

# **Evaluating Entrepreneurship Education— Constructing a Tool to Measure and Improve Entrepreneurship Education**

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## **Abstract**

**Many institutions in higher education adopt courses on entrepreneurship education, but to date there are no standards for evaluating their outcome. In order to develop a quality management tool for the Entrepreneurial Network University (ENU), which consists of the Freie Universität Berlin and Charité Universitätsmedizin Berlin, we developed the so-called “SQ-Monitor”. The SQ-Monitor is a questionnaire that is used in entrepreneurship education to evaluate the students’ sensitization (S) to and qualification (Q) for entrepreneurship before and after they take an entrepreneurship course. Sensitization and qualification are two important goals of Germany’s entrepreneurship education at the higher educational level. In this paper, sensitization and qualification are measured by using the theory of planned behaviour (Ajzen 1991) and competence self-assessment, respectively. We analyse the differences between the pre- and post-surveys statistically, and the results serve as the foundation for biannual discussions about the quality of all entrepreneurship courses that are taught within the ENU, which are continuously improved. We describe the development of the questionnaire and its implementation.**

## **1 Sensitization and qualification as main goals of German entrepreneurship education**

Entrepreneurship can be seen as a facilitator of a country's economic success. Entrepreneurs create jobs, increase productivity and commercialize innovation (Van Praag and Versloot 2007, p. 351). With the programme called EXIST, the German government tries to support knowledge-intensive entrepreneurship at its roots by funding university programmes that foster an entrepreneurship culture.<sup>1</sup> These programmes rely heavily on entrepreneurship education, which is designed to sensitize students to and qualify them for entrepreneurial activity.

A focus on education implies that being an entrepreneur can be taught and, more importantly, learned (see Erikson 2003). Nonetheless, we still know only little about the influence of our educational programmes on students' behaviour, capabilities and intentions to found a new business or the programmes' ability to foster entrepreneurial thinking and behaviour (see Souitaris et al. 2007; Wilson et al. 2007; Kuehn 2008; Oosterbeek et al. 2010; Titgemeyer 2010; Jain 2011; De Jorge-Moreno et al. 2012; Pruett 2012; Tegtmeier 2012; Morris et al. 2013; Sánchez 2013; Bae et al. 2014; Şeşen and Pruett 2014).

In order to answer these questions, we created and tested a method for measuring students' entrepreneurial intentions, skills and competences needed in order to become an entrepreneur. This method is integrated into a quality improvement tool, called the SQ-Monitor, which is an addition to the general evaluation of all courses at the university. It is the basis of biannual meetings for quality improvement within a group of entrepreneurship educators. Since the main goals of the EXIST programme are for students to be sensitized to and qualified for entrepreneurship (see Kulicke et al. 2011), these two variables are measured by the SQ-Monitor. We tested it at the Freie Universität Berlin and Charité Universitätsmedizin Berlin as a tool to analyse the quality of entrepreneurship education as part of the EXIST-founded project "Entrepreneurial Network University" (ENU). The SQ-Monitor was introduced during the summer term in 2014. Students were asked to evaluate themselves at the beginning and end of each entrepreneurship course by filling out a questionnaire. The results show the extent to which students were sensitized to and qualified for entrepreneurship. Here we describe how the questionnaire was developed, tested and implemented as a base for a biannual quality meeting between the entrepreneurship educators at Free University Berlin and Charité Universitäts Medizin Berlin.

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<sup>1</sup> <http://www.exist.de/DE/Programm/Exist-Gruendungskultur/EXIST-Gruenderhochschule/inhalt.html> [23.05.2016]

## 2 Defining S and Q

The central terms for this paper are sensitization and qualification. **Sensitization** causes someone to respond to a certain new stimulus.<sup>2</sup> In order to translate that to the entrepreneurship environment, we base our understanding of the term on the definition given by the EXIST programme, which focuses on the motivation to actually become an entrepreneur (Kulicke et al. 2011, p. 3). Therefore, we define sensitization as an activity that motivates further information intake concerning entrepreneurship or even becoming an entrepreneur.

**Qualification** is described as training to reach for a higher degree of knowledge.<sup>3</sup> The EXIST programme translates that to the entrepreneurship environment (Kulicke et al. 2011, p. 3). Therefore, we define qualification as the training for future self-employment while focusing on entrepreneurial knowledge.

To measure the degree of sensitization to and qualification for entrepreneurship, we base our questionnaire on the theory of planned behaviour (TPB) and a self-evaluation of competencies, respectively.

## 3 Building a questionnaire for sensitization and qualification in entrepreneurship education

In the following section, we review the literature on the scientific foundation for sensitization and qualification, in order to build the SQ-Monitor. We will discuss the origin of the items used in the final questionnaire tested on students' data.

### 3.1 Literature research—in search of the right items

#### 3.1.1 Sensitization and the Theory of Planned Behaviour

To analyse the degree of sensitization, as defined above, the measurement is focused on the motivation to further train for becoming an entrepreneur. The theory of planned behaviour (TPB) by Ajzen (1991) is based upon the assumption that an individual's intention is positively related to his or her behaviour. It can be directly compared to motivation. The TPB is a widely used and tested theory and a valid instrument to measure entrepreneurial intentions (see Autio et al. 2001; Souitaris et al. 2007; van Gelderen et al. 2008; Linan and Chen 2009;

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<sup>2</sup> [http://www.oxforddictionaries.com/de/definition/englisch/sensitize?q=sensitization#sensitize\\_\\_15](http://www.oxforddictionaries.com/de/definition/englisch/sensitize?q=sensitization#sensitize__15) [23.05.2016]

<sup>3</sup> <http://www.oxforddictionaries.com/de/definition/englisch/qualification> [23.05.2016]

Tegtmeier 2012). Therefore, we use it as an appropriate base of the first part (S) of the SQ-Monitor. The idea behind the TPB is explained in the following section.

