

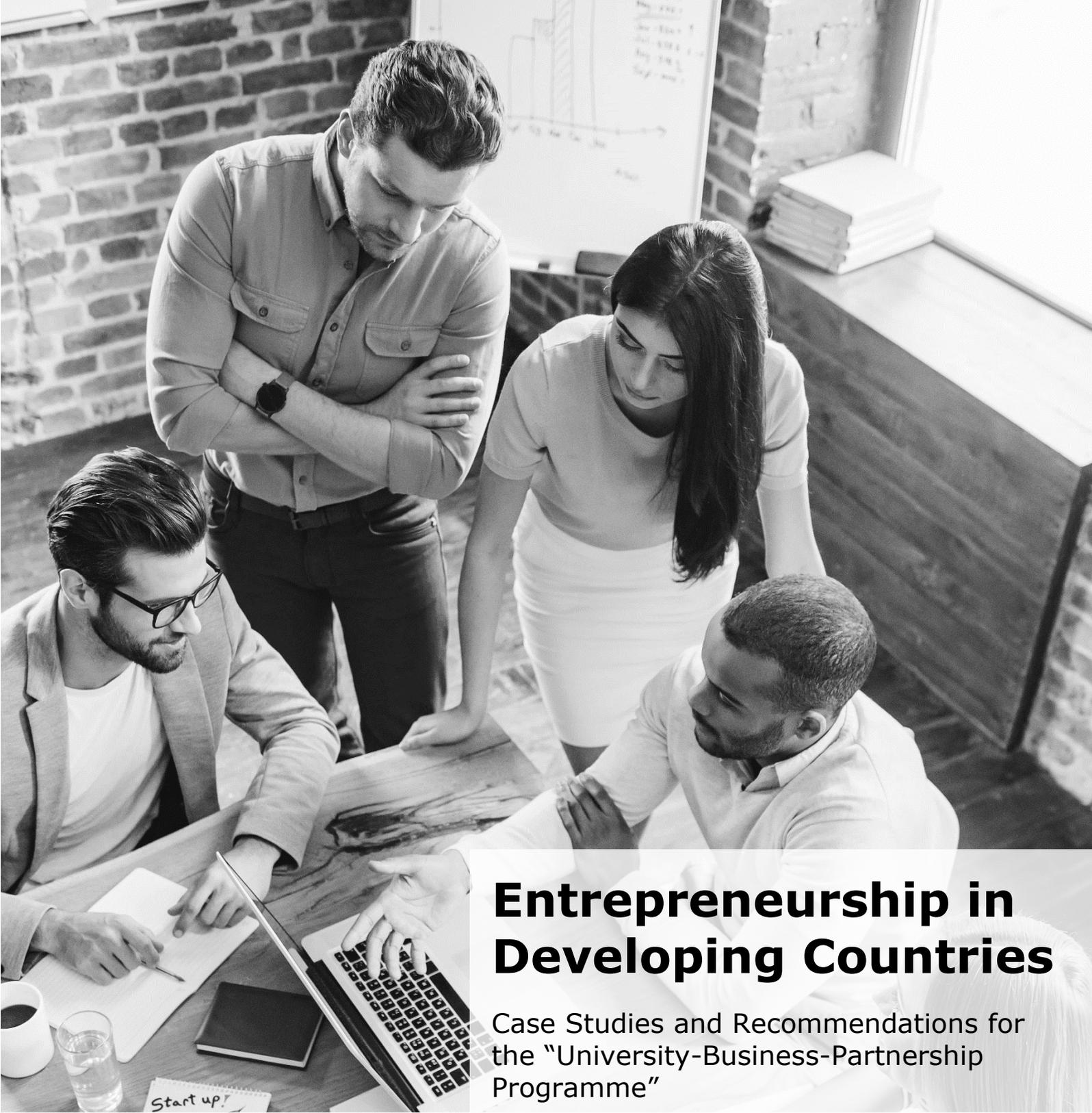


Entrepreneurship in Developing Countries

Case Studies and Recommendations for the "University-Business-Partnership Programme"

DAAD

Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Section P32 – Development Cooperation: Partnership Programmes and Higher Education Management

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***Case studies and recommendations for the
"University-Business-Partnership Programme"***

Final report, English short version

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CONTENTS

CONTENTS	3
LIST OF ABBREVIATIONS	4
EXECUTIVE SUMMARY	5
1 BACKGROUND AND OBJECTIVES OF THE STUDY	9
2 CASE STUDIES	10
2.1 Overview of Research Methods and the Nine Projects	10
2.2 Case Studies about Promoting Entrepreneurship in Developing Countries.....	13
2.2.1 YSAE - Young Southern African Entrepreneurs (TU Berlin).....	13
2.2.2 Platform for the development of entrepreneurs and SMEs in Ghana and Kenya (Bonn-Rhein-Sieg University of Applied Sciences)	19
2.2.3 Academia meets business (University of Leipzig)	30
2.2.4 African iN4iN network (University of Leipzig)	41
2.2.5 Building entrepreneurship and management skills for university graduates in Egypt (Philips University Marburg)	49
2.2.6 Applied Entrepreneurship Education Programme (Neu-Ulm University of Applied Sciences)	58
2.2.7 Start-Up Factory Kumasi - Paderborn (University of Paderborn).....	65
2.2.8 Entrepreneurship Education: A Key to Job Creation and Employability in Azerbaijan (University of Siegen)	72
2.2.9 Voice of Business (University of Applied Sciences Wismar)	78
3 CROSS-CASE ANALYSIS.....	84
3.1 Profile of the Projects	84
3.2 Drivers and Challenges of the Projects.....	89
3.3 Impacts of the Projects.....	91
3.4 Transferability of Project Methods	92
3.5 Cooperation and Synergies	93
4 CONCLUSION AND RECOMMENDATIONS.....	94

LIST OF ABBREVIATIONS

BRSU University of Applied Sciences Bonn-Rhein-Sieg

HNU Neu-Ulm University of Applied Sciences

HSW University of Applied Sciences Wismar

PUM Philipps-University of Marburg

TUB Technical University Berlin

UL University of Leipzig

UPB University of Paderborn

USI University of Siegen

EXECUTIVE SUMMARY

Summary of Main Findings

- **Impetus** for the projects: increased employment opportunities for graduates, interest and support for entrepreneurship by the national government.
- The projects faced **challenges** at the target universities, with the organisational framework of the project, with the project partners and with the framework conditions in the target country.
- Positive **impacts** of the projects: Above all, strengthened entrepreneurial thinking and behaviour of the students, more emphasis on entrepreneurship training and stronger networks.
- **Transferability** and **replicability**: All projects indicated that their approach could be transferred and replicated by partnerships of universities and colleges.
- All project leaders were of the opinion that there should be more **cooperation** – between the projects, with developmental organizations and with companies.
- **Recommendations for action**: (1) Interlinking projects more intensively - among themselves and beyond; (2) strengthening investment in start-ups; (3) pooling entrepreneurship education competencies of all stakeholders; (4) strengthening financing of projects; (5) Organisationally supporting projects.

Background and Objectives

The German Academic Exchange Service (Deutscher Akademischer Austauschdienst, DAAD), among other things, promotes projects in the area of entrepreneurship education in the programme “University-Business-Partnership Programme”. In the context of an accompanying study, empirica and the University of Kassel collected and analysed primary and secondary data on nine projects of this programme. The results are presented in this final report. The aim of the study was to identify common themes, challenges and potential synergies between the projects and to derive recommendations for future funding. In doing so, the study is intended to identify, in particular, links to institutions for development cooperation (for example, GIZ, BMZ, KfW) and stimulate exchanges with other higher education institutions. The report is aimed at universities in Germany and the partner countries, organisations of the development partnership, as well as at stakeholders in business and science policy.

State of Research

Comprehensive research on the current project and consequent research results show that entrepreneurship education in Asia and Africa does not have a large body of literature. However, there are quite a number of insightful and conclusive studies, contributions and reflections. Not only are these studies considerably extensive but in addition to structural analysis on individual countries, they also examine specific target groups, such as students.

The present studies have led to findings that could be taken into account in further projects or studies. In addition to the individual factors that positively influence implementation at universities, the challenges in the respective countries are also relevant to the nine case studies analysed in this report. For example, the knowledge about the opportunities or obstacles resulting from structural environmental conditions in a country can be helpful for the development of higher education projects in this country. From the studies, transnational important suggestions for the development of qualification measures can be extracted.

Methods

Within the scope of the study, the research team interviewed 26 project managers and other project stakeholders, as well as analysing project material and international literature on the theme, “Entrepreneurship in Developing Countries”. Additionally, the research team used information from a kick-

off workshop with the projects in February 2017 and a final workshop, which took place in September 2017.

Case Studies

The focus of the study was on nine projects, most of them with universities in Africa. The participating countries were South Africa (twice), Botswana, Namibia (twice), Tanzania, Rwanda, Kenya, Ghana (thrice), Ethiopia and Egypt. Two projects had partners in Asia (Azerbaijan, Vietnam).

Case Study	Country	Project Management
YSAE - Young Southern African Entrepreneurs	Botswana, South Africa	Technical University of Berlin, Department of Assembly Technology & Factory Operations
German-African University Partnership Platform for the Development of Entrepreneurs and Small/ Medium-sized Enterprises	Ghana, Kenya	Hochschule Bonn-Rhein-Sieg, Department of Economics
Academia meets Business	Vietnam	University of Leipzig, International SEPT Programme/ Development Economics
African in4in-Network	Ghana, Ethiopia, Kenya, Rwanda, Tanzania	University of Leipzig, International SEPT Programme
Development of Entrepreneurship and Management Skills of Future Egyptian University Graduates	Egypt	Philipps-University of Marburg, Department of Economics, Technology and Innovation Management
Applied Entrepreneurship Education Programme	Ethiopia	Hochschule Neu-Ulm, Centre for Afrika – Department of Economics
Start-Up Factory Kumasi - Paderborn	Ghana	University of Paderborn, Electrical Energy Technology - Sustainable Energy Concepts (EET-NEK), International Business
Entrepreneurship Education: A Key to Job Creation and Employability in Azerbaijan	Azerbaijan	University of Siegen, Department of Entrepreneurship and Family Business
Voice of Business	South Africa, Namibia	Hochschule Wismar, Robert-Schmidt Institute

Interdisciplinary Analysis: The profiles of the nine projects can be described by means of certain characteristics: the number of projects, the project partners involved and the approaches to transfer the methods used to the target country:

- **Participating Countries and Universities:** Three projects have a target country and a target university. Three projects also deal with several countries and one university per country; two projects have one country and two universities; one project involves two countries with several universities per country.
- **Target Groups:** All projects are aimed at teachers, who are the main stakeholders, in order to familiarise them with entrepreneurship teaching. In eight projects, students are also part of the target group, with the goal of conveying entrepreneurial thinking and acting to the students. Some projects explicitly focus on companies as the target group in the target country.
- **Type of Activities:** The projects include different types of events and activities: practical events and extra-curricular activities; traditional courses such as lectures, seminars and tutorials; events for exchange of expertise such as workshops, conferences and symposia; and network expansion.
- **Start-up Support:** Almost all projects directly support business start-ups by students and graduates in the target country. This is done through business plan or idea contests, incubators, consulting, coaching and mentoring, as well as through entrepreneurship labs.
- **Project Partners:** The project partners are an important part of the projects. According to the DAAD funding approach, all projects in the programme examined have partners in the business sector. Specifically, these partners are business associations and companies.

- **Transfer Approaches:** The projects pursue three different approaches to building and expanding entrepreneurship education in the target country: one-to-one transfer, proactive adaptation and portfolio expansion. However, the projects do not represent pure types - on the contrary, the different components of the projects can be assigned to different approaches. Most often, the projects follow the proactive adaptation approach.

The interviewees named four main drivers for the initiation and development of the projects: increased employment opportunities for graduates; improvements in the economic situation of the target country; the interest of the project participants in entrepreneurship and; at the higher level, support for entrepreneurship by the university management, the project partners and the government.

The projects faced numerous and more differentiated challenges as compared to the drivers of the projects. The challenges can overall be divided into four groups: challenges at the universities in the target country; challenges in the organizational framework of the project; challenges with the project partners and; challenges with the framework conditions in the target country.

The project managers indicated several positive impacts of the projects, in some cases, these were unique. However, they are broadly categorized as follows: strengthened entrepreneurial thinking and behaviour of the students, more emphasis on entrepreneurship training and teaching, stronger networks and network cooperation and a strong entrepreneurship environment.

The project managers indicated gaining a multitude of particularly important experiences, which can be helpful for similar projects. These lessons learned can be divided into four categories: teaching the concept of entrepreneurship teaching, implementation of activities, the economic environment and the design of funding programmes.

Transferability: All projects indicated that their approach could be transferred to and replicated by partnerships of other universities and colleges. Often, the projects also highlighted certain aspects of transferability, such as key elements of the approach, recommended teaching methods, recommended time schedules and challenges to be considered.

All project managers expressed the need for more cooperation – both between the projects, as well as with organizations for development cooperation in Germany and abroad, as well as with companies. The interviewees put special emphasis on the future support of such collaborations:

- All respondents would welcome more intensive cooperation between entrepreneurship projects in developing countries.
- Some project leaders advocate more cooperative teaching, research and training. The contacts with German development cooperation organizations differed. In some cases, developmental organizations do not appear to be interested in more cooperation with other projects and instead focus on their own projects.
- Stronger cooperation between local incubators could support start-ups from universities – not every university needs its own incubator.
- Entrepreneurship teaching and support can be promoted not only through organizations for development cooperation, but also through organizations for the promotion of business start-ups.
- Enterprises could play a greater role in projects to promote entrepreneurship in developing countries.
- An internet platform for exchanging experiences in similar projects should be created.

Conclusions and Recommendations

Suggestions for action can be derived from the nine case studies and the cross-case analysis. These recommendations are addressed to the DAAD as the sponsor of the study as well as to organizations of development cooperation, universities and university policy. The recommendations cover five areas: project networking, investment in business start-ups, pooling of entrepreneurship education skills, project funding and organizational support.

1: Interlink projects more intensively - with one another and beyond. The DAAD and organizations for development cooperation could support stronger internal and external networking of similar projects. This could be done through regular workshops and conferences or by means of suitable project proposals. For example, project sponsors could subsidize opportunities for networking and travel budgets could be provided for networking meetings. Similarly, the view on European institutions could be expanded.

2: Strengthening investment in start-ups. The DAAD and development organizations could support the establishment of institutions for the financial support of start-ups from universities in developing countries.

3: Combining entrepreneurship education competences of all parties. DAAD can organize an exchange and a set-up of didactic abilities for the individuals involved in development cooperation in the field of entrepreneurship education. This could be offered, on the one hand, in the form of mutual teaching-learning experiences (practitioner workshops), and on the other hand, as external training.

4: Strengthening funding of the projects. The federal government and state institutions such as the DAAD could place greater emphasis on entrepreneurship and entrepreneurship education in development cooperation. Germany could provide more funding for these issues as a whole, and also consider the possibility of broadening the scope of individual projects.

5: Supporting the organization of the projects. The DAAD or a commissioned body can set up an external project agency to help resolve problems in the projects. Another option can be a user-friendly online tool for reporting. A tool like that should, at the same time, provide a networking opportunity and thus make the benefits directly visible to stakeholders.

1 BACKGROUND AND OBJECTIVES OF THE STUDY

The German Academic Exchange Service (DAAD), among others, supports projects in the field of Entrepreneurship Education in the programme " University-Business-Partnership Programme ". In the context of a follow-up study, the researchers of the empirica Gesellschaft für Kommunikations- und Technologieforschung mbH, Bonn, and the University of Kassel, Entrepreneurship Education, collected and analyzed primary and secondary data on nine projects of this programme.

The study ran from November 2016 to September 2017. This final report presents the results. The aim of the study was to identify common themes, challenges and potential synergies between the projects and to derive recommendations for future funding. In doing so, the study will identify, in particular, links to institutions for development cooperation (for example, GIZ, BMZ, KfW) and stimulate exchanges with other universities. The report is addressed to universities in Germany and the partner countries, organizations of development partnerships as well as to actors in the economy and science policy.

This report is an English short version of the final report which is written in German. The executive summary as well as the case studies (Chapter 3) and recommendations for action (Chapter 4) presented here are in full length. The methodical explanations (Chapter 2) and the cross-case analysis are shortened. The German report also includes a Chapter about the state of the art in literature about entrepreneurship in developing countries.

2 CASE STUDIES

2.1 Overview of Research Methods and the Nine Projects

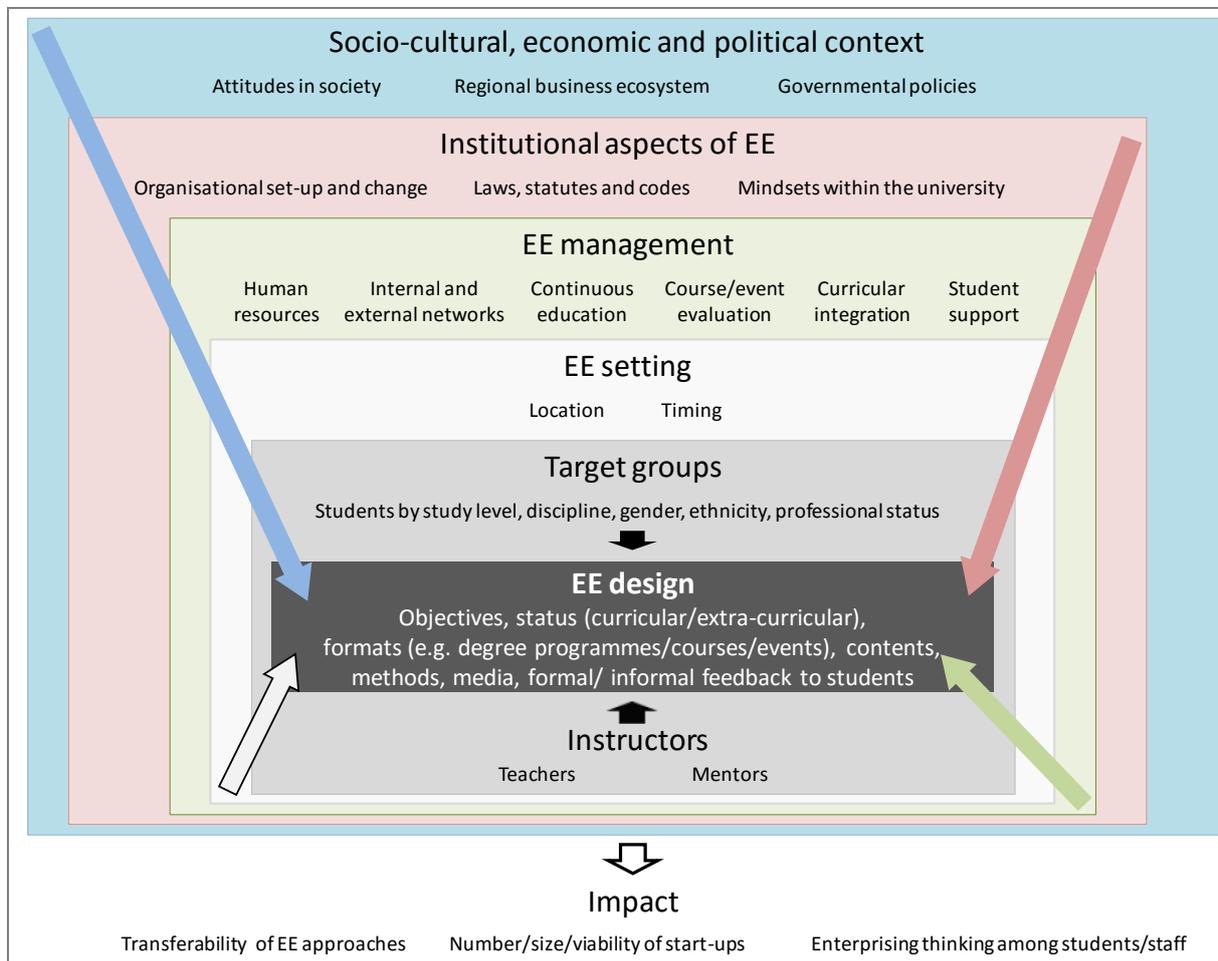
Research Questions

The questions and the evaluation of the study reflect the perspective of the universities, business partners and students participating in the projects. This includes their motivation to participate in the project, the drivers and challenges involved in the implementation of the projects, the impacts of the projects and the synergies resulting from the projects.

Methodological Framework of the Study

The research team used research as an analytical framework for Entrepreneurship Education (in the graph: EE) - see Figure 3-1. This framework helped to formulate concrete questions for interviews and to evaluate data. The framework has already been successfully applied in previous studies.¹

Figure 2-1: Analytical Framework for the Study "Entrepreneurship in Developing Countries"



Source: Brigitte Halbfas, University of Kassel

The analysis frame focuses on the design of entrepreneurship education. This design generally takes into account the instructors and the target groups. The courses take place in a particular setting and

¹ See Lilischkis/Volkman/Halbfas et al. (2015).

are managed in a certain way. In addition, the courses take place in a particular institutional framework, as well as in a specific socio-cultural, economic and legal-political context. This interaction results in the effects of "Entrepreneurship Education".

Methodological Approach for Case Study Research

The case study research consisted of three parts: secondary data analysis, interviews and workshop discussions.

Secondary Data Analysis

First, the research team evaluated documents and websites related to the nine projects. The documents were mostly project proposals and annual reports for the DAAD. The websites were essentially web presentations of the projects and the partner organizations.

Interview Survey with Project Managers and Partner Organizations

In total, the research team consulted 26 individuals – mainly the project managers, but also partner organizations. All project leaders were given a profile questionnaire before the interviews in which they had to give an overview of their project and its characteristics and strengths. The project leaders also indicated further interview partners. The interviews were conducted as semi-structured interviews, mainly conducted by telephone or video Internet. Some interviews could be conducted personally. Most interviews lasted between 45 and 75 minutes.

Project Discussion in Workshops

At the beginning and end of the study, a workshop discussion took place with the project managers at the German universities. The first workshop was dedicated to getting to know project managers and students, as well as having deeper discussions about the project processes. The second workshop was devoted to presentation and discussion of the study results. Results of the final workshop are included in the final report.

The Projects at a Glance

The following nine projects were researched within the framework of the study. Figure 2-1 shows an overview of the projects, sorted alphabetically by location of the leading university.

Figure 2-2: Projects in the Study "Entrepreneurship in Developing Countries"

Case Study	Country	Project Management	Concept
YSAE - Young Southern African Entrepreneurs	Botswana, South Africa	Technical University of Berlin, Department of Assembly Technology & Factory Operations	Business plan competitions, Design Thinking mind-set and methods
German-African University Partnership Platform for the Development of Entrepreneurs and Small/Medium-sized Enterprises	Ghana, Kenya	Hochschule Bonn-Rhein-Sieg, Department of Economics	Business plan competitions, incubators, teaching and market research; special emphasis on common intercultural teaching events
Academia meets Business	Vietnam	University of Leipzig, International SEPT Programme/ Development Economics	Business plan competitions, incubators and teaching events
African in4in-Network	Ethiopia, Ghana, Kenya, Rwanda, Tanzania	University of Leipzig, International SEPT Programme	Train-the-trainers in entrepreneurship teaching: workshops and conferences with teachers of the participating universities
Development of Entrepreneurship and Management Skills of Future Egyptian University Graduates	Egypt	Philipps-University of Marburg, Department of Economics, Technology and Innovation Management	Entrepreneurship teaching and support for start-ups in a yearly cycle
Applied Entrepreneurship Education Programme	Ethiopia	Hochschule Neu-Ulm, Afrikazentrum – Fakultät Economics	Train-the-trainer, development of a Master curriculum, business plan competition, consulting on ideas for start-ups
Start-Up Factory Kumasi - Paderborn	Ghana	University of Paderborn, Electrical Energy Technology - Sustainable Energy Concepts (EET-NEK), International Business	Advising a selected young company by students of the participating universities in a yearly cycle
Entrepreneurship Education: A Key to Job Creation and Employability in Azerbaijan	Azerbaijan	University of Siegen, Department of Entrepreneurship and Family Business	Awareness and qualification concepts, development of a basic culture, train-the-trainer, establishment of a start-up network
Voice of Business	South Africa, Namibia	Hochschule Wismar, Robert-Schmidt Institute	Awareness and qualification concepts, project work with business partners business simulations, business plan competitions

Source: empirica / University of Kassel

2.2 Case Studies about Promoting Entrepreneurship in Developing Countries

2.2.1 YSAE - Young Southern African Entrepreneurs (TU Berlin)

IN A NUT-SHELL	“YSAE” transfers Design thinking as method and mind-set to African Universities. The project partners focus on competence development through student’s projects and competitions. One challenge is to gain students with real interest in starting a business instead of only participating in a business plan competition.
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Abstract



In the project, the Technical University of Berlin and the Hasso-Plattner Institute transfer the design thinking workshops to universities in South Africa, Botswana and Namibia. Business idea competitions are used to inspire the students. Mainly undergraduate students from six different universities come together, take part in different design thinking courses and develop entrepreneurial competencies and business ideas.

The project runs from 2015 to 2018 and has the main objective to empower alumni of universities in Africa to become successful entrepreneurs by providing them with the required competencies, tools and ICT. At the universities in South Africa and Botswana courses have been held and business ideas have been created. The business partners supported the project with ICT infrastructure and knowledge about the entrepreneurial ecosystem.

Case study fact sheet

▪ Full name of project and website:	Young Southern African Entrepreneurs (www.ysae.me)
▪ Duration:	1.1.2015 – 31.12.2018
▪ Co-ordinating university and co-ordinator in Germany:	Prof. Dr. Guenther Seliger, Technical University of Berlin Marco Eisenberg, Hasso-Plattner-Institute
▪ Target country:	South Africa  , Botswana  , Namibia 
▪ Partner universities abroad:	Stellenbosch University (Stellenbosch, South Africa) University of Cape Town (Cape Town, South Africa) University of Botswana (Gaborone, Botswana) Botswana International University of Science and Technology (Palapye, Botswana) University of Pretoria (Pretoria, South Africa) University of Namibia (Windhoek, Namibia) ²
▪ Business partners in Germany:	Key Wind Energy GmbH (Berlin, Germany), Solarkiosk AG (Berlin, Germany)
▪ Business partners in target country:	SAP AG (South Africa), Vigosoft (Pty) Ltd (Botswana),
▪ Key objectives of the project:	The key objective of the YSAE programme is to empower alumni of universities in Southern Africa to become successful entrepreneurs by providing them with the required competencies, tools and ICT.

² The partner was not able to join the first project phase (2015-2017).

Background

Project profile: The Technical University of Berlin and the Hasso-Plattner Institute operate the project "YSAE" with universities from South Africa and Botswana. The project focus on sensitizing and qualifying students with design thinking. "YSAE" runs from January 2015 to December 2018, and has the main objective support alumni-students to become entrepreneurs.

Several concrete activities and events are designed to fulfil these objectives, which will be elaborated below in the section about key characteristics of the project.

Partners' profiles: The project leaders Technical University of Berlin and Hasso-Plattner Institute have eleven partners – seven university partners in Germany, South Africa and Botswana and four business partners –, two of them located in Africa and two of them located in Germany.

The Stellenbosch University – SUN for example, as one partner was founded in 1886 as a College and became a university in 1916. In 2016, 30,854 students were enrolled at the SUN. The SUN has ten faculties.³ The University of Cape Town - UCT is the oldest university in South Africa. The UCT has 7 faculties and 26,357 students enrolled in 2014.⁴ The University of Botswana - UB was founded in 1964 and has eleven faculties. In 2014, 18,176 students enrolled at the university.⁵ Two colleges focusing on sciences and engineering and technology represent the Botswana International University of Science and Technology - BIUST (founded 2005). The campus was redesigned in 2014 and has a capacity of 6,000 students.⁶

The business partners in Africa are SAP AG (South Africa) and Vigosoft (Pty) Ltd (Botswana), who support the project with appropriation of ICT and teach students working with it.

Key characteristics of the project

Objective

The project "YSAE" aims to use design thinking as a method to enable students to start a business.

Target groups

The project's principal target groups are alumni-students, students and teacher from the universities in South Africa and Botswana in the field of engineering (bachelor and master students).

