



ENTREPRENEURSHIP EDUCATION *in the Ems-Dollart-Region*



Prof. Dr. Annika Wolf

Carl von Ossietzky University Oldenburg (GER)

Dr. Diederich Bakker

Hanzehogeschool Groningen University of Applied Sciences (NL)

INTRODUCTION

Entrepreneurship Education in the Ems-Dollart-Region (EDR): Why mind-set matters!

The Ems Dollart Region (EDR) is a dynamic cross-border expanse, interconnecting the Netherlands and Germany in economics and culture. Its economic activities range from agriculture and industry to tourism. The region is characterised by the pivotal cities of Groningen in the West and Oldenburg in the East. Both of these cities are drivers for economic and social progress, development and innovation for the whole region.

Entrepreneurship Education

For development and innovation to occur, a new way of education seeks to empower students and other interested individuals with the knowledge, skills and mind-set necessary to embark on journeys as entrepreneurs and innovators: entrepreneurship education. Entrepreneurship education in the EDR epitomises the spirit of harnessing opportunities, sculpting business ideas and orchestrating growth in and for the collective region.

Drawing inspiration from a spectrum of forms of education, entrepreneurship education in this region manifests itself through diverse channels. Academic programmes provide a solid foundation with courses on entrepreneurship and finance. Short-term courses, workshops and seminars address specific issues such as crafting business plans, conducting market research and preparing compelling pitches for potential investors.

Clusters of innovation thrive in incubators and accelerators located in Groningen and Oldenburg with providing startups with mentorships, resources and shared knowledge. In the digital realm, the rise of online platforms ensures broad access, offering courses, webinars and instructional videos making entrepreneurship education available for all.

Entrepreneurship competitions and challenges serve as crucibles of creativity in which aspirants forge business ideas, subjecting them to the scrutiny of judges. The network of mentorships between experienced entrepreneurs, industry experts and visionaries guarantee real-world insights.

The heartbeat of entrepreneurship education resonates beyond knowledge-and skills-based acquisition. The cultivation of critical thinking, the nurturing of creativity and innovation, and the forging of resilience lie at its core. The alchemy of entrepreneurship education transmutes ambition into action, imbuing individuals with

the confidence to navigate the intricate web of business and financial literacy. It amplifies the symphony of communication and negotiation, and immerses aspirants in the orchestration of real-world business scenarios.

In the EDR, entrepreneurship education is a beacon that beckons students and other individuals to sculpt their own destinies and contribute to the harmonious mix of economic growth, job creation and innovation for transformative change for the whole region.

Entrepreneurship Education Research

In the research framework for this project, the research methodology was harnessed to illuminate the pathways of innovation and knowledge dissemination in the EDR and the entrepreneurial ecosystem. The research was conducted using qualitative semi-structured interviews with experts in the region and beyond to engage in dialogue and discover the broad measures that have proven to be successful in different organisations. These interviews encapsulated the narratives of visionaries, seasoned entrepreneurs, mentors and educators who have carved their imprints on the entrepreneurial landscape of the region.

In candid conversations, insights were revealed, experiences shared and perspectives unveiled – all weaving a rich tapestry of collective wisdom. These voices painted a vivid portrait of challenges overcome, lessons gleaned and triumphs celebrated, casting a spotlight on the unique interplay of factors shaping entrepreneurship education in the EDR.

Institutions that serve as bedrocks of entrepreneurial nurturing were not mere spectators in this story. The research methodology sought to unravel the inner workings, aspirations and methodologies that underscored their role in sculpting the entrepreneurial minds of tomorrow. Interviews with these institutions wove a narrative thread of purposeful design, resources offered and the intricate choreography of support orchestrated to facilitate the emergence of budding innovators.

The research methodology did not merely scratch the surface but was brought to the forefront the pulse of collaboration and cross-border dialogue that resonate in the region, as key players from both sides of the border shared their perspectives, showing common grounds.

Entrepreneurship education in the EDR is especially embraced in higher education institutions, which provide a vibrant ecosystem for an innovative cross-border future.

EINLEITUNG

Entrepreneurship Education in der Ems-Dollart-Region (EDR): Warum die Einstellung zählt!

Die Ems-Dollart-Region (EDR) ist ein dynamischer grenzüberschreitender Raum, der die Niederlande und Deutschland wirtschaftlich und kulturell miteinander verbindet. Die wirtschaftlichen Aktivitäten reichen von der Landwirtschaft über die Industrie bis hin zum Tourismus. Die Region wird durch die zentralen Städte Groningen im Westen und Oldenburg im Osten geprägt. Diese beiden Städte sind die Triebkräfte für wirtschaftlichen und sozialen Fortschritt, Entwicklung und Innovation in der gesamten Region.

Bildung für unternehmerisches Denken und Handeln

Damit Entwicklung und Innovation stattfinden können, wird eine neue Art der Bildung angestrebt, die Studierende und andere interessierte Personen mit dem Wissen, den Fähigkeiten und der Einstellung ausstattet, die notwendig sind, um sich auf die Reise als Unternehmer*innen und Innovator*innen zu begeben: die Bildung für unternehmerisches Denken und Handeln für die gemeinsame Region.

Unternehmerisches Denken und Handeln in dieser Region manifestiert sich über verschiedene Kanäle. Akademische Programme bieten eine solide Grundlage mit Kursen über Unternehmertum und Finanzen. Kurzzeitkurse, Workshops und Seminare befassen sich mit spezifischen Themen wie der Erstellung von Geschäftsplänen, der Durchführung von Marktforschung und der Vorbereitung überzeugender Präsentationen für potenzielle Investor*innen.

Innovationscluster gedeihen in Gründer*innenzentren und Acceleratoren in Groningen und Oldenburg, die Start-ups mit Mentor*innen, Ressourcen und gemeinsamem Wissen versorgen. Im digitalen Bereich sorgt das Aufkommen von Online-Plattformen für einen breiten Zugang, indem Kurse, Webinare und Lehrvideos angeboten werden, die unternehmerische Bildung für alle zugänglich machen.

Das Netz von Mentor*innen zwischen erfahrenen Unternehmern, Branchenexperten und Visionären garantiert Einblicke in die reale Welt und Umsetzungsverständnis.

Der Herzschlag der Entrepreneurship-Ausbildung geht über wissensbasiertes Lernen hinaus. Im Mittelpunkt stehen der Erwerb von Kompetenzen und die Kultivierung des kritischen Denkens, die

Förderung von Kreativität und Innovation sowie die Stärkung der Widerstandsfähigkeit. In der EDR ist die Bildung zu unternehmerischem Denken und Handeln ein Leuchtturm, das Studierenden und andere Menschen dazu anregt, ihr eigenes Schicksal zu gestalten und zu einem harmonischen Crescendo von Wirtschaftswachstum, Arbeitsplatzschaffung und Innovation beizutragen, das einen transformativen Wandel in der gesamten Region bewirkt.

Forschung im Bereich Entrepreneurship Education

Im Forschungsrahmen für dieses Projekt wurde als Forschungsmethodik qualitative, halbstrukturierte Interviews mit Expert*innen in der Region und darüber hinaus genutzt, um die Wege der Innovation und der Wissensverbreitung in der EDR und im unternehmerischen Ökosystem zu beleuchten. Dabei entstand auch ein Dialog, um die umfassenden Maßnahmen zu ermitteln, die sich in verschiedenen Organisationen als erfolgreich erwiesen haben. In diesen Interviews kamen Visionär*innen, erfahrene Unternehmer*innen, Mentoren*innen und Pädagog*innen zu Wort, die die unternehmerische Landschaft in der Region geprägt haben.

In offenen Gesprächen wurden Einsichten erörtert, Erfahrungen ausgetauscht und Perspektiven aufgezeigt – alles zusammen ergab ein Gefäß kollektiver Weisheit. Diese Stimmen zeichneten ein lebendiges Porträt der gemeisterten Herausforderungen, der gesammelten Lektionen und der gefeierten Triumphe und warfen ein Schlaglicht auf das einzigartige Zusammenspiel von Faktoren, die die unternehmerische Ausbildung in der Ems Dollart Region prägen.

Institutionen als Grundpfeiler der unternehmerischen Bildung wurden zu ihrer Ausrichtung, Voraussetzungen und Methoden befragt, die ihre Rolle bei der Formung der unternehmerischen Köpfe von morgen unterstreichen.

Die Forschungsmethodik kratzte nicht nur an der Oberfläche, sondern betrachtete den Puls der Zusammenarbeit und des grenzüberschreitenden Dialogs, der in der Region mitschwingt, in den Vordergrund, da die Hauptakteur*innen von beiden Seiten der Grenze ihre Perspektiven austauschten und so eine harmonische Symphonie der Gemeinsamkeiten schufen.

Unternehmerisches Denken und Handeln wird in der EDR vor allem in den Hochschuleinrichtungen gefördert, die ein lebendiges Ökosystem für eine innovative grenzüberschreitende Zukunft bilden.

INLEIDING

Ondernemerschapsonderwijs in de Eems-Dollard-Regio (EDR): waarom mentaliteit ertoe doet!

De Eems-Dollard-Regio (EDR) is een dynamisch grensoverschrijdend gebied dat Nederland en Duitsland op economisch en cultureel vlak met elkaar verbindt. In de EDR vinden tal van economische activiteiten plaats, van landbouw en industrie tot toerisme. De spil van de regio wordt gevormd door de steden Groningen en Oldenburg die de economische en sociale vooruitgang leiden door verandering te omarmen en hiermee innovatie voor de hele regio stimuleren.

Ondernemerschapsonderwijs

Te midden van de bruisende economische stroming en de historische banden die de regio kenmerken, wordt een nieuwe manier van onderwijs gegeven: ondernemerschapsonderwijs. Deze vorm van onderwijs voorziet studenten en andere individuen van kennis, vaardigheden en de mentaliteit die nodig is om als ondernemer en innovator aan de slag te gaan. Ondernemerschapsonderwijs in de EDR benadrukt het benutten van kansen, het vormgeven van zakelijke ideeën en het stimuleren van groei in de collectieve regio.

Ondernemerschapsonderwijs vindt plaats binnen academische programma's (op bachelor-, en masterniveau als ook doctoraatsgraden) en bieden een solide basis op gebieden als ondernemerschap, bedrijfsplanning, marketing en financiën. Korte termijn cursussen, workshops en seminars geven focus waarbij specifieke thema's worden behandeld zoals het opstellen van een bedrijfsplan, het uitvoeren van marktonderzoek en het voorbereiden van boeiende pitches voor potentiële investeerders.

Clusters van innovatie gedijen in incubators en accelerators in Groningen en Oldenburg, waar jonge start-ups worden gevoed door mentorschap, middelen en gedeelde kennis. In de digitale wereld wordt door de opkomst van online platforms de toegang tot cursussen, webinars en instructievideo's eenvoudiger gemaakt. Hierdoor is ondernemerschapsonderwijs beschikbaar voor vrijwel iedereen.

Competities op het gebied van ondernemerschap laten de creativiteit vloeien en zorgen ervoor dat aspirant ondernemers hun zakelijke ideeën vorm kunnen geven, ze vervolgens onderwerpen aan het oordeel van juryleden in de hoop met middelen, mentorschappen en erkenning verder te kunnen. Het netwerk van mentoren bestaat uit doorgewinterde ondernemers, experts uit het werkveld en visionairs. Zij delen graag hun kennis en kunde met de aspirant ondernemers.

Ondernemerschapsonderwijs is meer dan vaardigheden verwerven en ontwikkelen. Het cultiveren van kritisch denken, het koesteren van creativiteit en innovatie en het smeden van veerkracht vormen de kern. Ondernemerschapsonderwijs zet ambitie om in actie waardoor individuen het vertrouwen krijgen om door het ingewikkelde web van zakelijke en financiële geletterdheid te navigeren.

In de EDR is ondernemerschapsonderwijs een baken dat studenten en andere individuen uitnodigt om hun eigen koers uit te stippelen, hun eigen lot vorm te geven en bij te dragen aan economische groei, werkgelegenheidscreatie en innovatie. De EDR richt haar blik op de toekomst. Een toekomst waar ondernemerschap floreert, dromen worden gekoesterd en waar kennis en moed samen transformerende veranderingen aanwakkeren.

Onderzoek naar ondernemerschapsonderwijs

In het onderzoekskader van dit project is onderzoek uitgevoerd met behulp van kwalitatieve semi-gestructureerde interviews met experts in de regio en daarbuiten. Deze interviews omvatten de verhalen van visionairs, doorgewinterde ondernemers, mentoren en docenten die hun stempel hebben gedrukt op het ondernemerslandschap van de regio.

Instituten die als basis dienen voor het koesteren van ondernemerschap waren niet slechts toeschouwers in dit verhaal. De onderzoeksmethodologie probeerde de innerlijke werking, ambities en methodologieën te ontrafelen die hun rol onderstreepten bij het vormgeven van de ondernemersgeesten van morgen. Interviews met deze instellingen lieten doelgericht ontwerp, aangeboden middelen en ondersteuning zien die de reis van beginnende vernieuwers vergemakkelijken.

