve students' studying competences. One goal of the course 'stress management' is to make students aware of their own stressors and then teach them techniques for dealing with them consciously. As part of the course 'exam preparation', students learn about the importance of monitoring their own progress of learning and rewarding themselves. In the courses with a focus on time management and self-management, the students identify and use strategies to effectively manage their time and priorities. Courses on learning strategies and the organization of the learning and working process aim to foster students' knowledge of different learning strategies and instruments for planning study tasks over the long term. Furthermore, the students reflect on their motivation to study and the procedure of self-regulated learning. Students from different subjects participate in the courses, exchange information and reflect upon their current studies in group work. As a consequence, students can address problems and recognize that other

students often have the same problems. Additionally, they learn about other perspectives and academic methods while interacting with students from other disciplines. These general conditions and the learning goals mentioned above are some of the characteristics of those courses.

Twenty-nine of the participants in the intervention group were female, 9 were male and 6 did not report their sex. The ages ranged from 20 to 48, with 19 of the participants being 30 years old or younger ($M = 26.88$, $SD = 6.72$) and 20 students not reporting their age. At the time of measurement, 25 of the students were in a semester between 1 and 6, and 20 did not report. The intervention group consisted of 20 Bachelor students, 4 Master students, 1 state examination candidate and 20 who did not report. The fact that most of those courses are currently open to all students makes it difficult to get a sample of just first-year students.

Participants in the control group ($N = 87$) did not attend a workshop to improve their general study competences. Professors and teachers of introductory lectures at the University of Kassel were asked to send a link to the online questionnaire with a short introduction to their students. Forty-four of the participants of the control group were female, 17 were male, and 26 did not report their gender. The ages ranged from 19 to 60, with 70 students under 30 years of age ($M = 25.79$, $SD = 6.15$) and 2 who did not report their age. At the time of measurement, 84 of the students were in a semester between 1 and 6, and 3 did not provide information about their current semester. Seventy-four of the students in the control group were Bachelor students, 8 were Master's students, 3 were state examination candidates, and 2 did not give information about their subject of study.

4 Results

Before examining the main research question, we checked the data of the experimental group for possible differences between the institutes involved. Though the benchmarks differed between institutes ('organization of the learning process' $F(1,40) = 11.19$, 'motivation' $F(1,40) = 11.19$, 'planning' $F(1,40) = 19.27$, 'stress

management' $F(1,40) = 14.99$, all $p < .01$), there were no interaction effects between institutes and testing time for all scales (all $p > .15$).

Organization of the Learning Process

The analysis of the dependent variable 'organization of the learning process' indicates a statistically significant effect of the testing time, $F(1,130) = 10.90$, $p < .01$, $\eta^2 = .08$ and of the interaction testing time and group, $F(1,130) = 14.76$, $p < .001$, $\eta^2 = .10$, but the effect of the group is insignificant, $F(1,130) = 2.99$, $p = .086$, $\eta^2 = .02$. Table 3 shows the mean scores.

Table 3: Mean performance scores (standard deviations) of the dependent variable 'organization of the learning process'

Organization of the learning process (AV)	<i>M (SD)*</i>	
	Pre-test	Post-test
Intervention Group (N=45)	3.33 (.58)	3.69 (.64)
Control Group (N=87)	3.69 (.60)	3.66 (.56)

* Values from 1 'strongly disagree' to 5 'strongly agree'

Motivation

Concerning the dependent variable 'motivation', there is a statistically significant effect of the testing time, $F(1,130) = 5.95$, $p < .05$, $\eta^2 = .04$, the interaction testing time and group, $F(1,130) = 22.35$, $p < .001$, $\eta^2 = .15$, and also a statistically significant effect between the groups, $F(1,130) = 12.42$, $p < .01$, $\eta^2 = .09$.

Table 4: Mean performance scores (standard deviations) of the dependent variable 'motivation'

Motivation (AV)	<i>M (SD)*</i>	
	Pre-test	Post-test
Intervention Group (N=45)	3.10 (.62)	3.41 (.70)
Control Group (N=87)	3.68 (.61)	3.58 (.62)

* Values from 1 'strongly disagree' to 5 'strongly agree'

Planning

The two-way repeated measures ANOVA shows a statistically significant effect of the testing time, $F(1,130) = 12.05$, $p < .01$, $\eta^2 = .09$ and the interaction testing time and group, $F(1,130) = 20.60$, $p < .001$, $\eta^2 = .14$. There is no significant effect of the inter-subject factor group, $F(1,130) = .04$, $p > .20$, $\eta^2 = .00$.