The TPB stems from psychological research and is used to describe an individual's future behaviour. The behaviour is derived from the intention to execute the behaviour. This intention is measured in three ways: by looking at the attitude towards the behaviour, the subjective norm and the perceived behavioural control. The *attitude towards the behaviour* shows whether the interviewed person has a positive or a negative attitude towards the behaviour in question, the *subjective norm* gives information about the perceived social influence on the person concerning the behaviour in question, and the *perceived behavioural control* gives information about how much the person trusts his or her own skills to act out that particular behaviour (Ajzen 1991, p. 188). Compared to earlier work of Ajzen and Fishbein about the *theory of reasoned action*, the theory of planned behaviour focuses on the perceived behavioural control. Certain challenges due to lack of knowledge can be decreased through entrepreneurship education, and practice-oriented entrepreneurial projects will lead to positive experiences with entrepreneurship. Therefore, the perceived behavioural control is of great importance in our given empirical field. Figure 1 shows the basic elements of the TPB.

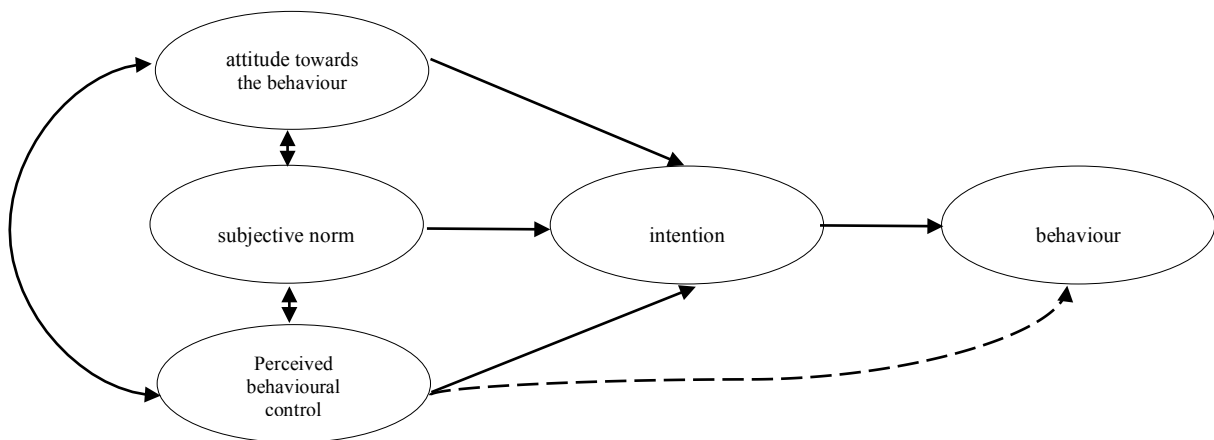


Figure 1 Theory of Planned Behaviour, Ajzen 1991, p. 182

We found that the TPB is already used for explaining entrepreneurial intentions throughout entrepreneurship research. In the following, we present our search of the literature to systematically review the use of this method:

**Step 1:** The database of EBSCO HOST Business Source Premier was used search for papers that included the words “entrepreneurial intent(ions)” in their title and addressed the TPB in their abstract. Here 28 articles were found, which are listed in table 1.

**Step 2:** The title and abstract were analysed for relevance. Indicators were the use of the TPB in the context of entrepreneurial intentions in any given way. Only articles that were published in English were included in the literature search. In total, five papers were identified as relevant and therefore used for constructing the questionnaire.

	<b>Amount</b>	<b>Articles</b>
<b>Step 1</b>	28	Astuti, R. D., and Martdianty, F. (2012); Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C., Hay, M. (2001); Azhar, A., Javaid, A., Rehman, M., Hyder, A. (2010); Carey, T. A., Flanagan, D. J., Palmer, T. B. (2010); Carr, J. C., Sequeira, J. M. (2007); Castellano, S., Maalaoui, A., Safraou, I., Reymond, E. (2014); De Jorge-Moreno, J., Castillo, L. L., Triguero, M. S. (2012); Fini, R., Grimaldi, R., Marzocchi, G. L., Sobrero, M. (2012); Kibler, E. (2013); Krueger, N. F., Reilly, M. D. (2000); Kuehn, K. W. (2008); Lin, X., Carsrud, A., Jagoda, K., Shen, W. (2013); Liñán, F., & Chen, Y.-W. (2009); Liñán, F., Urbano, D., & Guerrero, M. (2011); Liñán, F., Nabi, G., & Krueger, N. (2013); McLaughlin, E. B. (2010); Moriano, J. A., Gorgievski, M., Laguna, M., Stephan, U., Zarafshani, K. (2012); Paço, A., Ferreira, J., Raposo, M., Rodrigues, R., Dinis, A. (2011); Plant, R., & Ren, J. E. N. (2010); Sánchez, J. C. (2013); Shneor, R., Metin Camgöz, S., Bayhan Karapinar, P. (2013); Souitaris, V., Zerbinati, S., Al-Laham, A. (2007); St-Jean, É., Nafa, A., Tremblay, M., Janssen, F., Baronet, J., Loué, C. (2014); Tegtmeier, S. (2006); Tegtmeier, S. (2012); Tornikoski, E. T., Kautonen, T., Le Loarne, S. (2012); Tounés, A. (2006); Van Gelderen, M., Brand, M., Van Praag, M., Bodewes, W., Poutsma, E., Van Gils, A. (2008); Youli, H. and Liyong, X. (2013)
<b>Step 2</b>	5	<b>Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C. &amp; Hay, M. (2001).</b> Entrepreneurial intent among students in Scandinavia and in the USA. <i>Enterprise and Innovation Management Studies</i> , 2(2), 145–160.  <b>Liñán, F. &amp; Chen, Y.-W. (2009).</b> Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. <i>Entrepreneurship Theory and Practice</i> , 33(3), 593–617.