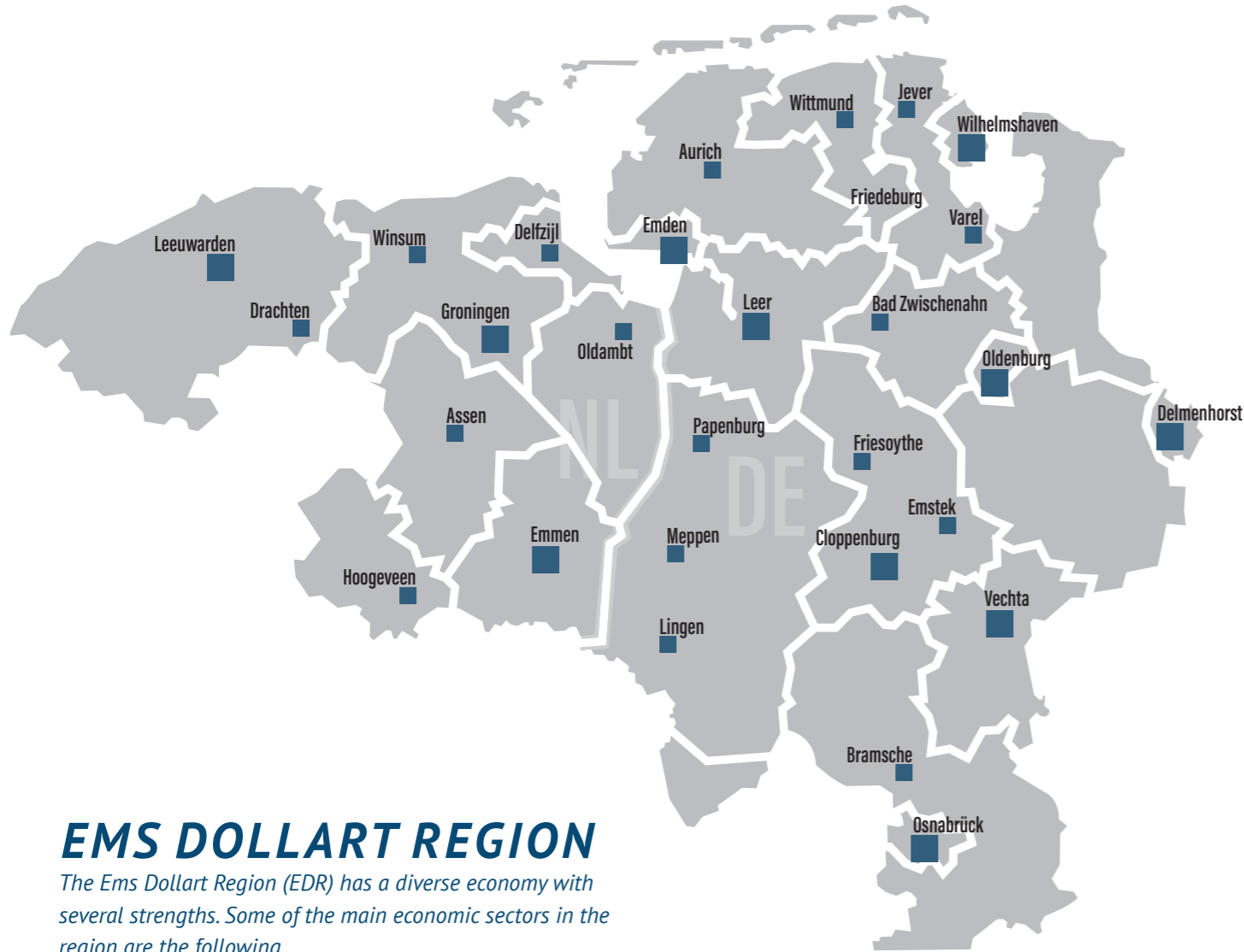
De onderzoeksmethodologie was niet alleen maar oppervlakkig; het heeft verborgen stromingen bloot gelegd. Het bracht de impuls van samenwerking en grensoverschrijdende dialoog naar voren die weerklank vindt in de regio, aangezien belangrijke spelers aan beide kanten van de grens hun perspectieven deelden, waardoor harmonieuze perspectieven ontstonden.

In het grote aanbod van ondernemerschapsonderwijs in de Eems-Dollard-Regio omarmen instellingen voor hoger onderwijs het ondernemerschapsonderwijs en bieden ze een levendig ecosysteem in een boeiende grensoverschrijdend gebied.

TABLE OF CONTENTS

Introduction.....	2
Einleitung	3
Inleiding.....	4
Table of Contents	5
Overview of the Ems Dollart Region.....	6
Introduction Higher education institutions	10
Hanze University of Applied Sciences – Groningen	11
Rijks University of Groningen.....	14
NHL Stenden University of Applied Sciences – Leeuwarden.....	16
Van Hall Larenstein University of Applied Sciences – Leeuwarden	18
Carl von Ossietzky University Oldenburg.....	20
University of Osnabrück & University of Applied Sciences Osnabrück	22
University of Vechta	24
Jade University of Applied Sciences – Wilhelmshaven.....	26
University of Applied Sciences Emden/Leer.....	28
Entrepreneurship Education.....	30
Struggles and Barriers of EE.....	33
Communication of EE.....	36
Interdisciplinary EE	37
Suitability to teach Entrepreneurship.....	38
Didactics in EE	39
Conclusion:	
Regional Specific Recommendation of EE	41
Entrepreneurship Education Formats	44

OVERVIEW OF THE



EMS DOLLART REGION

The Ems Dollart Region (EDR) has a diverse economy with several strengths. Some of the main economic sectors in the region are the following.

- 1. Agriculture:** The EDR has a strong agricultural sector, with a focus on dairy farming, crop production and horticulture. The region is known for its high-quality agricultural products, such as cheese, potatoes and flowers.
- 2. Industry:** The EDR has a well-developed industrial sector, with a focus on energy, logistics and manufacturing. The region is home to several large companies, including Enercon, a leading manufacturer of wind turbines, and ThyssenKrupp, a multinational steel and industrial engineering company.
- 3. Tourism:** The EDR has a unique natural landscape that attracts many tourists each year. The region has several national parks, including the Wadden Sea National Park, which is a UNESCO World Heritage Site. The region is also home to several historical and cultural attractions such as the Bourtange Fortress and the Meyer Werft shipyard.
- 4. Knowledge-based industries:** The EDR has a strong knowledge-based economy, with a focus on research and innovation. The region is home to several research institutions such as the University of Groningen and the Fraunhofer Institute for Wind Energy and Energy System Technology.

Overall, the EDR's economy is characterised by its diversity and resilience. The region's strengths in agriculture, industry, tourism and knowledge-based industries and strong research institutions make it a dynamic and attractive location for business and investment. However, the Ems Dollart Region also has weaknesses, such as limited access to venture capital and a fragmented innovation ecosystem, which could be tackled to further promote innovation and entrepreneurship in the region.

Strengths

- 1. Strong research institutions:** The EDR is home to several research institutions, including universities, research centres and institutes. These institutions conduct cutting-edge research in a variety of fields, including renewable energy, health and ICT, and they provide opportunities for collaboration and knowledge exchange.
- 2. Industry clusters:** The EDR has several industry clusters, such as the maritime industry in Leer and the renewable energy industry in Emden. These clusters create a concentration of businesses and research institutions that can collaborate and innovate together.
- 3. Entrepreneurship:** The EDR has a growing startup ecosystem, with several incubators and accelerators supporting new businesses. Entrepreneurship is also encouraged through various initiatives, such as the Ems-Achse Innovation Award and the EDR Innovation Fund.
- 4. Internationalisation:** The EDR is a cross-border region, with strong economic and cultural ties between the Netherlands and Germany. This internationalisation creates opportunities for collaboration and innovation across borders.
- 5. Supportive policies:** The Ems-Dollart-Region provides various initiatives to support innovation and entrepreneurship, including funding programmes and networking events. In addition, the Dutch and German governments provide tax incentives and other support for innovation and R&D.

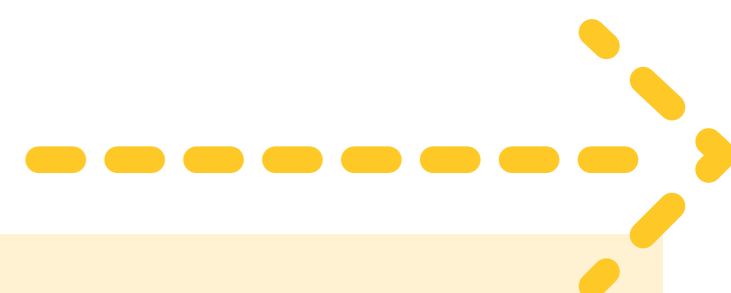
Drivers of innovation

Overall, the EDR has several drivers of innovation, including strong research institutions, industry clusters, entrepreneurship, internationalisation and supportive policies. These factors create an environment that encourages innovation and entrepreneurship and helps businesses in the region remain competitive and grow.

Higher education institutions play an important role in the growing startup ecosystem in the Ems Dollart Region (EDR) in several ways.

Weaknesses

- Limited access to venture capital:** The EDR region has limited access to venture capital, which can make it difficult for startups and small businesses to access the funding they need to grow and innovate.
- A fragmented innovation ecosystem:** The EDR region is composed of several different municipalities and regions, which can make it difficult to create a cohesive innovation ecosystem. Collaboration between different regions and institutions can be challenging.
- Lack of diversity in industry:** While the EDR has a diverse economy, there is a lack of diversity in some industries, such as agriculture and energy. This can limit the opportunities for innovation in these sectors.

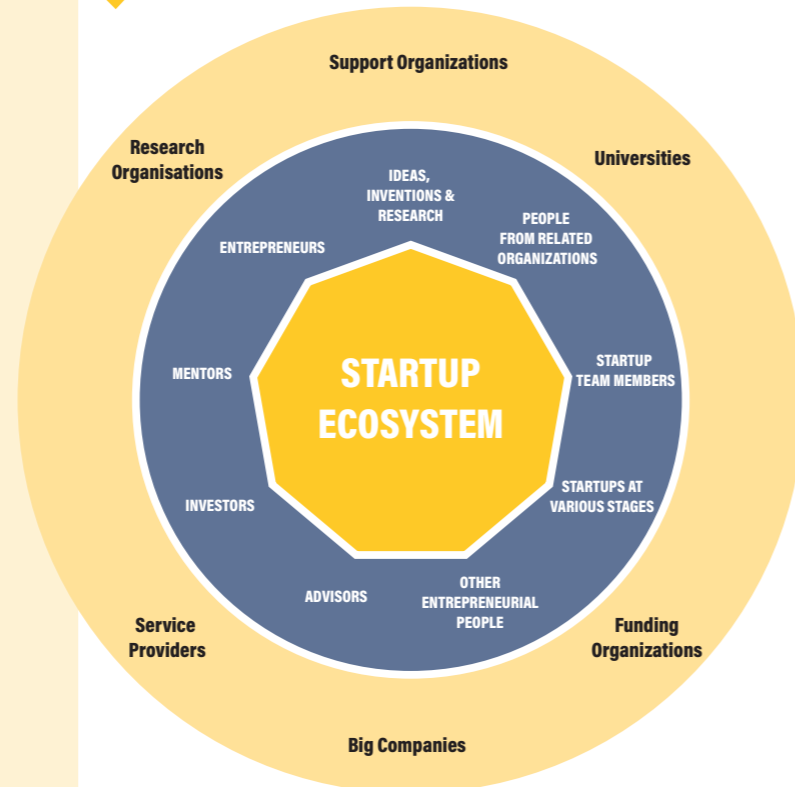


3. Incubators and accelerators: Some higher education institutions in the EDR have set up incubators and accelerators to support startups and provide them with access to resources and expertise.

4. Networking and collaboration: Higher education institutions in the EDR provide a platform for networking and collaboration between students, researchers, startups and businesses, creating opportunities for knowledge exchange and collaboration.

5. Funding opportunities: Higher education institutions in the EDR provide funding opportunities for startups and entrepreneurs through various programmes and initiatives, such as the EDR Innovation Fund.

Overall, higher education institutions in the EDR play a crucial role in the growing startup ecosystem by providing education and training in entrepreneurship, conducting cutting-edge research, offering resources and expertise through incubators and accelerators, facilitating networking and collaboration, and providing funding opportunities.



Entrepreneurship education is important because it helps individuals develop the knowledge and skills needed to start and manage businesses. It also helps to promote a culture of entrepreneurship, which can lead to increased innovation, economic growth and job creation.

There are several factors that contribute to the success of entrepreneurship education:

- 1. Experienced and qualified educators:** It is crucial to have educators who have practical experience in entrepreneurship and a strong understanding of the field. These educators can provide students with valuable insights, real-world examples and guidance.
- 2. Practical learning opportunities:** Providing students with hands-on learning experiences, such as internships, incubators and accelerators, can help them develop practical skills and apply theoretical knowledge to real-world situations.
- 3. Access to resources:** Providing students with access to resources, such as mentors, networks, funding opportunities and tools, can help them succeed in entrepreneurship.

Entrepreneurship education involves teaching and learning skills and knowledge that enable individuals to identify and pursue entrepreneurial opportunities. It provides education and training in entrepreneurship, including the development of business plans, financial management, marketing and leadership.

Entrepreneurship education can take place at various levels, including primary, secondary and tertiary education. It can be delivered through formal education programmes, such as courses and degrees, or through informal programmes, such as workshops, seminars and mentoring.

