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Abstract

The *women entrepreneurs* education and training programme is based on a study of more than 300 women entrepreneurs from Germany and Ireland.

The programme has been developed to enhance the capacities of early stage women entrepreneurs of micro- and small enterprises from the service sectors in Germany and Ireland and increase the success of their overall entrepreneurial performance.

A rich didactic approach is used to enhance entrepreneurial self-efficacy, managerial task-related skills, entrepreneurial orientations and the identification with the role as founder and innovator.

The Education and Training Programme is based on *Problem-Based Learning* and a *Learning-by-Doing* Strategy, combined with elements of *reflective, narrative* and *collaborative learning*. By selecting this didactic strategy, the focus is placed on the learner and individual entrepreneurial problems to be solved through collaborative learning and individual reflection and narration processes.

The didactic design is essentially based on *cognitivist, constructivist, and behavioural learning theories* and on *theories of self and identity development*.

The programme provides learners with *multiple learning paths customized to their organizational needs* and *individual competencies*. To solve entrepreneurial problems through learning, the learner collaborates with other members of a team.

The course, which has been created in a blended learning model, consists of four modules, one face-to-face kick-off module in each country and three online modules, delivered via the digital platform Moodle. The duration of the programme is four months.

The tasks are designed on the foundation of a competence framework in which participants can assess their progress in a provided matrix. The programme will be validated and finalized at the beginning of 2017 and implemented in the following summer.



Work Package III – Design and Implementation of the Education and Training Programme

The objective of work package III is to design and implement the education and training programme for early stage women entrepreneurs to develop the fundamental entrepreneurial competencies of women entrepreneurs. The findings of a survey of entrepreneurial competencies of German and Irish women entrepreneurs implemented in work package II have been used to create the blended learning programme.

1. Introduction

The *women entrepreneurs'* education and training programme has been developed to enhance the capacities of early stage women entrepreneurs and increase the success of their overall entrepreneurial performance. The course, which has been created in a blended learning model, consists of four modules, one face-to-face kick-off module and three online modules, delivered via the digital platform Moodle.

The programme is designed to help women entrepreneurs of micro- and small enterprises from the service sectors in Germany and Ireland.

The duration of the programme is four months. The estimated work-load is five to eight hours per week. The proposed number of participants for the pilot programme is 25 women entrepreneurs from each country.

2. Programme Goal and Learning Objectives

The programme goal is to enhance key entrepreneurial competencies of early stage women entrepreneurs in order to increase their entrepreneurial success. The learning objectives are derived from a study (Work package II) in which we have identified predictors of the factor of entrepreneurial success of women entrepreneurs of micro- and small enterprises in the innovation-driven economies of Germany and Ireland.

The factor “Entrepreneurial Competencies” is a significant predictor of the factor “Entrepreneurial Success” (.559; $p \leq .001$).

The best predictor of entrepreneurial competencies is the factor of task-related managerial skills, with a strong path weight (.703). Entrepreneurial self-efficacy was the second strongest predictor of entrepreneurial competencies (.667). For each of three entrepreneurial orientation factors, competition, innovation and risk-taking, the impact is strong and nearly the same (ranging from $=.505$ to $=.510$). The richness of perception of the



entrepreneurial role, operationalized by the identities of founder and of innovator, significantly predicts (.385) entrepreneurial competencies.

Learning objectives derived from survey findings (work package II) can be described as follows:

(1) Enhancing entrepreneurial self-efficacy.

(a) From the predictors of the factor of entrepreneurial self-efficacy the following learning objectives are derived:

- Participants can think in creative way to solve problems.
Participants will be able to create and design new services by using creativity methods.
- Creating and developing new products / services.
Participants will be able to add new services to their portfolio.
- Recognizing business opportunities.
Participants will be able to design business models to capture the business opportunity.

(b) Enhancing the skills of assessing entrepreneurial performance.

Because effective assessment has great bearing on *successful learning* participants will enhance skills of assessing entrepreneurial performance.

- Participants will be able to assess the business model of their own company.
- Participants will be able to evaluate their business performance.
- Participants will self-assess their own entrepreneurial competencies.