		<p><b>Van Gelderen, M., Brand, M., Van Praag, M., Bodewes, W., Poutsma, E. &amp; Van Gils, A. (2008).</b> Explaining entrepreneurial intentions by means of the theory of planned behaviour. <i>Career Development International</i>, 13(6), 538–559.</p> <p><b>Souitaris, V., Zerbinati, S. &amp; Al-Laham, A. (2007).</b> Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. <i>Journal of Business Venturing</i>, 22(4), 566–591.</p> <p><b>Tegtmeier, S. (2012).</b> Empirical implications for promoting students' entrepreneurial intentions. <i>Journal of Enterprising Culture</i>, 20(2), 151–169.</p>
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Table 1 Literature research: sensitization

All of the articles studied entrepreneurial intentions by using the TPB and looking at perceived behavioural control, subjective norm and attitude towards the behaviour. However, they did not use the same questions; therefore, similar items were grouped throughout the articles and collective terms were found for them. From these collective terms, the questions for the questionnaire were derived. When possible, existing questions were used when they matched the collective terms. Table 2 shows the items used, along with their corresponding scientific source.

TPB	Collective terms	Source
<b>Attitude towards behaviour</b>	Autonomy; self-realization; direct entrepreneurial intentions	<p><b>Souitaris, V., Zerbinati, S. &amp; Al-Laham, A. (2007):</b> Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. <i>Journal of Business Venturing</i>, 22, 566–591.</p> <p><b>Breaugh, J. A. (1999):</b> Further investigation of the work autonomy scales: Two studies. <i>Journal of Business and Psychology</i>, 13(3), 357–373.</p> <p><b>Van Gelderen, M. &amp; Jansen, P. (2006):</b> Autonomy as a start-up motive. <i>Journal of Small Business and Enterprise Development</i>,</p>

		<p>13(1), 23–32.</p> <p><b>Liñán, F. &amp; Chen, Y.-W. (2009):</b> Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. <i>Entrepreneurship Theory and Practice</i>, 33(3), 593–617.</p> <p><b>Tegtmeier, S. (2012):</b> Empirical implications for promoting students’ entrepreneurial intentions. <i>Journal of Enterprising Culture</i>, 20(2), 151–169.</p>
<b>Subjective norm</b>	Influence of relevant individuals; influence of the university environment	<p><b>Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C., Hay, M. (2001):</b> Entrepreneurial intent among students in Scandinavia and in the USA. <i>Enterprise and Innovation Management Studies</i>, 2(2), 145–160.</p> <p><b>Kolvereid, L. (1996):</b> Prediction of employment status choice intentions. <i>Entrepreneurship Theory and Practice</i>, 21(1), 47–57.</p>
<b>Perceived behavioural control</b>	Circumstances and capabilities	<p><b>Liñán, F. and Chen, Y.-W. (2009):</b> Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. <i>Entrepreneurship Theory and Practice</i>, 33(3), 593–617.</p> <p><b>Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C., Hay, M. (2001):</b> Entrepreneurial intent among students in Scandinavia and in the USA. <i>Enterprise and Innovation Management Studies</i>, 2(2), 145–160.</p> <p><b>Tegtmeier, S. (2012):</b> Empirical implications for promoting students’ entrepreneurial intentions. <i>Journal of Enterprising Culture</i>,</p>

		20(2), 151–169.
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Table 2 Collective terms: sensitization

### 3.1.2 Qualification

Following the propositions of the European Qualification Framework, the German Kultusministerkonferenz<sup>4</sup> (KMK) declared the development of competencies as a major aim of higher education (KMK 2005, pp. 3–5). The competencies at hand are professional, methodological, communicative and social skills (KMK 2005, p. 5). In the questionnaire, these skills were surveyed within an entrepreneurial context. Our literature review showed that the relevant scientific literature suggests looking at entrepreneurial competencies by examining specific traits (see Oosterbeek et al. 2010; Jain 2011; Sánchez 2013). To date, we found no common understanding for entrepreneurial competencies. Jain (2011) conducted a meta-study, which gives an overview into the current state of research concerning entrepreneurial competencies, and constructed a framework for such competencies. However, the framework mostly addresses specific traits and motives—and these can hardly be influenced by education. Therefore, the questionnaire relies on the work of Geißler (2012), who investigated the influence on the pre-founding process of entrepreneurial opportunities and the entrepreneurial environment at higher education institutions. Geißler focused on self-efficacy and market awareness, which are broadly discussed in the scientific discourse about entrepreneurial competencies (see Oosterbeek et al. 2010; Jain 2011; Morris et al. 2013; Sánchez 2013). Self-efficacy describes the trust in one’s own skills to fulfil a specific task (see Bandura 1997). In the given context, this would be the founding of a business. The literature shows that self-efficacy can be learned (see Cox et al. 2002). Geißler (2012) derived the items used in his questionnaire from Chen et al. (1998); these items are also used in the questionnaire at hand but are combined with those of Wilson et al. (2007), who studied entrepreneurial self-efficacy with a gender perspective with implications for higher education. Compared to Geißler (2012) and Chen et al. (1998), Wilson et al. (2007) have a stronger focus on soft skills. When looking at market awareness in the given context, the influence of higher education is of great interest. Therefore, items from Geißler’s (2012) questionnaire that addressed this in particular were also used. Since the questionnaire was handed out to students, employees and researchers of the university, some items were adapted to ask about the influence of not only education but also work tasks and research on market awareness.