Instructors

The project's principal instructors are coaches from the Hasso-Plattner Institute and university teachers from the Stellenbosch University and the University of Cape Town. The business partner in Africa are important, because they provide the students with the access to ICT.

³ According to SUN Website, see: <http://www.sun.ac.za/english/about-us/Why-SU>

⁴ According to UCT Website, see: <https://www.uct.ac.za/about/intro/statistics/>

⁵ According to UB Website, see: <http://www.ub.bw/home/ac/1/Faculties-and-Schools/>

⁶ According to BIUST Website, see: <http://www.biust.ac.bw/index.php/about-biust/about-us/biust-a-glance>

Design, setting and management of events and activities

Exhibit 1-2-1: Overview about activities and events

Activity/event	Format (type, length, offered in [year])	Objectives	Target group	Teachers or instructors	Participants / results 2015 - 2018
1. Design Thinking (Train-the-trainer)					
Design Thinking Basics	Course (2015, 2017)	Enable African teachers to supervise their students	African university teacher	Five African university teachers	
Management of Design Thinking Programmes	Individual Leadership Training (2015)	Enable one person to run a Design Thinking project	One lecturer	One lecturer	
Advanced Design Thinking	Course (2016, 2018)	enable them to supervise the Design Thinking activities of their local student teams at their home universities	African university teachers	2016: five 2018: six African university teachers (planned)	
2. Strategic Management					
Strategic support trip to each partner university in Southern Africa	Field trip (2015, 2018)	help the partner universities acquire additional support from local companies to enable more students and universities to participate in YSAE	Project coordinators, academic staff, students, African companies; two German lecturers each time		
Selection of finalist 15/16 and 16/17 and 17/18	Meeting/Evaluation (2016, 2017, 2018)	One team from each of the five participating universities will be chosen to join the final competition round.	German lecturers, African supervisors, students and jury of managers from global industry companies	2016 and 2017: five German lecturers, ten African supervisors 2018: five German lecturers, twelve African supervisors (planned)	2016 and 2017: 75-100 students 2018: 120-150 students (planned)
3. development of entrepreneurial competences					
Kick-off workshops	Workshop (2015, 2016, 2017, 2018)	Form teams and develop first ideas for design thinking projects	African supervisors, coaches from Germany, students	2015 and 2016: ten African supervisors, ten coaches from Germany 2017 and 2018: twelve African supervisors, twelve coaches from Germany (planned)	2015 and 2016: 75-100 students at five Universities 2017: 120-150 students 2018: 150-180 students (planned)

Activity/event	Format (type, length, offered in [year])	Objectives	Target group	Teachers or instructors	Participants / results 2015 – 2018
Project work	Ongoing working process (2015, 2016, 2017, 2018)	Develop a business idea	African supervisors, students at five Universities	2015 and 2016: ten African supervisors 2017 and 2018: twelve African supervisors (planned)	2015 and 2016: 75-100 students at five Universities 2017: 120-150 students 2018: 150-180 students (planned)
Finalist round	Competition event (2016, 2017, 2018)	Present business idea and compete	African supervisors, German lecturer, companies, media, students	2016 and 2017: ten African supervisors, ten German lecturer 2018: twelve African supervisors, ten German lecturer	2016 and 2017: 75-100 students 2018: 120-150 students (planned)

Source: Project Application "YSAE", 2014

Drivers and challenges

Drivers:

- The leadership of the project was flexible. The project leader used strategic planning.
- The motivation of the partners and the university management helped the project to be successful.
- Design thinking as a method is the core of the educational programme.

Challenges:

- To get employees work unpaid, because of missing financial support.
- Development cooperation is not focused in German Universities, which leads to difficulties.
- There is a different understanding of project management between the DAAD and the project leader. Flexibility and openness instead of regulations is needed to deal with the circumstances in the target countries.
- The time required for documentation and evaluation leads to a loss of time in the main tasks.
- Time management by different partners and different cultures is diverse.

Results

Impacts

From the view of the Hasso-Plattner Institute, the project has been creating benefits:

- Summary of courses: In South Africa and Botswana 1,250 students (mainly undergraduate) have been inspired by short courses of design thinking. In these countries, 90 students had the chance to develop entrepreneurial competences. 30 students have been able to develop a business idea. Three teams prepared everything to start a business. Finally, one team has been able to start a company (AMPARO GmbH) in Germany, because the investors have been unconfident with investing in South Africa.
- The project partners suppose that the students had a first impression about entrepreneurial behaviour and design thinking.

- The business plan competitions are not hold anymore, because of students looking for financial support for their life and not for realizing a business idea. Some of the students only look for an adventure instead of thinking about a business.

Transferability

Design Thinking as a tool set or mind-set can be transferred to other institutions.

Lessons learned

- **Design thinking as a tool set or mind-set of Entrepreneurship Education could be the spoiling round of entrepreneurship.**

The project partners suppose, the method can be useful.

- **Business idea competitions are not the ideal way to entrepreneurial behaviour or interest.**

Some students like to take part in a competition, no matter what the topic is. Therefore, the students who are interested in entrepreneurship itself cannot be caught exclusively.

- **Wind-breaker products can be a starting point for future business ideas.**

The business partner supported the work of the students with offering wind-breakers like the SAP structure of the server and so on. These innovations can open the market for younger entrepreneurs.

References

Research for this case study was conducted by Dr. Brigitte Halbfas, university professor at the University of Kassel, Department of Entrepreneurship Education and Dr. Verena Liszt, senior researcher at the same department, on behalf of the study Entrepreneurship in Developing Countries. Sources and references used include desk research plus the following:

Interviews and other primary data

- Marco Eisenberg, Project Leader (Germany), Hasso-Plattner-Institute: Telephone Interview on 18 May 2017.
- Response to a profile questionnaire about the project filled in by Marco Eisenberg, Hasso-Plattner-Institute, returned on 16 May 2017.

Websites

German Ministry of Foreign Affairs: Country information Botswana, Status quo January 2017. Last accessed 16 May 2017, see: http://www.auswaertiges-amt.de/DE/Aussenpolitik/Laender/Laender-infos/01-Nodes_Uebersichtsseiten/Botsuana_node.html

German Ministry of Foreign Affairs: Country information Namibia, Status quo May 2017. Last accessed 16 May 2017, see: <https://www.auswaertiges-amt.de/DE/Laenderinformationen/00-SiHi/NamibiaSicherheit.html>

German Ministry of Foreign Affairs: Country information South Africa, Status quo April 2017. Last accessed 16 May 2017, see: http://www.auswaertiges-amt.de/DE/Aussenpolitik/Laender/Laender-infos/Suedafrika/Aussenpolitik_node.html

Stellenbosch University, SUN Website, see: <http://www.sun.ac.za/english/about-us/Why-SU>

University of Cape Town, UCT Website, see: <https://www.uct.ac.za/about/intro/statistics/>

University of Botswana, UB Website, see: <http://www.ub.bw/home/ac/1/Faculties-and-Schools/>

Botswana International University of Science and Technology, BIUST Website, see: <http://www.biust.ac.bw/index.php/about-biust/about-us/biust-a-glance>

2.2.2 Platform for the development of entrepreneurs and SMEs in Ghana and Kenya (Bonn-Rhein-Sieg University of Applied Sciences)

IN A NUT SHELL	The "German-African Partnership Platform for the Development of Entrepreneurs and Small/Medium Enterprises" is a project between Bonn-Rhein-Sieg University and partner universities in Ghana and Kenya. The project's key characteristic is joint, cross-border events and activities.
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Abstract

GERMAN-AFRICAN
ENTREPRENEURSHIP

The "German-African Partnership Platform for the Development of Entrepreneurs and Small/Medium Enterprises" is a project between Bonn-Rhein-Sieg University (BRSU, Germany) as well as the University of Cape Coast (UCC) in Ghana and the University of Nairobi (UoN) in Kenya. The key characteristic of the project is joint, cross-border activities: A business plan competition is conducted for students from both UCC and UoN; faculty members are exchanged between all three locations for conducting joint lessons and courses; students can work on their thesis at a partner university; BRSU students conduct market-oriented research in and about Africa for German companies; an annual conference is organised for participants from all three countries, with an alternating location at UCC, UoN and BRSU. The project emphasises practice-oriented education based on theory. Entrepreneurship education and entrepreneurial activity are widely valued at UCC and UoN. Since the project's inception in 2015, it supported four student start-ups in Africa each year. Shortage of human resources and bureaucracy at the African universities as well as difficult access to finance are challenges to the project.

Case study fact sheet

▪ <i>Full name of project and website:</i>	German-African Partnership Platform for the Development of Entrepreneurs and Small/Medium Enterprises (https://www.german-african-entrepreneurship.org)
▪ <i>Co-ordinating university and co-ordinator in Germany:</i>	Prof. Dr. Jürgen Bode, Bonn-Rhein-Sieg University of Applied Sciences, Vice President for International Affairs and Diversity, Professor at the Department of Business Administration
▪ <i>Target countries:</i>	Ghana and Kenya
▪ <i>Partner universities abroad:</i>	University of Cape Coast (UCC), Ghana University of Nairobi (UoN), Kenya
▪ <i>Partners in Germany (selected):</i>	Deutsche Investitions- und Entwicklungsgesellschaft mbH (DEG), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Industrie- und Handelskammer (IHK) Bonn/Rhein-Sieg, Afrika-Verein e.V., Stiftung Partnerschaft mit Afrika e.V., Braun Stiftung, XCOM Africa, Deffor Ventures, Afrikanische Jugendhilfe e.V., Germany Trade & Invest, Dr. Kakuschke & Partner
▪ <i>Partners in target country (selected):</i>	Ghana: Graduate Employment Business Support Scheme (GEBSS), ZEAL Environmental Technology Ltd., Ghana Chamber of Commerce & Industry, EGEM Services Ltd., Samba Foods, Kayta IT Solutions, PKA Star Ventures Kenya: Equity Bank, Airtel, JamiiBora Bank, Safaricom, Senior Expert Service
▪ <i>Key objectives of the project:</i>	In Africa: Build capacities for practice-oriented teaching and research in the field of entrepreneurship and SME development. In Germany: increase awareness for Africa's potentials as a market and a partner.

Background

Project profile: The project “German-African University Partnership Platform for the Development of Entrepreneurs and Small/Medium Enterprises” is a partnership between the Bonn-Rhein-Sieg University of Applied Sciences in Germany (BRSU) and the University of Cape Coast in Ghana (UCC) as well as the University of Nairobi in Kenya (UoN). The project assists the two African universities in increasing entrepreneurial skills and employability of their graduates. It promotes the development of start-ups and small and medium-sized enterprises (SMEs). The project has two objectives with regard to the target countries and Germany:

- The main aim in Africa is to **build capacities** for practice-oriented teaching and research in the field of entrepreneurship and SME development.
- In Germany, the project seeks **increasing awareness** for Africa’s potentials as a market and a partner.

The Project Leader at BRSU, Jürgen Bode, highlights three components of the project: A particularly partnership-oriented collaboration; a strong business plan competition sponsored by business partners; and student support for German SMEs seeking to make business with Africa. The project runs from January 2015 to December 2018.

Partners’ profiles: The University of Cape Coast was founded in 1962. It has ten faculties and over 54 academic departments, institutes and centres. More than 60,000 students study at UCC. The School of Business, which is one of the ten faculties of UCC, was founded in the 2003/2004 academic year. The School offers an undergraduate university wide course and a postgraduate programme in entrepreneurship and small enterprise development. It also runs an incubator and recently founded the Centre for Entrepreneurship and Small Enterprise Development (CESED) to provide business development services, conduct research and build SME capacity.

The inception of the University of Nairobi can be traced back to 1956; it became an independent university in 1970. Currently it has over 60,000 students. Its School of Business has over 13,000 students with two satellite campuses in Mombasa and Kisumu. It is a leading Business School in the Eastern African region, attracting students from neighbouring countries.

The project has some further 30 partners from business and civil society with many different – often smaller – roles. This large number has several reasons. One is that the current project builds on earlier activities from 2012 to 2014. To some extent, the large number of partners reflects that many support the approach to send German students to Africa for conducting market research. Some of these partners have played a rather passive role so far. A table in the Annex to this case study provides the partners’ names and their roles in the project.

Key characteristics of the project

Objectives

The project has slightly different objectives in the two target universities, and it also pursues dedicated aims at the BRSU itself. At the University of Cape Coast in Ghana, the main aims are to support the establishment and growth of a Centre of Entrepreneurship and Small Enterprise Development (CESED) which co-ordinates entrepreneurship teaching and other entrepreneurial activities at the university. It provides business development services and conducts research. CESED was established in 2016. The sub-aims are, firstly, to establish a Section of Applied Market and Personnel Services within CESED which offers market-oriented research, consulting and training services from students and young graduates to African and German businesses. The project already supplies such services but there is as yet no organisational unit co-ordinating them. A second sub-aim is to make a new business incubator – which has already been established – an institution with nation-wide reputation.

At the University of Nairobi in Kenya, the main aims are to build capacities for practice-oriented teaching and research in the field of entrepreneurship and small enterprise development. The sub-aims are to set up a team for Applied Market and Personnel Services as well as developing a coaching and advice programme for new start-ups.

Some sub-aims are the same at both institutions:

- Building and growing a network of corporate partners;
- Increasing the employability of graduates through practice-oriented exchange, internships, and thesis writing;
- Building and integrating practice-oriented research programmes into teaching;
- Cultivating young entrepreneurs through a business plan competition.

Furthermore, BRSU pursues objectives in Germany. The main aim is to increase awareness for Africa's potentials and to initiate projects with Africa among academics, students, and business partners. Sub-aims include the following:

- Create knowledge and attitude among students for Africa as a future market;
- Establishing trilateral practice-oriented courses, involving e-learning platforms;
- Building joint practice-oriented research programmes with Africa;
- Assisting German SMEs in evaluating and entering the African market.

Target groups

The principal target groups of the project's events and activities are bachelor and master students from UCC, UoN, and BRSU but also researchers, e.g. for joint application-oriented research.

Teachers

A specific approach of the project is to run some lectures jointly with teachers from all three universities involved.

Design, setting and management of events and activities

The key characteristic of the project is joint, cross-border events and activities. A business plan competition is conducted for students from both UCC and UoN; faculty members are exchanged between all three locations for conducting joint lessons and courses; students can work on their thesis at a partner university; BRSU students conduct market-oriented research in and about Africa for German companies; an annual conference is organised for participants from all three countries involved, with an alternating location at UCC, UoN and BRSU. Furthermore, the project emphasises practice-oriented education that combines academic theory and practical experience in the business world. Furthermore, the UCC leadership made it mandatory for all study programmes to include courses in entrepreneurship. The following Exhibit provides an overview about the project's activities and events.

Exhibit 1-2-2: Overview of activities and events in the German-African Partnership Platform project

Activity/event	Format (type, length, offered since [year])	Objectives	Target group	Teachers or instructors	Participants / results in or until [year]
University of Cape Coast (UCC, Ghana)					
Green Business Award	Business plan competition	Increasing entrepreneurial skills	UCC students	Teachers from UCC and HBRS	~ 90 per year
Joint lessons	Lectures	Capacity-building in practice-oriented teaching methods	UCC students	Teachers from UCC and HBRS	20 – 30 per university

Activity/event	Format (type, length, offered since [year])	Objectives	Target group	Teachers or instructors	Participants / results in or until [year]
UCC Business Incubator	Incubator (coaching, mentoring and other business services), established in 2013	Supporting start-ups by UCC graduates	UCC graduates	Teachers from UCC's School of Business	15 – 20 per year
University of Nairobi (UoN, Kenya)					
Joint lessons with teachers from partner universities	Lectures	Capacity-building in practice-orientated teaching methods	UoN students	Teachers from UCC, UoN and HBRS	20 – 40 per year
UoN Business Incubator	Incubator (coaching, mentoring and other business services)	Supporting start-ups by UoN graduates	UoN graduates	Teachers from UoN's School of Business	Planned to be established in 2017.
UCC and UoN					
DEG Young Entrepreneur Award	Business plan competition, linked with lectures	Increasing entrepreneurial skills	UCC and UoN students	Winning teams coached by business centres of UCC and UoN	Several 100 applicants per year; 30 – 40 are short-listed; HBRS sees best eight; three are sponsored each year
UCC, UoN, BRSU					
Bilateral lessons on entrepreneurship and SMEs with teachers from partner universities	Joint lectures, around one week on site	Capacity-building in practice-orientated teaching methods	Students from the university where the lesson takes place	Teachers from UCC, UoN and HBRS	20 – 30 per university
Trilateral practice-oriented courses relevant for entrepreneurship and SME development	Joint seminars, via internet, 2 – 3 times per year	Capacity-building in practice-orientated teaching methods	Students from all three universities	Teachers from UCC, UoN and HBRS	20 – 40 per university
Joint German-African projects in applied research in entrepreneurship and SMEs	Work on doctoral proposals and doctoral thesis in foreign country	Building capacity in inter-cultural applied research	Students from all three universities	Teachers (supervisors) from the universities concerned	~ 5 students with 3 – 4 projects
Annual entrepreneurship conferences (2015 at UCC, 2017 at UoN, 2016 and 2018 at BRSU)	Conference	Building competence in inter-cultural entrepreneurship	Teachers and students from UCC, UoN, BRSU; businesses	Speakers from UCC, UoN, BRSU and business	2016: 300 participants
Market-oriented service provision for companies	Services to companies	Learning through applied market research	Graduate students and young graduates	Teachers (supervisors) from the universities concerned	~ 3 – 5 projects per year

Source: Bonn-Rhein-Sieg University

Events at UCC and UoN:

The **DEG Young Entrepreneur Award** is a yearly Business Plan Competition open to all kind of business fields. Students from all faculties of the University of Cape Coast and the University of Nairobi are welcome to turn in a business plan. The application process starts around March and April

and is announced individually in each university. Business Plans can be turned in until May or June. The business plans are evaluated by expert teams consisting of experienced academics and business people. Three winners are selected and receive awards of 6,000, 5,000 and 4,000 Euro, respectively. All winning teams are supervised and coached by the business centres of UCC and UoN. The awards are to be used as seed money for starting up the business.

Specific events and activities at UCC:

At UCC, attending entrepreneurship courses is compulsory for students from all departments.

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) sponsors a **Green Business Plan Award** in the field of green entrepreneurship, i.e. in fields such as waste management, environmental management, and renewable energies. A briefing workshop for selected students in Ghana is offered in preparation of the business plan competition. Students who participated in the workshop are invited to turn in their business plans. The winning business plan receives 7,000 Euro as seed money.

The **UCC Business Incubator** has been established in 2014 as one of the project's core elements. In early 2017, the incubator hosted nine start-ups, coached and supervised by lecturers and professors from the School of Business. The project supports the start-ups and UCC services for the entrepreneurs. BRSU contributes experience from its own business incubator.

Events and activities at UoN:

UoN is about to start its own **business incubator**. Meanwhile, the university uses expertise from the School of Business to train, coach and advise young entrepreneurs. At the time of writing this case study, six partner organisations have signed a letter of intent to support UoN through guest lecturers, student internships and mentorship.

Events at all three universities:

In order to facilitate mutual transfer of teaching methodology, German and African guest lecturers give **joint lessons** to students at all three universities. The objective is to build capacity in practice-orientated teaching methodologies, as well as awareness for German, Kenyan and Ghanaian methods of teaching.

Trilateral **practice-oriented courses** relevant for entrepreneurship and SME development are taught at all three partner universities. Teachers and students communicate across borders. The joint courses will be developed into a show case for unilateral practice-oriented courses.

The three partner universities are piloting **joint German-African projects in applied research**. UCC and UoN lecturers work on their doctoral proposals and doctoral research in Germany as well as BRSU lecturers on their research in Africa. The objective is to build human capacity in applied research.

In the project, the partner universities offer paid **market research services** to African and German businesses. The services are conducted by graduate students and young graduates hands-on, with local knowledge, coached by lecturers and managers. For German companies, a BRSU bachelor or master student will conduct market research for the company in Africa in the framework of their thesis, involving a stay with a scholarship in Africa of up to four months.

From 2015 to 2018, the project conducts four **entrepreneurship conferences**. They provide opportunities of learning, sharing and networking to all university teachers and students and businesses. The annual conferences are alternately hosted by the three project partners: 2015 at UCC in Ghana, 2017 at UoN in Kenya, 2016 and 2018 at BRSU in Germany.

Support to entrepreneurs:

Concrete support to nascent entrepreneurs from the African universities is a dedicated objective of the project. In 2015, 2016 and 2017, the project supported and supports four start-ups per year. An example of a new firm is one that sells different kinds of bags, produced by needlewomen from the

countryside. Another one produces a soft drink with the milk from the baobab tree. In contrast, digital start-ups rather appear to be a media hype; so far there were no notable digital business ideas. Furthermore, so far co-operation between different departments of the universities was low, which reduces opportunities of establishing multi-disciplinary teams.

Drivers and challenges

Drivers

The main driver for the project is the **interest in entrepreneurship** in all groups involved at both universities. According to the project leader in Germany, there is "100% acknowledgement of the importance of entrepreneurship" among all partners – because they consider it as a key to employment and economic growth. He says that UCC's Chancellor considers the project as a landmark for the whole university.

The project leaders at both universities confirm this. The project leader in Ghana points to **high unemployment** in the country and stresses that entrepreneurial skills make students useful for the labour market as employees or employers. Students consider entrepreneurial thinking and behaviour as helpful. She says that many students have business ideas but do not know how to push them forward – but they also know that the courses offered help them put their ideas into practice. Training programmes for teachers help improve their capability to actually teach entrepreneurship. The project leader in Kenya sees that students no longer consider employment as the only option after graduation but seek starting an own business. He is encouraged by seeing that companies both in Africa and Germany are interested to team up with African universities.

Challenges

The project is facing several challenges at both African universities. According to the Project Leader Germany, the primary challenge for the project is a dramatic **lack of resources**, mainly personnel resources, at the African universities. Any competent employee at an African university is overloaded with tasks. Hence, when concrete support is needed, there is always a lack of people. Occasionally, African experts may be called away from ongoing project meetings.

The second challenge is **bureaucracy** and related slow processes. For example, when transferring money from Germany to an African university it may take two months and more until it reaches the unit in charge. One needs to persistently and personally remind the administrator in charge in order to make things move – a practice called "chasing".

Another challenge is that teaching at the African universities is dominated by conveying textbook knowledge. There is **little appreciation for practical work** which is however necessary for supporting students to develop business ideas. Furthermore, university teachers prefer research over practical work; supporting students in entrepreneurial activities brings them neither esteem nor promotion.

A specific challenge for supporting start-ups is **difficult access to finance**. There is a funding gap between prize money from business plan competitions and a mature stage when the company can fund itself through sales. Bank loans are no options in Ghana and Kenya because interest rates are unaffordably high for a young enterprise. The project has too few contacts to finance organisations, venture capitalists in particular. The Project Leader Germany says that there is such money in Africa, but the hinge between supply and demand is missing and the project does not have sufficient resources to establish it. The project leaders in Ghana and Kenya also see finance as a critical issue for would-be entrepreneurs. The leader at UCC mentions crowd funding as an approach to be pursued in the future.

Results

Impacts

The project so far has and is developing a number of concrete impacts on the students, teachers, and local business:

- The project has been enhancing the subject of entrepreneurship at both universities, particularly at UCC; the universities now put **more emphasis on entrepreneurship education** of their students and on training their teachers.
- Joint entrepreneurship teaching with teachers from all universities involved increases entrepreneurial thinking and behaviour among students and also inter-cultural competence. The team leader in Ghana considers the **appreciation of practice-oriented teaching**, brought to the fore by tandem teaching, as a main lesson from the project. A team of BRSU, UCC and UoN academics is developing a handbook for practice-oriented teaching.
- BRSU students initiate contacts between German and African businesses, thereby contributing to **economic growth** in both countries.
- Through building a company network in Africa, more and more African students have the opportunity to do **internships in local businesses**.

Transferability

The project's approach appears to be well transferable to other universities – implementing incubators and joint entrepreneurship teaching in particular. However, the challenge of permanent resource shortage needs to be considered. Even in the BRSU project, a project management office would be helpful but cannot be funded through the project. Much more time could be spent on actual teaching and student support, rather than on “chasing”, administration and co-ordination.

Co-operation needs and potential synergies

The project leaders at all three sites are in favour of more co-operation within the project and beyond. The leader at UoN would like to see more staff mobility between the partner universities, more joint research, and more financial support for such research activities. The leaders at BRSU would welcome a service that supports projects of the type the BRSU is running. Existing organisations like GIZ would not offer such services. It would also be helpful if there was more co-operation between incubators. University incubators may play an important role in the entrepreneurial ecosystem of the respective African city or region, but the university should co-operate with other incubators nearby in order to help find the best solution for its entrepreneurial students.

Key lessons learned

▪ **Business Plan Competition as a focal point**

A business plan competition can serve as a focal point for entrepreneurship teaching and support activities at a university. Such a competition can help activate students who have a business idea but would otherwise not have the drive to pursue its realisation. There should be support for participating students in order to help them develop their ideas.

▪ **Students' market research helps build company network**

German students doing market research in Africa for preparing business activity between German and African SMEs cannot only serve the businesses involved; they can also be a viable means of building an enterprise network in Africa. In turn such contacts may support entrepreneurship education, for example helping African students find places for internships.

▪ **Implement entrepreneurship education as a cross-cutting issue**

It may be more valuable to implement entrepreneurship education as a cross-cutting issue at African universities, as done at UCC and UoN, rather than implementing lighthouse projects. Furthermore, entrepreneurship teaching should be practice-oriented in order to make students capable of realising and developing solutions as well as of starting an own business. Finally, there should be an incubation mechanism to support entrepreneurial students.

References

Research for this case study was conducted by Dr. Stefan Lilischkis, Senior Consultant at empirica GmbH, Bonn, on behalf of the study Entrepreneurship in Developing Countries. Sources and references used include desk research plus the following:

Interviews and other primary data

- Prof. Dr. Jürgen Bode, Project Leader (Germany), Bonn-Rhein-Sieg University of Applied Sciences, Vice President for International Affairs and Diversity, Professor at the Department of Business Administration; Sonja Keller, Project Manager and Scientific Associate, Bonn-Rhein-Sieg University of Applied Sciences: Joint personal interview on 11 May 2017.
- Prof. Dr. Rosemond Boheene, Project Leader (Ghana), University of Cape Coast, Associate Professor of Enterprise Development at the Centre for Entrepreneurship and Small Enterprise Development (CESED), Dean of International Education: E-mail responses to interview questions on 7 June 2017.
- Prof. Dr. Justus M. Munyoki, Project Leader (Kenya), Chairman, Department of Business Administration, University of Nairobi: E-mail response to interview questions on 30 June 2017.
- Response to a profile questionnaire about the project filled in by Sonja Keller, BRSU, returned on 19 April 2017.

Websites

German-African University Partnership Platform for the Development of Entrepreneurs and Small/Medium Enterprises: <http://www.german-african-entrepreneurship.org>, last accessed 8 June 2017.

Further resources

“Platform for the Development of Entrepreneurs and SMEs in Africa”, project application by Hochschule Bonn-Rhein-Sieg to DAAD, deadline 30/6/2014, with project description.

Presentations by Prof. Dr. Jürgen Bode and Sonja Keller, BRSU, at a launch workshop for the study “Entrepreneurship in Developing Countries” at DAAD, Bonn, on 3 February 2017.

Written response to key questions about the project in advance of the workshop at DAAD on 3 February 2017, by Sonja Keller, BRSU.