Based on assessments of the business model and the business performance and based on the self-assessment of the own entrepreneurial competencies, women entrepreneurs will be able to define *relevant* and *achievable entrepreneurial learning objectives* regarding the task-related skills.

(2) Enhancing task-related skills loading on the factor of managerial skills.

The learning objectives can be chosen from task-related managerial skills which represent potential problem areas.

Increasing production/service request.

Participants in the programme will *be able to increase their service orders by opening up new channels and markets and adding new services to their portfolio.*

Managing technological changes.



Participants will *be able to manage methods for developing process innovation that has an impact on their market.*

Dealing with the increase of customer/consumer complaints.

Women entrepreneurs will *be able to reduce complaints by focusing on customers and using quality circles designed to improve customer satisfaction.*

Dealing with the increase of competition.

Learners *will be able to improve customer relations and develop fidelization strategies consistent with their business model.*

All levels of Anderson's and Krathwohl's (2001) taxonomy are addressed in the sub-learning objectives of each learning objective related to managerial skills.

(3) Enhancing sense of entrepreneurial identity.

Women entrepreneurs will *strengthen their sense of a founder and innovator identity.*

(4) Enhancing competition, innovation and risk-taking orientation.

Women entrepreneurs *will be able to direct their company strategy to the orientation of the company towards competition, risk-taking and innovation.*

The programme goal and learning objectives state what women entrepreneurs will know and will be able to do at the end of each learning unit and after completing the programme. Course goals and learning objectives inform participants on what they will learn in the programme overall and in each learning unit.

3. Didactic Structure and Approach

The Education and Training Programme is based on *Problem-Based Learning* and a *Learning-by-Doing* Strategy, combined with elements of *reflective, narrative* and *collaborative learning*. By selecting this didactic strategy, the focus is placed on the learner and individual entrepreneurial problems to be solved through collaborative learning and individual reflection and narration processes.

The didactic design is essentially based on the following *theoretical perspectives*:

- *cognitivist* (e.g. instruction and modelling) and *constructivist learning theories* (e.g. significance and meaning making),
- *behavioural learning theories* (e.g. feedback), and
- *theories of self and identity development* (e.g. identity transition).



The programme provides learners with *multiple learning paths customized to their organizational needs and individual competencies*. To solve entrepreneurial problems through learning, the learner collaborates with other members of a team. Each team consists of two or three persons including the learner. Depending on recruitment possibilities, students from relevant disciplines (e.g. at least one business student), business angels, migrants (e.g. experts on business content) and (retired) entrepreneurs from other sectors could become members of the learning team.

3.1 Programme Structure

Figure 1 shows the structure of the programme. The blended learning programme consists of *one off-line module and three online modules*.

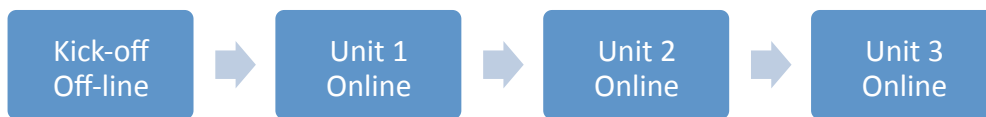


Figure 1: Structure of Blended Learning Design.

Because the course is intended to serve women entrepreneurs in *two countries*, the programme is divided into a *short off-line unit* (Kick-off) with an approximate duration of three hours and a *long online-part* with three units lasting four months, as shown in Figure 2.