Table 5: Mean performance scores (standard deviations) of the dependent variable 'planning'

Planning (AV)	<i>M (SD)*</i>	
	Pre-test	Post-test
Intervention Group (N=45)	3.03 (.74)	3.47 (.74)
Control Group (N=87)	3.30 (.70)	3.24 (.73)

* Values from 1 'strongly disagree' to 5 'strongly agree'

Stress Management

Regarding the dependent variable ‘stress management’, there is a statistically significant effect of the testing time, $F(1,130) = 21.82, p < .001, \eta^2 = .14$, the interaction testing time and group, $F(1,130) = 15.24, p < .001, \eta^2 = .11$, and a statistically significant effect of the group, $F(1,130) = 4.26, p < .05, \eta^2 = .03$.

Table 6: Mean performance scores (standard deviations) of the dependent variable ‘stress management’

Stress management (AV)	<i>M (SD)*</i>	
	Pre-test	Post-test
Intervention Group (N=45)	2.91 (.45)	3.37 (.76)
Control Group (N=87)	3.31 (.55)	3.35 (.55)

* Values from 1 ‘strongly disagree’ to 5 ‘strongly agree’

5 Discussion

The purpose of the current study is to analyze the effectiveness of study skills courses to improve general study competences, especially for first-year students. The findings support the assumption that students who participated in a course to improve their general study competences would report that they feel more competent two months after having attended the course, while students of the control group would not. Two-way repeated measures ANOVA’s show statistically significant effects in the interaction of testing time and group concerning every dependent variable. The change in competences between the pre-test and post-test differs significantly between the intervention group and the control group. These results indicate a positive impact of the study skills courses, which led to an increase in general study competences. Consequently, the findings are in line with prior studies regarding the impact of study skills courses (KUH & SCHNEIDER, 2008;

MERGNER, ORTENBURGER & VÖTTINER, 2015). Such courses can support students during their first-year phase and lead to greater success in studying. The courses investigated are designed to practice skills in stress and time management, learning strategies, exam preparation and the general organization of the learning and working process. By taking part in one of the courses, the students become acquainted with techniques for time management and for dealing with their study material. Furthermore, the courses provide an opportunity to learn how to handle stress and to be well-prepared for exams. The most striking finding to emerge from the analysis is that the effects of the courses on the students' study competences are still measurable two months after participation. Whereas previous studies have concentrated on study success dimensions such as persistence to the second year or grade point average (GREENFIELD, KEUP & GARDNER, 2013), these results confirm the association between participation in study skills courses and an increase in general study competences. Several reports referring to the situation in Germany (e. g. BOSSE & TRAUTWEIN, 2014) have identified organizational and personal skills as important factors during the first-year phase of studying. In line with these findings, this study shows that study skills courses are one opportunity to improve those study skills.

The findings may be limited by the small sample size. Moreover, the duration of the courses was comparatively short. Furthermore, one has to consider that the control group consists of students from one university only. The interpretation of the results also has to consider that the competence measures in this study were based on self-reports. Attention should be paid to the fact that the values of the competences of the participants of the control group were already higher than those of the participants of the intervention group. Especially the dependent variables 'motivation' and 'stress management' have shown a statistically significant effect of the group. This shows that students who are looking for assistance in fostering their general study competences actually exhibit lower values in the pre-test than students of the control group. Students who see the need for improving general study competences make use of those study skills courses and thereby improve their general study competences by taking part. The results of the study indicate a

positive influence of these courses on self-reported general study competences, such as the organization of the learning process, motivation, planning, and stress management. Future research should focus on different formats and the duration of those programs. The different learning goals of the courses should also be taken into account during the data analysis. In the current study, the courses attended varied in duration and learning goals. However, these different settings showed no statistically significant influences. The sample size did not have the statistical power to detect differences between these settings. Therefore, it could be necessary to examine effects of format, duration and learning goal on the acquisition of general study competences using larger samples in the future. Further research should generally focus on key success factors of study skills courses, such as the teaching-learning environment, to receive a better insight into best practice models. Additionally, more information about the critical challenges during the transition into higher education should be collected in order to support the students on an individual level.