Annex

Exhibit: Overview of partners and their roles in the German-African Partnership Platform project

* = major partner (listed on project website)

Partner (URL)	Role in project
Germany	
German companies	
Deutsche Investitions- und Entwicklungsgesellschaft mbH (German Investment and Development Corporation, DEG) * (http://www.deginvest.de/Internationalfinancing/DEG)	Provides funds for the Business Plan Award (15,000 € p.a.). Offers internships for students at their Accra and Nairobi offices Joint research and teaching possibilities with DEG staff. Assists in evaluation of business plans.
africacon * (http://www.africon.de)	Consultancy specialising in market entry in Africa. Earmarks funds for services delivered by the African "Sections/Teams for Applied Market and Personnel Services": minimum €10,000 throughout project. Offers internships, applied student research projects. Assists in evaluation of business plans
Deffor Ventures (http://defforventures.com)	German company with Ghanaian CEO; invests in mobile telecom, social e-learning, mobile and apps start-ups. Assists in evaluation of business plans
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (http://www.giz.de)	Specialist in technical assistance for developing countries. Funds travel cost for international workshops up to 5,000 €, a scholarship amounting 1,700 € p.a., and a best business plan prize about 5,000 €. Offers internships, applied student research projects in its offices in Germany, Ghana, Kenya.
SolarWorld AG (http://www.solarworld.de)	Producer of solar panels. Donates solar panels in the framework of its "Solar2World" programme (value: €10,000 per panel). Offers internships, applied student research projects. Assists in evaluation of business plans.
Other German organisations	
Afrika-Verein der deutschen Wirtschaft (German-African Business Association) * (http://www.afrikaverrein.de/en)	Association of ~400 German companies doing business in Africa. Contributes its network.
Industrie- und Handelskammer (IHK) Bonn/Rhein-Sieg; Mittlerer Niederrhein; Nord Westfalen * (Chambers of Commerce) (http://www.ihk-bonn.de)	All IHKs contribute their company network e.g. for internships. The IHKs Mittlerer Niederrhein and Nord Westfalen are specialised in assisting their members in doing business with Ghana and Kenya.
Stiftung Partnerschaft mit Afrika * (Partnership with Africa Foundation, http://www.german-african-partnership.org)	Non-profit organisation devising concepts for a new type of partnership between Germany and Africa. Its work aims at improving relations between African countries and Germany as well as promoting civic education. Co-finances African partners travelling to Germany, e.g. for internships, conference visits. Holds joint conferences with the project. Contributes network to companies offering internships for African students and graduates.
Auslandsgesellschaft Nordrhein-Westfalen e.V. * (Institute for International Relations, https://www.agnrw.de/)	Non-profit organisation building bridges between Germany and other cultures. (Not actively involved so far.)
Bonn Sustainability Portal * (http://bonnsustainabilityportal.de)	Portal for presenting knowledge about sustainability produced in Bonn and for networking actors in this field. Offers its network.
Braun Stiftung für internationalen Austausch * (Braun Foundation for International Exchange, http://www.braun-stiftung.org/)	Foundation fostering and promoting understanding between different cultures and educational and business systems. (Not actively involved so far.)

International Centre for Sustainable Development * (https://www.h-brs.de/en/izne)	Centre co-ordinating and promoting research and teaching in the field of sustainable development across the BRSU Contributing expertise as reviewers for conference call for papers and evaluate business plans
Außenhandelskammer Ghana (Delegation of German Industry and Commerce in Ghana, http://ghana.ahk.de)	Contributes its network of German companies with business interest in Ghana. Contributes „JobXchange“, a platform to match employers and job seekers in Ghana. Conduct joint market research activities together with the project’s “Sections/Teams for Applied Market and Personnel Services”
Don Bosco Mondo e.V. (http://www.don-bosco-mondo.de)	Association that runs projects focusing on vocational training and internships for the youth in developing countries; develops CSR projects for German companies in connection with youth and vocational education in developing countries Contributes its network of companies with interest in internships and vocational training in Germany, Kenya and Ghana
Afrikanische Jugendhilfe e.V. (African Youth Foundation, AYF, http://www.ayf.de)	Non-profit development organisation based in Bonn, Germany, with regional offices in Accra and Nairobi. Joint training courses in entrepreneurship in Ghana and Kenya. Joint conferences and workshops
Germany Trade & Invest (GTAI) (http://www.gtai.de)	The economic development agency of the Federal Republic of Germany. Runs, among others, offices in Accra and Nairobi
Africa	
African companies	
Graduate Employment Business Support Scheme (GEBSS, http://gebssghana.org)	Private/public sector support scheme aimed at equipping unemployed Graduates with business-focused skills UCC promotes GEBSS and its services to its students UCC may offer entrepreneurship expertise, training and consulting to GEBSS if needed Contributes to conferences
ZEAL Environmental Technology Ltd. (http://www.zealenvironmental.com)	Environmental services company in Ghana. Utilises research services of the “Centre for Applied Market and Personnel Services”. Offers internships for German and African students. Initiates and conducts student research projects. Contributes to conferences.
EGEM Services Ltd. (http://www.egemservicesgh.com)	Leading mechanical engineering service provider in Ghana. Active participation in project conference in Ghana. Promotes UCC’s business incubator to its network Support applied research in areas of interest with UCC
Samba Foods (http://sambafoodsghana.com)	Ghanaian female owned food processing and preservation company based in Tema. Internships for students in Ghana. Conduct applied research projects. Utilises research services of the partner universities. Provide allowances for student interns, support to the UCC Business Incubator and practical research to the sum of about US \$ 300 per year.
Kyta IT Solutions	African IT company located in Kasoa, Ghana Kyta will share its acquired knowledge about Africa Contributes to project conferences Internships for qualified students at Kyta’ offices in Ghana Initiates and conducts student research projects Kyta actively participates in short workshops
SENCAB – Sustainable Enterprise and Capacity Building Initiative (http://sencab.org)	Non-governmental organisation based in Ghana with coordination centre in Bonn, Germany UCC offers entrepreneurship expertise, training and consulting to SENCAB Actively participated in project conference in Ghana Promotes UCC’s business incubator to its network Company feeds back practical requirements for adaptation of curricula Supports applied research

PKA Star Ventures	Deals mainly with plumbing, building materials and hardware on wholesaling and retailing; located in Cape Coast, Ghana UCC offers training sessions Company feeds back practical requirements for adaptation of curricula
Other African organisations	
Association of African Entrepreneurs (AAE, http://www.aaeafrica.org)	NGO that promotes entrepreneurial spirit in Africa. Headquarters in Accra. Contributes its network to entrepreneurs, NGOs, governmental institutions, financing institutions- Involves AAE's Member Support Volunteers in training activities Use AAE's platform for information and dissemination about the project Internship opportunities qualified students at AAE members' offices Link the project activities with AAE's portfolio Contributes to conferences and workshops
Ghanaian-German Economic Association (GGEA, http://www.ggea.net)	Offers information and assistance Contributes its network of companies with business interest between Germany and Ghana
Ghana Chamber of Commerce and Industry (http://www.ghanachamber.org)	(Not actively involved so far.)
Sekondi-Takoradi Chamber of Commerce and Industry (http://sekonditakoradichamber.org)	Business association for West Ghana. (Not actively involved so far.)
Government of Kenya: Department of Youth Affairs and Sports	Youth Groups are given short term loans to start income generating programmes. These students are trained in entrepreneurship.
Kenya Entrepreneurship Empowerment Foundation (KEEF)	Non-profit organisation focusing on poverty eradication. Provides training and services to entrepreneurs.
CTL International Kenya	This organisation aims at eradicating poverty through sustainable community development. Helps reaching rural communities for training.
Federation of Women Entrepreneurs Associations (FEWA, www.Fewa.or.ke)	An apex body of women entrepreneurship associations in Kenya. Assists in identifying relevant women groups for promoting women entrepreneurs in Kenya.

Sources: Project application, project website, interview with project leader (Germany) and manager

2.2.3 Academia meets business (University of Leipzig)

IN A NUT SHELL	“Academia Meets Business” fosters entrepreneurship and entrepreneurship education at two universities in Vietnam. Business plan competitions, combined with coaching and mentoring, are key parts of the concept. More teachers competent in practical entrepreneurship education need to be trained.
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Abstract



In the project “Academia Meets Business”, the University of Leipzig fosters entrepreneurship education and entrepreneurship at two Vietnamese universities: the Vietnamese German University (VGU) in Ho Chi Minh City (the former Saigon) in Southern Vietnam, and at Hanoi University of Science and Technology (HUST) at Hanoi in Northern Vietnam. The University of Leipzig has a dedicated MBA programme for this activity named SEPT – small enterprise promotion and training. The project runs from 2015 to 2017 and has three objectives: establishing und developing the Entrepreneurship and Innovation Centre at VGU; implementing the Bach Khoa Entrepreneurship Programme at HUST; and knowledge transfer to public and private economic support organisations. This project is meant to sustain previous activities from 2012 to 2014. Among the main drivers for the project is high interest for it among all stakeholders involved. In particular, there is high interest for the two business plan competitions. The main challenge is scarce resources, in particular a lack of university teachers competent in practical entrepreneurship. All partners find that the project has been creating large benefits with relatively little finance. Beside the successful business plan competitions and increased entrepreneurial thinking and behaviour among students, the project created considerable co-operation between private enterprises and the two universities.

Case study fact sheet

▪ Full name of project and website:	Academia meets Business (http://www.in4in.net)
▪ Co-ordinating university and co-ordinator in Germany:	Prof. Dr. Utz Dornberger, University of Leipzig, International SEPT Programme (Promotion, development and management of SMEs)
▪ Target country:	Vietnam 
▪ Partner universities abroad:	Vietnamese German University (Ho Chi Minh City, Vietnam) Hanoi University of Science and Technology (Hanoi, Vietnam)
▪ Business partners in Germany:	No major partner.
▪ Business partners in target country:	Vietnam Chamber of Commerce and Industry Vietnam E-Commerce Association German Business Association Vietnam
▪ Key objectives of the project:	Establishment und Development of the Entrepreneurship and Innovation Centre (EIC) at Vietnamese German University; Implementation of the Bach Khoa Entrepreneurship Programme (BEP) at Hanoi University of Science and Technology; Knowledge transfer to public and private economic support organisations

Background

Project profile: The University of Leipzig operates the project “Academia meets Business” in the framework of its initiative Intelligence for Innovation (in4in), which in turn is a part of the university’s SEPT research and training programme.⁷ Dealing with entrepreneurship in developing countries is at the heart of these activities.⁸ “Academia meets business” runs from January 2015 to December 2017, targets Vietnam and has three objectives:

- Establishment und development of the Entrepreneurship and Innovation Centre (EIC) at Vietnamese German University (VGU) in Ho Chi Minh City.
- Implementation of the Bach Khoa Entrepreneurship Programme (BEP) at Hanoi University of Science and Technology (HUST).
- Knowledge transfer to public and private economic support organisations.

The main objective of both the EIC and the BEP is providing an organisational framework for coaching and mentoring students with business ideas, organising an annual business plan competition, offering support for developing business plans, and conducting practical projects with local SMEs.⁹ Several concrete activities help fulfil these objectives, which will be elaborated below in the section about key characteristics of the project.

The project aims to secure the long-term sustainability of activities which the University of Leipzig conducted from 2012 to 2014. Sustainability means that they do not need further support from DAAD from 2018 onwards. These activities were also supported by the DAAD’s Praxis Partnership Programme. The predecessor project established at the two Vietnamese destinations a partnership project with small and medium-sized enterprises (SMEs) and SME support institutions in Vietnam and in Germany. Historically, in 2005 the University of Leipzig decided to export its SEPT Programme and international MBA in SME Development to Vietnam. Based on an existing strong partnership, the first target was HUST. Due to its success, SEPT decided to expand the programme to VGU in 2011.

Promoting entrepreneurship is slowly becoming a recognised topic in Vietnam. More and more business incubators are being established, and business founders receive some financial support from the state.

Partners’ profiles: The project has five main partners: the two universities and three business partners, all located in Vietnam.

The *Vietnamese-German University (VGU)* was founded in 2008 as a partnership between Vietnam and the German Federal State of Hesse.¹⁰ In recent years, VGU broadened to a German-wide co-operation.¹¹ Its administrative and academic structure follows the Hesse university model and standards, including far-reaching autonomy. The university offers Bachelor’s and Master’s programmes in engineering, economics and health sciences. Close co-operation with business is one of VGU’s main characteristics.¹² Currently the University has more than 1,000 students.¹³ It is located in Ho-Chi-

⁷ SEPT stands for small enterprise promotion and training. “The International SEPT Program is a research and training program at the University of Leipzig dedicated to provide theoretical insight as well as practical experience in the management and promotion of Small and Medium-Sized Enterprises (SMEs) worldwide” (<http://www.sept.uni-leipzig.de>).

⁸ The University of Leipzig launched the in4in initiative more than ten years ago. At the beginning of 2017, the programme had gained experience in more than 20 countries in four continents.

⁹ Academia Meets Business Annual Report 2016, p. 21. Slightly different formulations for VGU and HUST.

¹⁰ According to the Hesse Ministry for Science and Arts, see <https://wissenschaft.hessen.de/studium/internationales/vietnamesisch-deutsche-universitaet>.

¹¹ According to VGU, see <http://www.vgu.edu.vn/university>.

¹² According to VGU, see <http://www.vgu.edu.vn/university>.

¹³ According to VGU, see <http://www.vgu.edu.vn/university>.

Minh City in South Vietnam, the former Saigon and the largest city in Vietnam with 8.4 million inhabitants in 2016.¹⁴

Hanoi University of Science and Technology (HUST), founded in 1956, is the first and largest technical university in Vietnam.¹⁵ It has more than 27,000 students.¹⁶ The specific partner at HUST is the School of International Education. Hanoi is Vietnam's second largest city, located in North Vietnam, with 7.6 million inhabitants in 2015.¹⁷

The *Vietnam Chamber of Commerce and Industry (VCCI)* assembles and represents business community, employers and business associations of all economic sectors in Vietnam. Promoting trade and business relations with enterprises abroad is one of VCCI's main functions. It is an independent, non-governmental, non-profit organisation with the status of a legal entity and operating with financial autonomy.¹⁸ In the "Academia Meets Business" project, it supports the Best Innovators Award in Ho Chi Minh City (by providing the venue and being represented in the jury), practical projects on product and service innovation in Hanoi and Ho Chi Minh City, the VGU Entrepreneurship Initiative as well as one-day symposiums in both cities.

The *Vietnam E-Commerce Association (VECOM)* was founded in 2007 as a non-government, non-profit organisation with the mission of promoting e-commerce in Vietnam.¹⁹ Its office is based in Hanoi. In the "Academia Meets Business" project, it supports practical projects on product and service innovation in Hanoi and Ho Chi Minh City as well as the Business Idea Competition and start-up coaching at HUST.

The *German Business Association in Vietnam (GBA)* started its activities in 1995 and was the first such foreign business association. GBA helps German businesses develop their operations, advises on a wide range of topics and creates opportunities for business and social exchange in both Hanoi and Ho Chi Minh City. GBA has more than 200 members.²⁰ In the "Academia Meets Business" project, GBA supports the Best Innovators Award in Ho Chi Minh City as well as practical projects on product and service innovation in both big cities.

The rationale for taking in these three business partners is that intermediary organisations like chambers and sectoral business association can play an important role to push and moderate co-operation between SMEs and universities. Usually SMEs do not have the necessary resources for such co-operation.

Further partners in Vietnam include SACOMBANK and Vietnam Business Matching for supporting networking and sponsoring of start-ups as well as Vuong Tron Ltd Co, VietHerbs, FACEUP, VERDIN Communication und Tokai Kyogou. BKHUP Co-Working Space supplied free co-working places for the first and second prize winners of the Business Idea Award. Vietnam Silicon Valley (VSV) Accelerator in Hanoi promoted entrepreneurial ideas in the project. In Germany, the Conoscope GmbH supported sponsoring with the project.²¹

¹⁴ According to Ho Chi Minh City government, http://www.pso.hochiminhcity.gov.vn/c/document_library/get_file?uuid=fcdce0c6-c8bb-4687-81e0-a1567671a494&groupId=18, referred to by Wikipedia.

¹⁵ There is a university with a similar name founded in 2009, the University of Science and Technology of Hanoi.

¹⁶ According to the university, see <https://en.hust.edu.vn/quick-facts>.

¹⁷ According to the governmental Statistical Handbook of Vietnam, see <http://www.gso.gov.vn/default.aspx?tabid=512&idmid=5&ItemID=14277>.

¹⁸ Information in this paragraph from http://www.cicgf.com/en/detail_1919.html.

¹⁹ See self-description at <http://www.vecom.vn/en>.

²⁰ See <http://www.gba-vietnam.org>.

²¹ Information about further partners from the internal annual report for 2016.

Key characteristics of the project

Objectives

The project "Academia Meets Business" aims at educating students from the two Vietnamese universities in entrepreneurial thinking and behaviour. The project helps them develop business ideas and put them into practice.

Target groups

The project's principal target groups are bachelor and master students as well as teachers from the two Vietnamese universities.

Instructors

The project's principal instructors are university teachers from the two Vietnamese universities involved. Experts from the three business partners are brought in as speakers, mentors and coaches.

Design, setting and management of events and activities

The project Academia Meets Business offers numerous events and other activities to teach and support entrepreneurial students. The following Exhibit provides an overview about activities and events.

Exhibit: Overview about activities and events in the project Academia Meets Business

Activity/event	Format (type, length, offered since [year])	Objectives	Target group	Teachers or organisers	Participants / results in or until [year]
At Vietnamese German University (VGU, Ho Chi Minh City)					
Best Innovators Award	Annual award, since 2013	Continued education	VGU students and other young entrepreneurs in HCMC	HCMC and business partners	2015: 30 innovative ideas, 60 participants 2016: 40 / 80 2017 target: 40 / 100
Coaching und Mentoring	Individual instructions; sessions Saturday afternoon	Developing business ideas	VGU students and other young entrepreneurs in HCMC	Experts, VGU professors	2015: 30 2016: 40
Business plan development support	Individual instructions	Preparing start-ups	VGU students and other young entrepreneurs in HCMC	Experts, VGU professors	2015: 7 business plans developed 2016: 10 2017 target: 12
Practical projects on product and service innovation	Joint development of innovations with local SMEs	Practical learning	VGU students	VGU professors, local and German companies	15 SMEs supported in 2015, 18 in 2016 (both universities together)
Service innovation lab	Lab for simulating client-customer behaviour	Developing business ideas	VGU students, companies	VGU professors, German Professors	Still in planning phase
Chief Innovation Officer	Workshop / seminar, newly developed in 2015, supported by GIZ	Start-up training, developing business ideas	Companies in HCMC	VGU professors German Professors	42 participants (2015), thereof 12 women, 30 men
Symposium on Business-Academia Linkages	Annually, newly developed in 2016	Knowledge transfer to public institutions, universities and business associations	Ministries, public support organisat., business associations	VGU, LU and VCCI	2016 in HCMC: 81 participants

Activity/event	Format (type, length, offered since [year])	Objectives	Target group	Teachers or organisers	Participants / results in or until [year]
At Hanoi University of Science and Technology (HUST, Hanoi)					
Business Idea Competition and award at HUST	Competition, individual support	Generating new business ideas	HUST students	HUST and business partners	2015: 52 ideas, 120 participants (35% women, 65% men) 2016: 40 innovative ideas, 80 participants 2017 target: 50 innovative ideas, 100 participants
Start-Up Coaching at HUST	Coaching, pre-incubation sessions	Developing business ideas	HUST students	Experts and HUST professors	2015: 10 business plans developed 2016: 15 2017 target: 15
Practical projects on product and service innovation with local SMEs	Joint development of innovations with local SMEs	Practical learning	HUST students	HUST and German professors	18 in 2016
Short training in innovation management	Workshop	Practical learning	HUST students/companies	German Professors	2015: 100 participants
International Conference on Emerging Challenges (ICECH)	Conference in 2012, 2014, 2015 and 2016	Continued education	HUST students / teachers and professors from all universities	Academics from the fields concerned	100 – 150 participants
Symposium on Business-Academia Linkages	Planned for 2017	Knowledge transfer to public institutions, universities and business associations	Ministries, public support organisations, business associations	HUST, LU, VCCI and VECOM	Targeted: 30 participants
At Leipzig University (LU)					
Innovation Week	Workshop / seminar	Continued education	Best students from VGU and HUST	University of Leipzig	2015: 10 participants from Vietnam 2016: 12 participants from Vietnam 2017: 10 participants from Vietnam
Innovation school	Workshop / seminar	Continued education	Experts and teachers	University of Leipzig	Innovation Summer School 2015: 4 participants from Vietnam
Varying locations in Vietnam					
Innovation Management Approaches – Case study from Germany	Workshop	Continued education	VGU students and teachers	Vietnamese-German University, University of Leipzig	70 participants (2015), thereof 20 women, 50 men
Panel of Technology and Innovation Management	Conference	Continued education	Ministries, public support organisat., business associations	Vietnamese-German University	
Innovation Management and	Workshop / seminar, two-day training,	Continued education	Training for local SMEs	HUST Vietnam	55 participants (2015), thereof 15 women, 40 men

Brand Management for SMEs	newly developed in 2015				
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Activity/event	Format (type, length, offered since [year])	Objectives	Target group	Teachers or organisers	Participants / results in or until [year]
Innovation and Financial Management for SMEs	Workshop / seminar, two-day training, newly developed in 2015	Continued education	Training for local SMEs	HUST Vietnam	50 participants (2015), thereof 15 women, 35 men
Export Manager Advanced Training Programme	Newly introduced in 2016; 4 modules à 16 hours plus coaching	Continued education, export plan development	Exporting SMEs	German experts and professors	30 participants in 2016 In HCMC

Source: Annual reports "Academia meets Business" project for 2015 and 2016

At VGU in Ho Chi Minh City, entrepreneurship is a required module for Master students. Bachelor students can volunteer for it. Key events and activities at VGU, i.e. in the framework of the Entrepreneurship and Innovation Centre (EIC), include the following:

The **Best Innovators Award** in Ho Chi Minh City was established in 2013 with strong support from the Vietnamese Chamber of Commerce and Industry and several Vietnamese private companies. Each year, more than 100 ideas are submitted. SEPT supports the 50 most promising ideas in innovation training sessions. Out of these, 20 are presented to a jury and five win the award of 3,000 Euro. The City of Leipzig is the main sponsor with 1,000 Euro. The City considers the award as an important activity in the framework of the long-standing friendship with Ho Chi Minh City and a step to further link the start-up scenes of both cities.²²

The **Chief Innovation Officer** course comprises twelve days of intensive training and coaching activities. SEPT introduced this activity in 2015. In 2015, altogether 25 SMEs, one organisation and one large company participated. 42 participants completed the training and coaching activities. The students developed ten selected innovative business plans in the course of this activity.

Student's projects in product and service development with companies in Vietnam: In these projects, a team of three students works on practical solution of a product or service development problem proposed by a company. The students have three months time to present the final solution to the company. Two of the project's business partners, VCCI and GBA, play an essential role in acquiring Vietnamese and also German businesses to establish these joint projects.

Coaching and mentoring at VGU: The project will link students and graduates from the technical disciplines with students from the MBA programme in order to foster joint business plan development. All SEPT MBA students have to write a business plan in the first semester. Furthermore, the students will be coached for receiving access to financial resources, and they will be supported when approaching pilot customers. SEPT's goal is to establish at VGU a Vietnamese edition of an entrepreneurship support programme at Leipzig University named SMILE (Self Management Initiative Leipzig).

Service Innovation Lab: The project's goal is to support and professionalise the development and systematic optimisation of business services in Vietnam through scientifically based concepts of service engineering. In the context of developing the VGU campus, SEPT will establish an innovation lab where client-customer behaviour can be simulated and investigated under varying conditions. The abovementioned student projects in product and service development with companies in Vietnam can use the service innovation lab to develop their innovative solutions.

²² Annual Project Report for 2015, p. 27. See <http://www.leipzig.de/news/news/verleihung-des-best-innovators-award-ho-chi-minh-stadt>.

VGU is seeking to scale up its entrepreneurship activities to the next level. The university plans to engage in entrepreneurship research, and the project leader at VGU envisions a start-up activity with other countries in the Association of Southeast Asian Nations (ASEAN) like Indonesia and Malaysia.

Key events and activities at HUST, i.e. in the framework of the Bach Khoa Entrepreneurship Programme (BEP), include the following:

Business Idea Competition: HUST organises a science competition every year, where 800 students and staff members present their latest research results. This is a good point to identify promising business ideas. SEPT encourages the idea owners to take part in the Business Idea Competition. This competition takes place in a two-step process: After collecting the ideas, a jury preselects the 20 most promising ideas. SEPT supports the founder teams through training (several workshops, altogether five days) and coaching in developing a business plan. These business plans are presented to a jury which will finally select the award winners. Furthermore, the business ideas are presented at an award ceremony where the audience can select a public award winner.

Start-up coaching: SEPT provides a coaching service for start-ups from HUST, in the same way as described above for VGU. Professors and assistant lecturers of the MBA programme act as coaches and supervise the start-up's development. All students seeking to start an own company or just interested in entrepreneurship can participate.

Student's projects in product and service development with companies in Vietnam: Similar to the project activities at VGU as described above.

The International Conference on Emerging Challenges (**ICECH**) first took place in 2012 at HUST and was also carried out in 2014, 2015 and 2016. Between 100 and 150 participants attended the conferences.

At the time of writing this case study, HUST introduces elective courses in entrepreneurship for business students.

Some events take place in Leipzig:

Innovation Week at Leipzig University: Every year in June, SEPT organises the Innovation Week. SEPT will invite the three best students of the MBA programme in Vietnam and one lecturer or PhD student to Leipzig in order to connect them with innovative companies in Germany and to take part in an innovation management workshop.

The third overall objective of the project, knowledge transfer to public and private economic support organisations, establishes a one-day symposium on Business-Academia Linkages Development. This event is meant to encourage the transfer of knowledge and experience from VGU and HUST to public and private economic support organisations. The target group comprises representatives from ministries, public economic promotion agencies, chambers and business associations as well as from other universities.

Concrete support to entrepreneurs:

Several of the above-mentioned activities provide concrete support for entrepreneurs: At VGU, the Best Innovators Award, coaching and mentoring, and the service innovation lab. At HUST, the business idea competition and start-up coaching. The two awards play a key role. The project leader in Germany considers it as very important that the awards are linked with further education so that the students develop their business idea further until the actual competition takes place. Furthermore, the chance to win a notable amount of money provides considerable motivation. According to the project leader, a weak point is, however, that there is little support for the winners. VGU tries to support the winners in the export management programme and the innovation management programme.

Drivers and challenges

Drivers:

The project is driven by **high interest in entrepreneurship among stakeholders** involved: universities' management, teachers and students as well as external partners. The presidents of both universities are strongly supporting the project. As regards students, there is high interest for the best innovators award (VGU) and business idea competition (HUST). Many young people in Vietnam are familiar with own business activities because it is common that people pursue some kind of self-employed activity beside their employment. Southern Vietnam is traditionally more active in this respect than the Northern region. External partners like the Vietnam Chamber of Commerce and Industry are also driving the project; they actively sought co-operation.

Furthermore, entrepreneurship has been a notable **issue on the national political agenda** in Vietnam for a few years. The Government supports new businesses particularly by students in the programme "Start-up Nation". According to the project leader, the Government is concerned about unemployment, is seeking more technology-oriented start-ups to create jobs, and believes that universities can play an important role in this respect.

Finally, the **City of Leipzig's commitment** for the best innovators award, which is quite special compared to similar activities, is also a driver.

Challenges:

The project is facing several challenges. First, in Vietnam there is a **lack of entrepreneurship competence** among university teachers. Due to their own education, teaching personnel has very academic thinking and approaches. University teachers normally have no or little practical entrepreneurial experience. This affects the teaching methods: Activating methods are not common. Moreover, Vietnamese university teachers are not used to evaluation of teaching and being confronted with demands to modify their teaching. The project leader in Germany says they underestimated this challenge. In 2017 the project will organise a specific workshop on activating methods in teaching. There are exceptions from the rule that university teachers have little practical business experience, like the project leader at VGU who is running an own business beside her position at the university.

There are also **particular challenges at the two universities**. A specific challenge at VGU is that the university is in a phase of restructuring. A board that needs to formally approve the Entrepreneurship and Innovation Centre meets only twice a year and has currently other priorities. A specific challenge at HUST is to widen the external network. Co-operation between university and business is generally not yet well developed in Vietnam. Furthermore, HUST considers itself as the leading technical university in the country and is used to being approached by others, rather than approaching potential partners itself.

Finally, all project leaders point to a **lack of resources** as a challenge. The project leader in Germany would wish to have more financial resources for the business plan competitions. The project leader at VGU mentions that more finance for the project would be helpful to build a stronger programme and to be able to advertise it in order to attract students. The project leader at HUST refers to a lack of human and financial resources in building entrepreneurship education, which applies to universities in Vietnam in general. HUST would need more funds to teach entrepreneurship to a larger number of students.