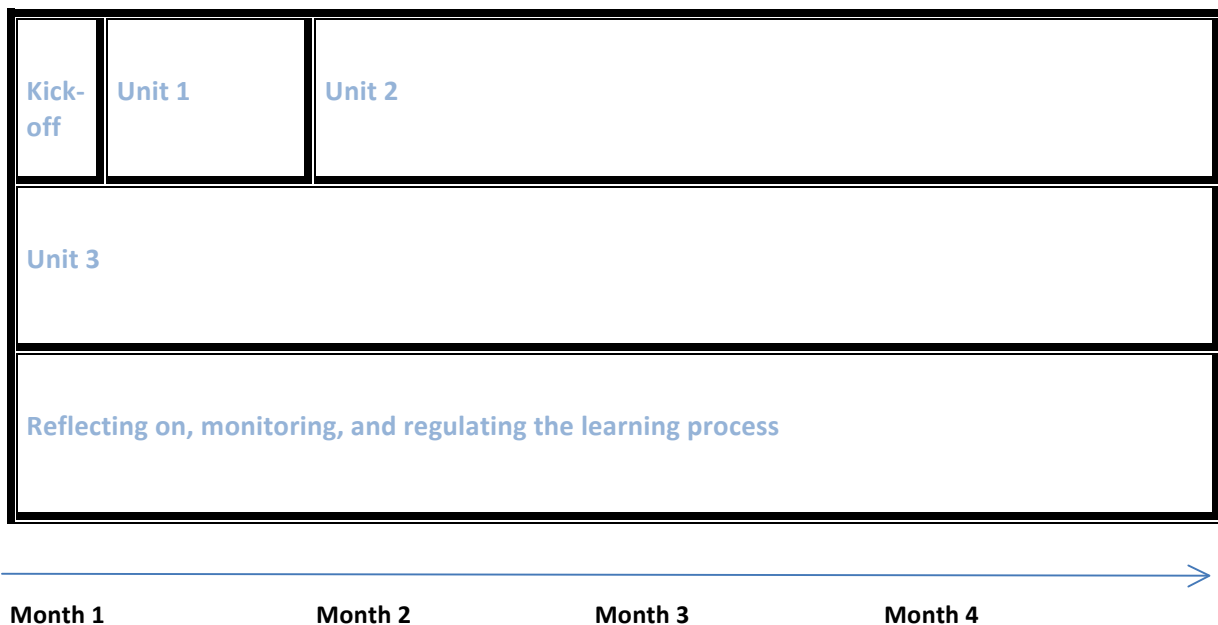


Figure 2: Programme Structure.



The function of the Kick-off session is to introduce participants to the programme, stimulate interest with a keynote lecture on women entrepreneurship and initiate networking.

The online programme consists of two consecutive units (Unit 1 and Unit 2) and one transversal unit (Unit 3) which intersects the offline and online parts of the programme. Unit 1 lays the foundation for the individual learning process by aid in understanding and assessing a personal business model in order to develop an individual learning path for Unit 2. In Unit 2, a maximum of two entrepreneurial problems can be selected from four problem areas, the so-called tracks.

Parallel to these two units there will be Unit 3, a networking unit.

Throughout the learning programme, women entrepreneurs will receive tools and support to successfully promote their learning process.

3.2 Didactic Means to Reach Learning Objectives

The didactic means to achieve learning objectives can be described as follows:

Enhancing Entrepreneurial Self-Efficacy

According to Bandura (1994), there are two effective sources from which to derive self-efficacy: through mastery experiences and vicarious experiences. Ways to help participants of the programme experience mastery and have vicarious experiences include the following:

Mastery experiences

Strengthening a sense of self-efficacy through mastery experiences will be realized in this programme by (1) individual learning paths customized to learners' self-assessed competencies and entrepreneurial performance, and (2) a learning unit based on constructivist didactic principles (Kegan, 2014).

- (1) Individualization of learning objectives is achieved through a sophisticated modelling process that will enable learners to *successfully* complete exercises with increasing levels of difficulty. Continuous effort is necessary to overcome difficulties within each series of exercises.

Self-assessment techniques of entrepreneurial performance and structured feedback help that attribution processes contribute to strengthening a sense of self-efficacy.

- (2) Programme participants will learn to overcome barriers that interfere with their defined entrepreneurial goals. Through reflecting on relevant entrepreneurial goals, goal-impeding behaviour, behavioural motivation and *big assumptions*, participants will be enabled to effectively approach their defined goals and enrich their cognitive perspectives.



Vicarious (second-hand) experiences

The other effective way to strengthen a sense of efficacy is through vicarious experience (second-hand experience) provided by social models. Seeing women entrepreneurs similar to oneself succeed by effort strengthens the observer's confidence that she too will be able to master comparable challenges that must be overcome to achieve entrepreneurial success.

To obtain vicarious experience in the programme

- (1) biographical videos of *successful women entrepreneurs*, and
- (2) a written narrative of enterprise founding will be presented by each participant. [This option will be used only if participants give written consent to presenting their stories to the public].