The aim of entrepreneurship education is to develop the entrepreneurial mindset and skills needed to create and manage successful businesses. It also aims to encourage innovation, creativity and problem-solving, and to promote economic growth and job creation.

4. Collaboration and networking: Creating opportunities for students to collaborate and network with other entrepreneurs and industry professionals can help them develop important relationships and gain exposure to new ideas and opportunities.

5. A relevant and up-to-date curriculum: Ensuring that the curriculum is relevant and up-to-date with the latest trends and best practices in entrepreneurship is important. This can help students develop the skills and knowledge needed to succeed in the current entrepreneurial landscape.

6. A supportive ecosystem: A supportive ecosystem, including government policies, community organisations and industry associations, can provide a supportive environment for entrepreneurship education and help students succeed in their entrepreneurial endeavours.

Overall, entrepreneurship education is most successful when it combines theoretical knowledge with practical learning opportunities, provides access to resources and networks, has experienced and qualified educators and is supported by a strong entrepreneurial ecosystem.

An entrepreneurial ecosystem is a set of interconnected and supportive elements that enable entrepreneurship to flourish in a particular region or community. It includes a range of actors and factors that influence the formation, growth and success of new businesses, such as entrepreneurs, investors, universities, government agencies, incubators, accelerators, mentors and service providers.

The elements in an entrepreneurial ecosystem can be classified in five main categories:

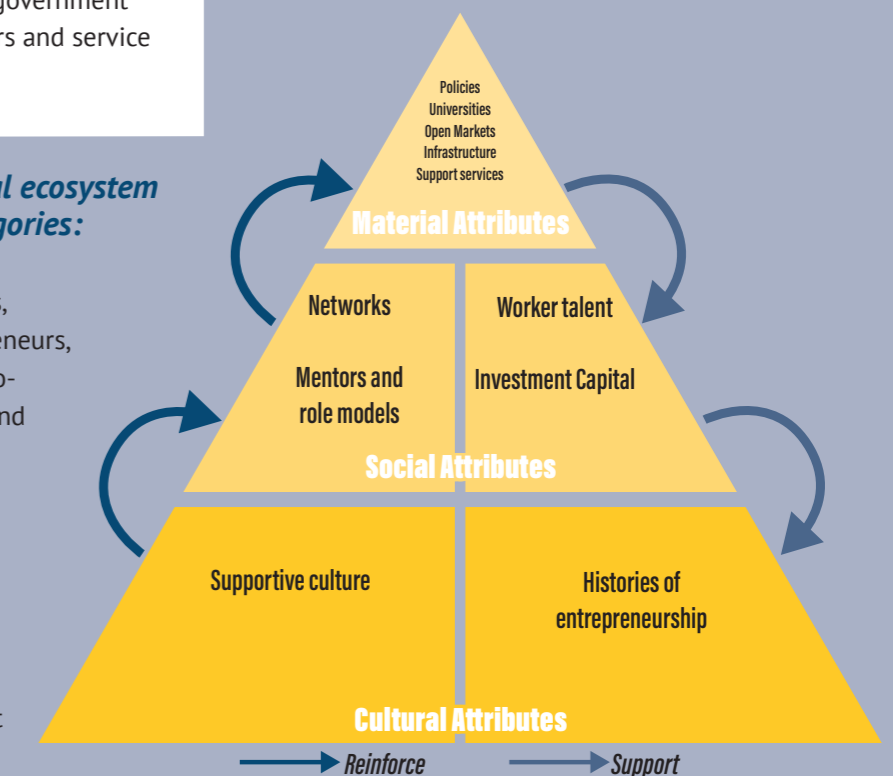
- 1. Human capital:** This includes the skills, knowledge and experience of entrepreneurs, mentors and other members of the ecosystem. Access to education, training and mentorship is important in developing the human capital needed for entrepreneurship.
- 2. Financial capital:** This includes the availability of funding from various sources, such as angel investors, venture capitalists, banks and government agencies. Access to financial capital is important for entrepreneurs to start and grow their businesses.

3. Networks: This includes the relationships and connections between entrepreneurs, investors, mentors, service providers and other members of the ecosystem. Networks provide access to resources, knowledge and opportunities that can support the growth and success of new businesses.

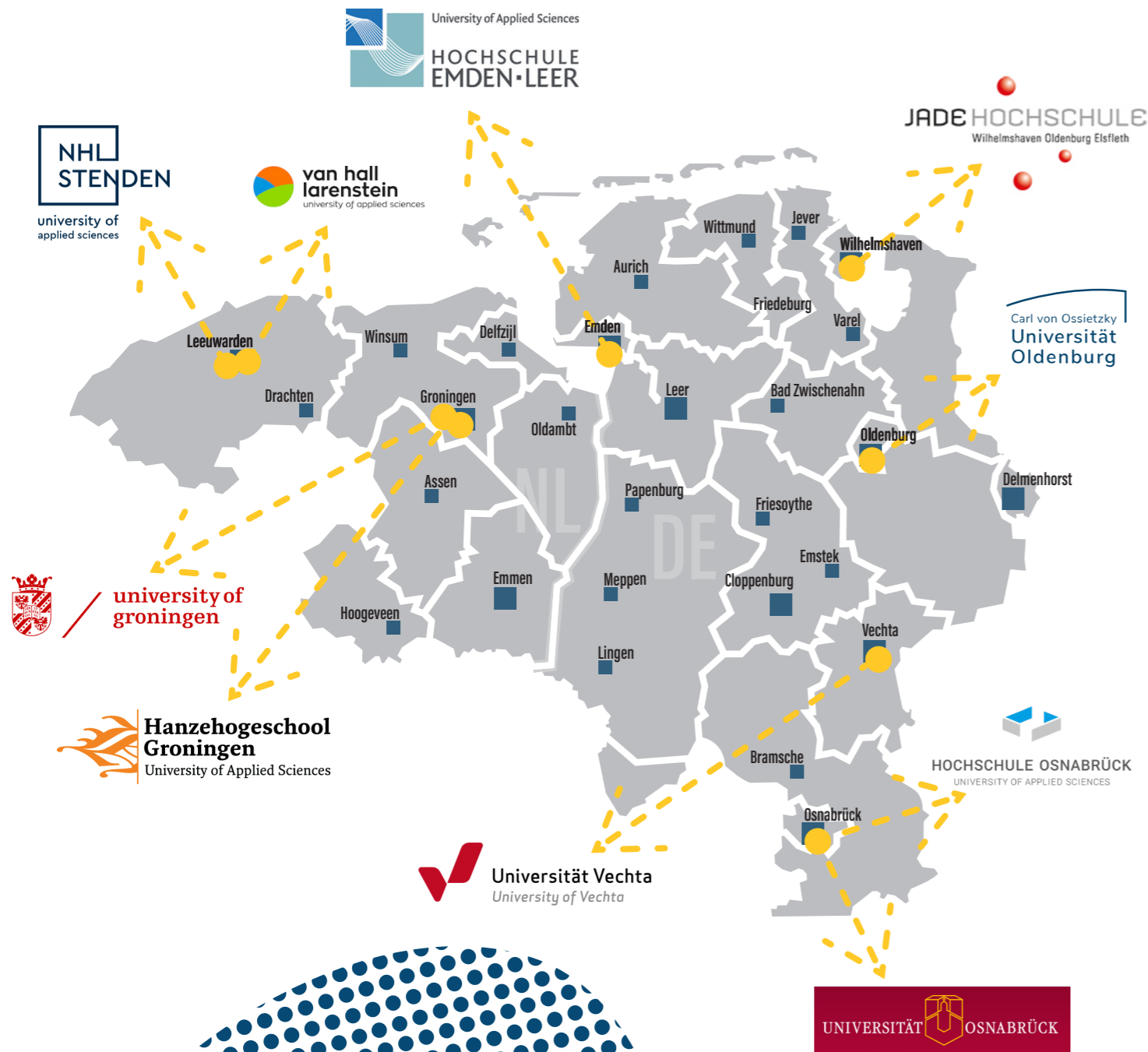
4. Culture and mindset: This includes the attitudes, values and norms of the community regarding entrepreneurship. A supportive culture and mindset can encourage entrepreneurship and risk-taking, while a negative culture and mindset can discourage it.

5. Supportive infrastructure: This includes the physical and virtual infrastructure, such as incubators, accelerators, co-working spaces and digital platforms, that support the development and growth of new businesses.

Overall, an entrepreneurial ecosystem is an interconnected and supportive network of actors and factors that create an environment conducive to entrepreneurship and new business creation. A strong entrepreneurial ecosystem can help to foster innovation, create jobs and drive economic growth.



INTRODUCTION HIGHER EDUCATION INSTITUTIONS



HANZE UNIVERSITY OF APPLIED SCIENCES – GRONINGEN



ACTIVITIES



get to know the landscape of entrepreneurship, methods and founders.

- The Centre of Expertise Entrepreneurship (CoEO) at Hanze University of Applied Sciences Groningen is committed to diverse research, nurturing entrepreneurial skills, and encouraging youth entrepreneurship. In the field of entrepreneurship, the centre serves as a resource for knowledge and support for small and medium-sized enterprises, contributing to the growth of entrepreneur in the region of the northern Netherlands and beyond.
- At Hanze University of Applied Sciences Groningen, students are encouraged to engage in entrepreneurship alongside their studies. This includes the option to pursue minors centered on entrepreneurship, establish their own businesses, and participate in the Top Entrepreneur program. Students are able to even graduate within their own company. Regular events such as the Rabo Entrepreneur Award and the Anner Award (each valued at €10,000) take place. Entrepreneurship education is supported by the “CoEO” throughout the entire institution.
- Start-up City functions as a creative center on the Zernike campus in Groningen, offering a venue for students, teachers, staff, and the wider network associated with Hanze University of Applied Sciences Groningen. Within this incubator, meaningful connections between the professional field, research, and teaching are established.



Trends in Life Science, Healthcare & BioTech:
Analyze and exploit current and future trends.

- The **research group Entrepreneurship in Change** is dedicated to enhancing the vibrancy of entrepreneurship in the North of the Netherlands. It consists of a collaboration between the Hanze University of Applied Sciences Groningen and the Alfa-College, where this partnership forms a dynamic knowledge community comprising lecturer-researchers, vocational and practice oriented students, external organizations, and entrepreneurs. Vitality, in this context, is the dynamic interplay among the entrepreneur, company, and the surrounding ecosystem.
- The **research group International Business** treats internationalization as a means for innovation. SMEs, startups, and scaleups can seek support with the research group to explore new markets and gain expertise in market entry. Further, a focus of support and facilitation is given to cross-border business between the neighboring German startup ecosystem. For example, a mentoring system for Dutch-German business is provided and a large support system on Dutch-German entrepreneurship is established.
- The **User-Centered Design research group** focuses on generating new knowledge about the design of digital tools in order to achieve a (long-term) change in behavior or knowledge in an intended user group. In particular, the research group focuses on the design of adaptive systems that can adapt to individual differences in users, new technologies, and the extent to which they can be used to address social problems and digital literacy and inclusion to optimally support people in the use of all types of technologies. This knowledge is applied directly in practice together with companies from the creative industries and domain partners in the fields of healthy ageing, entrepreneurship, and energy.
- A large part of the projects within the **New Business & ICT research group** are carried out at the Digital Society Hub, in which students, teachers and employees of the participating companies and institutions develop innovative solutions based on real challenges.

1. Wireless solutions, especially 5G.
2. Cybersecurity. Mainly focused on SMEs and health.
3. Smart Industry and Skills; further development of support for SMEs in their first or further steps towards the digitalisation of the manufacturing industry.
4. energy ecosystems and ICT for cross-company collaboration and transactions.
5. Data, machine learning as a prelude to AI.



Regulation, Legal & Financing:
understand which framework conditions are important.

The **research group Legal Aspects of**

Entrepreneurship investigates complex legal issues on a strategic and tactical level that are relevant for (social) entrepreneurs. The aim of the research group is to align laws and regulations more closely with the needs of entrepreneurs.

Together with entrepreneurs, teachers and students, the research group conducts research on topics related to increasing the social impact of SMEs in the region, tenders with social framework conditions and cooperative formation. In addition, the research group contributes to issues in the field of governance, public-private partnerships, and cybersecurity.

The practice-oriented legal research of the research group focuses on:

- Digital transformation: Practical support for entrepreneurs and (semi-)public organizations in legal issues related to digital applications.
- Impact of entrepreneurship: Strengthening entrepreneurship with impact: The functioning of laws and regulations is examined from the perspective of entrepreneurs, with a focus on entrepreneurs' own decision-making space and the avoidance of regulatory burdens.
- Governance: Strengthening mutual regional cooperation between entrepreneurs and cooperation with the government, with a focus on (European) public procurement law, cooperative training, and public-private partnerships.



IP management:
understand the operational and strategic opportunities as well as pitfalls.

The minor in **International Management** is designed to enable students to master standard and unusual challenges confidently and professionally.



Pitch decks, investor negotiation exits
learn professional pitching and get valuable feedback from investors.

International Communication (IC) is a degree program for inquisitive students who understand the impact of messages, news, and campaigns on society, who feel comfortable using modern communication technology and who consider the world their home. The program trains students to become communication professionals who are proactive, innovative, creative, respectful, and responsible.