Results

Impacts

From the view of the University of Leipzig, the project has been creating large benefits with relatively little finance. The project has been enabling the following benefits:

- Improved praxis orientation of the SEPT MBA Programme with a direct impact on students in Hanoi und HCMC. The project leader at HUST says that the project is useful for the university's leadership, teachers and students. Specifically, he reports a changed mindset of students; many have started an own business, for example with angel funding. This is new to HUST as a technological university without business background, where the idea of commercialising technology by founding a new company was not prevalent until recently.
- Planning and implementation of widely noticed innovation and business plan competitions which did not take place in Vietnam in this way before. They have had positive influence on innovation behaviour in Vietnam's private business.
- Promotion of innovative start-ups from the university environment through training and coaching.
- Winning Vietnamese enterprises and institutions for co-operation with universities and pointing out the benefits of co-operation between business and science.
- Developing networks also with international actors.
- Presenting Germany as an actor for supporting innovative ideas in Vietnam.

A core impact of the project is the stronger institutional embeddedness of project activities at both partner universities. At the time of writing this case study in mid-2017, both the Entrepreneurship and Innovation Centre at VGU and the Entrepreneurship Programme at HUST are in the process of becoming approved. Both are planned to be opened in 2017.

Transferability

The project leader in Germany considers the approach taken as well transferable to other universities. This applies in particular to the business plan competitions. He also appreciates the VGU's approach to not only address entrepreneurship but also innovation and export management.

Co-operation needs and potential synergies

The project leader in Germany welcomes more co-operation with other universities and also with development organisations in Germany in order to widen and strengthen entrepreneurship education support to developing countries. Co-operation with other partners in the programme "practice partnerships" is currently deepening.

Lessons learned

▪ **Developing university teachers' methodical competence**

It is important to train university teachers in activating teaching methods when they do not have much practical entrepreneurial experience and experience with non-traditional teaching methods.

▪ **Teaching entrepreneurship in the course of a business plan competition**

The combination of a business plan competitions with entrepreneurship teaching may be important to allow students developing their business ideas in a more substantial and sustainable manner.

▪ **Assuming longer times until decisions are taken**

One should not underestimate the time until university hierarchies decide on certain elements of the entrepreneurship programme.

References

Research for this case study was conducted by Stefan Lilischkis, Senior Consultant at empirica GmbH, Bonn, on behalf of the study Entrepreneurship in Developing Countries. Sources and references used include desk research plus the following:

Interviews

- Prof. Dr. Utz Dornberger, University of Leipzig, International SEPT Programme: telephone interview on 27 April 2017.
- Dr. Le Hong Hai, Hanoi University of Science and Technology, project team leader HUST: answers by e-mail on 16 May 2017.
- Ms. Huynh Dinh Thai Linh, Vietnamese German University, team leader VGU, telephone interview on 16 May 2017.

Websites

China International Consumer Goods Fair: VCCI Start Cooperation with CICGF, http://www.cicgf.com/en/detail_1919.html, last accessed 13 March 2017.

German Business Association in Vietnam, <http://www.gba-vietnam.org>, last accessed 13 March 2017.

Hanoi University of Science and Technology, <http://en.hust.edu.vn>, last accessed 13 March 2017.

Hessisches Ministerium für Wissenschaft und Kunst: Vietnamesisch-Deutsche Universität, <https://wissenschaft.hessen.de/studium/internationales/vietnamesisch-deutsche-universitaet>, last accessed 12 March 2017.

Stadt Leipzig, Best Practice Innovators Award, <http://www.leipzig.de/news/news/verleihung-des-best-innovators-award-ho-chi-minh-stadt/>, last accessed 13 March 2017.

Start-up Nation, <http://startupnation.vn/>, last accessed 11 June 2017.

University of Leipzig, SEPT Programme, <http://www.sept.uni-leipzig.de/>, last accessed 9 March 2017.

Vietnam E-Commerce Association, <http://www.vecom.vn/en/>, last accessed 13 March 2017.

Vietnamese-German University, <http://www.vgu.edu.vn>, last accessed 12 March 2017.

2.2.4 African iN4iN network (University of Leipzig)

IN A NUT SHELL	The African iN4iN network is a partnership between the Leipzig University and several African universities. Its objective is supporting technology transfer and entrepreneurship at the participating universities, targeting teachers. The project triggered South-South knowledge transfer.
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Abstract



Intelligence for Innovation (iN4iN) is an initiative of Leipzig University (LU) to foster innovation management, entrepreneurship, university-business linkages and related research in developing countries. The LU's iN4iN project in Africa seeks integrating universities from Ghana, Ethiopia, Kenya, Rwanda, and Tanzania into this initiative. The DAAD co-funded the project from 2013 to 2016. The project targeted university teachers in train-the-trainer activities. Students were only indirectly involved. The project triggered endeavours to foster entrepreneurship and technology transfer among peer universities in Africa without support from Europe ("South-South transfer"). However, there also appear to be unused opportunities to support North-South knowledge transfer through educating African students in entrepreneurship in Germany. Concepts developed in the project were also used for training students in Germany. Overall the project's approach seems to be well transferable to other universities. A handbook produced by the Leipzig University may support other higher education institutions and research centres in promoting entrepreneurship.

Case study fact sheet

▪ Full name of project (URL):	African iN4iN network (http://www.iN4iN.net)
▪ Co-ordinating university and co-ordinators in Germany:	Prof. Dr. Utz Dornberger, Leipzig University, International SEPT Programme (Promotion, development and management of SMEs); Dr. des. Richard Adu-Gyamfi, Leipzig University, International SEPT Programme
▪ Target countries:	Ghana, Ethiopia, Kenya, Rwanda, Tanzania
▪ Partner universities abroad:	Kwame Nkrumah University of Science and Technology (KNUST), Ghana; Adama University, Ethiopia; Mount Kenya University, Kenya; Ines-Ruhengeri, Rwanda; University of Dar Es Salaam, Tanzania
▪ Partners in Germany:	None.
▪ Partners in target country:	None.
▪ Key objectives of the project:	Support technology transfer and entrepreneurship at the participating universities through integrating them into the iN4iN network: <ul style="list-style-type: none"> a. Establishing exchange of knowledge and experience between project partners in order to support and further develop entrepreneurship programmes at the universities. b. Develop locally adapted strategies for strengthening cooperation activities and structures between private sector actors and the universities c. Establishing train-the-trainer programmes at the universities

Background

Project profile: The project's primary objective was supporting technology transfer and entrepreneurship at the participating universities through integrating them into the iN4iN network. This overall objective had three specific goals:

- Establishing exchange of knowledge and experience between project partners in order to support and further **develop entrepreneurship programmes** at the universities.
- **Strengthening business-university links:** Develop locally adapted strategies for strengthening cooperation activities and structures between private sector actors and the universities in the fields of innovation and technology transfer.
- Establishing **train-the-trainer programmes** at the universities in the fields of innovation and technology transfer.

The project ran from January 2013 to December 2016. In contrast to the other projects described in this study, the iN4iN project took part in a programme named Partnerships with Universities in Developing Countries (DIES), not in the programme Praxis Partnerships between Universities and Enterprises in Germany and Developing Countries. The DIES programme does not provide for partnerships with businesses, only with universities.

Partners' profiles: The project includes five universities from different African countries. The partner university in Kenya was exchanged during the project because the initial university, a small private organisation, was closed meanwhile. The five universities deliberately represented two advance partners, KNUST and the University of Dar Es Salaam, which already have an incubator. These universities could show what they already have achieved, while the other three universities were eager to learn.

Exhibit 1-2-3: Overview about partners and their roles in the Africa iN4iN project

Partner (URL)	Role in project
Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana (https://knust.edu.gh)	KNUST, established in 1952, has approximately 25,000 students. It is considered as one of the best universities in West Africa. Kumasi is a city with two million inhabitants in one of the largest metropolitan areas in Ghana, located in the inner country 200 km North-West of the country's capital Accra.
Adama Science and Technology University (ASTU), Adama, Ethiopia (http://www.astu.edu.et)	ASTU, established in 1993, has approximately 1,300 students in engineering and sciences. It is one of two technical universities in Ethiopia. ASTU is located in Adama, a city with approximately 325,000 inhabitants 100 km South-East of the country's capital Addis Ababa.
Mount Kenya University (MKU), Thika, Kenya (http://www.mku.ac.ke/)	Mount Kenya University (MKU) is one of the largest private universities in Kenya. The number of students exceeds 50,000. It is located in Thika, an industrial town North-East of the country's capital Nairobi.
Institute of Applied Sciences Ruhengeri (INES), Rwanda (http://ines.ac.rw/)	INES-Ruhengeri was founded in 2003 in Ruhengeri, a city with slightly less than 90,000 inhabitants in Northern Rwanda.
University of Dar es Salaam, Dar es Salaam, Tanzania (https://www.udsm.ac.tz)	The University of Dar es Salaam, located in the country's capital, is the oldest and biggest public university in Tanzania. It was established on 1 July 1970 and has today approximately 20,000 students.

Source: Project application, partners' website, Wikipedia with quoted sources

While the project had no formal partners, it received financial support from institutions in Africa for the conferences and workshops. These included for instance the Small and Medium Enterprise Support East Africa, the Micro and Small Enterprise Authority in Kenya and the Tanzanian Private Sector Foundation.

Key characteristics of the project

Approach

The project's main approach was sensitising university teachers for the subject of entrepreneurship and anchoring this subject in the universities' structures. The approach was conceptual, not didactical-methodical. For example, some of the events were semi-academic training sessions about concepts such as start-up clinics. Such "clinics" draw together teams of specialists to solve specific problems start-ups are facing.

Target groups

The project's target groups were university teachers from the five partner universities – it was a train-the-trainer project that did not directly involve students.

Design, setting and management of events and activities

The project conducted six types of activities: coaching, training, workshops, internships, symposiums, and conferences. In practice, the project organised several large symposiums and conferences on entrepreneurship, innovation and business co-operation at different locations. In between these big events, the project supported the participants in developing their concepts. The participants met personally once a year at one of the conferences. The German team was normally on-site for four days.

Exhibit 1-2-4: Overview about activities and events

Activity/event	Format (type, length, offered since [year])	Objectives	Target group	Teachers or instructors	Participants / results in or until [year]
Coaching					
Coaching for development of Entrepreneurship Support Services	2013	Detailed action plan for implementing Entrepreneurship Support Services at the partner universities	Staff members from partner universities	Teachers from LU	12 participants
Coaching for development of business idea/plan competitions	2015	Action plans for business idea/plan competitions	Staff members from partner universities	Teachers from partner universities and LU	30 participants
Coaching for implementation of business idea/plan competitions	Four workshops in Ghana in 2016	Implemented competitions	Staff members from partner universities	Teachers from partner universities and LU	143 participants
Training sessions					
Three-day training on innovation management	Organiser: KNUST, September 2013,	12 trainers who can run short-term training on innovation management in SMEs	Staff members from African partner universities and LU	Teachers from partner universities and LU	50 participants
Three-day training on business model development	Organiser: INES-Ruhengeri, Rwanda, March 2014	12 trained staff members	Staff members from African partner universities and LU	Teachers from partner universities and LU	33 participants
Four-day training on network management	Organiser: Adama University, September 2014	12 trained staff members	Staff members from African partner universities and LU	Teachers from partner universities and LU	60 participants
Internships					
Internships of staff from African partner Universities at SMILE	Organiser: Leipzig University, June 2014	2 well trained staff members	Targeted participants: KNUST and INES-Ruhengeri	LU teachers	2 staff members from Ghana and Rwanda

Activity/event	Format (type, length, offered since [year])	Objectives	Target group	Teachers or instructors	Participants / results in or until [year]
Internships of staff from African partner Universities at SMILE (LU)	Organiser: Leipzig University, September 2015	Training staff members from partner universities	Targeted participants: Adama University and Inoorero University	LU teachers	3 trained staff members from Kenya and Ethiopia
Internship of staff from African partner Universities at SMILE (LU)	Organiser: Leipzig University, November 2016	Training staff members from partner universities	Targeted participant: staff member from Dar es Salaam University	LU teachers	2 trained staff members from Tanzania and Ethiopia
Workshops					
Three-day Workshop on Entrepreneurial Education	June 2013, in Leipzig	Training partner universities' staff members	Targeted participants: 2 staff members from each African Partner University	Teachers from Leipzig University	12 participants
Two-day follow-up workshop on Entrepreneurship Support Services	September 2013, at KNUST, Ghana	Adapted strategies and action plans for implementation of Entrepreneurship Support Services	Targeted participants: 2 staff members from each African Partner University and Leipzig University	Teachers from partner universities and LU	39 participants
Five-day workshop on resource management for entrepreneurship support centers	Organiser: INES-Ruhengeri, Rwanda, 24 April 2014	Business plan for entrepreneurship support center	Targeted participants: 2 staff members from each African Partner University and Leipzig University	Teachers from partner universities and LU	33 participants
Five-day workshop on Concepts and Tools for Service Innovation Lab	Organiser: University of Dar es Salaam, Tanzania, 2016	Training partner universities' staff members	Targeted participants: 2 staff members from each African Partner University and Leipzig University	Teachers from Leipzig University	30 participants
Symposiums					
Two-day symposium on best practices in Entrepreneurship Promotion	Symposium, June 2013, in Leipzig	Developing strategies for implementing entrepreneurship support services at all partner universities	Targeted participants: 2 staff members from each African Partner University	Teachers from Leipzig University	70 participants
Final Project Symposium (5 days)	"International Entrepreneurship Promotion at Higher Education Institutions", Leipzig, September 2016	Documentation of lesson learnt (podcasts, webinar)	Targeted participants: 2 staff members from each African Partner University and Leipzig University	Teachers from LU	16 Trained staff members
Conferences					
The Role of Higher Education Institutions (HEIs) in facilitating Academia - Industry Linkage through Entrepreneurship and Innovation	iN4iN Africa Conference, Nov 2 - 4, 2014, Adama, Ethiopia	"Practical understanding of the academia-nexus and its implications on the socio-economic development in Africa" (Conference invitation)	Experts from universities, industry and non-governmental organisations from the project's countries	Experts from universities, industry and non-governmental organisations from the project's countries	60 participants

Activity/event	Format (type, length, offered since [year])	Objectives	Target group	Teachers or instructors	Participants / results in or until [year]
Conference "New Concepts for Business Acceleration for Africa"	ICABUMPA - iN4iN Conference, 7 – 29 October, 2015, Kenyan International Conference Centre	Promoting entrepreneurship in business, academia and government	Academics, entrepreneurs and policy-makers	Academics, entrepreneurs and policy-makers	250 participants

Source: Project application and project reports for 2013 – 2016

Concrete promotion of start-ups was not an objective in this project. However, some selective support was provided in start-up clinics which were conceptualised between the project partners.

Drivers and challenges

Drivers

The project's initiation was driven by **alumni from the Leipzig University's SEPT programme**. The project leader in Germany considers it as important to have such projects with African universities run with alumni because they know about the requirements from German academic organisations. Hence it is ensured that the parties involved have the same expectations and can trust each other.

A main driver of the project was the universities' **openness for entrepreneurship**. All universities sought employment opportunities for their graduates, facing high unemployment in all countries. They are aware that entrepreneurship education can support small business and employment creation in two respects: First, through making students think and act entrepreneurially and start a business after graduation; second, through providing the knowledge for professionalising some of the many informal small businesses which already exist.

Challenges

A first challenge of the project was **administrative management** and bureaucracy. Administrative processes tend to be very long in Africa. Due to earlier experiences, the German project manager preferred to pay project contributions on site. This way he prevented or limited possible difficulties with banks and the universities' financial administrations.

A second challenge was a **lack of resources** at African universities to teach and support students in entrepreneurship: Few university teachers are well trained to teach entrepreneurship, even in a practice-oriented manner, because in their own education they were rather prepared for jobs in the public sector. Furthermore, there are only few incubators, few adequate books, and few start-up funds at universities.

A related challenge was a **relatively small budget**. The partners were striving for implementing concepts, not only developing them. According to the German project manager, a "mentality to take" is widespread in Africa.

Results

Impacts

The project's main result was **increased competence** in entrepreneurship education among the participating teachers. In the course of the projects, the universities in Rwanda and Kenya **estab-**

lished incubators, managed by the alumni from the Leipzig University. Those universities that already had an incubator, the ones in Ghana and Tanzania, realised that they were able to support others. A sense of **South-South knowledge transfer** developed in the course of the project.

The Leipzig University used the **training concepts** developed in the project also to train students from Africa in Germany.

Transferability

The German project leader considers the approaches taken as well transferable to other universities. In fact there is a **handbook** for replicating entrepreneurship education and support, available for free from the iN4iN website.²³ The Leipzig University already applied for a further project with Ghana and Rwanda in order to foster the South-South transfer approach.

According to the German project leader, there is **high demand from African students to be taught in entrepreneurship in Germany**. The inclination to start a business is much larger among students from Africa than among German students. However, there are few such offers. The Leipzig University has one of a few offers in English. Hence there is a structural deficit in Germany in this respect; the German project leader says that a big opportunity has been missed so far.

Co-operation needs and potential synergies

The Leipzig University is continuously seeking new valuable partnerships and co-operations. For example, during the project it linked up with the programme **EXIST** – University-Based Business Start-Ups by the German Ministry for Economic Affairs and Energy.

Lessons learned

- **South-South knowledge transfer is gaining momentum**

African universities more advanced in promoting entrepreneurship can support less advanced ones in South-South knowledge transfer activities. In fact some universities already practice such activities.

- **Entrepreneurship support for Africa could benefit from wider network**

Entrepreneurship education and support in Africa cannot only be promoted by development organisations but also by entrepreneurship initiatives such as the Federal Government's EXIST programme.

- **North-South knowledge transfer through entrepreneurship education in Germany**

German universities could establish more entrepreneurship education programmes targeting students from these countries. The students can then found new businesses in their home country later on. Programmes such as CIM can help related repatriation efforts.

References

Research for this case study was conducted by Dr. Stefan Lilischkis, Senior Consultant at empirica GmbH, Bonn, on behalf of the study Entrepreneurship in Developing Countries. Sources and references used include desk research plus the following:

²³ See Dornberger et al. (2015).

Interviews

- Prof. Dr. Utz Dornberger, Project Leader iN4iN, Leipzig University. Telephone interview on 10 May 2015.
- Dr. des. Richard Adu-Gyamfi, Operative Project Manager iN4iN, Leipzig University. Answers by e-mail on 14 June 2017.

Websites

Adama Science and Technology University: <http://www.astu.edu.et>, last accessed 21 June 2017.

Centre for International Migration and Development, <https://www.cimonline.de>. Last accessed 20 June 2017.

EXIST – Existenzgründungen aus der Wissenschaft / University-Based Business Start-Ups, <http://www.exist.de>. Last accessed 20 June 2017.

Institute of Applied Sciences Ruhengeri: <http://ines.ac.rw>, last accessed 21 June 2017.

Kwame Nkrumah University of Science and Technology: <https://knust.edu.gh>, last accessed 21 June 2017.

Mount Kenya University: <http://www.mku.ac.ke>, last accessed 21 June 2017.

University of Dar es Salaam: <https://www.udsm.ac.tz>, last accessed 21 June 2017.

Further sources

Dornberger, Utz; Adu-Gyamfi, Richard; Sommer, Peter (editors) (2015): Entrepreneurship promotion at higher education institutions (HEIs) and research centers. Leipzig. Available at <http://iN4iN.net/sharing-knowledge/our-books/>.

2.2.5 Building entrepreneurship and management skills for university graduates in Egypt (Philips University Marburg)

IN A NUT SHELL	"Building entrepreneurship and management skills for university graduates in Egypt" is a project between the University of Marburg and the German University in Cairo. It is driven by very agile teachers and students. However, it turned out that students in Egypt need stronger guidance in entrepreneurship education than in Germany.
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Abstract

"Building entrepreneurship and management skills in future Egyptian university graduates", abbreviated to IMAGINE, is a project between the Philipps University of Marburg (PUM) and the German University in Cairo, Egypt. It took from 2013 to 2016 and had three primary objectives: Developing entrepreneurial competences and practical management skills in GUC students; establishing an infrastructure for sustaining the initiative after the end of the project; and establishing a sustainable learning network between the project partners. The project was driven by very agile teaches and highly motivated students. It turned out that students in Egypt need stronger guidance in entrepreneurship education than in Germany because the cultural and political framework conditions in Egypt require being careful not to enter into conflict with laws and values. A key insight was that it is very useful to support students' entrepreneurial activities in a fixed one-year scheme. The project led to the sustainable launch of twelve successful start-ups, provided entrepreneurship teaching and support to more than 100 students, and established networks with the local business and finance community. This shows that such projects can be successfully conducted under difficult political framework conditions.

Case study fact sheet

▪ Full name of project and website:	IMAGINE – Building entrepreneurship and management skills for university graduates in Egypt (no website)
▪ Co-ordinating university and co-ordinator in Germany:	Prof. Dr. Michael Stephan, Philipps University Marburg, School of Business & Economics, Research Group of Technology and Innovation Management
▪ Target country:	Egypt
▪ Partner universities abroad:	German University Cairo
▪ Partners in Germany:	Alumni Marburg MAFEX – Marburg Institute for Innovation Research and Entrepreneurship Promotion PHLINK (Marburg University student consulting)
▪ Business partners in target country:	DAIHK, GIZ, Shekra, Tamkeen Capital, Siemens
▪ Key objectives of the project:	Developing entrepreneurial competences and practical management skills in GUC students. Establishing an infrastructure for sustaining the initiative after the end of the project. Establishing a sustainable learning network between the project partners.

Background

Project profile: The project “Building entrepreneurship and management skills for university graduates in Egypt”, abbreviated to IMAGINE, was a partnership between the Philipps University Marburg (PUM) in Germany and the German University in Cairo (GUC) in Egypt. It ran from mid-2013 until the end of 2016. Due to the state crisis in Egypt in 2013, the project’s operative beginning was deferred to early 2014. The project had three primary objectives related to teaching, infrastructure and networks:

- Developing entrepreneurial competences and practical management **skills** in GUC students.
- Establishing an **infrastructure** for sustaining the initiative after the end of the project.
- Establishing a sustainable learning **network** between the project partners.

An implicit objective of the project was to build a centre for entrepreneurship, innovation and internationalisation at GUC that provides a physical and organisational infrastructure beyond the lifespan of the project, serving skills development and networking.

The project was based on long-standing co-operation between both universities: At the outset, PUM and GUC had practiced student exchanges in social and political sciences as well as business and economics for more than ten years. In 2012, PUM opened a liaison office at the German Science Center in Cairo. At GUC, a professor from the Management Technology Faculty and her assistant had established entrepreneurship teaching and were seeking to expand it already before the project. Hence the idea to launch a project on entrepreneurship teaching at GUC fell on fertile ground.

Partners’ profiles: Beside GUC, the project involved several partners mainly from Germany and Egypt. The project leaders in Germany and Egypt said that other organisations were very open for the subject of entrepreneurship and becoming involved in the project.

Partner	Profile and role in the IMAGINE project
German University in Cairo (GUC)	GUC is an Egyptian Private University founded in 2002. ²⁴ The German Universities of Stuttgart and Ulm are patrons of GUC. The Faculty of Management Technology is the central point for entrepreneurship education at GUC. It offers Bachelor and Master Programmes in General Management, Business informatics and Technology-based management. GUC’s study programmes and curricula are developed in collaboration with German universities and other international institutions. Currently, the university has approximately 10,000 students. ²⁵
Marburg Institute for Entrepreneurship and Innovation Management (MAFEX)	Core provider of knowledge for building entrepreneurial capacity and its organisational framework. MAFEX is a charitable trust established in 1998 to support university start-ups by undergraduate and graduate students in Marburg. In the project it supported activities in Germany and Egypt, for example the entrepreneurship week in Marburg, coaching and consulting start-up teams as well as running seminars for mentoring and training.
Phlink e.V.	Key partner for building the organisational infrastructure of a student consultancy. Phlink is a student-run business consultancy located in Marburg founded in 2008 as a non-profit organisation. In Cairo it consulted founding members of GUC’s student consultancy. It also organised workshops in the framework of the entrepreneurship weeks in Marburg in 2014 and 2015 and contributed to the entrepreneurship week in 2016.
GIZ (Gesellschaft für Internationale Zusammenarbeit)	Since 1956, GIZ has been implementing projects in Egypt on behalf of the German Government. GIZ and its ICE centre for Innovation, Collaboration and Entrepreneurship were a key partner for developing training and coaching modules for entrepreneurship at GUC adapted to the Egyptian business environment. GIZ also facilitated contacts to the local business community for student projects, it coached student start-up teams, and it supported student business consulting through paid project-based internships.
German-Arabian Chamber for Industry and Trade (DAIHK)	Established in Egypt in 1951. Representing 2200 member companies, GACIC is the largest business co-operation organisation between Germany and the Arab world. DAIHK arranged contacts to the businesses world and contributed to a workshop.

²⁴ Information from GUC, see http://www.guc.edu.eg/en/about_guc/.

²⁵ See http://www.guc.edu.eg/en/about_guc/history.aspx.

Tamkeen Capital	A venture ally firm supporting start-ups with access to finance, incubation, talent placement and business development services. In the project, Tamkeen had an active role in coaching and mentoring entrepreneurship teams in Cairo and it contributed to many seminars and workshops in Cairo.
Shekra	During the project, the Egyptian crowd funding company Shekra became a main partner also in coaching and mentoring students.
Siemens	Siemens has a long experience in mentoring student consultancy projects, including university competitions on a wide range of business problems. Siemens coached entrepreneurship teams from GUC in management and engineering issues.

Key characteristics of the project

Objectives

The overall objective was preparing students to start an own business after graduation or to qualify them as demanded employees.

The project's first goal, developing entrepreneurial competencies and practical innovation management skills, represented the project's contents. It was subdivided into two parts: First, as regards entrepreneurial competencies, the programme supported university-based start-ups, entailing pre-seed and seed activities. It was based on three consecutive modules: sensitising, training and coaching new ventures and business ideas. According to PUM, measures related to this part were very successful right from the beginning and exceeded expectations. Second, the development of practical management skills covered two different formats: student consultancy and thesis-based projects. The project fulfilled the aim to establish a student-run business consultancy. On the other hand, the project sought to increase the number of enterprises co-guiding students' project work and final theses. However, the enterprises' readiness to support students in this way was small, while there was large interest on the part of the students.

The second goal was closely building a sustainable organisational framework and infrastructure at GUC that allows institutionalising and perpetuating the competence building initiative beyond the lifespan of the project.

The third goal was building a sustainable network for mutual learning among all project partners involved. This included the partners in Marburg (MAFEX, Phlink, Alumni Marburg) and in Egypt (Siemens, DAIHK, and GIZ).

Target groups

At the beginning of the project in 2014, students came mainly from the Management Faculty. In 2015 and 2016, students from Pharmacy, Engineering and Applied Arts also took part. In Egypt, it is rather the exception that students aim at Master Degrees. Hence most students were Bachelor students. The share of participating men and women was almost equal. Students discussing their business ideas with friends and other fellows helped increase awareness about the project and its reputation. Yomna AbouOmar explained that they marketed the offers by "lecture crashing" – popping into ongoing lectures.

Teachers and instructors

The principal entrepreneurship teachers at GUC were Dr. Hadia Hamdy and Prof. Florian Becker-Ritterspach from the Management Technology Faculty and their assistant Yomna AbouOmar.

Concrete support for start-ups in the project

The project provided concrete support to GUC students' entrepreneurial activities – it coached and mentored students interested in starting a business, for example through qualification, arranging funding sources, establishing contacts to customers, and legal consulting. Altogether the project supported approximately 110 students. Twelve concrete enterprises developed from these activities (see section on impacts below and Annex).

During the project it turned out that some concepts could not be applied as planned and that they needed to be adapted to the local cultural context. Firstly, students in Cairo need to be guided

stronger than in Germany. Due to the legal-political framework conditions, people in Egypt need to take care not to do things that could be disadvantageous for them – an issue to which the project leader in Germany refers as “**power distance**”²⁶. Hence students expect from university teachers to lead them through the start-up process in order to avoid conflicts with university management and public authorities. This cultural background also required to introduce a rather strict sequence of teaching and support, namely a one-year cycle from the idea to start-up.