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<sup>4</sup> Conference of the ministers of culture



While self-efficacy and market awareness were represented as described above, within the ENU project Clemens Beck, Stefanie Demmler and Robert Tolksdorf (2011) developed a competence-based evaluation for their course “Simulierte Unternehmensgründung in der IT-Branche” at Freie Universität Berlin that focused on the KMK requirements of the German government. The pre-/post-evaluation is a self-evaluation for students to rank themselves in different skills before and after they take the course. Their questionnaire focused on present learning goals that included business skills as well as communicative and social skills. Their goal was to show the influence of practice-oriented education on competence development. Since Beck et al. (2011) already focus on the goals of the entrepreneurship education within the ENU, we included their items in the SQ-Monitor as well. Moreover, we made sure to build a competence-profile (see Fink 2010, p. 436) of the ENU and added to the SQ-Monitor entrepreneurial competences that were taught at the ENU. In order to build that specific competence profile, the course descriptions of all the entrepreneurship education at the ENU were analysed and items were derived from the stated learning goals of the courses.

### **3.2 Constructing the SQ-Monitor**

The questionnaire addresses the main goals that are given for the Freie Universität Berlin as well as Charité Universitätsmedizin Berlin: sensitization to and qualification for entrepreneurship. We derived items from existing studies to which we added specific learning goals of the ENU. Therefore, we were able to build a competence profile of the ENU’s entrepreneurship education with respect to the current state of research. The test design is a pre-post t-test. The studies we used for the base of our SQ-Monitor employed different Likert scales. In order to provide a comprehensive questionnaire, we chose a 7-point Likert scale. In our first version of the questionnaire, we translated the items from English into German. Later we also used the SQ-Monitor in English, using original items in these cases. In order to make sure everyone had the same understanding of the questions in the questionnaire, we cross-checked them with psychologists and native-speakers at Freie Universität Berlin (Support für die Lehre<sup>5</sup>).

We added control variables in addition to the items asking for sensitization and qualification. Hence, we integrated demographic variables and the family background (as proposed by Jain 2011, p.135). Furthermore, the questionnaire asks for theoretical and practical experiences in

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<sup>5</sup> [http://www.fu-berlin.de/sites/qualitaetspakt/lehrqualifizierung/SUPPORT\\_fuer\\_die\\_Lehre/](http://www.fu-berlin.de/sites/qualitaetspakt/lehrqualifizierung/SUPPORT_fuer_die_Lehre/) [23.05.2016]

the field of entrepreneurship as well as for the motivation to participate in the given course, which was taken from the questionnaire of Beck et al. (2011).

To make sure the pre- and posttests could be compared with each other, students were asked to give themselves a alias, which were not to provide any identifying information in order to provide anonymity (see Fink 2010, p. 440-441).

## **4 Conducting a test run of the SQ-Monitor**

The first prototype of the SQ-Monitor was used during the summer 2014 term and can be seen as a pretest for the questionnaire itself. It was used in four different entrepreneurship courses, which are described in the following section.

### **4.1 Description of the entrepreneurship courses**

#### FunPreneur Competition

(Bachelor: 80 participants)

*The FunPreneur Competition is open to students from all disciplines. Participants can experience being an entrepreneur for 5 weeks and find out whether being an entrepreneur is a possible future career option. Within workshops, they will be taught everything they need to know for becoming an entrepreneur (marketing, law, accounting, project management). They will have an idea workshop to work on their business model, which they then will implement during a period of 5 weeks, receiving 5€ to found their business. Each student team will work with a supervisor who is an entrepreneur or CEO. After 5 weeks, they present their results to a jury and have the chance to win prize money.*

#### Entrepreneurship Education—Start-Ups Powered by Companies

(Master: 11 participants)

*The course is part of the master's programme in business informatics. The course consists of a variety of blended-learning elements, which are part of the flipped classroom concept. The students will work with companies that provide them with a business case from their company that needs to be solved in an entrepreneurial matter. The companies have different foci to make sure every student finds a case he or she can relate to. In order to develop a business model for the partner company, students are equipped with the necessary knowledge, including business model development, writing a business plan, revenue models, etc. On the*

*basis of this teaching concept, students work on a business plan. This process is supported by several coaching sessions from their teachers.*

### Simulated IT Entrepreneurship

(Master: 9 participants)

*The course is part of the bachelor's programme in computer science. Students learn how to plan, execute and evaluate entrepreneurial IT projects. Student teams come up with a business model and develop software the idea is based on. They get input on business model development, software development, market analysis, marketing planning, finance, project management and working in teams, as well as in presenting techniques.*

### Start-Up! Entrepreneurship (Charité Universitäts Medizin)

(Model course in human medicine: 15 participants)

*What will the medicine of the future be like? How can innovative ideas be implemented in medicine? What challenges come with that? What kind of financial support is out there and what is different with medical entrepreneurship? Start-Up Entrepreneurship is an elective for students in medicine and can be taken in their 7<sup>th</sup> semester. Students learn how to be an entrepreneur by developing ideas for applied medicine and medical research while also thinking about how to open their own medical office. Students meet in a classroom as well as work online during e-learning phases.*

The questionnaire was given to the students during the first and last two weeks of the semester. All the courses included face-to-face meetings with the students; therefore, the evaluation was based on a pencil-and-paper questionnaire, a coherent measurement tool for the given learning environment (see Fink 2010, p. 438). In blended-learning scenarios, the questionnaire was also provided online, which, as expected, had a lower return rate with 5 out of 15 in the course “Start-Up! Entrepreneurship”.

## **4.2 Results**

The SQ-Monitor has shown that within the four classes that have been analysed, the sensitization to as well as qualification for entrepreneurship could be improved significantly ( $\alpha = 0.05$ ), which is illustrated in figure 2 and 3. The direct self-evaluation about whether students' intentions and skills changed was confirmed by 64% and 71%, respectively. However, measuring their entrepreneurial intentions with the TPB approach showed only a

slight improvement. Nevertheless, there is a significant improvement ( $\alpha = 0.05$ ) of perceived behavioural control. Looking at the students' skills shows that they mostly gained business skills and improved their self-efficacy, but were hardly able to recognize market opportunities better than before taking the course.