SUMMER SCHOOLS/CAMPS? HACKATHONS? SOCIAL ENTREPRENEURSHIP CAMPS?

- Practical research on the topics
 - Entrepreneurship
 - Digitisation
 - Internationalization
 - Human capital
 - Regional innovation
- **De Noorderlingen** is a challenging educational program for students who already have their own company or business idea during their studies and want to develop it into a success. You will be coached and advised by successful entrepreneurs and experts from the region.
- In the **DaVinci** minor, gaining proficiency in the Design Thinking method will be gained. Participants will be allowed for direct application in real-world scenarios. This method places a significant emphasis on taking action – kicking off tasks regularly, creating prototypes, and testing them immediately.
- The Intensive **Design Thinking Hackathon** is a new, high-intensity way of teaching that swaps the classroom for an inspiring start-up city environment. During this two-day event, 80 marketing students will look for a gap in a specific market. Guided by two teacher-coaches, the design thinking steps of empathy, problem definition, ideation, prototyping,

and testing will go through. The result will be a fully tested product idea, from which a company will be created that will further develop the product and sell it for a profit.

- **International Sustainable Entrepreneurship**
In this minor, you will act as true entrepreneurs and innovators, learning to develop creative business concepts and apply strategies to promote development and maximize the improvement of human and environmental well-being.
- **College Tour Ondernemen** is a series of workshops where anyone interested in entrepreneurship will be introduced to the topic. Participants can discover all aspects of the start-up phase of an entrepreneur and have the opportunity to actively participate in various assignments about entrepreneurship.

RIJKS- UNIVERSITEIT GRONINGEN



ACTIVITIES



Introduction to entrepreneurship:
learn about the landscape of entrepreneurship, methods, and founders.

- **„On the use of imagination by entrepreneurs“**,
This research project explores what imagination is, how entrepreneurs use their imagination, what they use their imagination for, and how entrepreneurs can use imagination effectively. To study the use of imagination, several methods are used. Entrepreneurs are interviewed, the diaries that entrepreneurs have been keeping for over a year are studied, and experiments are conducted.
- **„Entrepreneurship in the field of rare diseases“**
The processes that people have gone through will be examined, what hurdles they face, awareness of the problems will be raised in order to develop tools to overcome them. How do these entrepreneurs shape their cooperations, possible improvements should be organized and used. How do these entrepreneurs learn about the science behind drug development or about the business side of raising funding and bringing the solution to market to develop support programs and accelerate future initiatives?



Team & project management:
learn successful and sustainable management for teams and projects.

Masterclass **Organization and Teamwork**

This course examines leadership in society by mimicking the way teams of entrepreneurs create opportunities by engaging with their environment. The assumption of this course is that opportunities arise when entrepreneurs interact with people around them and prepare for the possibility of taking advantage of opportunities when they arise in the process. The use of an opportunity, in turn, can trigger a new process of creating opportunities, and the way different entrepreneurs deal with these opportunities is then examined.

At the end of the course, a team will be selected for the „Falling Walls“ Leadership Lab, an elite group that will work as a local student association for the generation and presentation of entrepreneurial ideas. Associated with this is an international endeavor that combines groundbreaking innovation ideas with investors and mentors.



(Pilot) customers & partnerships:
win the first pilot customers and enter into cooperations.

The Center for Entrepreneurship works with a number of institutional and economic partners.

- Province of Groningen
- Van Hall Larenstein (University of applied sciences)
- NHL Stenden (University of applied sciences)
- Province of Drenthe
- Wetsus
- New Energy Coalition
- Hanze University of Applied Sciences
- Forward one
- Carduso Capial
- GasTerra
- Indietopia u.v.m.



Pitch decks, investor negotiation exits
Learn professional pitching and get valuable feedback from investors.

The **VentureLab Weekend** is a 3-day event where budding entrepreneurs can find out if their startup ideas are viable. Supported by a variety of workshops and an international group of coaches and experts from various industries, Friday will begin to build a coalition around the idea or join a team that will work on something important. On Saturday and Sunday, lectures and workshops will be attended, market research will be carried out and the pitching of ideas will be trained. On Sunday evening, the teams will conduct a final pitch in front of a jury of experienced entrepreneurs, venture capitalists and potential investors.

SUMMER SCHOOLS/CAMPS? HACKATHONS? SOCIAL ENTREPRENEURSHIP CAMPS?

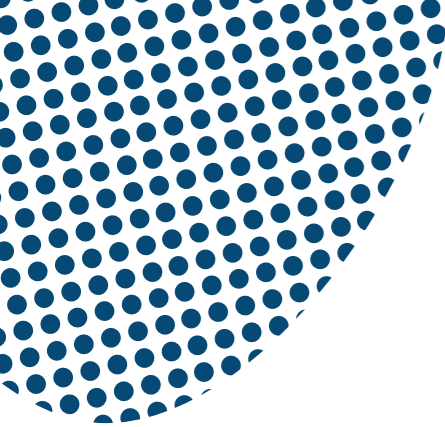
- **Extracurricular Course on Entrepreneurship** offers the opportunity to learn more about entrepreneurship from both an academic and practical perspective. After a brief introduction to the topic, you will work in collaborative, cross-faculty groups to practice what you have learned and develop new skills. Each evening ends with real challenges presented by the invited speakers from a wide range of industries.
- The minor **in Innovation & Entrepreneurship** is offered by the Faculty of Business and Economics in collaboration with the Centre of Entrepreneurship at the University of Groningen. An empirically based solution for a practical business development challenge will be developed.

• **Technology-based entrepreneurship**

This course is a compulsory course in the master's program in Industrial Engineering. This course aims to provide students with insights into the specific challenges and issues that entrepreneurs face when starting a new business in a technology context. The course conveys these findings from a theoretical, scientific point of view.

• **Media Entrepreneurship**

This theoretical and practical course examines the role of entrepreneurship in media and journalism, teaches you to observe and study entrepreneurial actions in the media landscape, and guides you through the process of creating a proposal for a new business venture.



NHL STENDEN UNIVERSITY OF APPLIED SCIENCES – LEEWARDEN

ACTIVITIES



Introduction to entrepreneurship:
learn about the landscape of entrepreneurship, methods, and founders.

- From special stories from entrepreneurs to workshops on how to develop a business model. Together with partners, inspiring and educational workshops and events are organized.
- Community members' lunch together.
- Presentations by entrepreneurs who share their experiences.
- Startup Idea Scan
- Ask the expert (for example, clarify legal or marketing issues with experts from the community)
- Trainer (brainstorm with coaches or entrepreneurs about business ideas/companies)



Regulation, Legal & Financing:
understand which framework conditions are important.

The Center for Entrepreneurship offers various programs and scholarships.

- Hayo Apotheker Incentive Fund – you can qualify for a start-up budget at the „Kickstart Trail“ event.
- The „Business Program“ supports students in reconciling studies and entrepreneurship.



Business models and business plan:
understand how ideas can be commercialized and how to create a business plan.

- Content of the minor „**Entrepreneurship in Action**“ (toolbox for entrepreneurs), business plan, human resources management for startups, marketing and sales for startups, budgeting and obtaining financing, financial statements, and legal aspects for startups in Indonesia/Bali.
- The International **Business Planning semester** is a two-year program within the bachelor's degree program in International Business.



IP management:
understand the operational and strategic opportunities as well as pitfalls.

The minor in entrepreneurship is aimed at students with a plan to become entrepreneurs. Contents are the creation of a concept; identify or create a market; Develop a strategy to achieve the goals.



Trends in Life Science, Healthcare & BioTech:
Analyze and exploit current and future trends.

- The minor „Entrepreneurship in Action“ (Location: Bali) approaches entrepreneurship as a set of skills. Working in today's fast-paced world requires flexibility, innovation, and proactivity. Every successful company understands that innovation is the key to survival in a highly competitive market. Entrepreneurs naturally develop soft skills that employers are currently desperately looking for as they search for the next generation of successful leaders in their companies. You will be challenged to learn and explore entrepreneurial skills, understand the business model, marketing and communication, financing plan, finances, etc. In addition, you will participate in a self-development program ranging from communication skills to character building, combined with leadership and communication courses.
- The „Creative Business“ **degree programme** teaches cross-media thinking and working.
- The Spa **Business** Strategy minor focuses on developing, managing, and maintaining a spa business solution that meets these high demands. To this end, the students acting as spa consultants must assist a client in solving their business challenges by designing a solid spa business solution concept that will be presented to the client at the end of the module. Part of the Hotel Management degree program.
- The study in „Hospitality Management“ challenges students to develop their talents and learn to be agile in a fast-paced and rapidly changing world.



Pitch decks, investor negotiation exits
learn professional pitching and get valuable feedback from investors.

Content of the minor „**Entrepreneurship in Action**“ (soft skills of entrepreneurs), behavioral, psychological, and communicative aspects of entrepreneurship. Business Pitching, Elevator Pitching, Networking, Growth Mindset and Business Negotiation



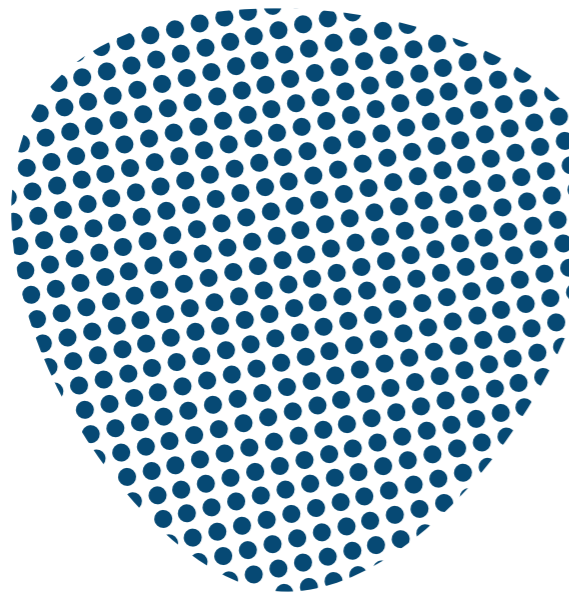
(Pilot) customers & partnerships:
win the first pilot customers and enter into cooperations.

- „**Founded in Friesland**“ is a guide through the Frisian ecosystem for start-ups and scale-ups. If you have an innovative startup and could use some extra support, then founded in Friesland can help you with that. You know exactly what's going on in the north and what parties you need to help you grow. The Center for Entrepreneurship has a strong partnership with Founded in Friesland and is an important part of the CFes program.
- „**Startup Program**“ is an online learning environment for new entrepreneurs that focuses on people, the planet, and the wallet. It offers a range of video courses from real impact entrepreneurs, a cheat sheet to bring order to chaos, and if that's not enough, guarantee an answer to your business questions within an hour via 1-on-1 chat.
- „**Innofest**“ Would you like to test your product on your target group to find out if it fits their needs? Then Innofest is just right for you. They will help you test your prototypes to increase your chances of success. You test your product in places that are as close to reality as possible, such as festivals and living labs. The feedback they receive can help you refine your product or service and take it to a higher level.

SUMMER SCHOOLS/CAMPS? HACKATHONS? SOCIAL ENTREPRENEURSHIP CAMPS?

Every month, the Center for Entrepreneurship organizes a variety of events:

- Lectures
- Workshops
- Parties



VAN HALL LARENSTEIN UNIVERSITY OF APPLIED SCIENCES – LEEWARDEN



ACTIVITIES



Introduction to entrepreneurship:
learn about the landscape of entrepreneurship, methods, and founders.

The Green Entrepreneurship Centre (GEC) is a knowledge centre within the VHL University of Applied Sciences (VHL) that trains entrepreneurial students, alumni and (future) entrepreneurs. The GEC supports start-ups and projects that are geared towards sustainable and innovative entrepreneurship. The GEC is aimed at all students and alumni, regardless of what education you have completed at VHL. The centre operates through an extensive network of facilities, advice and opportunities. The Green Entrepreneurship Centre is committed to sustainable entrepreneurship and has a special focus on student start-ups.

As a knowledge center of VHL, we contribute to realizing the entrepreneurial ambitions of our students and alumni. We do this with a view to a green economy in which terms such as circular economy, climate targets, internationalization, innovation and cooperation have become a matter of course. We encourage entrepreneurial students to strive for sustainable business operations. The UN's development goals, the Global Goals, can serve as a guide here. The center offers many opportunities for students, including personal coaching, IT facilities, network meetings, microloans, idea labs, and a minor in Sustainable Entrepreneurship. There are also opportunities for existing companies, alumni, governments, and consulting firms with a mission, question, or problem in the field of sustainable entrepreneurship.



Trends in Life Science, Healthcare & BioTech:
Analyze and exploit current and future trends.

- Content of the master's program **Innovative Milk Chain Management** – learn to be able to react to future nutritional trends with creative dairy solutions.
- The Food Technology **degree program** focuses on creating and innovating in the world of food, marketing, and technology.
- **Regional** Development and Innovation is a specialization in the International Development Management program and analyzes the reasons for the persistent inequality between urban and rural areas. Students learn how to facilitate development and empower vulnerable rural communities.