Design, setting and management of events and activities

The project offered numerous different activities and events to fulfil its objectives in building competencies, developing an organisational framework, and building a network for mutual learning – see the following Exhibit. GUC and the project leader in Marburg in collaboration developed a methodical approach based on **effectuation and causation**, according to the project leader at GUC: “Start with what you have (skills, resources, networks) and create opportunities based on them; bootstrap as much as you can and take risks based on affordable loss; try to leverage adverse conditions and be very flexible in order to turn them to opportunities.” One of the project’s approaches was to have students write final theses together with enterprises. This did not work. Alternatively, the project will try to engage enterprise representatives as mentors for students.

Exhibit 1-2-5: IMAGINE project Marburg – Cairo: Overview about activities and events

Activity/event	Format (type, length, offered in [year])	Objectives	Target group	Teachers or instructors	Participants / results 2014 – 2016
1. Entrepreneurial competencies & management skills					
1.1 Entrepreneurial competencies					
1.1.1 Sensitising					
Guest lectures and presentations by experienced entrepreneurs	Lectures	Sensitising students for entrepreneurial thinking and activity	GUC students	GUC teachers	n.a.
Brownbag lunches	Working lunches	(see above)	GUC students	GUC teachers	n.a.
Regular tables for entrepreneurs	Roundtable discussions	(see above)	GUC students	GUC teachers	n.a.
Excursions to visit successful start-ups	Excursions	(see above)	GUC students	GUC teachers	n.a.
Idea contests	Idea contests	(see above)	GUC students	GUC teachers	n.a.
Entrepreneur speed-dating events	Speed-dating events	(see above)	GUC students	GUC teachers	n.a.
1.1.2 Training					
Lecture series	Lecture	Training students for entrepreneurial thinking and activity	GUC students	GUC teachers	n.a.
Business plan seminars	Seminars	(see above)	GUC students	GUC teachers	n.a.
Entrepreneurship workshops	Workshops	(see above)	GUC students	GUC teachers	n.a.

²⁶ “Power distance is the extent to which the lower ranking individuals of a society ‘accept and expect that power is distributed unequally’.” Quoted from Wikipedia.org which refers to Hofstede (1997) and six dimensions of culture, one of which is power distance.

Activity/event	Format (type, length, offered in [year])	Objectives	Target group	Teachers or instructors	Participants / results 2014 – 2016
1.1.3 Coaching					
Business plan coaching	Coaching	Coaching students in their entrepreneurial activities	GUC students	GUC teachers	n.a.
Networking	Networking activities	Networking for supporting students' entrepreneurial activity	GUC students	GUC teachers	n.a.
1.2 Practical management skills					
Student consultancy projects	Consultancy projects	Consulting nascent student entrepreneurs at GUC	GUC students	GUC teachers	n.a.
Student thesis-based projects	Thesis projects	Developing entrepreneurial competence in students through thesis work	GUC students	GUC teachers	n.a.
2. Developing sustainable organisational framework					
Training sessions		Building a sustainable organisational framework for entrepreneurship education at GUC	Project coordinators, academic staff, students	GUC teachers	n.a.
Field trips	Field trips	(see above)	Project coordinators, academic staff, students	GUC teachers	n.a.
Workshops	Workshops	(see above)	Project coordinators, academic staff, students	GUC teachers	n.a.
3. Building a sustainable network for mutual learning					
Scale-up of Entrepreneurship Education in Egypt	Conference , Cairo, 2014	Building sustainable entrepreneurship network between PUM and GUC	Students, faculty members, heads of departments, deans, Egyptian entrepreneurial ecosystem members	GUC teachers	100 participants (among them 80 students)
Conference: Managing Sustainable Innovation Projects	Conference, Marburg, 2015	(see above)	(see above)	GUC teachers	120 participants (among them 80 students)
Building networks for mutual learning for sustainability between Germany and Egypt	Conference, Cairo, 2016	(see above)	(see above)	GUC teachers	120 participants (among them 80 students)

Source: IMAGINE project – project description, status reports and supplements by PUM project leader

Drivers and challenges

Drivers:

The project was driven by **highly motivated students, professors and assistant instructors** as well as **supportive partners**. As regards students, according to the project leaders in Germany and

Egypt, entrepreneurship education offers a viable employment opportunity for students in Egypt as a country with a difficult economic situation and high unemployment – but also with good market opportunities. The German project leader says that GUC students' enthusiasm for entrepreneurship is outstanding and not existing in this form in Germany. However, this may also have to do with the type of students GUC attracts, namely middleclass people from rather well-situated homes.

As regards professors and other teachers, the project was implemented at and with **GUC's Management School** which did already have experience with the subject of entrepreneurship before. Prof. Florian Becker-Ritterspach and Dr. Hadia Hamdy were the main driving forces, supported by their assistant Yomna AbouOmar. AbouOmar reports that during the project they learned a lot about how to select the right students and motivating them as well as structuring teaching and support. Originally, the project came into being because the GUC's liaison office connected the University of Marburg's Working Group Technology and Innovation Management with GUC's Business School. Both sides report that it was immediately a good fit. Furthermore, clear allocation of roles between GUC and PUM helped ensure a smooth operation of the project.

As regards partners, the project leader at GUC reports that **project partners** were very supportive. Mentors and coaches were very accessible. However, corporations, although supportive, were found to view startups rather from the corporate social responsibility angle.

In the past years, the national **Government's university policy** also changed and became friendlier towards entrepreneurship. Technology transfer has been fixed as a new objective of Egyptian universities, with entrepreneurship as one aspect.

Challenges:

The project faced several challenges: Firstly, the **political framework conditions** were severe. Political instability, a difficult internal security situation, terrorist attacks, coming along with curfews and reduced flight connections, led to decreasing readiness of German project partners to travel into the country.

The **economic framework conditions** in Egypt are also unfavourable for start-ups, as reported by the project leader in Egypt. The entrepreneurial ecosystem is undeveloped, entailing lack or immaturity of services such as incubators and accelerators, funding. Regulations about bankruptcy and minority protection are unfriendly for start-ups. The project leader in Germany reports that at the outset no one could tell whether crowd funding is legal in Egypt.

Second, there is a general **lack of innovation and entrepreneurship culture** in Egypt, coming along with a strong tendency to avoid insecurity. At the outset of the project in 2013, entrepreneurship was not acknowledged as an important issue in Egypt. Transferring knowledge and technology into practice was no explicitly formulated official objective at universities in Egypt. This made partnerships with businesses difficult. Furthermore, students and parents are highly risk averse, believing that a stable job and guaranteed salary is much better than self-employment.

The project leader at GUC says that there are only **few capable university teachers** who truly exhibit the spirit of entrepreneurship. She also says that some academics at GUC did not value entrepreneurship, misguided students or even undermined the concept.

Bureaucracy at GUC was a notable obstacle. According to the project leader in Germany, the university's administration was not always supportive; founding the Centre for Entrepreneurship took long and financial management was slow. The university is led in a rather paternalistic, centralised manner, which aggravated the project flow and limited security in planning. However, in the course of the project it moved up in the university management's priorities. For example, it became quite easy to obtain rooms or information technology equipment when needed, which was not necessarily the case at the beginning of the project. After all, the project leader at GUC states that it is important to receive the buy-in from university management to be able to successfully conduct such a project. The GUC project team reports that at the outset the university's management was quite reserved about implementing the project. However, German project bureaucracy was also a challenge for

GUC, financial reporting requirements in particular. Fulfilling related requirements was difficult given a not very supportive administration at GUC.

Limited funds were also reported to be a challenge. In particular, a lack of funding after the end of the project is a challenge for GUC. Finally, one of the successful start-ups from GUC enticed away a project coordinator. While this hampered the project, this type of employment generation is also a sign of the project's success.

Results

Impacts

The project reached considerable positive impacts even though the political framework conditions in Egypt were severe. Considering the socio-political background, it can be considered a strong achievement that the PUM was able to carry out the project at all.

Approximately **110 students** in 35 start-up teams took part in the start-up cycles and learned about management skills as well as entrepreneurial responsibility. Not all students started a successful business but at least they learned to think entrepreneurially and to assess a project in a realistic way. The project leader in Egypt reports that the participating students increased their social and networking skills significantly. Furthermore, **teaching assistants** were made familiar with the subject of entrepreneurship and new ways of teaching.

Very tangibly, the project brought forward **twelve successful new businesses** from GUC, coming along with new jobs. The project also established a new **student-run company consultancy**.

The project managed to build up several **networks** which support the project further: A network of finance suppliers, including venture capitalists and business angels, a network of GUC graduates, and a specific network of alumni from the IMAGINE project. In particular, the project strengthened technology transfer in Egypt through numerous workshops and the establishment of related networks.

Transferability

The project leader in Germany considers the one-year cycle of supporting entrepreneurial students as something worth transferring to other universities. Since the beginning of 2017, PUM in fact seeks transferring the concept to other universities in Egypt. The first new partners are Cairo University and Assiut University in Upper Egypt.

Co-operation needs and potential synergies

The project leader in Germany says that the project is well connected to other organisations, also with other projects supporting entrepreneurship education in developing countries. He believes that enterprises could play a more active role in such projects, multi-national enterprises in particular. Multi-nationals could use their locations in different countries to spread experiences and activities to other places. This may in particular apply to providing private equity for start-ups from universities as well as to establishing incubators and accelerators.

Lessons to be learned from the case study

▪ **Entrepreneurship education needs to be adapted to local cultural context**

In the project it turned out that some envisaged concepts did not work as planned. They needed to be adapted to the local cultural context. The main lesson was that students need to be guided more closely and that start-up promotion should better take place in fix one-year cycles.

▪ **Creation of a considerable number of successful start-ups**

Twelve successful start-ups were created in the course of the project; one of the graduates is meanwhile even a serial entrepreneur. This indicates that a project with motivated students and teachers can have a notable impact on concrete new business and jobs.

▪ **Importance of entrepreneurship and technology transfer increasingly acknowledged**

The case study also shows that entrepreneurship and technology transfer are increasingly acknowledge as important in Egypt, i.e. even in a country with a lack of innovation culture and prevalent risk-adversity.

References

Research for this case study was conducted by Stefan Lilischkis, Senior Consultant at empirica GmbH, Bonn, on behalf of the study Entrepreneurship in Developing Countries. Sources and references used include desk research plus the following:

Interviews

- Prof. Dr. Michael Stephan, Philipps University Marburg, School of Business & Economics, Research Group of Technology and Innovation Management: Phone interview on 28. April 2017.
- Hadia Hamdy, Associate Professor of Entrepreneurship and Innovation Management, Faculty of Management Technology, German University in Cairo: Answers by e-mail on 21 May 2017.
- Yomna AbouOmar, Research Group Technology and Innovation Management, School of Business & Economics, Philipps-University Marburg; former co-ordinator of IMAGINE project, teaching assistant and research associate at GUC: Internet phone interview on 23 May 2017.

Websites

German University in Cairo, <http://www.guc.edu.eg/en>, last accessed 20 March 2017.

Wikipedia: German University in Cairo, https://de.wikipedia.org/wiki/German_University_in_Cairo, last accessed 20 March 2017.

Further sources

Hofstede, Geert H. (1997). Cultures and Organizations: Software of the Mind (second ed.). New York: McGraw-Hill. Originally published in 1991 as Cultures and organizations: software of the mind: intercultural cooperation and its importance for survival.

Annex

The following list includes the names of successful start-ups in the framework of the IMAGINE project. "Success" means "registered company" and "business activity". In Egypt it is common to use Facebook as a business website.

2014

Breakout, <http://www.breakoutegypt.com/>; <https://www.facebook.com/BreakOutEgypt/?fref=ts>, more than 20 employees.

Gymawy and Rebli: Ahmed Shuayb meanwhile founded his second enterprise.

2015

Chameleon: <https://www.facebook.com/chameleoncowork/>

Restorya: <https://www.facebook.com/RestorYa/>

Binary Eye: <http://binaryeye.org/>

La Vie Boheme: <http://www.bohememag.com/>

Blue Bird Design: <https://www.facebook.com/Rana.A.Moniem/?fref=ts>

2016

Null: <http://nulldies.com/>

Arcadia: <http://www.arcadiacamps16.com/>

IQSAN: <http://iqsanlms.com/>, <https://www.facebook.com/IQSANLMS/?fref=ts>

Penguin Customs Shop, <https://www.penguincustomshop.com/>, <https://www.facebook.com/penguin.custom.shop/?pnref=lhc>

2.2.6 Applied Entrepreneurship Education Programme (Neu-Ulm University of Applied Sciences)

IN A NUT SHELL	"AEEP" supports rural areas in Ethiopia with an entrepreneurship and renewable energies master programme. The project concentrates on train-the-trainer courses, supporting business ideas from lecturers and implement them with master students. The challenge is to gain financial support to realize the ideas.
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Abstract

The Neu-Ulm University of Applied Sciences (HNU) transfers some developed entrepreneurship courses to their partner in Ethiopia. The project lead to a final master programme of entrepreneurship and renewable energies. The idea is to support rural areas through supporting innovative ideas. On one hand, the teachers at Arba Minch University gain access to entrepreneurship education through train-the-trainer courses and develop own business ideas. On the other, the students participate within the programme and have the chance to work on real business ideas. The project runs from 2013 to 2016 and has the main objective to develop the master programme for electrical engineers and train the lecturers in Ethiopia. The partner university even implemented a Business Innovation Center to support teaching entrepreneurship and producing business ideas and start-ups. The government is interested in the project and entrepreneurship as a topic, but financing business ideas is a challenge.

Case study fact sheet

▪ Full name of project and website:	AEEP (https://www.hs-neu-ulm.de/forschung/institute-kompetenzzentren-netzwerke/africa-centre/aEEP-ethiopia/)
▪ Duration	1.10.2013 – 31.10.2016
▪ Co-ordinating university and co-ordinator in Germany:	Prof. Dr. Elmar, Steurer, Neu-Ulm University of Applied Sciences, Controlling and Finance
▪ Target country:	Ethiopia 
▪ Partner universities abroad:	Arba Minch University (Arba Minch, Ethiopia)
▪ Business partners in Germany:	Phaesun GmbH Memmingen, XCOM Willich, Chamber of Commerce Ulm, Sahay Solarverein Afrika e.V.
▪ Key objectives of the project:	Development and implement an applied entrepreneurship education programme for electrical engineers of Arba Minch University (named entrepreneurship and renewable energies). Use the potential synergies of the applied approach to enable new employment possibilities for poorer parts of the population.

Background

Project profile: The project "AEEP" is operated by the Neu-Ulm University of Applied Sciences²⁷ with Arba Minch University (AMU) in Ethiopia. The project focus on the development of an entrepreneurship programme for engineers and on training the lecturers. AEEP runs from October 2013 to October 2016.²⁸ Several concrete activities and events are designed to fulfil these objectives, which will be elaborated below in the section about key characteristics of the project.

Partners' profiles: The project has five partners – one university partner in Ethiopia and four business partners in Germany.

The *Arba Minch University - AMU* was founded in 1986 in South-West Ethiopia. The University consists of one Institute of Technology and five Colleges: Agriculture, Business and Economics, Natural Sciences, Medicine and Health Sciences, and Social Sciences and Humanities. The University has 8,000 registered students in 2008 and already 24,000 in 2014.²⁹

The business partners in Germany: Phaesun³⁰, XCOM, Sahay Solarverein Afrika e.V. and the Chamber of Commerce in Ulm support the project with contributing to the development of the education programme and participating in the projects of the students. This means they have worked together with the students on specific projects. The main task was to support sourcing, obtain approvals as well as support the access to financial resources or opportunities at the investor road show in Addis Abeba. In sum, they have been nine student entrepreneurs, who gain coaching for their process of starting a new business.

Key characteristics of the project

Objective

The project "AEEP" aims to develop and implement an applied entrepreneurship education programme for electrical engineers of Arba Minch University named entrepreneurship and renewable energies.

Target groups

The project's principal target groups are engineering students (master) from the Arba Minch University and especially instructors or teachers (mainly without Phd) for the future entrepreneurship programme.

Instructors

The project's principal instructors are university teachers from the Neu-Ulm University of Applied Sciences and the Arba Minch University (Ethiopia). The business partners support the project with input of experience and support for the students.

²⁷ Neu-Ulm University of Applied Sciences Website: <https://www.hs-neu-ulm.de/forschung/institute-kompetenzzentren-netzwerke/africa-centre/aEEP-ethiopia/>

²⁸ See dissemination on: <https://www.ruralelec.org/project-case-studies/neu-ulm-university-applied-sciences-applied-entrepreneurship-education> and <https://www.hs-neu-ulm.de/forschung/institute-kompetenzzentren-netzwerke/africa-centre/aEEP-ethiopia/>

²⁹ According to AMU Website, see http://www.amu.edu.et/index.php?option=com_content&view=article&id=26&Itemid=3

³⁰ Phaesun Website, see http://www.phaesun.com/de/unternehmen/news/news/news-de-tail.html?tx_ttnews%5Btt_news%5D=83&cHash=215a1bf38fd456ad833791c7505d34aa

Exhibit 1-2-6: Overview about activities and events

Activity/event	Format (offered in [year])	Objectives	Target group	Teachers or instructors	Participants
1. Target: Procedure Agreement					
Project kick off meeting	Meeting (2013)	Agreement organisational procedure	German and Ethiopian coordinator, Arba Minch University (AMU) officials	In Germany: Ethiopia 2, Germany 6; In Ethiopia: Ethiopia 6; Germany 2	
2. Target: Joint execution of education programme					
Ethiopian stay in Germany	Experience exchange (2014)	Management education in marketing, production, leadership and finance	German and Ethiopian project partner, Chamber of Crafts Ulm, AMU-lecturers	Ethiopia 8; Germany 4	
Development workshops	Workshops (2014)	7 executed workshops: - four workshops with German coordinator and the HNU-lecturers - three WS with industry partners	German and Ethiopian project partner and additional lecturers, two experts from each industry partner: Phaesun, Sahay Solar & XCOM	11	
Company visits	company visits (2014)	Two companies/institution visits	Chamber of Crafts Ulm, German and Ethiopian project partner	Ethiopia 8; Germany 4	
Pilot execution of education programme Part I - Micro Business Development	Execution (2014)	Management education of master students by the coached lecturers	German and Ethiopian project partner, AMU-lecturers, Sahay Solar and pot. industry partners, enrolled students, "typical" micro-entrepreneurs and controllgroup I	8 Ethiopia; 2 Germany	60 Ethiopia; 1 Germany
Student result presentation I	Presentation (2014)	Presentations of business plans opinion surveys	German and Ethiopian project partner, AMU-lecturers, enrolled students, industry partner Phaesun GmbH and pot. local industry partners or other firms	8 Ethiopia; 2 Germany	60 Ethiopia; 1 Germany
Pilot execution of education programme Part II – Entrepreneurship Specialization	Evaluation (2014)	Management education of master students by the coached lecturers	Ethiopian coordinator, AMU-lecturers, HNU-lecturers and local expert (or pot. industry partners), enrolled students and controllgroup II	8 Ethiopia; 1 Germany	60 Ethiopia

Activity/event	Format (offered in [year])	Objectives	Target group	Teachers or instructors	Participants
3. target: Independent execution of education programme by Ethiopian lecturers					
Student result presentation II	Presentation (2015)	Presentations of business plans opinion surveys	German and Ethiopian project partner, AMU-lecturers, enrolled students, pot. local industry partners or other firms	Ethiopia 10; Germany 3	Ethiopia 10
Ethiopian stay II	Meetings (2015)	Management education in marketing, production, leadership and finance Application of the theoretical concept to the developed business models Education and application of the Business Model Canvas	German project coordinator, Chamber of Crafts Ulm, HNU-Administration, Ethiopian coordinator, AMU-lecturers	Ethiopia 9; Germany 3	
Ethiopian stay II - weekly development Workshops	Workshops (2015)	7 executed workshops: - Four workshops with German coordinator and the HNU-lecturers - Three WS with industry partners	German and Ethiopian project partner and lecturers, two experts from each industry partner: Phaesun, Sahay Solar & XCOM;	Ethiopia 9; Germany 3	
Ethiopian stay II – script finalization	Meetings (2015)	At least 7 to 8 standardized lecture scripts	German and Ethiopian project partner and lecturers, two experts of Sahay Solar	Ethiopia 9; Germany 3	
Student result presentation III	Presentation (2015)	Presentations of business plans Student opinion surveys	German and Ethiopian project partner, AMU-lecturers, enrolled students, industry partners Phaesun GmbH, students from pilot phase and pot. local industry partners	Ethiopia 10; Germany 2	Ethiopia 60
4. target: Continuation of education programme & final reporting					
Student result presentation IV	Presentation (2016)	Presentations of business plans Student opinion surveys	German and Ethiopian project partner, AMU-lecturers, enrolled students, students from pilot phase, pot. local industry partners or other firms	Ethiopia 8	72 students within programme, 31 external entrepreneurs
International conference in Addis Abeba	Conference (2016)		German and Ethiopian project partner and lecturers, AMU officials, students, German industry partners, experts, DAAD responsible and broad public	In sum 45 participants including 11 AMU-and HNU-lecturers	10 project participating students

Source: Project Application "AEEP", 2013

Some specific events and methods

Ethiopian stay: Ethiopian lecturers from the field of engineering stayed in Neu-Ulm for six weeks. During the first stay, the lecturers participated in a course about entrepreneurship and entrepreneurship education. The lecturers from HNU offered them the chance to experience entrepreneurship education methods by their own, for example the business model canvas. Following stays included coaching of actual business plans of the lecturers from AMU.

Development workshops: Within these workshops in Germany, the Ethiopian lecturers have been able to present their business ideas and talk with business partners from Germany about the realization and possible improvements. The workshop was a test for the so-called road show (student result presentation) in Ethiopia.

Student result presentation (road show): The lecturers and students have been able to present their business ideas at a specific event. The events held in Ethiopia and included the participation of stakeholders, the Ministry of Education, the Ministry of Economy, and the Women Association of Ethiopia.

Education Programme: The master programme named entrepreneurship and renewable energies was developed within the project. The programme consists of one technology part including monitoring, maintenance and performing of minor repairments as well as the entrepreneurship part including development of entrepreneurship and supporting the foundation of start-up SMEs to enable value added production. The entrepreneurship education is mainly focusing on the business model canvas as a method to enable lecturers and students to learn entrepreneurial behavior.

Drivers and challenges

Drivers:

- High interest and enthusiasm for entrepreneurship among government.
- Positive attitude from participants about entrepreneurship (eye opening experience).
- Positive feedback from successful events.
- Implementation in university programme through positive expectations, motivation and engagement of Ethiopian lecturers.

Challenges:

- To gain financial support from economic stakeholders or micro finance institutions.
- Missing simple technical engineering resources within the country (bad local sourcing).
- Emigration of companies from urban areas to cities.
- The students of Arba Minch University have a lack of speaking the English language.
- At the partner University, political education courses seem to be more important than Entrepreneurship education courses. Therefore, the entrepreneurship education courses have to deal with canceling and rearrangements.

Results

Impacts

From the view of the Neu-Ulm University of Applied Sciences, the project has been creating benefits:

- Students and teachers from Arba Minch University worked together in the new developed entrepreneurship education programme and gained entrepreneurial competences like forwardness, goal-orientation, resilience, ability to plan on the long run, believe in own idea.
- The instructors/teachers participated in train-the-trainer courses in Germany and Ethiopia.
- The business model canvas (Osterwalder et al., 2010) enriched the entrepreneurial competences during the development of the business plan.

- Lecturers and master students developed 15 business plans at the Arba Minch University.
- Nine of 15 business plans turned into real business. The entrepreneurs established 18 jobs and their companies still exist in 2017.
- After the project, the Arba Minch University implemented a Business Innovation Center to support the education programme at the university and the projects for further business idea development.

Transferability

The developed education programme is transferable to other technical universities and universities of applied sciences. The business model canvas is transferable. Information is available in English.

Co-operation needs and potential synergies

The project members from Germany stay in contact with other German Universities and Universities of applied sciences, who coordinate entrepreneurship education projects in Africa or Asia. The project leader is, connected with the Federal Ministry for Economic Cooperation and Development as well as with the GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit).

Cooperation between different projects and stakeholders could be useful for the project and further progress in the field of knowledge exchange and financial support. Knowledge exchange between the projects, as well as offering summer schools with train the trainer workshops could be useful to share ideas, gain more creativity and experience different methods and trainings. Financial support was not offered by the Ethiopian state or by other Ethiopian stakeholders. Therefore having a platform to use crowd funding or oiko credits³¹ within the project could be useful to support business ideas.

Lessons learned

- **The focus should not be on one business field.**

Focusing on one specific business area can hinder further development. To stay open and consider the entrepreneurial ecosystem (like micro finance institutions) is important to succeed.

- **A good business idea needs also financial support to exist.**

No business start-up can be successful, if the money is missing. The financial institutions should also consider small profit but stable cash flow.

- **The most important point for successful entrepreneurship education is the reality-based long-lasting experience.**

The lecturers and students had the chance to experience a real business idea and development process through a period of 18 months. They tried to understand the concept of entrepreneurship and finally they developed an entrepreneurial attitude.

References

Research for this case study was conducted by Dr. Brigitte Halbfas, university professor at the University of Kassel, Department of Entrepreneurship Education and Dr. Verena Liszt, senior researcher at the same department, on behalf of the study Entrepreneurship in Developing Countries. Sources and references used include desk research plus the following:

Interviews

- Prof. Dr. Elmar Steurer, Project Manager AEEP.

³¹ Oiko credits, see <https://www.oikocredit.coop/publications/annual-reports>

- Selomie Daniel, Arba Minch University, dselomie@gmail.com
- Teshome Dengiso Megiso, Arba Minch University, teshomedengiso@yahoo.com
- Business Partner: Phaesun GmbH: Tobias Zwirner: tobias.zwirner@phaesun.com

Literature

AEEP Sachbericht für den DAAD (2016): Projekt "Applied Entrepreneurship Education Programme" (AEEP) Sachbericht über den Zeitraum 1.1.2016 bis 31.12.2016.

Alliance for Rural Electrification. Last accessed 16 May 2017, see: <https://www.ruralelec.org/project-case-studies/neu-ulm-university-applied-sciences-applied-entrepreneurship-education>

Arba Minch University Website: About us. Last accessed 16 May 2017, see: http://www.amu.edu.et/index.php?option=com_content&view=article&id=26&Itemid=3

Daniel, S./Steurer, E./Wagemann, B. (2017): Productive use of renewably energy supporting applied entrepreneurship – Lessons learned from a development project in rural Ethiopia. In: Proceedings of the 5th Annual Conference "Universities, Entrepreneurship and Enterprise Development in Africa" from 10th to 11th November 2016 in Bonn-Rhein-Sieg at the University of Applied Sciences, Sankt Augustin, Germany.

German Ministry of Foreign Affairs: Country information Ethiopia, Status quo April 2017. Last accessed 16 May 2017, see: http://www.auswaertiges-amt.de/DE/Aussenpolitik/Laender/Laenderinfos/01-Nodes_Uebersichtsseiten/Aethiopien_node.html

Phaesun Website. Last accessed 16 May 2017, see: http://www.phaesun.com/de/unternehmen/news/news/news-de-tail.html?tx_ttnews%5Btt_news%5D=83&cHash=215a1bf38fd456ad833791c7505d34aa

Oiko credits. Last accessed 31 May 2017, see: <https://www.oikocredit.coop/publications/annual-reports>

Osterwalder, A./Pigneur, Y./Smith, A. (2010): Business Model Generation: Ein Handbuch für Visionäre, Spielveränderer und Herausforderer. Campus Verlag.

2.2.7 Start-Up Factory Kumasi - Paderborn (University of Paderborn)

IN A NUT SHELL	In the project "Start-Up Factory Kumasi – Paderborn", students from the University of Paderborn and the Kwame Nkrumah University of Science and Technology in Ghana learn entrepreneurial methods and provide consulting selected entrepreneurs in annual cycles.
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Abstract

In the project "Start-Up Factory Kumasi – Paderborn", the University of Paderborn's Department of Electric Energy Technology co-operates with the Kwame Nkrumah University of Science and Technology (KNUST) in Ghana. The project runs from 2015 to 2018. Its objective is developing technical products and services for regional markets in Africa. German students, together with students and teachers from KNUST, jointly develop technical products in the field of renewable energies. Every year, the teams consult one specific entrepreneur in an annual cycle. Through this development and consulting experience and also in presentations at trade fairs, the students learn entrepreneurial thinking and may be motivated to start a business themselves later on. Communication between the German and the Ghanaian team has been hampered so far – WhatsApp turned out to be the most effective means of day-to-day communication. More intense communication between similar projects may in the future help finding solutions to practical problems within such projects.