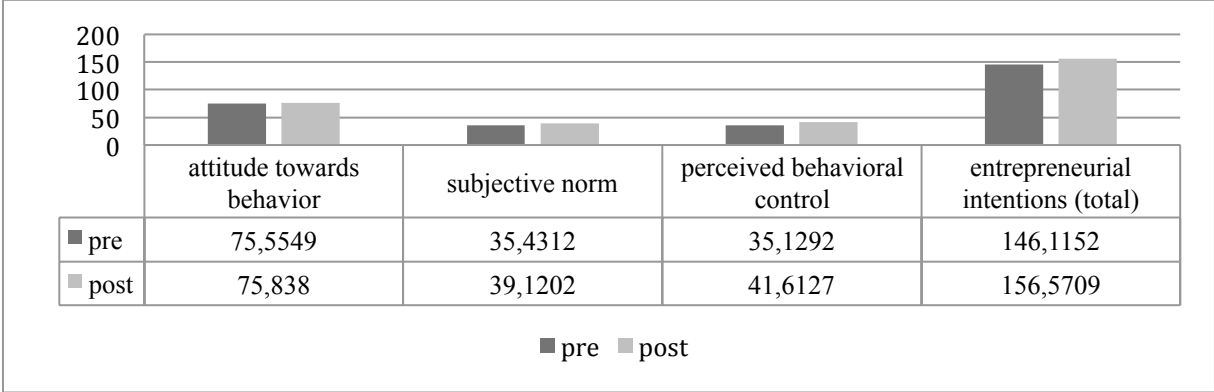


Figure 2 Sensitization-monitor average

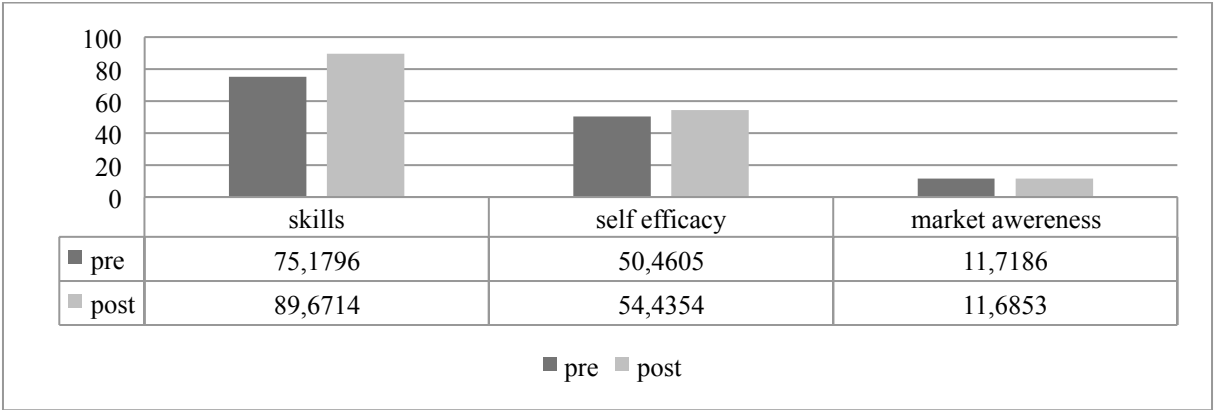


Figure 3 Qualification-monitor average

Following a linear regression model, we find a significant relationship between both family ( $\alpha = 0.07$ ) and practical experiences ( $\alpha = 0.05$ ) on the one hand and the subjective norm on the other, which is shown in figure 4. If there was an entrepreneur in the family, the social influence on the decision to become an entrepreneur was perceived higher compared to students who did not have entrepreneurs in their family. This is the opposite in cases in which the students had already gained practical insights themselves: here social influence on the planned behaviour is less perceived.

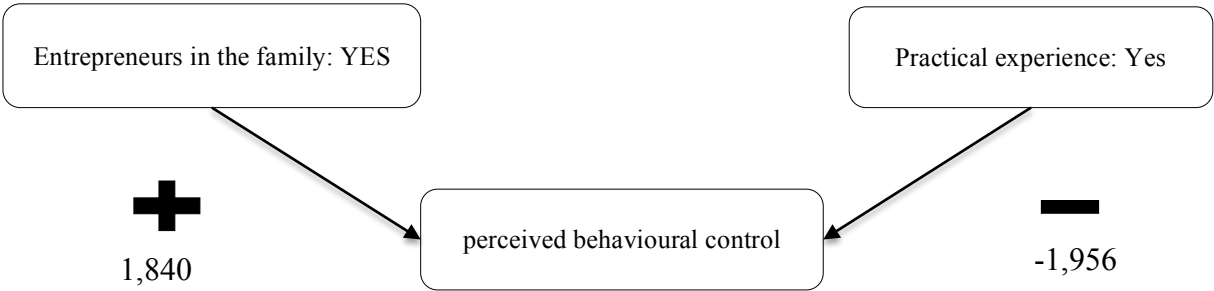


Figure 4 Significant relationships

Interestingly, the main motivator for taking entrepreneurship courses was indeed the interest in the topic rather than merely collecting credit points, which can be seen in figure 5.