Modelling provides a social standard against which women entrepreneurs can evaluate their capabilities and makes it possible to acquire better means that contribute to a sense of self-efficacy by observing the success of others.

Enhancing Task-related Managerial Skills

A standardized learning process is designed to enhance task-related managerial skills. The process entails the following steps:

- Define learning objectives based on self-assessment of competencies and organizational performance and an evaluation of the business model.
- Become aware of relevant skill-based knowledge by developing and reflecting on a mind map.
- Reflect on relevant entrepreneurial goals related to managerial skill, goal-impeding behaviour, behavioural motivation and *big assumptions*.
- Read texts, make use of supplemental resources and watch video clips.
- Answer questions to support *understanding, applying, analysing, evaluating* and *creating* skill-related learning results/products/entrepreneurial problem solutions with the support of the learning team by means of diverse activities.
- Present developed problem solutions which will be evaluated by different groups using different methods.
- Reflect on the learning process.

Enhancing Sense of Entrepreneurial Identity

To enhance a sense of entrepreneurial identity, activities, social interactions and meaning-and-significance-making processes are essential means (Ibarra, 2005). People can gain knowledge about themselves while having the opportunity to observe themselves in action (Ibarra, 2005). "The mechanisms underlying the role of social interaction ... are information and support, identification and social validation and comparison" (Ibarra, 2005, p. 13). Life events play a critical role in identity transitions. "What transforms any event into a trigger is the meaning a person derives from it" (Ibarra, 2005, p. 17).



On the basis of mechanisms and factors that explain the sense of identity, we can develop a didactic framework able to enhance *innovator and founder identity* as follows:

Activities

Through *activities of innovating processes and services for her own company*, the participant will have an opportunity to observe her own behaviour and gain knowledge about herself as an innovator.

Meaning and significance making processes

Innovative activities in the programme are events from which participants can derive meaning. This meaning will be reflected in an exercise in which they are assigned to *write a narrative about an innovative activity* within the programme. Experiences have little value if they are not connected to or fused with stories (Widdershoven 1993, p. 7). Unity that triggers a sense of significance is advanced by a story that is not already present in the action (Widdershoven 1993, p. 7).

Because early stage entrepreneurs have already founded their companies, the goal of enhancing their founder identity will be addressed by elaborating meaning-and-significance-making processes. An exercise designed to enhance founder identity is *to write a narrative of becoming a founder*.

Social interactions

In terms of social interactions, there are three ways in which sense of identity will be strengthened in the programme:

- The blended learning setting is a social learning environment *that will provide opportunities for participants to engage actively with content related to enhancing entrepreneurial success*. Through social interactions, the learner will obtain information and support. The programme offers learners an opportunity for social validation and comparison by receiving and giving feedback on the results of learning and by learning about social norms against which the women can judge their own capabilities.
- Videos of successful female entrepreneurs show potential models. Modelling is an effective way to trigger processes of identification. Identifying with other entrepreneurs motivates women entrepreneurs to assimilate the essential requirements of a founder or innovator role (Ibarra, 2005).

Because identity transition can be understood as a developmental process, we expect that through this programme, with its planned duration of only four months, the degree of identity strengthening may be limited.

Enhancing Orientations of Competition, Innovation and Risk-taking

Orientations of competition, innovation and risk-taking are regarded as characteristic adaptations (McAdams & Pals, 2006). They centre on a firm's degree of entrepreneurship.



Changing characteristic adaptations as “culturally conditioned phenomena” (McCrae, 2011, p. 198) is about changing habits, goals and attitudes. “... sustained change of characteristic adaptations would require people to adopt new cognitive perspectives and goals ...” (McCrae, 2011, p. 199).

To enhance characteristic orientations, the already mentioned method of reflecting on goal-impeding entrepreneurial behaviour will be used in order to modify *big assumptions* and to adopt new cognitive perspectives and goals. Reflecting on self-defined goal-impeding behaviour related to competition and innovation will address this learning objective.