Case study fact sheet

▪ Full name of project and website:	Start-Up Factory Kumasi – Paderborn (http://ei.uni-paderborn.de/nek/forschung/start-up-kumasi)
▪ Co-ordinating university and co-ordinator in Germany:	University of Paderborn (UPB), Department of Electric Energy Technology – Sustainable Energy Concepts, Prof. Dr. Stefan Krauter; operative team leader: Tobias Klaus
▪ Target country:	Ghana 
▪ Partner universities abroad:	Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana
▪ Further partners in Germany:	afrisolar e.V.
▪ Further partners in target country:	eng solutions Ltd. (Ghana) German Chamber of Foreign Trade in Ghana
▪ Key objectives of the project:	Students from UPB as well as students and teachers from KNUST jointly develop technologies from West Africa in the field of renewable energies for the West-African market

Background

Project profile: The project "Start-Up Factory Kumasi – Paderborn" is operated by the University of Paderborn's Department of Electric Energy Technology – Sustainable Energy Concepts. The University's technology transfer office TecUP and its Chair for International Business are also involved. German students, together with students and inventors from the Kwame Nkrumah University of Science and Technology (KNUST) in Ghana, jointly further develop technical developments from West Africa in the field of renewable energies. The objective is to develop technical products and services for regional markets in Africa, also including business plans. The students mainly work at their home university but meet for block events in Ghana. The project runs from 2015 to 2018.

Partners' profiles: The Kwame Nkrumah University of Science and Technology (KNUST) is considered as one of the best universities in West Africa, particularly in the field of renewable energies. The Department of Physics and the Department of Electrical Engineering are partners in the project. Kumasi is a city with two million inhabitants in one of the largest metropolitan areas in Ghana, located in the inner country 200 km North-West of the country's capital Accra.

The start-up company eng solutions in Ghana accompanies the project as a business partner. Its field of business is regenerative energy, energy efficiency and domestic technology. It brings in its experience throughout the project, and it represented the first business idea on which the project worked in 2015/16.

The German Chamber of Foreign Trade in Ghana is an associated partner. The Chamber helped present the first project at the West Africa Energy Conference (WACEEE) in Ghana. A further associated partner is the German afrisolar association, which is led by the operative project leader at UPB.

Key characteristics of the project

Objectives and target groups

The project's overall objective is fostering entrepreneurial thinking among Ghanaian and German students in technical degree programmes, especially in physics and electrical engineering. Specifically, the objectives are to make Ghanaian physics students think and act entrepreneurially, to make UPB engineering students familiar with entrepreneurship, and to make UPB business students familiar with commercialising technology. Ideally, the project will lead to joint Bachelor and Master theses. Furthermore, the project also aims at motivating Ghanaian university teachers to think more entrepreneurially. In order to be most effective, the project is integrated in existing structures at both universities. The fix point is a concrete consultancy project: Every year, teams of students and teachers from both universities consult one specific entrepreneur from Ghana.

Teachers and instructors

The teachers involved in the project are from UPB, specifically from Electric Energy Technology and TecUP, and from KNUST, specifically from the Departments of Physics and Electrical Engineering. In both countries, external experts from practice are brought in to support the teams.

Design, setting and management of events and activities

The events of the Start-Up Factory Kumasi – Paderborn take place in a certain annual sequence with three workshops as the main events:

- (1) A kick-off workshop each year in November. The German project team, including students, travels to Ghana.
- (2) A second workshop and visit in Ghana around Easter in order to mutually present and discuss results achieved so far.
- (3) A concluding third workshop in Germany in summer, presenting the results to the entrepreneur supported and discussing the achievements. The team from Ghana, including teachers and students, visits Paderborn.

At the outset of each annual project cycle, a young Ghanaian entrepreneur with a business idea in the field of renewable energy is selected for being supported. The idea is normally no high tech but intelligent low tech. The entrepreneur is not necessarily a KNUST graduate – the goal is to work on an idea that is as promising as possible. The team at UPB considers itself as a kind of consultancy to put this idea into practice. The project leader in Germany says they need to take this consulting very serious because the Ghanaian entrepreneur invests considerable time and money. The first sub-project in 2015/16 was to support eng solutions, a company offering products and services in the field of renewable energy founded in 2014. In 2016/17, the task is to optimise a hybrid dryer for agricultural machines. Before the kick-off workshop, UPB selects six to eight students to work on the one-year sub-project. At least two German students write a qualified thesis paper about the sub-project. Ten to twelve students and some teachers from KNUST are involved to develop the technology and business idea, specifically to adapt it to requirements in Ghana.

The ideas supported in the first two years originated both in engineering and were lacking business expertise. Hence the students were supported by the UPB's business department to develop a sound business plan for the technology.

According to the original plan, the activities should take place within one semester. Realising that continuous coaching needs to take more time to develop technology and business plans, the sequence was extended to one academic year.

The Exhibit shows an overview about the events in the project's annual cycle.

Exhibit: Overview about activities and events in the Start-Up Factory Kumasi – Paderborn

Activity/event	Format (type, length, offered since [year])	Objectives	Target group	Teachers or instructors	Participants / results in [year]
Start-up workshop	Kick-off meeting in Ghana, annually in November	Selection of technical solutions for commercialisation	UPB and KNUST students	Teachers from UPB and KNUST	2015: 10 German participants 2016: 9 German participants
Technical development	Joint drafting and implementation of a work plan	Development of technical solutions for commercialisation	UPB and KNUST students	Teachers from UPB and KNUST	n.a.
Company internships	KNUST students' internships in the supported enterprise; three weeks in winter vacation time	Support selected enterprise; develop entrepreneurial thinking of KNUST students	KNUST students	(Not applicable)	About 8, at eng solutions
Entrepreneurship Camp	Two-day interim workshop in Ghana, from second year onwards every year around Easter	Teaching advanced knowledge and practice of entrepreneurship and start-up; development of business plans	UPB and KNUST students	UPB and KNUST teachers plus external experts	around 20
Continuous coaching of UPB students	Coaching	Developing the economic aspects of the business ideas	UPB students	TecUP, teachers from UPB plus external experts	about 6-8
Continuous coaching of KNUST students	Coaching	Developing the economic aspects of the business ideas	KNUST students	KNUST teachers, external experts	around 12
Concluding workshop	Concluding workshop in Germany, from second year onwards	Reviewing what was achieved in the sub-project	KNUST and UPB students and teachers	KNUST and UPB teachers	around 20

	every year in summer				
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Source: Start-Up Factory Kumasi – Paderborn project description and status report 2016

Project example: smart tropical house

It its first year, the project "Start-Up Factory Kumasi - Paderborn" supported the development of a "smart tropical house". 14 students from KNUST work together with German students on tasks in the fields of architecture, air conditioning, business planning, photovoltaic and energy management. For example, the influence of different outside wall coatings on the inner temperature needed to be measured. An objective of the smart tropical house project was reducing the currently very high energy consumption in houses. Insufficient insulation of the houses requires much energy to cool them down inside.

Source: <http://ei.uni-paderborn.de/nek/forschung/start-up-kumasi/>, own summary and translation

Drivers and challenges

Drivers

The original driver for initiating the project between KNUST and UPB was a preceding joint project application which the project leader at UPB submitted from his former employer. Hence both parties knew each other and sought to seize a further opportunity for co-operation.

For Ghanaian students, the project opens up the opportunity to start an own business after graduation – facing high unemployment in the country. This was stressed by all interviewees: the project leader and the business supporter at UPB, and the entrepreneur supported in the project's first year.

Challenges

A first challenge is **timing**. In the first months of the project it turned out that support to enterprises should take place in one academic year, rather than in only half a year. The entrepreneur supported in the first year states that even one year may be too short for Ghanaian students to really understand things sufficiently deeply. Furthermore, curricula times in Germany and Ghana are different so that, for example, students may have to prepare for exams at times when specific tasks or workshops in the project take place.

Communication between the country teams in the first year of the project was not optimal and unexpectedly time-consuming. Apparently there were cultural differences and different expectations between the country teams. Web-based training, including central data storage in a Moodle platform, and video conferencing, which were planned to be used at the beginning, did not work because the students and teachers in Ghana were not sufficiently inclined to use them. Instead, communication via WhatsApp turned out to be feasible. In fact, the German project team learnt that many small businesses in Ghana conduct almost their complete interaction via WhatsApp. However, WhatsApp is not designed for more sophisticated academic exchanges. When required in specific cases, the teams from the two countries communicate via e-mail to exchange files. Another example of deviating expectations is that KNUST teachers assign certain subjects to their students which are supposed to be related to the project. However, in the first year they have not always communicated these subjects to the German partners in advance. The result was that some subjects were not a perfect fit. The project leader at UPB says that communication between the students worked better, while there are shortcomings in academic knowledge among some KNUST students.

In order to deal with the challenge of **cultural differences**, the team in Paderborn modified their approach somewhat in the second year: At the beginning of the cycle, they trained their students in cultural issues they would face – for example, that processes would be slower than in Germany. Furthermore, the introductory workshop in Ghana put much more emphasis on making the team members acquainted with each other; one and half a day was spent on specific cultural training. Some Ghanaian students even took their German fellows to their homes. This experience turned out

to be very beneficial for the ensuing project. Moreover, communication with university teachers improved strongly in the second cycle due to a mediator from Ghana who studied in Germany.

While the project also aims at motivating KNUST **university teachers** to think and act more entrepreneurially, this goal so far has only partly been fulfilled. The expertise of Ghanaian university teachers is often in specific technical subjects and there has as yet been little interest to extend it towards entrepreneurial application.

As regards the **support to concrete enterprises**, the first selected product to be developed was a container for living (see project example above). There were ambiguities about the technical concept which was developed in the project between the student teams and the entrepreneur. The fact that the entrepreneur was older than the students may have made communication more difficult. Nevertheless, the entrepreneur states that he received valuable support which he will implement step by step. In the second year, the student teams supported a start-up that had developed a method to dry farmers' harvests. This start-up was run by graduates who were almost the same age as the support team, and communication is reported to have been more fluent.

Co-operation with **project partners** beyond the universities, while not essential for the project, were somewhat hampered. A small German enterprise was foreseen as a partner but linkages were cut because of disagreements. Another partner foreseen, the German Chamber of Foreign Trade, could so far not play a bigger role as planned because its energy expert left the Chamber and has not yet been replaced.

Considering the immense time required to keep co-operation between the partners running, the project leader at UPB considers the **project's budget** as very small. The Ghanaian entrepreneur involved in the first year says he would have wished to receive at least travel cost reimbursement because his enterprise is not located in Kumasi. He would have been pleased to become stronger involved in the project to contribute his expertise as an entrepreneur and receive a little compensation in turn. Furthermore, he would have strongly appreciated access to prototype funding.

On the other hand, **bureaucracy** does not appear to be a big problem. KNUST's top management was not involved; the project was channelled through the Dean of the College of Science. In fact, in order to give the project more thrust, there is the idea to arrange a meeting between both universities' vice presidents for international affairs. So far this idea was not put into reality because it would involve considerable extra effort.

Results

Impacts

In its first two years, the project went through a steep learning curve and already had positive impacts. The project leader at UPB says that the project **made KNUST students think more about entrepreneurship**. Even if they do not start a business on their own, they learn how a business director thinks and they increase their chances to move into a leading company position later on.

Several students seized the opportunity to do an **internship in the company** supported in the first year of the project, which increased their understanding of practical business according to the entrepreneur. Moreover, presenting the first-year project at the WACEEE trade fair was also a helpful experience for the students. According to the project leader at UPB, students through such events learn to reflect their project, to speak about it and to take a different perspective to it.

The entrepreneur of the small enterprise supported in the first year says he benefited particularly from the business advice he received but also from the technical concepts. He is very positive about the project's impact on students but worried about the project's sustainability after the end of DAAD funding. The **start-up** supported in the second year was successfully registered at the end of the cycle. The German students identified themselves so much with it that they contributed money to the enterprise's formal registration.

Transferability

The operative project leader at UPB believes that the project's approach to run one-year cycles of concrete support to entrepreneurs in Africa through students in Germany and Africa is valuable and in principle well transferrable to other universities. Diverging curricula between the countries involved, however, need to be addressed.

Co-operation needs and potential synergies

According to UPB's project leader, the project could benefit from more co-operation with other organisations and experts. For example, the Federal State of North-Rhine Westphalia has a partnership with KNUST but so far it does not support projects like the Start-UP Factory. The same applies to a German office specifically for Ghana of the German Association for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ). On the other hand, the project leader has good contacts to the GIZ office in Ghana itself. Furthermore, he recently established contacts to the United Nations Industrial Development Organisations (UNIDO) which would be a good fit for the project, and expressed general interest.

Moreover, the project leader at UPB suggests establishing a **cross-project communication platform**. Such a platform could be a point of exchange about experiences from other projects – what works, what does not work, and why and how? Communication on such a platform should however be confidential.

More **meetings with similar projects** as well as with development organisations in Germany may also be helpful in order to discuss new ideas. For example, development organisations, with their long-standing experience on site, may be able to give advice for practical problems in communication and motivation.

Lessons learned

▪ **Using simple popular communication media may be most effective**

The project partners in Germany sought to communicate with African university partners and students via an academic data platform and through teleconferencing. However, it turned out to be more effective to communicate via simple, popular media like WhatsApp.

▪ **Managing cultural differences**

The teams from the countries involved should manage their expectations and they should dedicate sufficient time to becoming acquainted with each other right at the beginning of the project. Establishing personal relationships with the team members from the foreign country is very important.

▪ **Intensified exchange with similar projects and development organisations**

In order to learn more about how to solve practical problems in such projects, it may be useful to intensify exchange between similar projects and also with development organisations. Workshops and web-based platforms may help in this respect.

References

Research for this case study was conducted by Dr. Stefan Lilischkis, Senior Consultant at empirica GmbH, Bonn, on behalf of the study Entrepreneurship in Developing Countries. Sources and references used include desk research plus the following:

Interviews

- Tobias Klaus, Coordinator and Research Assistant, Energy supply for sustainable development, University of Paderborn: Personal interview, 15 May 2017.
- Eva Alexandra, Schmitz, Doctoral Fellow and Research Assistant, Chair for International Business of Prof. Dr. Rüdiger Kabst and Paderborn School of Entrepreneurship & Innovation, TecUP, University of Paderborn: VoIP interview, 22 June 2017.

- Emmanuel Addo Otoo, ENG Solutions Ltd., Ghana: VoIP interview on 26 June 2017.

Websites

afrisolar, <http://www.afrisolar.org/seite/248310/start-up-factory-kumasi-paderborn.html>, last accessed 19 June.

eng solutions, <http://www.hls-lenggries.de/eng-solutions.html>, last accessed 19 June 2017.

KNUST, Department of Physics, <https://physics.knust.edu.gh/>, last accessed 19 June 2017.

Start-Up Factory Kumasi – Paderborn, <http://ei.uni-paderborn.de/nek/forschung/start-up-kumasi/>, last accessed 19 June 2017.

Further sources

“Start-Up Factory Kumasi – Paderborn”, project description (no public document)

“Start-Up Factory Kumasi – Paderborn”, project application (no public document)

“Start-Up Factory Kumasi – Paderborn”, status report 2016 (no public document)

2.2.8 Entrepreneurship Education: A Key to Job Creation and Employability in Azerbaijan (University of Siegen)

IN A NUT SHELL	“EE-KEY-AZ” fosters entrepreneurship education at two universities in Azerbaijan. Sensitisation as a first step followed by qualification of trainers and students supports the establishment of an entrepreneurship network. However, financing new business ideas is an ongoing challenge.
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Abstract



In the project, the University of Siegen supports the partner in Azerbaijan, the UNEC (old ASEU) in Baku, to develop an education system based on entrepreneurship for small and medium-sized enterprises. This system should be focus on entrepreneurial behavior to enable students to deal with the changing circumstances on the labour market. In and around this nucleus a culture and network structure is set up that creates an entrepreneurial climate and enables students to think and act entrepreneurially. The project runs from 2016 to 2019 and has three main objectives: sensitization and qualification of students, qualification of trainers and establishing a network. The political and economic stakeholders have a high interest in entrepreneurship education and therefore do not hinder development and implementation processes. Sensitization processes can reach a huge amount of students. Qualification is concentrated on specific teachers and students. The business partners are important to give teachers and students insights into business life. An entrepreneurship lab has been established and a network between Universities in Baku will support sustainable education.

Case study fact sheet

▪ Full name of project and website:	Entrepreneurship Education: A key to job creation and employability in Azerbaijan (http://www.ee-key-az.de)
▪ Duration	1.1.2016 – 31.12.2019
▪ Co-ordinating university and co-ordinator in Germany:	Prof. Dr. Petra Moog, University of Siegen, Chair for Entrepreneurship and Family Business
▪ Target country:	Azerbaijan 
▪ Partner universities abroad:	Azerbaijan State Economic University (Baku, Azerbaijan) Odlar Yurdu University (Baku, Azerbaijan) Azerbaijan State Oil and Industrial University (Baku, Azerbaijan)
▪ Business partners in Germany:	IHK Siegen, Unternehmenschaft Siegen-Wittgenstein, KM_SI – Kompetenzregion Siegen-Wittgenstein, SMI – Siegener Mittelstands Institut, Rotarier
▪ Key objectives of the project:	Sensitisation of numerous students for the topic of entrepreneurship through posters, folders, displays and personal contact; Qualification of trainers from Azerbaijan Universities and Qualification of students in an entrepreneurship lab at Azerbaijan Universities; Establish an entrepreneurship education network in Baku between three Azerbaijan Universities, economic partners and the University of Siegen

Background

Project profile: The University of Siegen operates the project "EE-KEY-AZ"³² with a starting point at the Azerbaijan State Economic University (UNEC) in Baku, Azerbaijan.³³ The project focus on three modules named sensitisation, qualification and network in the field of entrepreneurship education. "EE-KEY-AZ" runs from January 2016 to December 2019, and has three key objectives:

- Sensitization of numerous students for the topic of entrepreneurship through posters, folders, displays and personal contact.
- Qualification of trainers from Azerbaijan Universities and Qualification of students in an entrepreneurship lab at Azerbaijan Universities.
- Establish an entrepreneurship education network in Baku between three Azerbaijan Universities, economic partners and the University of Siegen.

Several concrete activities and events are designed to fulfil these objectives, which will be elaborated below in the section about key characteristics of the project.

The entrepreneurship education modules have been developed and realised at the University of Siegen. Since 2007 the University and its members are supported from German Federal Ministry of Science and Energy (BMW, Bundesministerium für Wissenschaft und Energie) to develop the project "Unternehmeruni", which is focusing on the named modules and the development of an entrepreneurship lab (Gründerbüro).³⁴

Partners' profiles: The project has eight partners – two university partners in Azerbaijan and six business partners –, all of them located in Germany.

The *Azerbaijan State Economic University* was founded in 1930 in Baku and is one of the largest higher education institutions in the Southern Caucasus. There are nine faculties operating at the University with more than 18.000 students studying on 21 specialities.³⁵ The *Odlar Yurdu University* was founded in 1995 in Baku, with five faculties. The University cooperates with different European Universities through exchange programmes and research projects.³⁶

The business partners are on the one hand the *Chamber of Commerce and Industry Siegen (IHK Siegen)*, the *Association of Enterprises (Unternehmerschaft Siegen-Wittgenstein)*, which are supporting the project with counselling about internships. On the other hand, the partners *District Siegen Wittgenstein*, *Competence Region Siegen-Wittgenstein* and *Medium Sized Business Institute of Siegen* and *Rotary Club* support the project with participation at meetings, counselling about internships and organization. Counselling includes advices for Azerbaijan students to find opportunities for new business ideas (mentoring), to get to know already working business ideas, get in contact with other enterprises to develop a network. Some business partners will tell the participants about innovation management and tell about their experiences with starting a business.

Key characteristics of the project

Objectives

The project "EE-KEY-AZ" aims to *develop an education system based on entrepreneurship for small and medium-sized enterprises*

³² Project website: <http://www.ee-key-az.de/projektbeschreibung/>.

³³ UNEC website: <http://unec.edu.az/en/p-moog-azerbaycanin-qeyri-neft-ixraci-sahesinde-cox-quclu-potensi-ali-var/>.

³⁴ According to project application.

³⁵ According to Azerbaijan State Economic University, see <http://unec.edu.az/en/university/about-unec/>.

³⁶ According to Odlar Yurdu University, see <http://www.oyu.edu.az/en/index.php?newsid=16>.

Target groups

The project's principal target groups are students from the two Azerbaijan universities (mainly master students) and university staff, who teach the aimed students.

Instructors

The project's principal instructors are university teachers from the University of Siegen and the two involved Azerbaijan universities. Experts from the business partners are frequently brought in as advisors or workshop leaders.

Design, setting and management of events and activities

Exhibit 1-32-7: Overview about activities and events

Activity/event	Format (offered [year])	Objectives	Target group	Teachers or instructors	Participants / results in or until [year]
1. Sensitization					
Workshop 1: Entrepreneurship-Education, Sensitization and peer-effects	Workshop (2016)	Awareness rising, increased knowledge	Project partner, teacher/academic staff	Prof. Dr. Petra Moog	42 participants (once)
Posters, folders, displays and personal contact	Dissemination/ Information (2016, 2017, 2018, 2019)	Awareness rising	Students in Baku	Prof. Dr. Petra Moog	Develop project website, flyers, posters, personal contact
2. Qualification					
Workshop 2: competence evaluation, train the trainer, experience exchange between peers/ alumni	Workshop (2016)	Awareness rising, increased didactical knowledge, including sensitization	Project partner, teacher/academic staff	Prof. Dr. Petra Moog	64 participants (once)
Summer School and Autumn School including visiting enterprises and convey internships	Summer/ Autumn-School (2016, 2017, 2018, 2019)	Develop competences in different fields: Business Planning, Management of Resources, Nuts and Bolts, Logistic in SMEs, Innovation Management, International Contracts, E-Commerce, Risk Management	Project partner, teacher/academic staff, students from Baku and Siegen	Fakri Mammadov; Prof. Dr. Petra Moog	2016 in Siegen 21 participants in the field of financing 2016 in Baku 27 participants in the field of business planning enterprise visits, business speeches
Student exchange programme (Master and Phd)	Networking (2016, 2017, 2018, 2019)	Develop entrepreneurial and international competences, gain contacts	Academic staff	Prof. Dr. Petra Moog	2016 three Phd students from Baku came to Germany
3. Network/Communication					
Workshop 3 (Siegen): Networks I Workshop 4 (Baku): Networks II	Workshops (2016)	Gain network participants, establish new associations	Coach Mrs. Hietsch, project partners, academic staff, founders and graduates from Baku	Prof. Dr. Petra Moog	Workshop I: 42 participants, Workshop II: 64 participants

Activity/event	Format (offered [year])	Objectives	Target group	Teachers or instructors	Participants / results in or until [year]
Workshop 5: supportive activities and competition contests Workshop 6: Establishing a master	Workshops (2017) – scheduled	Develop a business plan contest, Establish an incubator, Create a concept for master courses	Coach Mrs. Hietsch, project partners, academic staff	n.a.	n.a.
Establish a database of graduates	Database (2018)	Establishing	Business partners in Baku, Gründbüro/ConnectUSI Siegen, graduates and students, academic staff	n.a.	n.a.
Workshop 7: Graduate-Club Workshop 8: Final Conference	Workshops (2019)	Redevelop Business plan contest, Establish Graduate network, Establish an incubator, Finalizing teaching offer	Project partner, academic staff, managers from other Universities	n.a.	n.a.
Advisory Board	Meeting (2019)	Establish an advisory board for financing issues, gain funding/financial support	Project partner (especially business partners Baku and Siegen)	n.a.	n.a.

Source: Project Application "EE-KEY-AZ", 2015

Some specific events and methods

Workshop awareness rising and sensitization: Within the project, the members developed some merchandising products to support the sensitization of the students for entrepreneurship: Flyers, posters and stands to get in contact face-to-face. As a second step, sensitization workshops have been organized to give the students a chance to get first insights into the process of starting a business.

Train the trainer: Students and trainers should be able to understand, that being an entrepreneur could be a possible job alternative. The lecturers from Azerbaijan had been invited to participate in lecturers in Siegen, Germany. Specific train the trainer workshops should support lecturers with creativity techniques and different kind of teaching methods. After the qualification, the lecturers got feedback to their own lecturers in Azerbaijan.

Advisory board for financial issues: The idea was to support new business ideas with financial resources. This is due to the financial crisis and the bankruptcy of financial institutions in Azerbaijan. However, the development of this institution had been criticized. In the end, a different approach was chosen to realize the idea: The plan is to invite business angels, private investors to establish a responsible network for entrepreneurs and financiers. This network should finally operate for all three universities situated in Baku.

Graduate network (database): One central idea is, to collect the contact details from all graduates to establish a huge network. This network could be used to spread information but almost the network can be used to support people with new business ideas to get in contact with business partners. The university itself can use the network to invite graduates for speeches about business experiences into their entrepreneurship courses.

Drivers and challenges

Drivers:

- High interest for the project among management at universities, politics and institutions.
- Demand of self-fulfillment of younger generation.
- Pressure of economic situation due to critical circumstances and challenges in mineral oil and energy sector.
- Professionalization of teaching on university level including innovative teaching concepts, which are active and hands-on oriented.

Challenges:

- Political situation, conflicts with Armenia.
- Strong hierarchies in Azerbaijan Universities take time and need patience in case of implementing curricular courses.
- There is capital in Azerbaijan but investors are rare or only deal with well-known friends/partners.

Results

Impacts

From the view of the University of Siegen, the project has been creating benefits:

- Sensitisation activities has reached students (amount of students will be announced in 2017). The measurement will be based on items of standardised questionnaires.
- Azerbaijan State Economic University is motivated to integrate deeper insights into entrepreneurship on higher education level. Train the trainer supports integration on lower level to avoid time taking hierarchies.
- At Azerbaijan University, an entrepreneurship lab (incubator) has been created.
- First enterprises have been founded (four enterprises with four, three and two times one employees including the founder).
- A network between all Universities in Baku has been established and can be used to establish a Baku Incubator.
- Identification of financing through family fools and friends instead of private or governmental financing.

Transferability

The sensitization for entrepreneurship with the prepared materials and the workshop concept can be transferred to other universities. For future progress, it is planned to organize sensitization workshops for different Universities in Azerbaijan or at least for the Universities in Baku.

Co-operation needs and potential synergies

During the project, the members cooperate intensively with the ministry of education in Azerbaijan and with important stakeholders within the University. To stay in contact with people who manage the education sector in the country is as much important as to stay in contact with business partners to get contacts for new business cooperation. Business partners can also support the lecturers with practical insights and can be role models for the students.

For further progress and future work in the field of entrepreneurship education in Africa, the project has developed first cooperation with other German universities to exchange experiences and learn from each other. The partner countries may differ but the problems of implementation transfer, motivation and education are similar and therefore cooperation is suitable.

Lessons learned

- **Entrepreneurship Education enjoys a huge appreciation on political and on university level.**

The support of stakeholders within the project collaborates (universities) as well as from political stakeholders and business partners is very important to be able to push the topic.

- **Some Universities have shorter implementation processes.**

The implementation process in internationally experienced Universities is shorter due to the handling with English as a working language and experience in dealing with international partners.

- **Focusing on entrepreneurship education is not enough for didactical changes.**

The partners were interested in general information about didactics in economic, for example. The lecturers have not been trained in teaching and were looking forward to gain general didactical information.