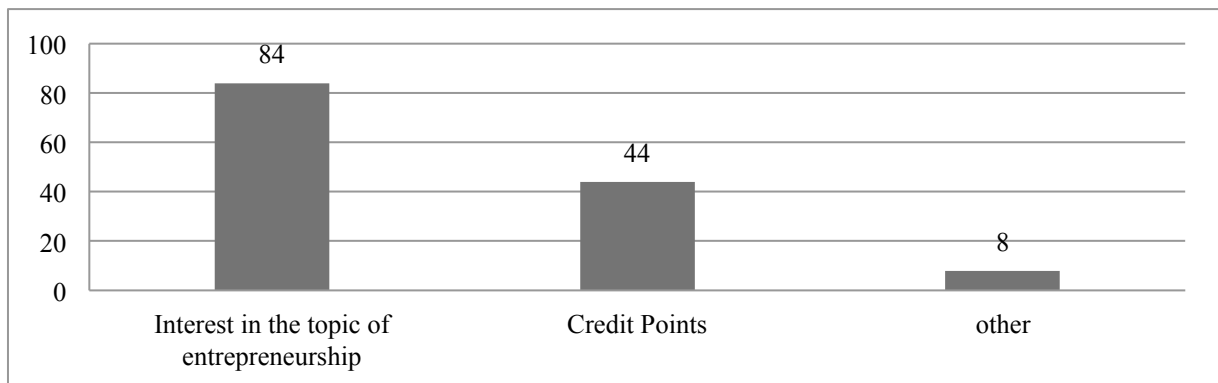


Figure 5 Motivation to participate in the course

### 4.3 Reflecting on the quality of entrepreneurship education by using the SQ-Monitor

In order to continuously improve the quality of the entrepreneurship education within the ENU, the entrepreneurship education team meets biannually. The team consists of all entrepreneurship educators within the ENU. The results of the SQ-Monitor are handed to each educator in advance and serve as a foundation for reflecting on and discussing the quality of the entrepreneurship education at the Free University Berlin and Charité Universitätsmedizin Berlin. An employee of the entrepreneurship education team within the ENU project analyses the dataset of all courses. Prior to the meeting, educators are asked to think about their goal and expectation fulfilment as well as problems or surprising results that may have occurred during the semester. The SQ-Monitor as well as the standard evaluation helps them to reflect on these points. At the beginning of each meeting, educators are presented with the goals they stated in the previous meeting and reflect on the fulfilment of these. The input of the other educators helps each of them to improve their teaching and to state new goals for the next semester. Figure 6 shows how the SQ-Monitor is used to continuously improve the entrepreneurship education.

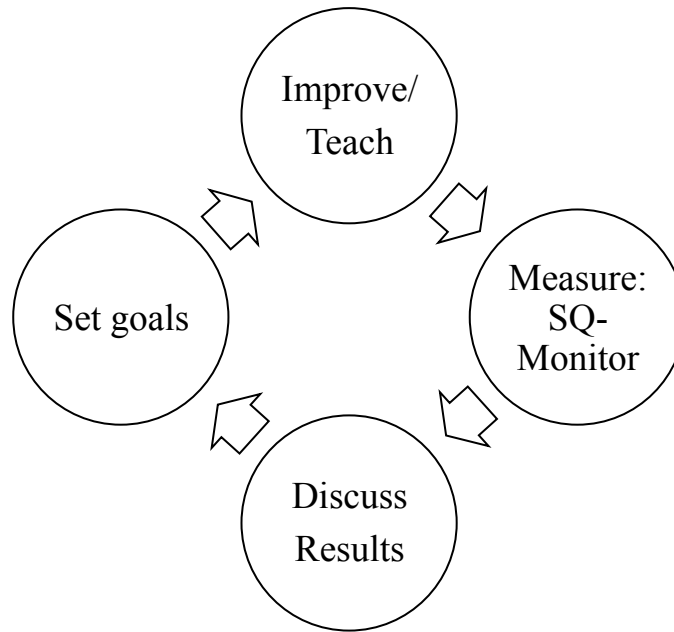


Figure 6 Quality improvement cycle based on the SQ-Monitor

It is important to mention that not all of the results of the SQ-Monitor are significant at the course level due to the small learning groups, especially for graduate courses. However, the results are still able to initiate a discussion and offer the opportunity to exchange experiences within the team of educators. The following examples serve as an insight into the discussions and results of the quality meetings.

*Perception of entrepreneurial infrastructure at the university:* Some results in a given course indicated that some of the students perceived the entrepreneurship infrastructure to be less present after finishing the course. The group of educators discussed possible reasons and decided to introduce the university’s entrepreneurship support team in each of the courses and also to provide video material about them, as well as focus on successful entrepreneurs who founded their company with the support of the university. Moreover, educators try to promote events that are not included in the student’s curriculum, such as the monthly informal meeting “Business & Beer”, at which university start-ups present their business and stay afterwards to talk to students in an informal atmosphere.

*Gender inequality:* In some courses, the lack of women was present. The educator team discussed whether this just represents the average distribution in the given discipline or whether it was symptomatic of the entrepreneurship education. The team decided to work on

the promotion of female entrepreneurship, for example, by organizing a talk by a female entrepreneur.

*Working with a given business model:* In one course, the students were asked to further develop a given business idea. This was a challenge that seemed to inhibit the student's creativity and decreased their learning outcome. Therefore, the group suggested changing that for the next time the course ran to let the students come up with their own idea.

*Passive students:* One of the courses suffered from the problems of students being too passive and not openly communicating with the instructor. This was a new development compared to prior experiences with the course. Therefore, the educators team proposed a weekly consultation hour.

*Expected workload:* For some students, the workload of one of the courses seemed to be too high. The educators discussed it and decided, while it is difficult to change the workload with the given format, they could change their communication and better prepare students about what to expect from the course.

In summary, it can be shown that the SQ-Monitor not only gives insight into the change of perception and skills of the students but also acts as an initiator for fruitful discussions about the entrepreneurship education, which helps to constantly improve the quality of the education.

## **5 Implications and limitations**

The first iterations of using the SQ-Monitor already showed that entrepreneurship education has a significant ( $\alpha = 0.05$ ) influence on the intentions and qualification of students for entrepreneurship, at least when measured through the students' perceptions. Since that first prototype of the questionnaire was used, it has been further developed and fully implemented into the ENU's quality management, and automated by using an R-script. During the winter term of 2014–2015, a modified version of the SQ-Monitor was introduced, in which some of the items were eliminated by running a factor analysis and some questions were adapted after qualitative feedback from the students who filled out the first version. The current version can be found in the appendix.