Krueger and Dickson (1994) found that subjects who believe they are competent in a specific task see more opportunities in risky choices related to the specific tasks. Interacting with self-confidence of personal competence and organizational performance is risk-taking. By enhancing self-efficacy, we expect that an orientation will also be encouraged towards seeing more opportunities in risky choices. For that reason, the objective of enhancing risk-taking will not be directly addressed by a specific learning and developmental method.

4. Content

Course content is aligned with individual learning objectives. The content and assignments are of sufficient depth that different learning objectives can be achieved within the indicated work-load. The online-programme is organized into three units, as shown in Table 1:

- Unit 1: How to successfully deal with the essence of entrepreneurship,
- Unit 2: How to successfully overcome challenges to effective business performance, and
- Unit 3: How to implement successful Networking.

Unit / Module	Learning Track	Content
Kick-off		- Introduction to the Programme - Key note - Networking
1. How to successfully deal with the essence of entrepreneurship?	Entrepreneurial essence	Written narration of own founding story
	Business Model	Business model and assessment of own business model SWOT Analysis / Environmental analysis
2. How to successfully overcome challenges to effective business performance?	2.1 Increase production/service request.	Customer development Market development
	2.2 Manage technological changes.	Process innovation Service innovation
	2.3 Dealing with the increase of customer/consumer complaints.	Quality circles Customer satisfaction
	2.4 Dealing with the increase of competition.	Customer relationship Strategic business model
3. How to implement successful networking?	Networking	Personal branding Networking Social media



Reflecting on, monitoring, and regulating learning process	Reflection on before-after business model Canvas
	Self-Assessment of entrepreneurial competencies
	Self-Assessment of organizational performance
	Defining learning objectives
	Written narrative about innovative activity
	Reflection on goal-impeding entrepreneurial behaviour

Table 1: Content of Education and Training Programme.

Kick-off

The function of the Kick-off session is to introduce participants to the programme, stimulate interest with a keynote lecture on women entrepreneurship, initiate networking and give answers to open questions.

Unit 1

Unit 1 is related to the learning objectives: enhancing entrepreneurial self-efficacy and sense of entrepreneurial identity.

- Content covers assessment of one’s own company’s business model by drafting a business model, evaluating strengths and weaknesses of the company and analysing the environment and opportunities. This content lays the foundation for enhancing predictors of entrepreneurial self-efficacy, orientations of competition, innovation and risk-taking, and skills to assess entrepreneurial performance.
- To address entrepreneurial identity, the learner will write a narrative of how she becomes a founder.

Module: Reflecting on, monitoring and regulating the learning process

The learner must develop an individual learning path for Unit 2 and can choose two of four tracks. The individual learning path results from a reflection and assessment process triggered in Unit 1 that works to integrate individual and organizational perspectives:

- reflecting on feedback for assessments of business model
- reflecting on and assessing business performances related to managerial skills that are relevant for entrepreneurial success, and
- reflecting on and assessing entrepreneurial competencies.

Questionnaires will be provided in order to self-assess organizational performance and individual competencies and to define learning goals and objectives.

The entire learning process will be reflected on in terms of the current and expected business model of enterprise and forum activities.



Unit 2

Unit 2 is related to the learning objectives: to enhance entrepreneurial-self-efficacy, entrepreneurial identity as a founder and innovator and task-related managerial skills and promoting orientations of competition, innovation and risk-taking.

The factor of task-related managerial skills is the best predictor of entrepreneurial competencies. Seven managerial skills with the highest loadings have been identified in the survey of German and Irish women entrepreneurs. The tracks derived from task-related skills have been selected and reviewed in order to provide different learning tracks for participants to choose among. In the first proposed content framework, the learner was expected to choose a maximum of four/five learning tracks. After reviewing the content and learning objectives of each track, the seven learning tracks have been reduced to four. The focus on four tracks makes it possible for course requirements to be consistent with the approximate time required for the learning process and activities. With the number of learning tracks reduced, the learner can now choose two out of four learning tracks reflecting the relevant problem.

In the course of this module, the learner will write a narrative of an innovative activity.

Furthermore, a standardized procedure will guide reflection on entrepreneurial goal-impeding behaviour.