References

Research for this case study was conducted by Dr. Brigitte Halbfas, university professor at the University of Kassel, Department of Entrepreneurship Education and Dr. Verena Liszt, senior researcher at the same department, on behalf of the study Entrepreneurship in Developing Countries. Sources and references used include desk research plus the following:

Interviews and other primary data

- Prof. Dr. Petra Moog, Project Leader (Germany), University of Siegen, Chair for Entrepreneurship and Family Business: Telephone Interview on 22 May 2017.
- Business Partner 1: Mr. Jan Krueckemeyer, Krueckemeyer Company, E-Mail responses to interview questions on 3 July 2017.
- Business Partner 2: Mr. Joerg Dienenthal, Dango Dienenthal Company, E-Mail responses to interview questions on 27 June 2017.
- Response to a profile questionnaire about the project filled in by Prof. Dr. Petra Moog, Sven Wolff, und Miriam Hiepler, University of Siegen, returned on 12 April 2017.

Websites

German Ministry of Foreign Affairs: Country information Azerbaijan, Status quo March 2017. Last accessed 28 April 2017, see: http://www.auswaertiges-amt.de/DE/Aussenpolitik/Laender/Laender-infos/01-Nodes_Uebersichtsseiten/Aserbajdschan_node.html

EE-KEY-AZ Project, project website, see: <http://www.ee-key-az.de/projektbeschreibung/>

Azerbaijan State Economic University, press release on university website, see: <http://unec.edu.az/en/p-moog-azerbaycanin-qeyri-neft-ixraci-sahesinde-cox-quclu-potensial-var/>

Azerbaijan State Economic University, information about university, see: <http://unec.edu.az/en/university/about-unec/>

Odlar Yurdu University, information about university, see: <http://www.oyu.edu.az/en/index.php?newsid=16>

2.2.9 Voice of Business (University of Applied Sciences Wismar)

IN A NUT SHELL	“VoB” transfers sensitization and qualification concepts to two universities in Namibia and South Africa. The focus lies on increasing practical training within courses and supporting students to develop entrepreneurial interest and competences. One challenge is to gain support from economic stakeholders.
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Abstract

In the project, the University of Applied Sciences Wismar transfers an already developed and positively evaluated concept of 'student's research and development teams' to their partners in Namibia and South Africa. Additionally new instruments are generated to increase the practical amount: business simulation games and an idea camp. A module (some courses with similar topics) named 'entrepreneurial, leadership and employability competencies' offers students from different academic programmes a chance to come together and to develop a network for further business start-ups. The project runs from 2015 to 2018 and has the main objective to further develop an already existing concept of sensitization and qualification with focus on intrapreneurship. At both partner Universities work-integrated learning has been invented. The University in Namibia established a center for cooperative learning. The University in South Africa invented idea camps with service learning focus. The economic stakeholders have a high interest in the project and in general demanding employees from the universities. Therefore, the economic stakeholders have to learn to work together with universities and the other way around.

Case study fact sheet

▪ Full name of project and website:	Voice of Business http://voice-of-business.education/
▪ Duration	1.1.2015 – 31.12.2018
▪ Co-ordinating university and co-ordinator in Germany:	Dipl.-Kff. (FH) Regina Krause, University of Applied Sciences Technology, Business and Design Wismar, Robert-Schmidt-Institute
▪ Target country:	Namibia  , South Africa 
▪ Partner universities abroad:	Vaal University of Technology - VUT (Vanderbijlpark, South Africa) Namibia University of Science and Technology – NUST (Windhoek, Namibia)
▪ Business partners in target country:	Steinmueller Africa (Pty) Ltd, Sasol Group Services, Adforce, NUST Radio Station, Hospice of Hope, Innovation Design Lab, Television Classified Advertisements Edition (TVCASE), City of Windhoek
▪ Key objectives of the project:	Develop and implement a module (some courses with similar topics) named "entrepreneurial, leadership and employability competencies" to qualify African students. Develop two new tools (Business Simulation Games Ludus and Special Idea Camps) to increase the practical amount within courses.

Background

Project profile: The University of Applied Sciences of Wismar operates the project “Voice of Business” with Vaal University of Technology (VUT) in South Africa³⁷ and Namibia University of Science and Technology (NUST) in Namibia³⁸. The project focus on qualifying students concentrating on entrepreneurial, leadership and employability competences. “VoB” runs from January 2015 to December 2018, and has the main objective to further develop an existing concept of sensitization and qualification with focus on intrapreneurship.

Several concrete activities and events are designed to fulfill these objectives, which will be elaborated below in the section about key characteristics of the project.

Partners’ profiles: The project has eight partners – two university partners in Namibia and South Africa and six business partners –, all of them located in Africa.

The Vaal University of Technology - VUT was originally founded as a College for Advanced Technical Education in 1966 in Vanderbijlpark in South Africa.³⁹ VUT has four faculties that offer courses in Applied and Computer Sciences, Human Sciences, Engineering and Technology and Management Sciences⁴⁰. It is one of the largest universities of technology in South Africa, with an annual enrolment of about 21 000 students.⁴¹ The Namibia University of Science and Technology – NUST in Windhoek in Namibia was founded 1996. There are six faculties at the NUST (management sciences, human sciences, engineering, health and applied sciences, computing and informatics, and natural resources and spatial sciences). In 2014, 12,946 students enrolled at the university.⁴²

The business partners in South Africa are *Steinmueller Africa (Pty) Ltd* and *Sasol Group Services*, who support the project with participating at project workshops and co-develop teaching and learning contents for the module. The business partners in Namibia are Adforce, NUST Radio, Hospice of Hope, Innovation Design Lab, television Classified Advertisements Edition (TVCASE) and City of Windhoek. These partners assigned an agreement and work together with the students on specific projects.

Key characteristics of the project

Objective

The project “VoB” aims to extend an existing concept of sensitization and qualification with focus on intrapreneurship.

Target groups

The project’s principal target groups are students from the two African universities (bachelor and master students) and economic stakeholders, who support the projects.

Instructors

The project’s principal instructors are university teachers from the University of Applied Sciences Wismar and the Vaal University of Technology (South Africa) and the Polytechnic of Namibia, which is part of the Namibia University of Science and Technology – NUST. The business partners in Africa are important to have a platform for the work-integrated learning.

³⁷ VUT Website: <http://www.vut.ac.za/>

³⁸ NUST Website: <http://www.nust.na/>

³⁹ According to VUT Website, see <http://www.vut.ac.za/VUT-History/>

⁴⁰ According to VUT Website, see <http://www.vut.ac.za/facts-about-vut/>

⁴¹ According to VUT Website, see <http://www.vut.ac.za/Background-Overview/>

⁴² According to NUST Website, see <http://www.nust.na/?q=about-us/nust-facts>

Design, setting and management of events and activities

Exhibit 1-2-8: Overview about activities and events

Activity/event	Format (offered [year])	Objectives	Target group	Teachers or instructors	Participants
1. Target: Establish an infrastructure for the implementation of new teaching methods					
Business Breakfasts in Namibia (3 times)	Networking event 2015	Preparing companies for cooperation Presenting the idea	Project lead and partner, companies of the region		38 female and 32 male
Come together and training for South African lecturers	Meetings, workshops, company visits (2015)	- Experience exchange and get to know each other - Information about the concept at the HSW (Hochschule Wismar, German University of Applied Sciences) - Visiting companies who took part within the project in Wismar, Germany	Project lead and partner, German companies, IHK and VUT lecturers	Four male and four female	
2. Target: Development of education programme, courses, modules					
Experience exchange	Contacting and Networking (2016)	- Exchanging experiences - Get to know and understand higher educational structures in Africa and Germany - Get to know the business simulation tool - Develop course material	Project lead and partner, lecturers		one person from each University
Creativity Workshop Namibia	Workshop (2016)	Sensitization of students for entrepreneurship	Students	One German, one Namibian	six female and nine male
3. Target: qualifying students at VUT, NUST and HSW					
Distribution Conference at Southern Gauteng Regional Innovation Forum	Conference (2017)	- Disseminate information about the project - Gain additional project partners	Project lead and partners		
IdeaCamp South Africa	Workshop (2016)	Students develop solutions for specific problems and gain entrepreneurial competences	Students	two South African	eight female and twelve male
Entrepreneurial Thinking and Acting (two times in Namibia)	Workshop (2016)	Sensitization of students for entrepreneurship	Students	two Namibian each time	19 female and 32 male
Project work with students from VUT, NUST and HSW	Workshop (2017)	Training with a business simulation tool	Students, project lead and partner		
Networking forum for companies and students at NuST, VUT and HSW	Networking forum (2017)	- Get in contact with companies - Gain interested students for the projects	Project lead and partner, students		
Come together and training for African lecturers	Workshop (2015)	- Get to know the business simulation tool - Evaluate the tool	Lecturers from VUT, NUST and HSW		
Activity/event	Format (offered [year])	Objectives	Target group	Teachers or instructors	Participants
4. target: Dissemination of results and final sustainable qualification process					

Conferences	Conference (2018)	Disseminate project results and experiences	Project lead and partners		
Summer Camp in South Africa	Workshop (2018)	- Final qualification for capable students in the field of entrepreneurship - Experience exchange between students	Project lead and partners, students, lecturers, companies		Six students from each partner

Source: Project Application "VoB", 2014

Some specific events and methods:

Workshops to sensitize students for entrepreneurship: The project lead and partners produced promotion materials to spread the topic at the Universities and prepared specific workshops. The workshops contained creativity training and trainings to learn or at least activate entrepreneurial thinking and acting. The students had the chance to get to know companies and their challenges.

Idea Camp including Service Learning Projects: The students had the possibility to participate in specific trainings in companies. The training contains a service learning challenge, which was prepared by the companies. A center in Namibia responsible for cooperative learning events supported the promotion of the training. During their training, the students have to deal with a specific problem and solve the problem in groups of three to six people within a specific amount of time. Company members support the students with information, feedback and business advises.

Business Breakfast: Within this project, the business partners have been very important. The business partners have been invited to a business breakfast to get to know the project leaders, partners and the idea itself. During the event, the project members developed networks with companies who are interested in train students and support their learning. Different forms of support have been self-evaluation, feedback, and reflection workshop.

Drivers and challenges

Drivers:

- High interest and enthusiasm for employability and starting a business among students, business partners and the universities.
- The already established infrastructure of the universities in Namibia and South Africa were supportive to implement entrepreneurial concepts.

Challenges:

- To gain support from economic stakeholders. Some companies are interested in cooperation and but do not support the universities.
- There is a different understanding of project management. These different cultures need to come together, get used to the different wording and get to know each other. This takes time and patience.
- The political circumstances in South Africa concerning the conflicts between black and white people can hinder further development and implementation of entrepreneurial settings.

Results

Impacts

From the view of the University of Applied Sciences Wismar, the project has been creating benefits:

- In both African Universities, work-integrated learning (courses with practical training) has been established consistently.
- In all programmes at NUST (Namibia), the module has been implemented compulsory.
- The bachelor students and afterwards the master students attended the module. The amount of female and male was equal.
- The intercultural aspect within the project is distinctive. Academic staff, project members and students from Namibia, South Africa and Germany visited each other, which leads to further progress in case of intercultural networks and future projects or cooperation.

Transferability

The module could be transferable f. e. to other universities or to workshops for business partners.

The idea camp is transferable to other countries and could be useful to not only force entrepreneurial competences but also force international exchange and cultural understanding.

Co-operation needs and potential synergies

The University of Applied Sciences Wismar created a cooperation since 2012 with Namibia and 2014 with South Africa. There are ongoing cooperation with Ghana on national (GIZ⁴³, DAAD) and European (EC⁴⁴) level.

The conference organized by the University of Bonn-Rhein-Sieg supports the cooperation process between important stakeholders in this field. This platform could be also a great field for spreading ideas and concepts about train-the-trainer workshops between the projects, because it is essential to support the didactical development and to increase the experience of the manly young lecturers within the projects.

The idea of developing a platform for all projects with financial support for business ideas could be useful but dangerous. It is much better to strengthening self-help instead of develop dependence on German companies (for example depending on seeds and pesticides).

Lessons learned

- **Entrepreneurship Education motivates students to gain a job or start their own business.**

The enthusiasm of the students is important to be successful with the planned programme.

- **The development of entrepreneurial thinking and acting cannot be pushed in another country.**

The process to identify entrepreneurial behaviour as chance to support the society with a new way of thinking needs time. It is not possible to speed up this process of identifying entrepreneurship education as a tool to motivate further business development. It is much more difficult, if the awareness is not matured and economic and social circumstances are not prepared.

⁴³ GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit)

⁴⁴ EC (European Commission)

- **Develop a network with governmental and economic stakeholders as well as volunteering associations is necessary to implement entrepreneurship education in society.**

The stakeholders of the project need to be members of different areas (government, business, universities, non-profit-organizations) to be able to have power and offer different projects to the students. This would lead to more sustainability and visibility.

References

Research for this case study was conducted by Dr. Brigitte Halbfas, university professor at the University of Kassel, Department of Entrepreneurship Education and Dr. Verena Liszt, senior researcher at the same department, on behalf of the study Entrepreneurship in Developing Countries. Sources and references used include desk research plus the following:

Interviews and other primary data

- Dipl.-Kff. (FH) Regina Krause, Project Leader (Germany), University of Applied Sciences Technology, Business and Design Wismar, Robert-Schmidt-Institute: telephone interview on 17 May 2017.
- Ms Martha Namutuwa, Namibia University of Science and Technology – NUST (Windhoek, Namibia): E-mail responses to interview questions on 13 July 2017.
- Response to a profile questionnaire about the project filled in by Dipl.-Kff. (FH) Regina Krause, University of Applied Sciences Technology, Business and Design Wismar, returned on 12 April 2017.

Websites

German Ministry of Foreign Affairs: Country information Namibia, Status quo May 2017. Last accessed 16 May 2017, see: <https://www.auswaertiges-amt.de/DE/Laenderinformationen/00-SiHi/NamibiaSicherheit.html>

German Ministry of Foreign Affairs: Country information South Africa, Status quo April 2017. Last accessed 16 May 2017, see: http://www.auswaertiges-amt.de/DE/Aussenpolitik/Laender/Laenderinfos/Suedafrika/Aussenpolitik_node.html

Vaal University of Technology – VUT, About, see: <http://www.vut.ac.za/>

Namibia University of Science and Technology – NUST, About, see: <http://www.nust.na/>

3 CROSS-CASE ANALYSIS

3.1 Profile of the Projects

Overview of Profile Features

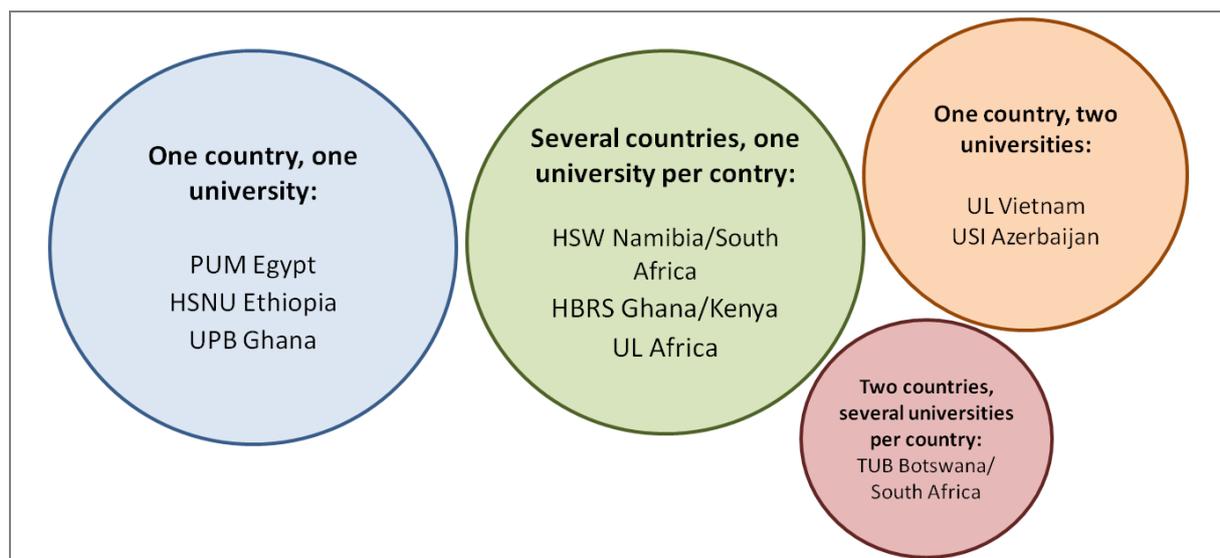
The profiles of the nine projects examined can be described by means of specific characteristics: the number of countries and universities participating in the project, the target groups, the nature of the activities, the promotion of business start-ups in the projects, the project partners and the approaches used to transfer the project methods to the target country. On the basis of the frequencies of indicators of these characteristics, the following sections in Chapter 3.1 illustrate the similarities and characteristics of the projects.

For the sake of easier readability, the following analysis uses abbreviations for the nine projects, which are composed of the abbreviations of the German university, which is responsible for the respective projects, and the target countries involved.

Number of countries and universities participating in the project

In summary, three projects have a target country and a target university. Three projects also deal with several countries and one university per country; two projects have one country and two universities; a project involves two countries with several universities per country (see Figure 3-1).

Figure 3-1: Grouping of Projects by Number of Target Countries and Target Universities



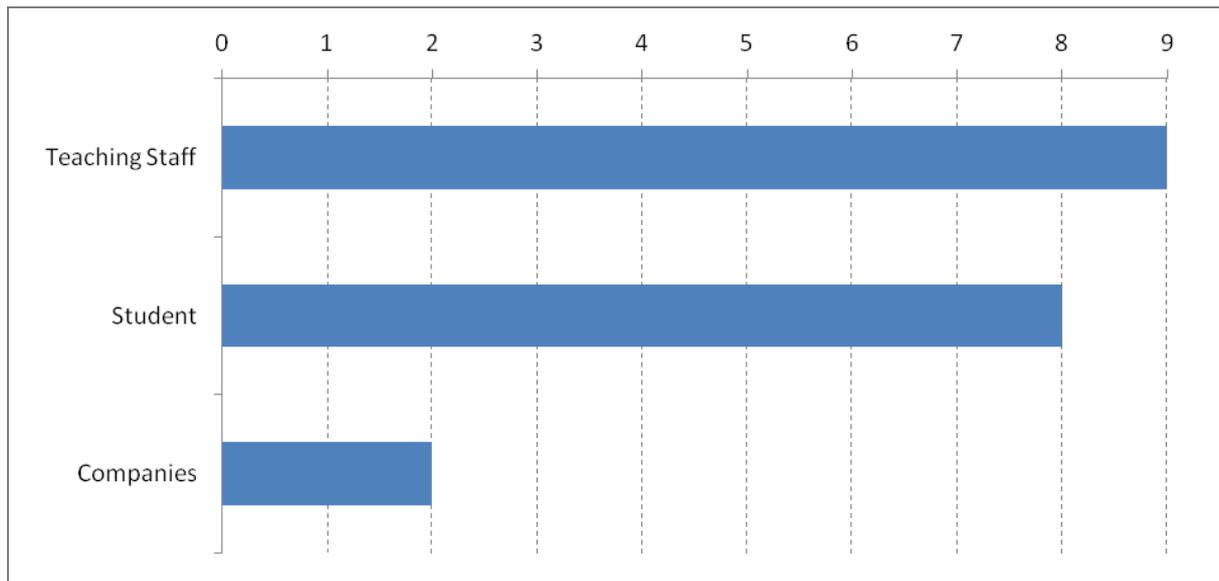
Source: empirica / University of Kassel

There is no link between the number of countries and universities participating in the project and the effects in the project.

Target Groups (Main Participants)

All projects are aimed at teachers as main stakeholders in order to bring them entrepreneurship education. In eight projects, students also belong to the target group, to which entrepreneurial thinking and acting are to be conveyed. Only the Africa Project of the University of Leipzig is aimed exclusively at teachers, not at students.

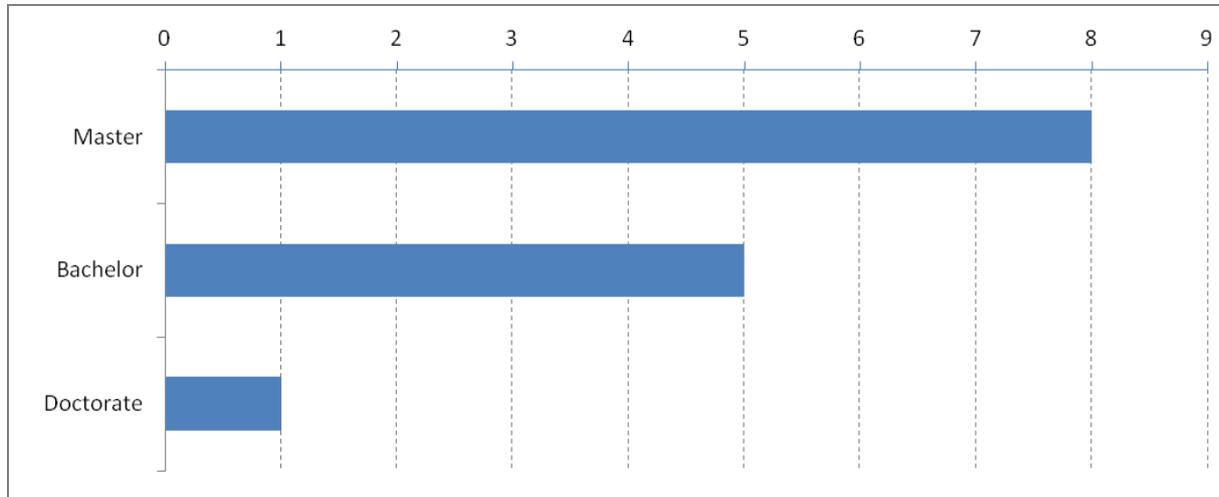
Figure 3-2: Target Groups (Main Participants) of the Projects



Source: empirica / University of Kassel

A more detailed analysis of the student target groups shows that the universities specify bachelor and master students as a relevant target group in the projects. All eight projects, which have students as a target group, address themselves to master students. A little less (five) are also addressed to undergraduate students. Doctoral students were only included in one project for the target group.

Figure 3-3: Target group "Students" According to Level of Studies in the Projects



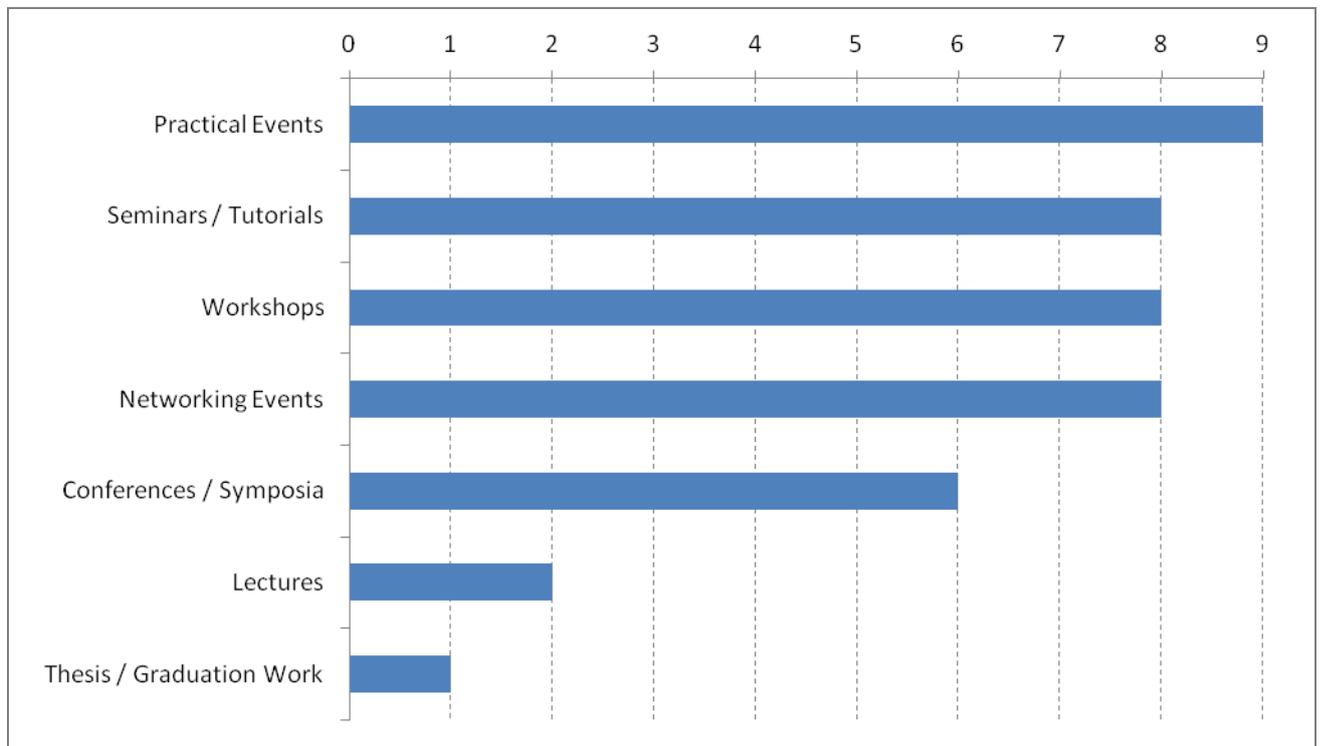
Source: empirica / University of Kassel

The higher education institutions, i.e., the presidencies or rectorates at the head of the university, are not target groups for entrepreneurship education, but they are formally involved in most projects since the project managers had to apply for the project. Some projects explicitly target companies in their specific country as a target group. The engineering and natural science faculties (STEM subjects) and business schools of the participating universities in the target countries consider themselves centers of entrepreneurship education in the projects. Here, „center“ is understood as the place where the project managers are active. In addition to the core faculties, entrepreneurship education events are also open to students of other faculties at some universities. At three universities, the offer is specifically intended for students of the entire university.

Type of activities

The projects include many different types of events and other activities (see Figure 3-4).

Figure 3-4: Types of Activities in the Projects (Excluding Support of Start-ups)



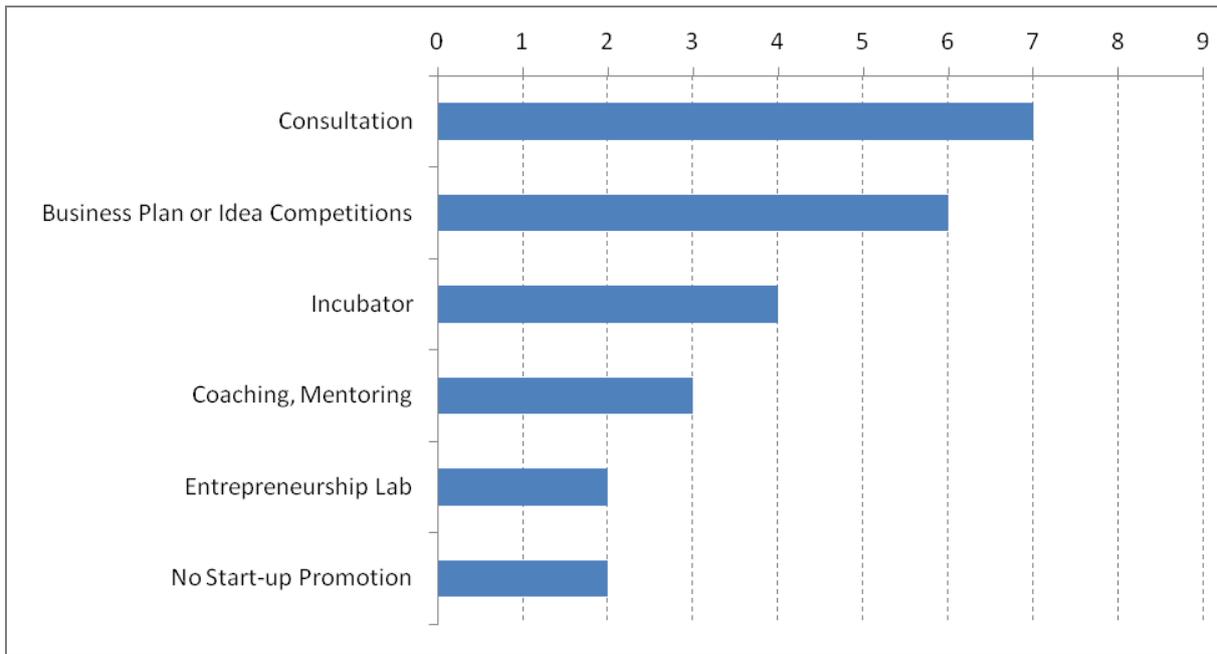
Source: empirica / University of Kassel

- **Practical courses** (mainly extra-curricular) include internships in companies, excursions to companies and practice projects. All projects offer practical events.
- **Classical lectures** (mainly curricular): lectures, seminars and tutorials are offered in almost all projects. Lectures, however, are only offered in a few projects – which clarifies the focus on practice-oriented teaching. Some projects have developed special event formats.
- **Events for the exchange of expertise:** workshops, conferences and symposia on entrepreneurship are organized in many projects.
- **Network expansion:** Almost all projects use and expand their network in Germany and the target countries in order to increase their expertise and gain further support resources for the project.
- Only one project reported about work on a dissertation to achieve an academic degree.
- **Incubation and acceleration:** This section includes business plan contests and ideas, the establishment of incubators, entrepreneurship laboratories as well as coaching, mentoring and advising of start-ups.