The questionnaire has a few limitations, starting with the fact that students evaluate their skills based on self-assessment. Moreover, it does not account for a complete set of skills that could be necessary for being an entrepreneur, and it derives sensitization from entrepreneurial intentions, which could be negative even in the case in which a student has been sensitized to entrepreneurship but does not want to become an entrepreneur. However, the continuous use of this measurement tool showed that it can initiate fruitful discussions on the quality of entrepreneurship education and further improve the learning experience. We suggest pairing these discussions with further training of educators through train-the-trainer workshops and additional exchange with educators from external institutions. For instance, educators of the Freie Universität Berlin are part of several networks, such as *Coneect*, that focus on a constant exchange of ideas and experience in entrepreneurship education.



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## 7 Appendix

### QUESTIONNAIRE – ENTREPRENEURSHIP EDUCATION – PRETEST 2015/2016

The event in which you are participating is part of the Entrepreneurial Network University project. As part of this project, we would like to know how familiar participants are with the topic of starting businesses.

In the following text, you are therefore invited to assess yourself in various areas.

Please answer the questions honestly and as spontaneously as possible. If you are unsure of how to respond, compare yourself with other people in your environment.

Your participation will take approximately 10 minutes.

**To merge your answers (“pretest”) with information collected later (“posttest”), please create an alias for the following section. This allows us to evaluate your answers anonymously. Aliases consist of six characters and are composed as follows:**

1. The first two letters of your mother's first name.
2. The first two letters of your father's first name.
3. The day of birth of your mother.


*If your mother is called Marie, you fill in MA.*

*If your father is called Klaus, you fill in US.*

*If your mother's birthday is on July 5th, you fill in 05.*

**Please give us some general information about yourself and your background.**

Event name

Name of lecturer

Your degree program


**I take this course as:**

- Student of the Freie Universität Berlin  Student of the Charité  
 Student of another university  
 Postgraduate student  Employee of the FU/Charité  Other

**If you are a student, please indicate your desired degree:**

- Bachelor's  Master's  Diploma  Other

**In which semester of your degree program are you currently studying?**

*If you are, for example, studying in the third semester of your master's program and*

*have not taken a semester off, please enter the number 3.*

Your age in years

Gender

- female  male

**How did you find out about this event?**

University calendar  Recommendation  At a different event  Information kiosk (e.g. in front of a student cafeteria)

On the website of my institution  Posters

Other: \_\_\_\_\_

**What motivated you to participate in this event?**

I am interested in the topic of entrepreneurship

I need the credits

Other   
Please indicate: \_\_\_\_\_

**Have you already attended entrepreneurship events?**

Yes  No

If yes, please specify which event and at which university or institution you attended the event.

**Have you already gained practical experience that would be useful to you if you were self-employed?**

Yes  No

If yes, please specify.

Are there entrepreneurs in your immediate family (parents, grandparents, aunts, uncles, siblings)?

Yes  No

Please distribute 100 points among the following three possible career directions in accordance with your preferences:

Entrepreneur-ship  Science  Business practice

**Please indicate how strongly you agree with the following statements.**

	<b>1 strongly disagree</b>					<b>7 strongly agree</b>		
	1	2	3	4	5	6	7	
Being an entrepreneur implies more advantages than disadvantages to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If I had the opportunity and resources, I'd like to start a firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Being an entrepreneur would entail great satisfaction for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Among various options, I would rather be an entrepreneur.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Please indicate how strongly you agree with the following statements.**

	<b>1 strongly disagree</b>					<b>7 strongly agree</b>		
	1	2	3	4	5	6	7	
I am aware that at my university you are encouraged to realize your own ideas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am aware that at my university you meet many people with good business ideas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am aware that there is a well-functioning support program for start-ups at my university.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Please indicate how strongly you agree with the following statements considering your entrepreneurial skills.**

	<b>1 strongly disagree</b>					<b>7 strongly agree</b>		
	1	2	3	4	5	6	7	
I am prepared to start a viable firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I can control the creation process of a new firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I know the necessary practical details to start a firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am confident that I would succeed if I started my own firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Please indicate how strongly you agree with the following statements.**

	<b>1 strongly disagree</b>				<b>7 strongly agree</b>		
	1	2	3	4	5	6	7
I'll start a full- or part-time business at some point in the future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm going to start a business within the next 5 years.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'll do everything in my power to start a business in the future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Please estimate your skills in the listed areas below.**

	<b>1 low</b>				<b>7 high</b>		
	1	2	3	4	5	6	7
Communication skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leadership ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Self-organization ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Responsibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teamwork	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Please rate your knowledge in each area below.**

	<b>1 low</b>				<b>7 high</b>		
	1	2	3	4	5	6	7
Business plan development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business model development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing planning/marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Market and competitive analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business/organizational/legal forms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trademarks, patents and other intellectual property rights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



	1	2	3	4	5	6	7
Taxes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controlling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Idea generation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Please indicate how strongly you agree with the following statement.**

	<b>1 strongly disagree</b>				<b>7 strongly agree</b>		
	1	2	3	4	5	6	7
I know my shortcomings in the areas named above, but can find solutions to compensate for these shortcomings in the event of starting a business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**How sure are you that you could perform the following entrepreneurial tasks well?**

	<b>1 not sure</b>				<b>7 very sure</b>		
	1	2	3	4	5	6	7
Establish and maintain marketing objectives (such as the launch of new products/services, market share, sales targets)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Set and meet management objectives (e.g. strategic planning, setting of goals)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taking risks (e.g. making decisions that are subject to uncertainty and risk)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial control (e.g. control of cash inflow/outflow, as well as income and expenses)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taking steps to safeguard the company in case of unforeseen events (e.g. formation of changes, generation of new business ideas)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate how strongly you agree with the following statements.