- In the Disaster Risk Management **specialization**, students learn how disasters are the result of poorly managed risks, combined with the lack of appropriate risk mitigation measures. Effective crisis and disaster responses therefore require a shift away from reactive emergency response towards proactive disaster risk reduction. Disaster risk management combines the concept of response and reconstruction (in the post-disaster phase) with the concept of prevention, mitigation and preparedness (pre-disaster phase).



Business models and business plan:
understand how ideas can be commercialized and how to create a business plan.

Content of the master's programme in Management of the **Agricultural Production Chain**



Team & project management:
learn successful and sustainable management for teams and projects.

Content of the International **Development Management program**



Regulation, Legal & Financing:
understand which framework conditions are important.

- The Green Entrepreneurship Centre (GEC) offers students who want to start a start-up insight and, if necessary, support in finding financing opportunities.
- understand the advantages and disadvantages of common instruments and models and critically assess their application.
- independently develop strategic options and derive recommendations for their implementation.

SUMMER SCHOOLS/CAMPS? HACKATHONS? SOCIAL ENTREPRENEURSHIP CAMPS?

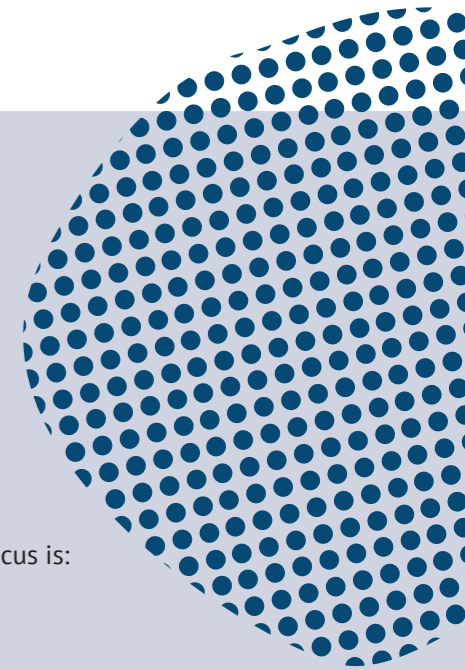
- International **Agricultural Industry and Trade** (part of the content: Developing Entrepreneurship)
- International **Development Management** as well as **Animals, Society and Economy (Animal Husbandry)** (Content part: Entrepreneurship)
- European University Alliance INVEST

In 2021, Van Hall Larenstein University of Applied Sciences (VHL) launched a cooperation with four other universities in Europe under the name „European University Alliance INVEST“. The partners of INVEST are working together on „Innovations for Regional Sustainability“. Starting in September, the HVHL, together with partners, will offer five minor subjects/specializations for students in the 3rd and 4th year of study as well as international exchange students. In these, research and teaching are linked.

One of the main areas of focus is:

Entrepreneurship

- Circular economy/bio-based economy
- Job creation and management of human capital
- New business models and smart technologies
- Regional, sustainability-based capitalism and bio-based industries.



CARL VON OSSIEZKY UNIVERSITY OLDENBURG

ACTIVITIES



Introduction to entrepreneurship:
learn about the landscape of entrepreneurship, methods, and founders.

- Students, staff, or alumni who have the desire to start their own company or even already have a business idea have come to the right place at GIZ (Start-up and Information Centre, University of Oldenburg). GIZ offers advice, coaching and qualification to all those interested in founding a company in the pre-start-up and start-up phase, as well as in the market and growth phase. In particular, founders also receive support in applying for funding (e.g., EXIST start-up scholarship and EXIST transfer of research). Several start-up consultants are available for this purpose.
- Appointments for a first meeting can be made at any time. Together with the start-up consultants, depending on the status of the start-up idea, we then look for optimal support in the start-up process. Of course, all information will be treated with the utmost confidentiality!
- GIZ also offers individual counselling appointments with experts from the private sector. The main consultation hours take place regularly on various topics, such as taxes, law, marketing, etc.



Trends in Life Science, Healthcare & BioTech:
Analyze and exploit current and future trends.

In start-up consulting, various workshop formats are offered, which start-up teams can take advantage of either alone or together with other start-up teams.

- Design Thinking Workshops: User-centered product development, innovation
- LEGO® Serious Play® Workshops: Strategy and Vision Workshops, Team Workshops
- Market workshops: Targeted analysis of market potential and positioning
- Business model development: Development of the business model using various methods.



Value Proposition & Marktanalysen:
understand the market and formulate your „Unique Selling Point.“

The Marketing module

Students should:

- Insights into the mindset and tasks of marketing have won,
- Be able to identify and delineate markets,
- Deal with systematic decision-making behavior be able to deal with,
- Be able to recognize new developments in marketing,
- Reflect the institutional peculiarities of marketing can.



Regulation, Legal & Financing:
understand which framework conditions are important.

The „Oldenburg Start-up Cheques“, which GIZ issues in cooperation with the Technology and Start-up Centre Oldenburg (TGO), are intended to facilitate start-ups and provide founders with important support in the pre-start-up and start-up phase. The checkbook contains seven consulting vouchers for young entrepreneurs on legal, tax and financial issues as well as on corporate and marketing strategies.

SUMMER SCHOOLS/CAMPS? HACKATHONS? SOCIAL ENTREPRENEURSHIP CAMPS?

- Entrepreneur Simulation Game
- Practical project – Citizen entrepreneurship for a sustainable energy industry
- HEALTHCARE HACKATHON OLDENBURG, interdisciplinary teams develop creative solutions in the form of prototypes, new services, or innovative business models.
- Information event „Innovation Management and Entrepreneurship“, part-time master's program
- Start-up management
- Project Seminar Entrepreneurship
- Start-up management for educational scientists and computer scientists
- Strategy & Entrepreneurship
- Eco Venturing: Project and face-to-face seminar
- Excursion seminar business model and prototype development



IP management:
understand the operational and strategic opportunities as well as pitfalls.

The Corporate Strategies module

The aim of the course is to enable students to:

- know and understand basic terms, instruments, and theories of strategic management.
- analyze corporate strategies using conceptual frameworks.
- understand the advantages and disadvantages of common instruments and models and critically assess their application.
- independently develop strategic options and derive recommendations for their implementation.



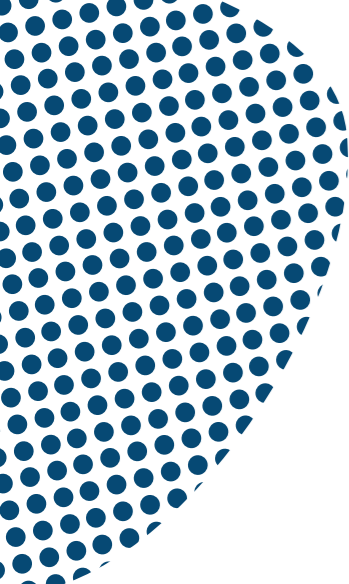
(Pilot) customers & partnerships:
win the first pilot customers and enter into cooperations.

- The Technology and Start-up Centre Oldenburg (TGO) is a partner of the university-related incubator „VentureLab Plus“.
- The Start-up and Innovation Centre (GIZ) cooperates with the Economic Development Agency of the City of Oldenburg, for example in the area of the Oldenburg Start-up Forum.
- The Entrepreneurship Summer School Plus 2012 was organised by GIZ in cooperation with the Oldenburg Economic Association - The Small Circle.
- Business Angels
- Founding a start-up centre in Oldenburg
- Sirius Minds Affiliated Institute of the University of Oldenburg
- Pitch Workshop



Pitch decks, investor negotiation exits
learn professional pitching and get valuable feedback from investors.

- Online Pitch Event
- Practice: Get the chance to pitch your own idea in front of others
- Feedback: Get tips for the further development of your business idea from a jury of experts
- Prizes: The two best ideas will be rewarded with a three-hour business coaching session from venture coach and founder Irene Walsh
- Network: Get to know other people interested in founding a company from the Northwest Startup Region!



UNIVERSITY OF APPLIED SCIENCES OSNABRÜCK



ACTIVITIES



Introduction to entrepreneurship:
learn about the landscape of entrepreneurship, methods, and founders.

- As a joint institution for transfer and innovation of the two Osnabrück universities, TIM advises and supports in all matters relating to the exchange between science and practice, start-up ideas and projects as well as the exploitation of research results. Personal and confidential advice is a central concern.
- If you are looking for cooperation partners for an application-oriented research project, the integration of practical examples in teaching or feedback on scientific projects. The TIM arranges practical results and provides support in the search for suitable contacts in practice.
- Ideas can be tested at the innovation sites of the college and university and implemented as the first prototypes, for example in the StartUp! Lab at the port of Osnabrück. Support is provided by advice and feedback on the idea, mentoring, financial support programs, free workshops and events, and the opportunity to network with other interested parties.



Pitch decks, investor negotiation exits
learn professional pitching and get valuable feedback from investors.

1. Idea development and elevator pitch are contents of the workshops at StartUp! Lab – the groups present their prototypes and the business model and get valuable feedback.
2. Part of the ideas competition – the ideas are presented in a live pitch in front of an expert jury.



Trends in Life Science, Healthcare & BioTech:
Analyze and exploit current and future trends.

Product and Innovation Management is a module of the master's programs: Business Management, Controlling and Finance as well as International Business and Management Innovation is a „perennial favorite“. In order to remain competitive, many markets require a permanent willingness and ability to innovate, ranging from changes to existing products to basic innovations. New product developments usually do not arise by chance but are the result of a systematic innovation process that extends over several phases and integrates different development and testing methods.



Business models and business plan:
understand how ideas can be commercialized and how to create a business plan.

- What belongs in a business plan - Checklist of the BMWK for the preparation of a business plan
- The module „Business Model and Business Plan“ is part of the following courses: Business Administration and Management as well as Industrial Engineering and Management at the Osnabrück University of Applied Sciences



Regulation, Legal & Financing:
understand which framework conditions are important.

- The TIM team advises scientists at the University of Osnabrück on funding opportunities for application-oriented research projects with non-scientific partners. You can also obtain assistance with further research funding from the research officers at Osnabrück University. The Research & Cooperation department advises on national funding opportunities, and the EU Office provides support for European projects.
- If you are interested in the possibilities of a research-related start-up, the team advises on funding opportunities and establishes contacts in the regional start-up ecosystem.
- Advice on the registration of intellectual property rights and exploitation of inventions, as well as patent applications.
- Individual mentoring and support in the various phases of a start-up development around the topic of entrepreneurship and start-ups

- Women in particular should be encouraged to implement their ideas, as they have just as much potential as men. The aim is to create a start-up scene that is open to everyone – regardless of gender, origin or background.
- The „**Start-up Start-up Kit**“ includes all information on the necessary first steps as well as the „EXIST funding model of the BMWi“ for financing the start-up phase of the start-up project.
- Coaching – Individual advice on start-up ideas
- Finance – Advice on funding opportunities
- Support – accompaniment and mentoring in the start-up phases.
- Network & Navigation – Networking in the Startup Ecosystem
- Legal forms: The most important selection criteria – Overview of the BMWK with selection criteria for the various legal forms.
- Tips for founding a team – A publication of the RKW magazine with success factors and stumbling blocks for team start-ups.



IP management:
understand the operational and strategic opportunities as well as pitfalls.

- The module „**Leadership and Strategy**“ is part of the degree program Health Management - The Anchoring of Strategic Management in the Healthcare Industry supports the theoretical foundation, the method-based structure and the defense of comparative competitive advantages for the goal of ensuring the viability of the relevant health care facilities. In this way, the hitherto dominant operational management is supplemented by thinking, acting and leading in longer-term horizons.
- The module „**Strategic Business Management**“ is part of the degree program Agriculture - Corporate Management is characterized by the objective of aligning and developing the company within the existing market economy environment and other framework conditions in such a way that it can successfully assert itself in the competition in the long term. In particular, this requires a wide range of strategic and cross-divisional decisions by the company management. In addition to the choice of sustainable strategies based on analysis and evaluation results, this includes, above all, efficient financing and collateralization.



Team & project management:
learn successful and sustainable management for teams and projects.

The module „Project Management“ is part of the following degree programs:

- Electrical Engineering
- Computer Science
- Mechatronics
- Bioprocess Engineering in Agriculture and Food Industry
- Dental Technology
- Plastics Technology
- Energy, Environmental and Process Engineering
- Materials Engineering
- Automotive Engineering
- Mechanical Engineering
- Landscaping
- Construction Management

SUMMER SCHOOLS/CAMPS? HACKATHONS? SOCIAL ENTREPRENEURSHIP CAMPS?

- Annual ideas competition – Students and other members of the University and University of Applied Sciences Osnabrück can submit their innovative, unique and feasible business ideas.
- The StartUp! Lab offers workshops on a regular basis.
- The Entrepreneurship module deals with entrepreneurial thinking and acting through iterative approaches such as Design Thinking and Lean Startup

UNIVERSITY OF VECHTA



ACTIVITIES



Introduction to entrepreneurship:
learn about the landscape of entrepreneurship, methods, and founders.