Support of concrete start-ups in the projects

Almost all projects – the exceptions are the Africa Project of the University of Leipzig and the project HSW Namibia/South Africa – support direct start-ups of students and university graduates in the target country. Figure 3-5 shows the frequencies of the activities to support start-ups in the projects.

Figure 3-5: Activities to Support Concrete Start-ups in the Projects

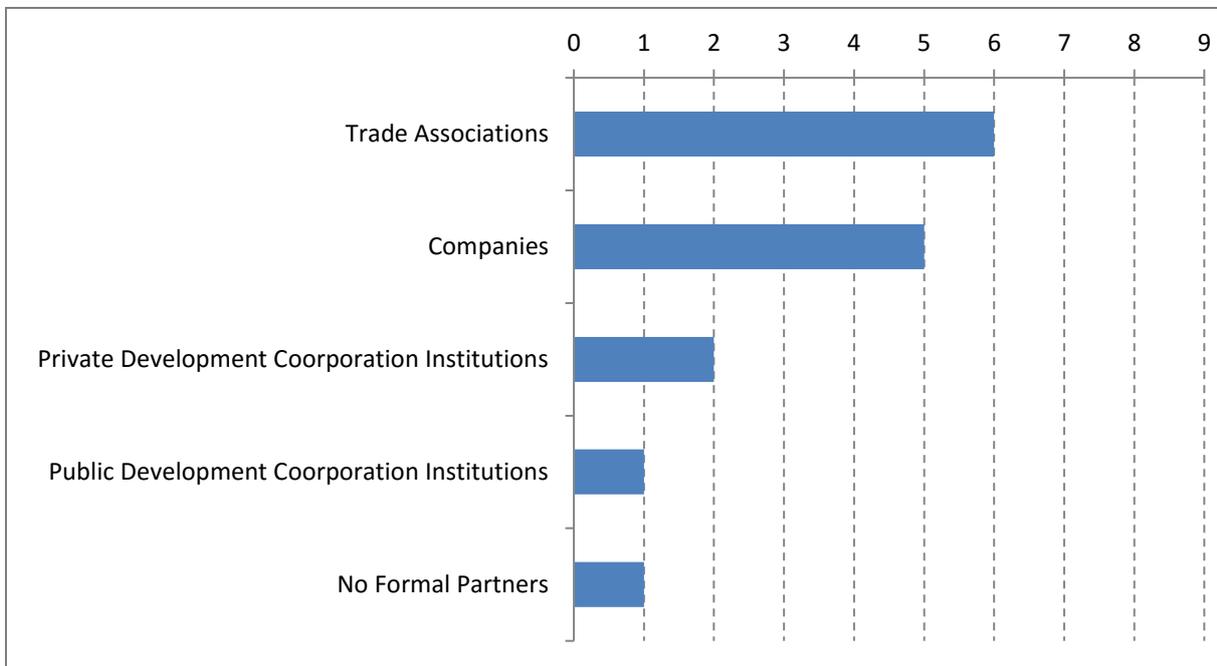


Source: empirica / University of Kassel

Project partners

The project partners are an important part of the projects. In accordance with the funding approach of the DAAD, all projects in the programme "Practical Partnerships between Universities and Enterprises" have partners in business. Specifically, these are economic associations (in six projects) and enterprises (in five projects).

Figure 3-6: Types of Formal Project Partners in the Projects



Source: empirica / University of Kassel

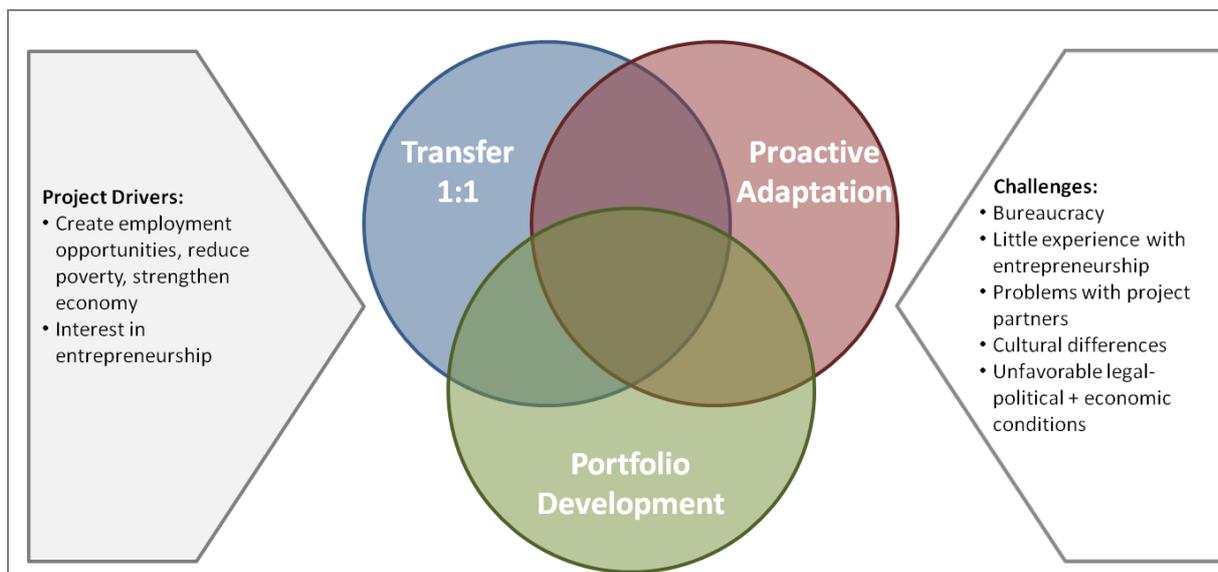
Transfer approaches from the German universities

The projects pursue different approaches to developing and expanding entrepreneurship education in the target country. Three types of approaches can be identified in the investigated projects. The projects, however, do not represent pure types – the different building blocks of the projects can be assigned to different approaches:

- **One-to-one transfer** (exogenous approach – symbolization: cultivation of German plants in the target country): The project participants try to transfer tried and tested approaches in Germany to the target country.
- **Proactive adaptation** (exogenous approach with endogenous elements – symbolization: genetic modification of German plants for cultivation in the target country): The project participants take established approaches as a starting point in Germany, but they already adapt the concept to the expected conditions of the target country.
- **Portfolio development** (endogenous approach – symbolization: growth aid for plants rooted in the target country): The project participants support activities or concepts that already existed in the target country and their further development related to the culture and resources of the university and the country. The projects most frequently pursue the approach of proactive adjustment, followed by portfolio development. One-to-one transfer only takes place in exceptional cases and if the conditions at the target university permit it.

In addition to the initial concept, the approaches may be adapted to the specific conditions of the target country during the project in order to ensure the functional capability of the project („flexible adaptation“). This was also the case in all the investigated projects.

Figure 3-7: Approaches of Transfer of Entrepreneurship Education in the Projects



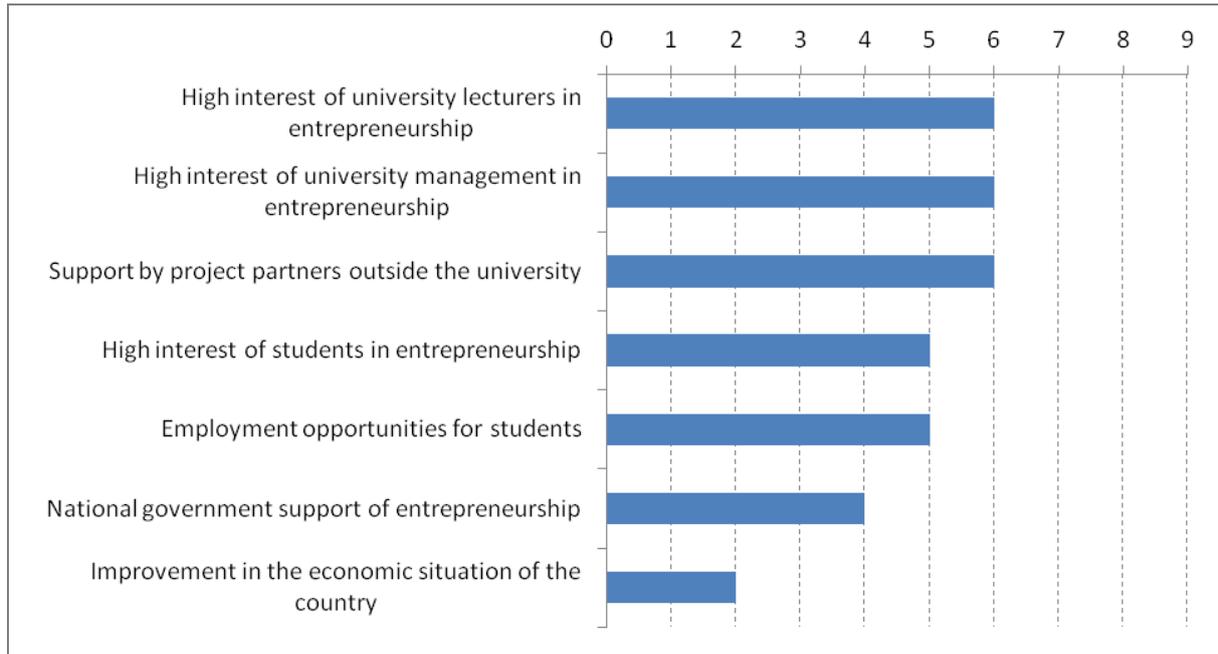
Source: empirica / University of Kassel

3.2 Drivers and Challenges of the Projects

Drivers

The interview partners named three drivers for the initiation and development of the projects: (1) increased employment opportunities for graduates; (2) improvement of the economic situation of the target country and the associated interest of the project participants in entrepreneurship and; (3) the level of support for entrepreneurship by the university management, the project partners and the national government. The following drivers called the interviewees – see Figure 3-8 for a graphical overview.

Figure 3-8: Frequency of Certain Drivers in the Projects



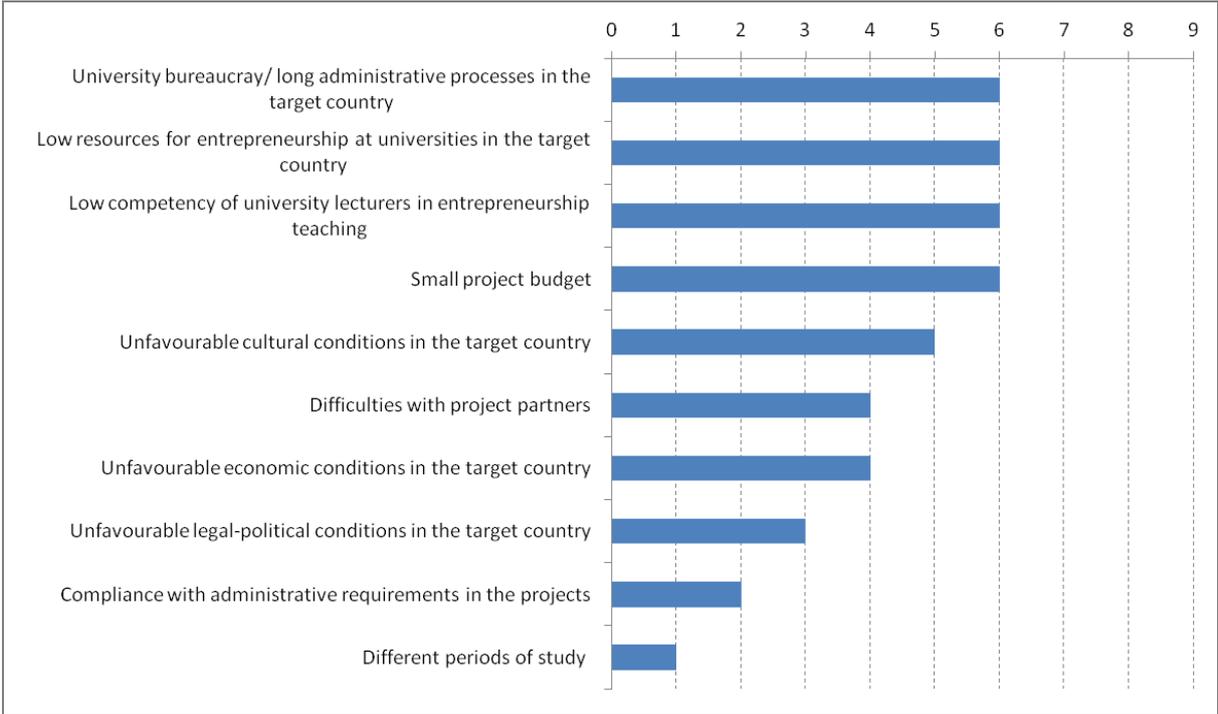
Source: empirica / University of Kassel

Challenges

Overview

The challenges in the projects were numerous and more differentiated than the driving forces. The challenges can be divided into four groups: (1) Challenges at the higher education institutions in the target country, (2) Challenges in the organizational framework of the project, (3) Challenges with the project partners, and (4) Challenges with the framework conditions in the target country , It is clear that the challenges lie mainly in the work done at the respective universities in the target country. The respondents called the following challenges and obstacles - see Figure 4-9 for a graphical overview.

Figure 3-9: Frequency of Certain Challenges in the Projects

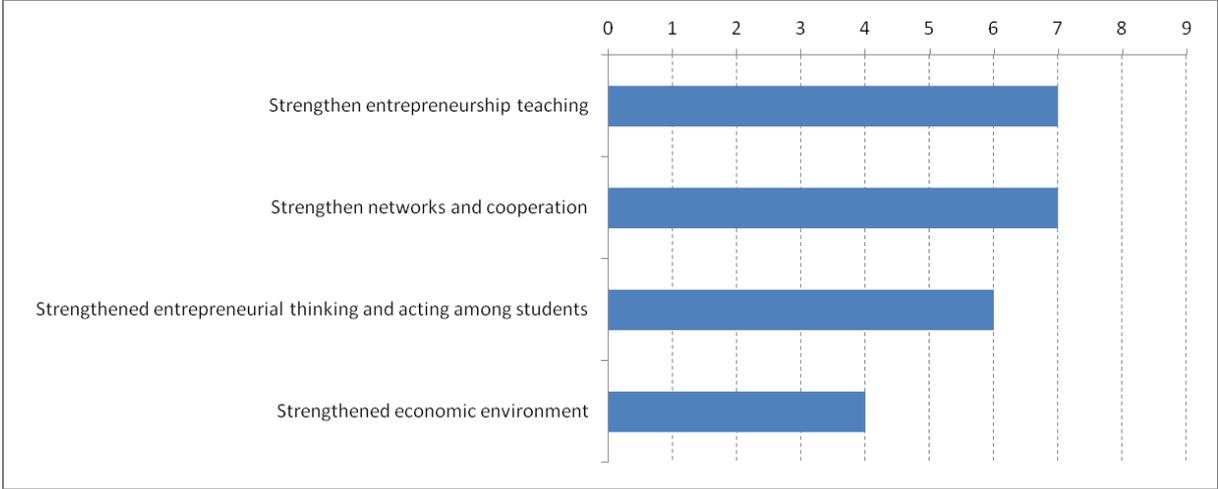


Source: empirica / University of Kassel

3.3 Impacts of the Projects

All the project managers indicated positive impacts of the projects. Often specific, they can be grouped into several categories: (1) strengthened entrepreneurial thinking and acting among students, (2) strengthened entrepreneurship education, (3) strengthened networks and cooperation, and (4) a strengthened economic environment, as shown in Figure 3-10.

Figured 3-10: Frequency of Certain Impacts in the Projects



Source: empirica / University of Kassel

3.4 Transferability of Project Methods

All projects indicated that their approach could be applied to partnerships of universities and colleges. Often the projects highlighted certain aspects of transferability:

- **Important elements of the approach:** Incubators (HBRS Ghana/ Kenya), business plan contest (UL Vietnam, HSW Namibia/ South Africa) and an engineering curriculum with an entrepreneurship focus (HNU Ethiopia).
- **Recommended teaching methods:** teaching courses with teachers from several countries (HBRS Ghana/ Kenya) and linking entrepreneurship with related disciplines such as innovation and export management (UL Vietnam).
- **Recommended schedules:** Several projects (PUM Egypt, UPB Ghana) recommended organizing teaching and support activities in an annual cycle. However, different study courses at the German and the target university have to be taken into account.
- **Challenges to be considered:** Project management is enormous and takes time for project content (HBRS Ghana/ Kenya, TUB Botswana/ South Africa). This should also be taken into account in the replicability of project methods.
- **Use of available knowledge on replicability:** The University of Leipzig has developed a handbook on the development of entrepreneurship education in developing countries, which is freely available on the Internet. In the project HNU Ethiopia, a master programme for engineering was developed with an emphasis on entrepreneurship, which was later published.⁴⁵

At the time of the analysis, some projects were before the start of new projects (PUM Egypt) or had applied for new projects (UL Africa), in which the respective approach is to be pursued.

⁴⁵ Daniel, S./Steurer, E./Wagemann, B. (2017): Productive use of renewably energy supporting applied entrepreneurship – Lessons learned from a development project in rural Ethiopia. In: Proceedings of the 5th Annual Conference "Universities, Entrepreneurship and Enterprise Development in Africa" from 10th to 11th November 2016 at the University of Applied Sciences Bonn-Rhein-Sieg, Sankt Augustin, Germany.

3.5 Cooperation and Synergies

All project managers expressed their support for more co-operation – both between the projects as well as with economic organizations and organizations of development cooperation in Germany and abroad. In the final workshop, it was said that it depends heavily on the people involved, whether co-operation emerges and succeeds or not.

Cooperation between the projects

All respondents would welcome more intensive cooperation between entrepreneurship projects in developing countries. Many project managers describe the cooperation, which is organized annually by the HBRS, as particularly instructive and profitable. Exchanges regarding the transfer of existing concepts, their adaptation or the development of new concepts are also an essential issue in development cooperation.

University cooperation

Some project leaders supported more common teaching, research and training. The head of the project HBRS Ghana / Kenya would welcome more exchanges of teaching staff from the participating universities as well as more joint scientific research - and more resources for this. In the case of joint apprenticeship, the project leader HNU Ethiopia would offer co-operation with train-the-trainer courses in order to take advantage of a wide variety of possibilities. The project manager HSW Namibia / South Africa also sees considerable advantages in the co-operation in teaching because the didactic knowledge of the teachers on entrepreneurship education is very small and an exchange can be fruitful.

Cooperation with business

Cooperations with economic organizations are an important part of the projects, in accordance with the mandate of the "Practical Partnerships between Universities and Enterprises in Germany and in Developing Countries" programme. In terms of content, however, the economic organizations play a rather subordinate role in the projects - clear main partners are the universities. Nonetheless, the economic organizations are indispensable for the success of the projects. In particular, associations can establish important contacts between universities and companies (explicitly mentioned at UL Vietnam) as intermediaries. Economic organizations are involved in the projects in a variety of ways. Their surplus value is rather the sum of many smaller contributions than in a few large, e.g. financial or organizational support for business plan competitions or incubators, investment in business start-ups as well as consulting, coaching, mentoring and brokering of contacts for start-ups. The motivation for the participation of the economic organizations is based on their mandate and business activity. Thus, associations pursue the goal of promoting the economy; the participating financial service providers aim at future profits through investments in young companies.

Cooperation with organizations in the field of development and creation

The contacts to German development cooperation organizations differed. GIZ has often been mentioned as a contact, but it has not always seemed to be a suitable co-operation partner. Sometimes developmental organizations do not seem to be interested in more co-operation with other projects; they focus on their own projects.

Entrepreneurship education can be promoted not only by organizations of development cooperation, but also by organizations for the promotion of business start-ups. For example, the project UL Africa is cooperating with the programme EXIST - Business start-ups from universities of the Federal Ministry of Economics and Technology.

4 CONCLUSION AND RECOMMENDATIONS

From the nine case studies and the interdisciplinary analysis, some recommendations for action can be inferred. These recommendations are addressed to the DAAD as the contracting authority of the study, but also to development cooperation organizations, universities, their university lecturers and (potential) project managers and university policy. The recommendations cover five areas: (1) project networking, (2) investment in business start-ups, (3) consolidation of entrepreneurship education competencies, (4) project funding, and (5) organizational support for projects.

(1) More intensive networking for projects – both within the projects and externally

Challenge:

Many project managers encounter challenges in the target countries that they have not, or have not, expected in this form, although they have quite relevant experience in development cooperation. On the other hand, there is a lack of opportunities for students and teachers from the target countries to exchange ideas about entrepreneurship projects and teachers with their peers, thereby increasing their competence. The final workshop of the accompanying study also showed that the projects would welcome more intensive cooperation with business partners. This concerns, in particular, the strengthening of networks, more sponsorship and investment, as well as greater involvement in counselling, coaching and other support for start-ups. In general, the projects are looking for a higher and lasting willingness to cooperate between universities and enterprises and binding support for project objectives.

Solutions in the projects:

All project leaders would welcome a stronger networking of the projects - with each other and with other partners. The meetings of the projects held so far have yielded all project managers, both from Germany and from the target countries. However, the meetings have so far only been irregular and could not be visited by all project managers. In particular, there is a lack of funds for visits from the target countries. Some of the projects under study have also applied for joint funding to better network the projects. However, the application did not meet the eligibility criteria.

Many of the projects are continuously looking for suitable partners. These are, in particular, organizations of development cooperation, business associations and companies. Extending to other types of organizations could be gainful: some projects are looking for partnerships with start-up organizations from universities such as EXIST. However, the projects seem to be limited to German partners. Organizations at European level such as capacity4dev.eu and the EU Emergency Trust Fund for Africa did not mention respondents.⁴⁶⁴⁷In order to involve economic organizations more closely, the project managers proposed several measures: company demand surveys, preparation of quotations, project conferences with large associations as co-organizers, crowdfunding platforms for start-ups, as well as mid-size workshops with projects and universities in Germany.

Possible implications:

<p>Implication 1: The DAAD and development cooperation bodies could support stronger internal and external networking of similar projects. This can be done through regular workshops and conferences, through an online platform, or through appropriate project proposals. For example, project sponsors could subsidize network work and travel budgets could be provided for networking meetings. Likewise, the view on European institutions could be expanded.</p>

⁴⁶ See <https://europa.eu/capacity4dev>.

⁴⁷ See https://ec.europa.eu/europeaid/regions/africa/eu-emergency-trust-fund-africa_en.

(2) Investment in business start-ups

Challenge:

Several respondents pointed to the problem that start-ups in developing countries are often very difficult to finance start-up and growth. Loans are generally prohibitively expensive, venture capital is scarcely available, and universities do not have funds to finance spin-offs. The only way to finance this is often by means of loans or participations from friends and acquaintances. In a project, the spin-off of a company from financial difficulties in the target country was relocated to Germany, which seems contradictory in the promotion of developing countries.

Solutions in the projects:

Some projects (e.g. PUM Egypt) cooperate with financial institutions to develop start-up and growth capital. As possible solutions for the financing difficulties of the start-ups, the interviewees called: investment tools with funds from German companies, company-oriented foundations and private donors with large and several small amounts, for example about Oiko credits as well as corporate venture capital of German multinational corporations. There would also be internet platforms on which capital providers in certain countries and cities can be found by type of capital (eg business angels, corporate venture capitalists, venture capital institutions, crowdfunding, credit institutions).⁴⁸

Possible implications:

Implication 2: The DAAD and development organizations could support the establishment of institutions for the financial support of start-ups from universities in developing countries.

(3) Bundle and promote entrepreneurship education competencies of all participants

Challenge:

It became clear that the knowledge of the teachers in the target countries and those of the project staff in the German universities are different in terms of entrepreneurship education and high-debt idiocy. The application competencies in the area of entrepreneurship education methods or the development and development of a basic culture in and around the universities as well as the perceived possibilities for action and needs are correspondingly different.

Solution in the projects:

In some projects, Such as PUM Marburg, USI Azerbaijan and HSW Namibia / South Africa, has been particularly focused on the development of a foundation culture through sensitization and subsequent qualification which promotes the development of entrepreneurship education on the ground and enables the cultural integration of didactic concepts. The UL Africa project attaches particular importance to train-the-trainer measures. There are also approaches for joint research in some projects; the universities would like to welcome them.

Possible implications:

Implication 3: The DAAD could organize a qualifying exchange and an intensified set-up of didactic skills for those who are involved in the development of entrepreneurship in the field of Entrepreneurship Education. This could be offered on the one hand in the form of mutual teaching-learning experiences (Practitioner workshops), on the other hand as external training (training, market of possibilities) and as train-the-trainer measures. The projects could also provide additional incentives for research.

⁴⁸ See <https://www.oikocredit.de/was-wir-tun/finanzierungen/finanzierungen>.

(4) Strengthening funding of the projects

Challenge:

Several project managers in Germany and the target countries described the funds available for the project as quite small - without the interviewers asking them in detail. In the interviews, it was felt that the contribution of German universities to development cooperation lagged behind the possibilities due to low financial resources. In addition, a project mentioned that the requirements for the speed of financial proofs for a developing country are sometimes difficult to cope with.

Solution in the projects:

The interviews gave the impression that the projects were conducted with great commitment. The project managers are also willing to take unusual paths and react flexibly if the project aims are achieved.

Possible implications:

Implication 4: The German government and state institutions such as the DAAD could give greater weight to the issue of entrepreneurship and entrepreneurship education in their development cooperation. Germany as a whole could provide more funding for these topics and could also consider making individual projects financially broader.
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(5) Organizational support for projects

Challenge:

The cost of administrative project management is high in many projects and saves time for project content. In some discussions, the documentation and reporting requirements for the DAAD, which were elaborated from the project management perspective, were reported. Due to the sponsorship, the corresponding guidelines were met punctually, but the related work is perceived as burdensome.

Solution in the projects:

Solutions for a facilitated organization have not yet been implemented in the projects. Thus, one of the project managers would welcome an external service bureau, which relieves the projects of administrative tasks - for example, to persuade responsible persons in the administration of higher education to do certain tasks become. However, other project representatives expressed their opposition to such a new facility in the final workshop of the study. One project manager recommended to create incentives for the management of the German universities to support the projects more strongly.

Possible implications:

Implication 5: The DAAD could set up or commission an organization or infrastructure that would help projects to solve challenges in the projects. The DAAD could also make use of its contacts with existing organizations in developing countries in order to initiate assistance, if necessary, for projects, including the DAAD offices, as far as their statutes permit. ⁴⁹
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Overall, the projects under investigation show that Entrepreneurship Education can make a noteworthy contribution to economic development in Africa and Asia. This is also true and in the sense of a help for self-help. German development cooperation could be well advised to pay more attention to the subjects of entrepreneurship and entrepreneurship education.

⁴⁹ According to DAAD, however, legal issues would have to be clarified.

The German Academic Exchange Service (DAAD), among other things, promotes projects in the area of entrepreneurship education in the "University-Business-Partnership Programme". Within the framework of an accompanying study, empirica and the University of Kassel have collected and analyzed primary and secondary data on nine projects of this programme. This final report presents the results. The aim of the study was to identify common themes, challenges and potential synergies between the projects and to derive recommendations for future funding.

<https://www.daad.de/der-daad/unsere-aufgaben/entwicklungszusammenarbeit/foerderprogramme/hochschulen/infos/en/44507-university-business-partnerships-between-higher-education-institutions-and-business-partners-in-germany-and-in-developing-countries/>