Universities need strategies to support more heterogeneous student groups, in order to ensure the quality of education and to reduce the dropout rate of students. As a result, a range of supportive offers has already evolved at German universities during the recent years. As the present study demonstrates that general study competences increase after attending such a program, these findings support a more consistent implementation of such courses into study programs, especially for first-year students, to provide supportive opportunities for students with different backgrounds. Furthermore, the correlation between an increase in general study competences on the process of studying should be investigated further. As many studies have shown the importance of studying skills (e.g. the organization of the learning process and time management skills) in the first-year phase, it is important to analyze the specific relationship between the studying process and outcomes such as performance or interest in the subject.

6 References

Asikainen, H., Parpala, A., Lindblom-Ylänne, S., Vanthournout, G., & Coertjens, L. (2014). The Development of Approaches to Learning and Perceptions of the Teaching-Learning Environment During Bachelor Level Studies and Their Relation to Study Success. *Higher Education Studies*, 4(4), 24-36.

Bologna Reform (1999). *Der Europäische Hochschulraum. Gemeinsame Erklärung der Europäischen Bildungsminister 19. Juni 1999, Bologna*. Retrieved June 12, 2015, from http://www.bmbf.de/pubRD/bologna_deu.pdf

Bosse, E., & Trautwein, C. (2014). Individuelle und institutionelle Herausforderungen der Studieneingangsphase. *Zeitschrift für Hochschulentwicklung*, 9(5), 41-62. Retrieved May 21, 2015, from <http://www.zfhe.at/index.php/zfhe/article/viewFile/765/633>

Brahm, T., & Jenert, T. (in press). *On the assessment of attitudes towards studying – Development and validation of a questionnaire. Learning and Individual Differences*. Retrieved October 26, 2015, from <http://dx.doi.org/10.1016/j.lindif.2015.08.019>

Bundesministerium für Bildung und Forschung (2010). *Richtlinien zur Umsetzung des gemeinsamen Programms des Bundes und der Länder für bessere Studienbedingungen und mehr Qualität in der Lehre*. Retrieved June 6, 2015, from http://www.qualitaetspakt-lehre.de/_media/Programm-Lehrqualitaet-BMBF-Richtlinien.pdf

Bundesministerium für Bildung und Forschung (n. d.). *Projektdatenbank Qualitätspakt Lehre*. Retrieved June 6, 2015, from <http://www.qualitaetspakt-lehre.de/de/3013.php>

Duong, S., & Püttmann, V. (2014). *Studieren ohne Abitur: Stillstand oder Fortentwicklung? Eine Analyse der aktuellen Rahmenbedingungen und Daten*. Gütersloh: Gemeinnütziges Centrum für Hochschulentwicklung. Retrieved June 6, 2015, from http://www.che.de/downloads/CHE_AP_177_Studieren_ohne_Abitur_2014.pdf