- The TrENDi team continuously develops exciting, entertaining and effective offers around the topic of „entrepreneurial thinking and acting“.
- Individual start-up advice for all those interested in starting a business, tailored to their needs.
- Informative workshops on the topic of entrepreneurship, in which all phases of a start-up are taken into account.
- **From TrENDi-Members Guided seminars:** EXCURSION/ FIELD TRIP Entrepreneurship & Sports: Project Development in the context of intercultural exchange.
- Female Role Models: In dialogue with founders of sustainable start-ups and artistic presentation of the results
- Transformation potentials through technological advances
- Introduction to Entrepreneurship, Intrapreneurship and Innovation Management
- Business Model Development / Businessplanning

- Marketing
- Project work: Business Plan
- Economics of Social Entrepreneurship, Social Business and Non-Profit Organizations
- Learning and working in contexts of transformation
- Entrepreneurial concepts of social entrepreneurship and social business
- Corporate Sustainability
- **Start-up STORIES** – In this format, founders from various industries talk about their start-up secrets. They talk about their founding idea and the beginnings of their start-up, about setbacks and milestones.
- **START-UP ON SCREEN** – it’s about learning from failed projects.
- **START-UP MEET** – make contacts or get to know new perspectives and ways of thinking on the topic of „start-up“. Visits to start-ups and renowned companies from the region, as well as excursions to cities and countries such as Berlin, Hamburg, Kassel, Munich, England, Scotland, Italy, Florida and many more.



Regulation, Legal & Financing:
understand which framework conditions are important.

- **Financing** – The TrENDi team provides support in consultation appointments and shows various options.
- **ENTREPRENEUR-IN-RESIDENCE** – In this program, successful entrepreneurs are integrated into the start-up microcosm of the University of Vechta twice a year for one week each. In doing so, they not only give lectures in the various departments of the university, but also work intensively with potential founders or start-up teams in the form of coaching sessions lasting several hours. In addition, the EIR and the TrENDi team are using the time to push ahead with concrete plans for sustainable network development, which should be characterized by an uncomplicated and direct exchange. The one-week stay concludes with a three-day workshop that is not only open to university members, but also takes a participatory approach with the citizens of the region.

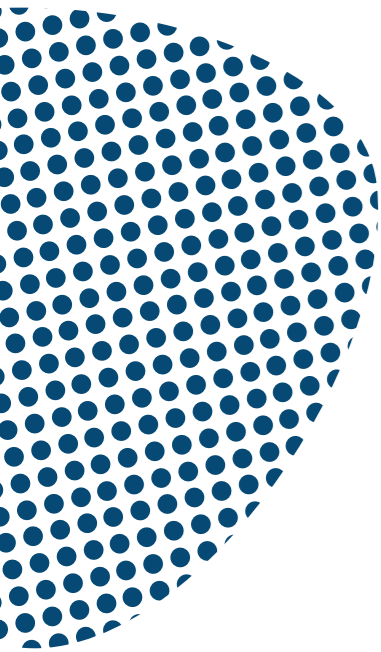


Pitch decks, investor negotiation exits
learn professional pitching and get valuable feedback from investors.

Workshop „**Pitch-Perfect**“ – Presenting ideas dynamically and convincingly

SUMMER SCHOOLS/CAMPS? HACKATHONS? SOCIAL ENTREPRENEURSHIP CAMPS?

- The spectrum of professional events on the topic of „entrepreneurship“ ranges from important knowledge transfer for all budding entrepreneurs in seminars and workshops to lectures from practice and cultural events that look at the topic of „entrepreneurial thinking and acting“ from a different perspective.
- **Summer School SANDbrain** learn in the holiday paradise – on the topic of „Entrepreneurship & Sports“. An exciting workshop week in Sardinia
- Open Start-up Consultation Hour
- Guest lecture „**FuckUp-Night**“ – People talk about dealing with failure – Inspiring!
- Workshop „**Pitch-Perfect**“ – Presenting ideas dynamically and convincingly
- Workshop „**Social Media Marketing**“ – Intro Social Networks as a PR and Advertising Tool



JADE UNIVERSITY OF APPLIED SCIENCES – WILHELMSHAVEN



ACTIVITIES



Introduction to entrepreneurship:
learn about the landscape of entrepreneurship, methods, and founders.

- At the Institute for Business Start-ups and Innovation at Jade University, students and employees are supported in the implementation of their start-up idea.
- Consulting services
- Coaching
- Infrastructure – Jade Startup Box (fully equipped workstations, meeting room)
- Advice on subsidies
- Accompaniment
- Events and workshops
- the opportunity to exchange ideas with like-minded founders and those interested in founding a company and thus create synergies.
- Support in all start-up issues, on the subject of company formation, taxes, trademark and patent law or even start-up grants and state subsidies.
- Founder's tips – help and thoughts for budding entrepreneurs.
- The „common thread“ for start-up planning is an overview of the BMWI start-up portal – step by step, it guides you through the fundamental questions on the way to your own company:
 - Decision
 - Planning
 - Budget
 - The company



Business models and business plan:
understand how ideas can be commercialized and how to create a business plan.

- In the start-up tips you will find the category **business plan**, explanations, assistance as well as templates or samples to download.
- What should be included in your business plan? – The overview of the BMWI start-up portal goes through all the important points
 - Summary
 - Founders
 - Product/Service
 - Market Overview
 - Marketing
 - Company Organization/Human Resources
 - Opportunities and risks
 - Financing
 - Data



IP management:
understand the operational and strategic opportunities as well as pitfalls.

Content of the Entrepreneurship Certificate:

- Tax pitfalls Obtaining tax bases in the course of setting up a company.
- Developing competencies for future tax implications and consequences in the course of setting up a company



Regulation, Legal & Financing:
understand which framework conditions are important.

- Content of the Entrepreneurship Certificate: Business Start-ups and Financing
- Gaining fundamentals in the field of financing
- Recognizing the emergence of capital requirements
- Obtaining the basics of financing opportunities
- Acquisition of competencies for the assessment of loan collateral and its liability
- In the category of start-up capital and funding, financing options are shown. Here you will find links to pages where you can find further help and contact persons.
- Information on scholarships is listed, such as EXIST (start-up grant) and others.
- Information on the legal forms
- Registering a business - you have to pay attention to this - many questions are answered here, the framework or legal questions. For example:
 - Commercial or freelance
 - Checklist to prepare for registering a business.
 - Questionnaire for tax registration



(Pilot) customers & partnerships:
win the first pilot customers and enter into cooperations.

- GIZ – The start-up and innovation centre in Oldenburg
- EXIST Start-up Grant
- Projekt Exist Potentiale| Jade Startup Box
- Nordfrost – The company supports as a sponsor.
- City of Wilhelmshaven



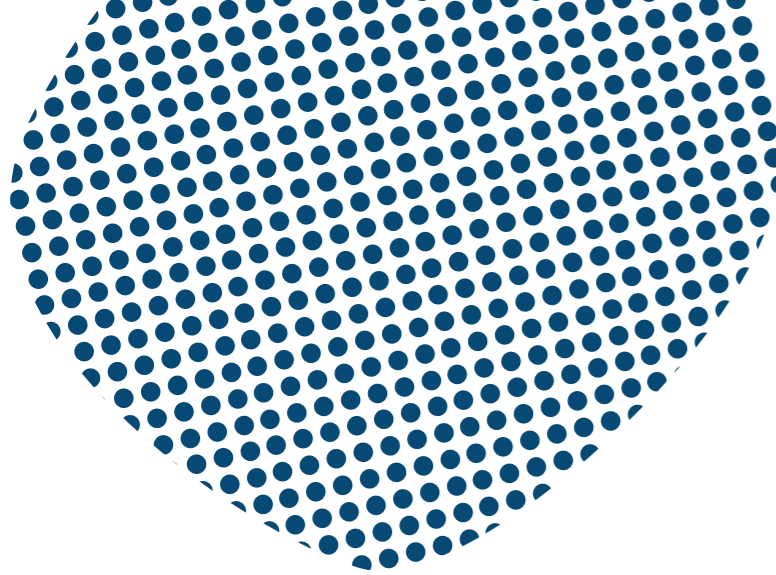
Pitch decks, investor negotiation exits
learn professional pitching and get valuable feedback from investors.

- At the meeting entitled „Pitching while pitching“, on the golf course of the Golfclub Wilhelmshaven-Friesland e.V., founders of the Jade University of Applied Sciences had the opportunity to exchange ideas with successful entrepreneurs in the region about their start-up idea and to win mentors for their entrepreneurial projects.
- Content of the Certificate Entrepreneurship: Pitch Workshop
- Acquisition of methodological competence to present complex business ideas in a structured manner.
- Acquisition of communication skills, writing and presenting results

SUMMER SCHOOLS/CAMPS? HACKATHONS? SOCIAL ENTREPRENEURSHIP CAMPS?

- Jade Startup Tag (Campus Wilhelmshaven)
 - Pitching while pitching
 - Certificate Entrepreneurship - In order to obtain the certificate, two compulsory modules must be successfully passed, and three elective modules must be completed. The compulsory modules „Business Simulation Startup“ and „Practice of Business Start-up“ take place alternately in the summer and winter semesters. Elective modules may vary from semester to semester.
 - Joint workshop series of the economic development

- agencies of the districts of Wesermarsch, Friesland and the city of Wilhelmshaven as well as the Harlingerland Economic Development Association e.V.
- Start-up days: Start-up coaching – from the idea to the company
- Foundation Days: Business Plan – From Idea to Success
- Foundation Days: Financing & Funding Programs



UNIVERSITY OF APPLIED SCIENCES EMDEN/LEER



ACTIVITIES



Introduction to entrepreneurship:
learn about the landscape of entrepreneurship, methods, and founders.

The **MeerCommunity – Meer-Startups for the Region** supports students, employees and alumni interested in founding a company in order to make a sustainable contribution to the regional innovation capability in East Frisia. The services of the MeerCommunity Startup Center include: Consulting and coaching services as well as workshops for students and professors and the support of those willing to start a business by mentors and regional companies.

Through good networking and interdisciplinary projects within and outside the university, students should be inspired to implement their own ideas.

- Network of founders – learning from experience



Trends in Life Science, Healthcare & BioTech:
Analyze and exploit current and future trends.

- The specialization of the Business Psychology program deals with the topic of how social and technological trends change consumer behavior.
- The HILOG Application Center offers insights into the latest developments in logistics and digitalization.



Value Proposition & Marktanalysen:
understand the market and formulate your „Unique Selling Point.“

The specialization Market and Consumers deals with the questions „What do products and services have to offer in order to be attractive to consumers? What is the best strategy to market my start-up's offering?“



Business models and business plan:
understand how ideas can be commercialized and how to create a business plan.

Content of the seminar „Entrepreneurship“ at the Business Campus Leer in the dual business administration program – Students can develop business ideas, plan the necessary steps for implementation, create a business plan and present a concept convincingly.



Regulation, Legal & Financing:
understand which framework conditions are important.

Content of the focus module „Entrepreneurship“ – Students understand the legal, organizational, and economic/financial framework conditions for start-ups.



IP management:
understand the operational and strategic opportunities as well as pitfalls.

The specialization „Corporate Management“ deals with the contents:

- Innovation
- Strategic Management
- Organization
- Human resource management
- Change Management
- International Management

The methods are:

- Analytical and structured problem-solving skills
- Scientific work
- Presentation skills
- Teamwork

The **Project Management module** in the Business



Team & project management:
learn successful and sustainable management for teams and projects.

Administration degree program – acquisition of an understanding of the development of project management from a hierarchical waterfall model to objectively focused agile thinking.



(Pilot) customers & partnerships:
win the first pilot customers and enter into cooperations.

Networks in the region:

- Female Entrepreneurs Network East Frisia
- Cornexion – deals with the development of startup ecosystems and networks to create perspectives for startups.
- Energy Efficiency and Climate Protection Networks Initiative – successfully supports companies of all industries and sizes in exchanging information across industries in networks and implementing measures to optimize energy efficiency.
- The NIWO – Network for Innovative Economic Development
- The network – brings your company forward through networking and certain extras.
- The Emden start-up network redOx supports the conversion of ideas into a business model.



Pitch decks, investor negotiation exits
learn professional pitching and get valuable feedback from investors.

- The MeerCommunity will regularly organize investor pitches to give female founders early feedback in the start-up process.
- Content of the focus event „Entrepreneurship“ – pitch for financing a business idea

SUMMER SCHOOLS/CAMPS? HACKATHONS? SOCIAL ENTREPRENEURSHIP CAMPS?

- Online Exist Workshop – Among other things, the Exist start-up grant finances living expenses over a period of 12 months. At the information event, information about the scholarship will be provided, the application process will be prepared and questions about the funding guidelines will be answered.
- The Entrepreneurship Club invites you to an informal exchange.
- Founding and Startup Stories
- Side-Hustle Workshop – learn to use strengths, interests, and competencies.
- The focus module „Entrepreneurship“ in the field of economics introduces the basic concepts of entrepreneurship and presents the individual stages of dynamic corporate development from the idea to implementation to placement.