	1 strongly disagree					7 strongly agree	
	1	2	3	4	5	6	7
I often see potential business ideas during my studies/research/work at the university.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Through my studies/research/work at the university, I often recognize opportunities that could be used for setting up a business (even if I do not pursue them).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thanks to my studies/research/work at the university, I often have ideas that could be used for new products or services (even if I do not pursue them further).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Comments on the questionnaire**

**Other comments**

**Thank you for participating!**

## QUESTIONNAIRE – ENTREPRENEURSHIP EDUCATION – POSTTEST 2015/2016

The event in which you are participating is part of the Entrepreneurial Network University project. As part of this project, we would like to know how familiar participants are with the topic of starting businesses.

In the following text, you are therefore invited to assess yourself in various areas.

Please answer the questions honestly and as spontaneously as possible. If you are unsure of how to respond, compare yourself with other people in your environment.

Your participation will take approximately 10 minutes.

**To merge your answers (“posttest”) with information collected earlier (“pretest”), please create an alias for the following section. This allows us to evaluate your answers anonymously. Aliases consist of six characters and are composed as follows:**

4. The first two letters of your mother's first name.
5. The first two letters of your father's first name.
6. The day of birth of your mother.


*If your mother is called Marie, you fill in MA.*

*If your father is called Klaus, you fill in US.*

*If your mother's birthday is on July 5th, you fill in 05.*

**Please give us some general information about yourself and your background.**

Event name

Name of lecturer

Your degree program


**I take this course as:**

- Student of the Freie Universität Berlin  Student of the Charité  
 Student of another university  
 Postgraduate student  Employee of the FU/Charité  Other

**If you are a student, please indicate your desired degree:**

- Bachelor's  Master's  Diploma  Other

**In which semester of your degree program are you currently studying?**

*If you are, for example, studying in the third semester of your master's program and semester off, please enter the number 3.*

*have not taken a*

Your age in years

Gender

female  male

**Have you attended other entrepreneurship events during this semester?**

Yes  No

If yes, please specify which event and at which university or institution you attended the event.

**Have you gained practical experience that would be useful to you if you were self-employed during this semester?**

Yes  No

If yes, please specify.

Are there entrepreneurs in your immediate family (parents, grandparents, aunts, uncles, siblings)?

Yes  No

Please distribute 100 points among the following three possible career directions in accordance with your preferences:

Entrepreneur-ship	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto;"></div>	Science	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto;"></div>	Business practice	<div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto;"></div>
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**Please indicate how strongly you agree with the following statements.**

	<b>1 strongly disagree</b>				<b>7 strongly agree</b>		
	1	2	3	4	5	6	7
Being an entrepreneur implies more advantages than disadvantages to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If I had the opportunity and resources, I'd like to start a firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being an entrepreneur would entail great satisfaction for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Among various options, I would rather be an entrepreneur.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Please indicate how strongly you agree with the following statements.**

	<b>1 strongly disagree</b>				<b>7 strongly agree</b>		
	1	2	3	4	5	6	7
I am aware that at my university you are encouraged to realize your own ideas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am aware that at my university you meet many people with good business ideas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am aware that there is a well-functioning support program for start-ups at my university.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Please indicate how strongly you agree with the following statements considering your entrepreneurial skills.**

	<b>1 strongly disagree</b>				<b>7 strongly agree</b>		
	1	2	3	4	5	6	7
I am prepared to start a viable firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can control the creation process of a new firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know the necessary practical details to start a firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am confident that I would succeed if I started my own firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Please indicate how strongly you agree with the following statements.**

	<b>1 strongly disagree</b>				<b>7 strongly agree</b>		
	1	2	3	4	5	6	7
I'll start a full- or part-time business at some point in the future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm going to start a business within the next 5 years.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'll do everything in my power to start a business in the future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please estimate your skills in the listed areas below.

	<b>1 low</b>						<b>7 high</b>	
	1	2	3	4	5	6	7	
Communication skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leadership ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Self-organization ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Responsibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teamwork	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please rate your knowledge in each area below.

	<b>1 low</b>						<b>7 high</b>	
	1	2	3	4	5	6	7	
Business plan development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business model development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing planning/marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Market and competitive analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business/organizational/legal forms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trademarks, patents and other intellectual property rights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taxes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controlling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Idea generation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate how strongly you agree with the following statement.

	1 strongly disagree				7 strongly agree		
	1	2	3	4	5	6	7
I know my shortcomings in the areas named above, but can find solutions to compensate for these shortcomings in the event of starting a business.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How sure are you that you could perform the following entrepreneurial tasks well?

	1 not sure				7 very sure		
	1	2	3	4	5	6	7
Establish and maintain marketing objectives (such as the launch of new products/services, market share, sales targets)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Set and meet management objectives (e.g. strategic planning, setting of goals)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taking risks (e.g. making decisions that are subject to uncertainty and risk)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial control (e.g. control of cash inflow/outflow, as well as income and expenses)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taking steps to safeguard the company in case of unforeseen events (e.g. formation of changes, generation of new business ideas)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate how strongly you agree with the following statements.

	1 strongly disagree					7 strongly agree	
	1	2	3	4	5	6	7
I often see potential business ideas during my studies/research/work at the university.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Through my studies/research/work at the university, I often recognize opportunities that could be used for setting up a business (even if I do not pursue them).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thanks to my studies/research/work at the university, I often have ideas that could be used for new products or services (even if I do not pursue them further).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**Do you think that your attitude toward founding a business changed because of the event in which you participated?**

Yes  No

**If yes, then please specify**

**Do you think that your competencies relevant to founding a business changed as a result of the event?**

Yes  No

**If yes, then please specify**

**Comments on the questionnaire**

**Other comments**

**Thank you for participating!**