- Gotzen, S., Kowalski, S., & Linde, F.** (2011). Der KOMpetenzPASS - Fachintegrierte Förderung von Schlüsselkompetenzen. In *Neues Handbuch Hochschullehre*, Ergänzungslieferung 11 09, Griffmarke F 2.13 Berlin. Retrieved December 19, 2013, from <http://www.fbi.fh-koeln.de/institut/personen/linde/publikationen/KOMpetenzPASS.pdf>
- Greenfield, G. M., Keup, J. R., & Gardner, J. N.** (2013). *Developing and Sustaining Successful First-Year Programs. A Guide for Practitioners*. San Francisco, CA: Jossey-Bass.
- Hanft, A.** (2015). Heterogene Studierende – homogene Studienstrukturen. In A. Hanft, O. Zawacki-Richter, & W. B. Gierke (Eds.), *Herausforderung Heterogenität beim Übergang in die Hochschule* (pp. 13-28). Münster: Waxmann.
- Heublein, U., Richter, J., Schmelzer, R., & Sommer, D.** (2014). *Die Entwicklung der Studienabbruchquoten an den deutschen Hochschulen. Statistische Berechnungen auf der Basis des Absolventenjahrgangs 2012*. Hannover: DZHW. Retrieved April 28, 2015, from http://www.dzhw.eu/pdf/pub_fh/fh-201404.pdf
- Hillinger, B.** (2012). Kompetenzentwicklung in der Studieneingangsphase als Anforderung einer paradigmatischen Wende der Lernkulturen in Universitäten und Hochschulen in der Transformationsgesellschaft. In P. Kossack, U. Lehmann, & J. Ludwig (Eds.), *Die Studieneingangsphase – Analyse, Gestaltung und Entwicklung* (pp. 105-114). Bielefeld: UVW UniversitätsVerlagWebler.
- Horn, J. L.** (1965). A Rationale and Test for the Number of Factors in Factor Analysis. *Psychometrika*, 30(2), 179-185.
- Kuh, G., & Schneider, C.** (2008). *High-impact educational practices: What they are, who has access to them, and why they matter*. Washington, DC: Association of American Colleges and Universities.
- Londoner Communiqué** (2007). *Auf dem Weg zum europäischen Hochschulraum: Antworten auf die Herausforderungen der Globalisierung*. Retrieved April 12, 2015, from https://www.bmbf.de/pubRD/Londoner_Kommunique_Bologna_d.pdf
- Maurer, H., & Gurzeler, B.** (2005). *Handbuch Kompetenzen: Strategien zur Förderung überfachlicher Kompetenzen*. Bern: hep.

Mergner, J., Ortenburger, A., & Vöttiner, A. (2015). *Studienmodelle individueller Geschwindigkeit. Ergebnisse der Wirkungsforschung 2011-2014*. Hannover: DZHW. Retrieved April 30, 2015, from http://www.dzhw.eu/pdf/21/bericht_wirkungsforschung_2015.pdf

Nauerth, A., Walkenhorst, U., von der Heyden, R., Lettau, W.-D., Rechenbach, S., Struckmann, I., & Jahn, M. (2012). Entwicklung von Kompetenzmessinstrumenten zur Erfassung der Studierfähigkeit sowie der Beschäftigungsfähigkeit im Rahmen des Forschungsprojektes Transitionen. In K. Marzinik, A. Nauerth, & M. Stricker (Eds.), *Kompetenzentwicklung basisnah. Forschungsprojekte im Gesundheits- und Sozialbereich* (pp. 257-292). Berlin: Lit Verlag.

Padgett, R. D., Keup, J. R., & Pascarella, E. T. (2013). The Impact of First-Year Seminars on College Students' Life-long Learning Orientations. *Journal of Student Affairs Research and Practice*, 50(2), 133-151. Retrieved June 6, 2015, from https://www.wesleyan.edu/reslife/faculty-academic-partners/The_Impact_of_FirstYearSeminars.pdf

Schaeper, H., & Spangenberg, H. (2008). Absolventenbefragungen – Erfassung relevanter Kompetenzen für Studium und Beruf. In N. Jude, J. Hartig, & E. Klieme (Eds.), *Bildungsforschung 26: Kompetenzerfassung in pädagogischen Handlungsfeldern. Theorien, Konzepte, Methoden* (pp. 161-175). Bonn, Berlin: BMBF.

Statistisches Bundesamt (2014). *Absolventen/Abgänger nach Abschlussart*. Retrieved April 28, 2015, from https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/BildungForschungKultur/Schulen/Tabellen/AbsolventenAbgaenger_Abschlussart.html

Wild, K.-P., & Schiefele, U. (1994). Lernstrategien im Studium: Ergebnisse zur Faktorenstruktur und Reliabilität eines neuen Fragebogens. *Zeitschrift für Differentielle und Diagnostische Psychologie*, 15(4), 185-200.

Woisch, A., Willige, J., & Grützmacher, J. (2014). *Studienqualitätsmonitor 2013. Studienqualität und Studienbedingungen an deutschen Hochschulen*. Hannover: DZHW. Retrieved April 28, 2015, from <http://www.dzhw.eu/pdf/21/pdf/24/sqm2013.pdf>

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