ENTREPRENEURSHIP EDUCATION

1.1. Overview of the approach of EE research

Semi-structured expert interviews are a valuable qualitative research method that allows researchers to tap into the depth of knowledge held by experts in a given field. By following a well-defined research design, researchers can gather rich and insightful data that contributes to a deeper understanding of the research topic.

a. Research Method

The primary objective of this research is to gather in-depth insights and expertise on a specific topic or issue from individuals who are considered experts in the field. As a research method, semi-structured expert interviews were used to provide a flexible and interactive method for collecting rich qualitative data, allowing to tap into the knowledge and experiences of experts.

b. Selection of Participants (Experts)

In order to evaluate the current state of Entrepreneurship Education in the EDR, experts from the region were chosen, considering factors such as their qualifications, experience, and relevance to the research topic. These potential experts were identified through academic networks, professional associations, or relevant publications. They were subsequently contacted and invited them

to participate in the interviews. In addition, national experts in entrepreneurship education with a proven track record were also interviewed for best practice examples. In total, nineteen experts were chosen because of their background as professors, researchers, or consultants for EE working for HEI in either the Netherlands or Germany (14 interviewees) with different experience levels. Five interviews were furthermore conducted with interviewees from HEI outside the Ems-Dollart-Region, which were nonetheless considered experts in EE. Twelve of the interviewees were professors while seven were in other positions as further described in the table below. Working experience in the field at the HEIs ranges from 1 to 25 years, with an average of nine years considering all respondents.

Doku...	D...	Member EDR	Gender	Location	Working in EE at HEI in years	Interview Length in minutes	Name of HEI	Profession
Interviews	R1	<input checked="" type="checkbox"/>	male	Netherlands	3	35:59	Hanze University of Applied Sciences	Professor
Interviews	R2	<input checked="" type="checkbox"/>	male	Netherlands	4	56:09	Hanze University of Applied Sciences	Professor
Interviews	R3	<input checked="" type="checkbox"/>	male	Netherlands	20	26:56	University of Groningen	Deputy Director UGNWG
Interviews	R4	<input checked="" type="checkbox"/>	male	Germany	8	29:57	HS Osnabrück	Startup Service
Interviews	R5	<input checked="" type="checkbox"/>	male	Germany	1,5	35:08	Universität Vechta	operational management EXIST project
Interviews	R6	<input checked="" type="checkbox"/>	male	Germany	18	47:01	HS Emden/Leer	Professor
Interviews	R7	<input checked="" type="checkbox"/>	female	Netherlands	1	29:45	NHL Stenden	Professor
Interviews	R8	<input checked="" type="checkbox"/>	male	Germany	15	24:13	Universität Oldenburg	Professor
Interviews	R9	<input checked="" type="checkbox"/>	male	Germany	25	38:05	HS Emden/Leer	Professor
Interviews	R10	<input checked="" type="checkbox"/>	female	Germany	6	58:24	Universität Oldenburg	Professor
Interviews	R11	<input checked="" type="checkbox"/>	male	Germany	3	40:29	Jade Hochschule Wilhelmshaven	Knowledge and technology transfer
Interviews	R12	<input type="checkbox"/>	male	Germany	20	62:54	PFH Göttingen	Professor
Interviews	R13	<input type="checkbox"/>	male	Germany	20	95:00	HS Bremerhaven	Professor
Interviews	R14	<input type="checkbox"/>	female	Germany	11	54:31	Europa Universität Flensburg	Director Entrepreneurship & Education Centre
Interviews	R15	<input checked="" type="checkbox"/>	male	Netherlands	7	55:24	University of Groningen	Coordinator Entrepreneurship minors, lecturer
Interviews	R16	<input type="checkbox"/>	male	Germany	11	28:25	TU Braunschweig	Professor
Interviews	R17	<input type="checkbox"/>	female	Germany	3	27:21	HTW Berlin	Professor
Interviews	R18	<input checked="" type="checkbox"/>	female	Germany	1	35:01	HS Emden/Leer	Professor
Interviews	R19	<input checked="" type="checkbox"/>	male	Netherlands	1	38:14	NHL Stenden	Center for Entrepreneurship

Figure 2: List of Interviewees including location, profession, experienced and gender

c. Ethical Considerations

Participants made an informed consent, ensure that participants understand the purpose of the interviews, their voluntary nature, and the confidentiality of their responses. An ethical approval was not required for the nature of the research.

d. Development of Interview Guide

The interview guide was developed creating a list of open-ended questions that cover the key areas of interest. These questions were broad enough to allow experts to elaborate on their responses. Probing questions allowed to delve deeper into specific aspects or insights provided by the experts. The interview guideline was tested by conducting a pilot interview with a non-participant to refine the interview guide and ensure clarity and relevance of questions.

The interview guideline was created in such a way that the questions were ordered from general to specific. First, open questions were asked about the existence of formats, the beginnings of entrepreneurship and the HEI. The questions evolved during the guideline from the HEI reference closer to the personal perception of the interviewees. Questions about the suitability of teachers, teachability and wishes for improvement were asked more towards the end. This was to ensure that the interviewees were introduced to the more in-depth questions slowly as the interview progressed and were not caught off guard at the beginning, which might have affected the quality and length of the answers.

e. Data Collection

Due to the ongoing pandemic, the interviews were conducted via video conferencing, which also catered to the convenience of the experts. The interviews were recorded and transcribed. The interviewer was clearly defined as a neutral facilitator, ensuring that their own opinions do not influence the responses. Each interview began with an introduction, reiterating the purpose and confidentiality of the interview. Although the interview guidelines provided a clear path, flexibility in the conversation was provided, allowing experts to share insights beyond the structured questions. Follow-up questions to seek clarification or elaboration were asked. The interviews were conducted in the timeframe from September to November 2020.

f. Data Analysis

The recorded interviews were transcribed and a coding techniques (e.g., thematic and/or content analysis) applied to identify recurring themes, patterns, and insights within the data. The data was then analyzed accordingly. The form of communication for the interviews was originally planned as a personal conversation with the interview partners. However, due to the pandemic in 2020, video conferencing was chosen as a substitute. Additionally, three interviews were conducted as telephone calls, because a video call was not feasible. All interviews were recorded, transcribed, and evaluated through coding with the MAXQDA Software. Based on the interview guide, a category system was deductively created in the sense of qualitative content analysis and was furthermore used as a search grid for extracting suitable conspicuous text passages. The phrases and statements that were considered relevant for the categories were considered as codes and added to the categories.

The data analyses show major fields for consideration:

- Struggles and barriers of Entrepreneurship Education
- Communication of Entrepreneurship Education
- Interdisciplinary Entrepreneurship Education
- Suitability to teach Entrepreneurship
- Didactics in Entrepreneurship Education

STRUGGLES AND BARRIERS OF EE

From the interviews the following topics emerged as struggles or barriers to EE:

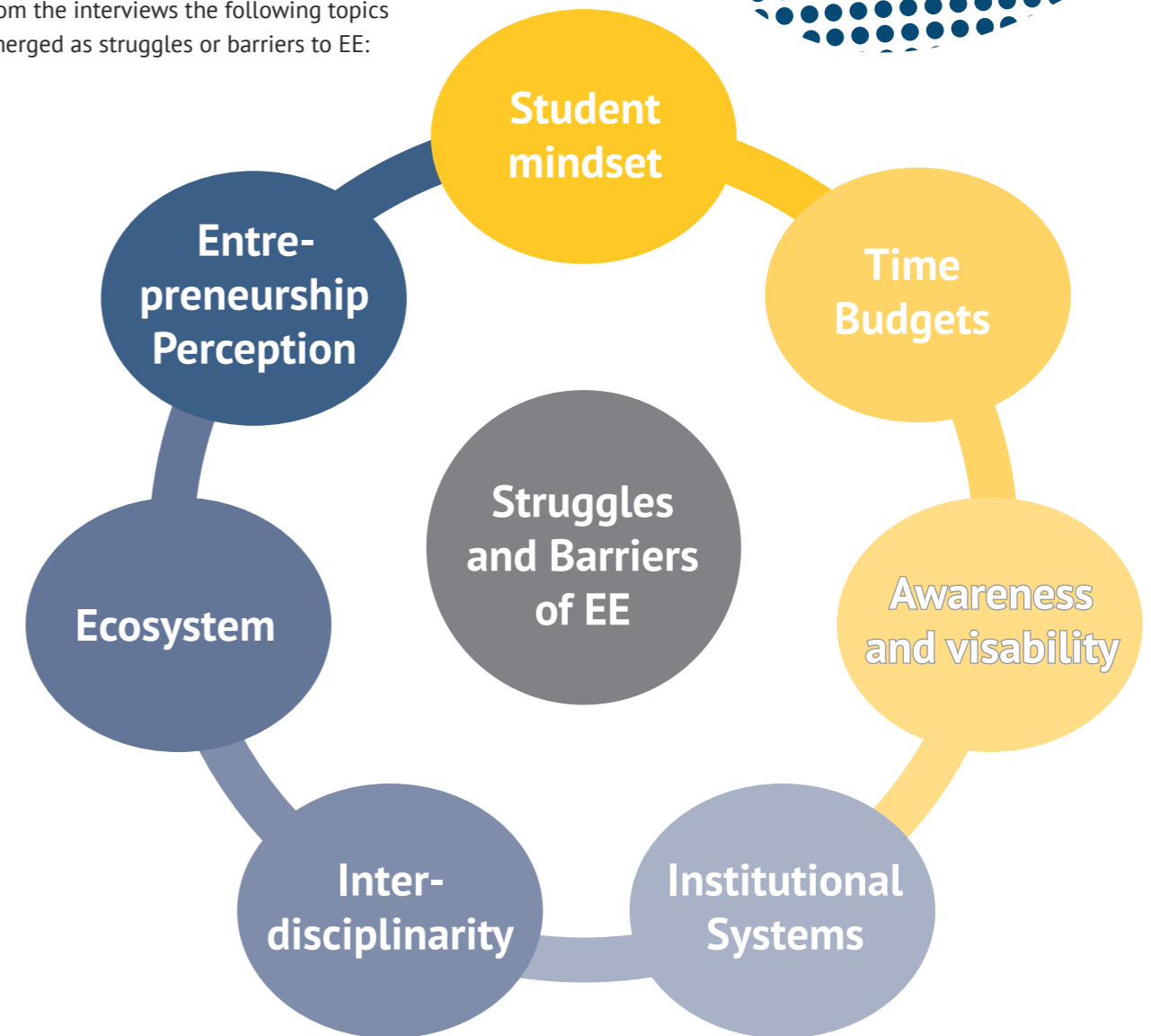


Figure 3: Struggles and Barriers of Entrepreneurship Education overview

Student mindset

As an overall barrier to the EE approach almost 75% of the interviewees describe the student's mindset and their past education as a hurdle. This impression is substantiated by various topics: (1) the strong manifestation of the assessment by target achievement in the students' previous education path is criticized leading to less openness towards experimental approaches; and (2) the lack of personal commitment and initiative on the part of many students, which is also encouraged by the rigidity of the HEI educational programs, which leave hardly any room for extracurricular activities, thus harming students from participating in EE formats.

Many experts also consider an early confrontation with EE as well as teamwork and interdisciplinary (i.e. future skills) to be useful in order to promote a hands-on mentality and more problem-solving oriented approaches. Another mentioned factor is to motivate students through more attractive, project-based formats.

Time Budgets

Time budgets on the educator's side seem to create hurdles as they often fail to have enough time to support students in their entrepreneurial efforts. It is, in this case, up to the personal decision of the respective educators concerned whether they invest additional time or not. Respondents mention that capacities are valued higher in the search for suitable EE teachers than the actual qualification for the position. The necessary and important network building with the ecosystem is described as a time-consuming part of the EE process, which needs constant attention in order to for it to be maintained and to grow.

Awareness and visibility

EE struggles with the overall awareness for the topic and the visibility within the HEI. Experts mention missing strategies for EE as well as the subject seems to hold a low relevance and recognition within the institutions which ultimately results in failing entrepreneurial activities. Therefore, the interviewees described a need for greater transparency and communication of success stories of alumni and offerings that familiarize students with the subject area and function. The visibility of information for students and professors alike is described as a crucial point.

Institutional Systems

The strong restrictions within the institutional systems with an accredited module plan generally leave no room for more creative evaluation methods. The more experimental learning approaches of EE often run up against the rather unfavorable conditions of traditional academic teaching. Adapting EE formats to institutions specifications also requires a lot of commitment and creativity from the educators. The need for educators from the ecosystem for practice-oriented EE is also often more difficult especially due to the academic background of most educators within the institutional context.

Inter-disciplinarity

Participation in interdisciplinary extracurricular activities remains challenging in the well-organized academic framework. Through institutional barriers, students are mostly prevented from earning credit points in other departments as well as their own course curricula are too overloaded to fit additional courses. Furthermore, it is criticized that the accessibility necessary for EE with regard to formats, credit transfers etc. is not given. Many experts also describe the conflict with the management of HEI to be a barrier in EE. This conflict arises mostly through the flexibility and freedom that EE requires in contrast to the formal environment of HEI's. Another conflict has its origin in the financial area. For one, experts criticized the lack of financial resources to invest in visibility, as well as resources are also missing to support for example prototyping. The institutional organization also harms the cooperation within and across HEI's, especially if the relevance of EE is not clear.

Ecosystem

Some respondents mention struggles in EE regarding the ecosystem. The general impression of entrepreneurship suffers from a rather negative image that possibly result in a barrier for entrepreneurial activities in students. This image builds on the strong judgement of failure that comes along with some entrepreneurial endeavors. Another crucial factor is the overall level of wealth in the society that results in an obstacle for entrepreneurial interest as the economy offers more secure alternatives.