Unit 3

Unit 3 is related to the programme's learning objectives: promoting managerial skills, enhancing sense of entrepreneurial identity and entrepreneurial self-efficacy. Discussion groups will be established and interactive tasks will be provided to assess existing relationships and to increase networking activities by participating women entrepreneurs. The topics covered by this module are personal branding, networking and social media. Throughout the learning programme, networking activities will be offered in a Forum open to all participants from Germany and Ireland.

5. Media

Media provided within the programme include readings, videos and supplementary resources. Content on the learning platform will be provided in German and English.

Readings

The readings present powerful managerial methods. They are written at an appropriate readability level and structured in a clear way. The narrative style of the texts, which are enriched with examples and questions, facilitates the process of reading and understanding.

Videos

The development of the video is embedded in an *edutainment*-approach in order to facilitate the learning process for early stage women entrepreneurs.

A web-based series including biographies of successful women entrepreneurs has been created to stimulate entrepreneurial identification as successful innovators and founders and to strengthen their sense of entrepreneurial self-efficacy. The videos will emphasize social modelling through the main characters of successful female entrepreneurs in the context of entertainment. To produce these edutainment videos, a validation process was employed regarding messages, formats and characters.

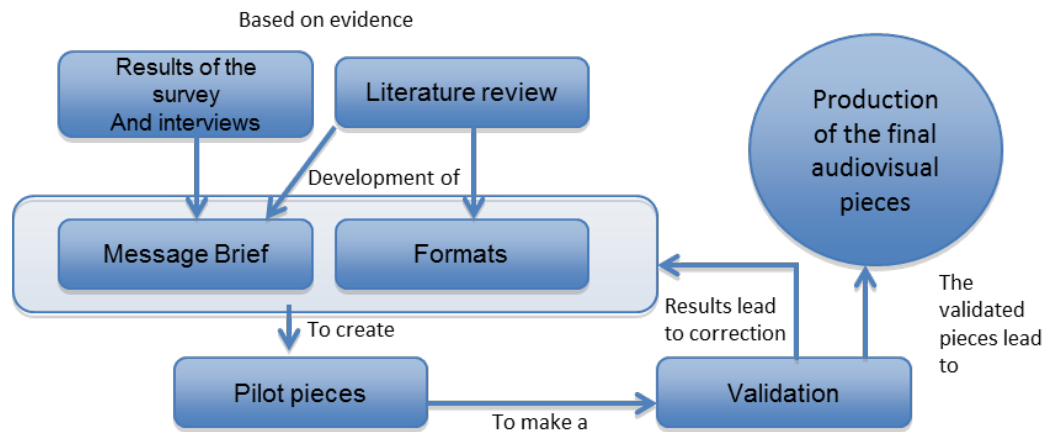


Figure 3: Process to create the web-series for the educational programme.

Different messages/biographical stories and formats were tested in two focus groups. Group discussions guided by a validation protocol were recorded and evaluated afterwards. Twelve short videos were edited from the interviews in order to validate the characters to use for the web series and determine with which women/stories early stage women entrepreneurs identify more, so that there will be a successful modelling and identification process. Five characters and their biographies have been positively validated.

Alongside of the web-based series of women entrepreneurs' biographies, video statements about learning goals have been edited for inclusion in the learning tracks to enhance managerial skills, entrepreneurial –self-efficacy and the entrepreneurial orientation of competition, innovation and risk-taking.

Supplemental resources

Supplementary resources are included, such as links and literature.

6. Outlook

Programme development will be followed by testing and validating a pilot project with ten women from Germany and Ireland. Validation will take place in January 2017. The early stage women entrepreneurs who validate the programme will have access to the learning platform with its introductory and structuring tools, as well as to the content, the exercises



of Unit 1, and Unit 2, Track 1 and the learner's manual. An online questionnaire for the validation process is being implemented in order to obtain detailed feedback on programme structure, content and usability of the learning platform. As some women already recruited to test the programme are interested in participating in the whole programme, the full content will be provided in the actual implementation of the programme.

The first round of the programme, which will also be evaluated, is scheduled for summer 2017. After validation in January 2017, the programme will be revised, and an updated version of the programme design will be submitted to the European Commission. The next step before starting the programme will be to recruit both participants of the programme in the two countries and external learners to set up learning teams. In addition, the kick-off sessions must be planned, in order to start and implement the pilot programme on time.



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