Specifically for the Ems-Dollart-Region, the different perceptions of power distance have been a struggle in multinational student teams. As the EDR ecosystem is binational, it is concerning that different perceptions of power distance can be a barrier within teamwork and within teaching multinational students as a professor.

Entrepreneurship Perception

Prejudices and false perceptions about entrepreneurship as barriers were described by many interviewees. A large component of building an entrepreneurial mindset is to break down established stereotypes. One of them being a great heroism surrounding entrepreneurial individuals, as their successes are glorified, without considering the failures in the process. Some also argue that such misconceptions are not only societal, but present within the HEIs, resulting in skepticism within the faculties regarding EE. The breakdown of the misconceptions was mentioned as a critical factor.

COMMUNICATION OF EE

The expert responses show that communication of EE is divided in three different categories, each addressing another target audience.

HEI Contribution

Almost 75% of the respondents consider HEI Contribution as a helpful dimension in communicating EE, but the form of contribution varies. Some respondents believe that the HEI contributes mainly to communication through the provision of resources, which for example could be in the form of EE ambassadors or an Entrepreneurship Hub. However, some respondents perceive it as a bureaucratic contribution rather than a recognition of the importance of the topic. Almost all respondents also consider the implementation of entrepreneurship in the HEI as a successful strategy, clearly stating ETA and contribution to society, as a broad strategic definition in the strategy of the HEI would also facilitate access and communication to other faculties, improving accessibility of EE programs across faculties. It is important, however, to observe that the success of this strategic anchoring often depends on the hierarchical and institutional location of projects and responsibilities. Accordingly, some respondents state that the engagement of HEI Chairs and the engagement of the HEI Presidents help a successful communication of EE. The engagement signifies the purpose of HEI for the region as well as it could represent an advocacy for the university. Regarding the most helpful HEI contributions, some respondents mention creative freedom as well as the ability to react faster and work more flexibly.

Communication Students

Communication towards students can be understood as communication by professors to create awareness for EE formats in order to attract students and to grow a community. Most respondents agree that the communication towards students should focus on content. A broad definition of entrepreneurship in various educational formats would be a suitable way to reach various students across all faculties. In addition, more than 50% of the respondents agree that online marketing is an important communication tool for EE as a way to reach a greater audience beyond the student body, mentioning predominantly the following social media channels: Facebook, Instagram, X (formerly Twitter), and professional networks like LinkedIn or Xing. Other mentioned digital tools would be surveys, monthly newsletters, and online blogs. Conversely, some respondents support the importance of print media, offline marketing, as well as a centrally placed infrastructure on campus and having entrepreneurial ambassadors. Most respondents agree that the topic of entrepreneurship communication offline requires a lot of creative skill and intensive marketing.

Communication Stakeholder

Most respondents agree that the communication towards entrepreneurs or other individuals involved in the entrepreneurship ecosystem would be very important, as it is a way of cultivating connections and forming a strong network, as well as enhancing connectivity with society, economy and other HEIs in the sense of the third mission. Some argue that having a direct spokesperson and visibility on campus are vital when communicating with third parties, and that a sustainable network can ensure the connectivity of the HEI with the ecosystem, which in turn ensures that the EE is kept up to date. In addition, having a close network can lead to a more successful communication with stakeholders. Other mentioned means of attracting entrepreneurs, stakeholders and other individuals that are part of the ecosystem would be large-scale advertising campaigns, large banners in the city, EE advisory boards including representatives of the ecosystem, utilization of the local press, and speeches by the HEI chair.

INTERDISCIPLINARY EE

All respondents unanimously agreed that interdisciplinary teaching plays a major role in EE. There are multiple reasons:

Multi-Perspective

Gaining different perspectives and learning from others is a vital part for EE. The different student backgrounds within interdisciplinary teams could provide in-depth insights on each participant's field of expertise and help to recognize more opportunities. The respondents observe a higher quality of generated ideas in multidisciplinary teams, some even in the final products, as more needs and perspectives have been considered in the process.

Interdisciplinary teaching

EE as a cross-border subject is also requested to be taught by a multi-disciplinary team of teachers in order to open the education process to more perspectives and different approaches. As it was mentioned before, there is a challenge for professors to attract students from other faculties. The cooperation of educators from different faculties could help with the acceptance of the formats. A diverse choice of guest lecturers from the ecosystem could also ensure a more interdisciplinary approach in teaching.

Learning Experience

The standard curricula separate the students into different faculties; the interdisciplinary approach would also give the students the opportunity to learn from each other in more ways than just EE. As in entrepreneurial teams, students' skills and competencies can

complement each other to generate a greater outcome. Participants criticize that most interdisciplinary formats are extracurricular activities, as curricular formats are usually closed to other faculties. Even in elective subjects, students are often limited on their choices. This reduces the possibility for interdisciplinary formats to emerge. As a result, open elective modules offered to all students have proven to be very successful. Another proposal pursued the idea of achieving greater cooperation among faculties through a profiling and complementary studies area, in which students can gain credits from other areas.

Diversity

In addition to an interdisciplinary approach, the diversity of teams was also described as an important factor to the success of EE.

SUITABILITY TO TEACH ENTREPRENEURSHIP

An important perspective in EE is the consideration about who is find most suitable to teach entrepreneurship and why. The data clearly shows three main streams:

Combination of Entrepreneurs and Professors

Almost 75% of respondents point out that a combination of both entrepreneurs and professors would be most suitable to teach entrepreneurship. While professors could monitor the progress and deliver the necessary input, entrepreneurs could act as inspirational role models as well as provide practical experience. Professors also help to raise the experiences of the course to the meta level in order for tools and methods to remain applicable beyond the format. The mutual complementation of the two will overall contribute to the value of the format, adding also a combination of diversity and an interdisciplinary approach.

Entrepreneurs

Other opinions included that entrepreneurs alone are best suited as teachers for EE. Professors as civil servants chose a low-risk career path that is conflicting with the necessary risk tolerance of entrepreneurs. Entrepreneurs may also have a great activating influence on students and offer experiential values, which professors without entrepreneurial background could not deliver. The authenticity of entrepreneurs is hereby also named as a large impact on the students' motivation.

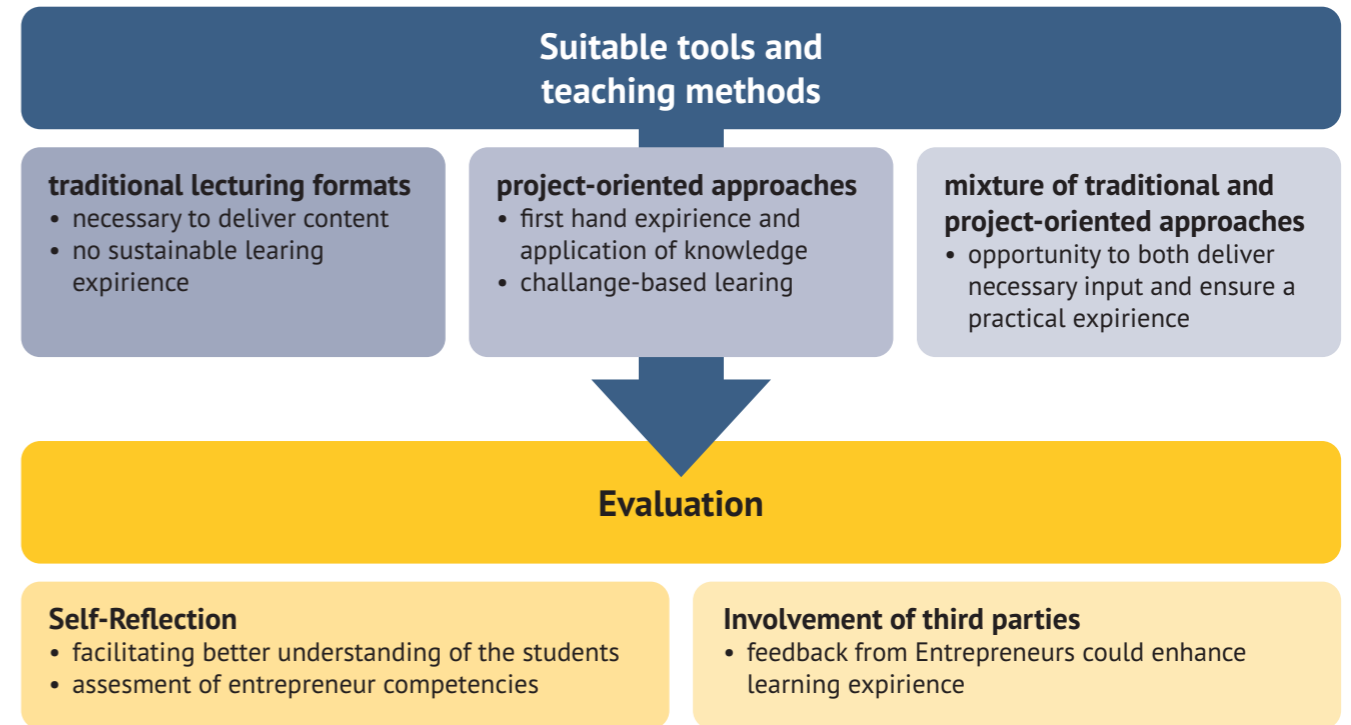
Students

A small number of participants respond that students' involvement in teaching their classmates, with a professor present to reflect on the input, is a helpful element in EE. This would follow the learning by doing approach.

Professors redefined

Almost 50% of the respondents agree upon professors teaching EE, some mentioning that professors alone would be best suited to teach within EE, as they approach the subject in a systematic way. Additionally, many interviewees agree that professors need to redefine their understanding of their roles within the lectures. Professors' tasks would mainly consist of reflecting on students' actions as well as they would need to educate themselves on alternative pedagogical tools and teaching methods more suitable for EE. This would mean for professors to educate themselves further not only about entrepreneurship but also about didactics within EE. The redefined role of the professor in EE could therefore be seen more as coaches.

DIDACTICS IN EE



Entrepreneurship Education is more than teaching. The didactics and pedagogy of teaching entrepreneurship include suitable tools and learning approaches as well as evaluation challenges.

The interviews show that there are three different main approaches to tools and teaching methods:

Traditional lecturing formats

No respondent defended the use of only traditional lecturing format because they regard it as crucial to consider that students receive information differently and it is only through application that they will be able to realize the relevance of the topic in hand. Nonetheless some inputs require traditional methods of delivering content and instruction to the students.

Project-oriented lecturing approaches

When it comes to project-oriented teaching, the respondents stress the importance of a challenge-based approach as the need to overcome a challenge will strengthen students' entrepreneurial skills on a real-life basis. This approach is contrary to the simple application of methods in general lectures and will also inspire students and stimulate them to learn more. At the same time, there is a preoccupation when dealing with these challenges because it ought to be done in a way that makes them applicable to different contexts in the future. A recommendation of project-oriented teaching made by an interviewee would be the build-measure-learn principle usually applied by start-ups. An extra preoccupation demonstrated by some interviewees is that the teaching methods in general should also address introverted students, most importantly when applying project-oriented formats. Furthermore, they highlight how students value the possibility of choosing a topic, a challenge, or an idea, as it allows them to work out their personal preferences and abilities (effectuation approach), which in turn also represents an increase in performance incentive and in personal responsibility of the students.

Mixture of traditional and project-oriented approaches

As some interviewees suggest a mix of the traditional teaching method and the project-oriented method, they argue that the didactics should depend on the topic in discussion. For example, lectures would be appropriate to teach the theoretical background of entrepreneurship while courses like skills development would require application-oriented formats. Therefore, the type of teaching would change according to the number of problem-based subjects. An example of a mixed method recommended by an interviewee would be the constructivist didactic approach and Kolb's learning cycle, suggesting that an ideal EE format composition would consist of theoretical input, illustration provision, followed by application and reflection.

Another didactical challenge is the evaluation of the course outcome, further explored through different evaluation approaches that respondents suggested to be included in EE:

Self-reflection

Many respondents believe that self-reflection is a crucial factor when it comes to evaluation, and some of them added that it is also a way of facilitating better understanding of the students. Some respondents also add the importance of self-reflection when it comes to teamwork, as recurring meetings creates a space for exchange and reflection to highlight learnings and difficulties of the students. One important concern that was brought up is that there must be an alternation between the application and the reflections phases, and this could be achieved by intensive block courses. A practical example of a self-reflection evaluation was given by an interviewee and consisted of an intake survey done with all university entrants, where they are asked to indicate their entrepreneurial intentions, as well as to make a self-perceptive assessment of their entrepreneurial competencies. After defining their personal goals, their development plan is repeatedly addressed and reflected on during the course.

Involvement of third parties:

Several respondents believe that the involvement of third parties is also pivotal to the evaluation process. Some suggest that feedback from experienced third parties, as for example successful entrepreneurs, could enhance the students' learning experience and enrich discussions. Another example would be to involve probable users of the ideas or products created by the students, both in the evaluation and the idea generation process, as this could become an opportunity for further development of the students outside of the classes.

However, the kind of involvement of the third parties in EE formats differs in three aspects according to most respondents: intention to involve them, added value and timing. Considering their expertise, third parties can be involved at different points of idea finding and project development process. Some respondents consider helpful to insert a third party both at the beginning of EE formats, as in developing ideas of entrepreneurial cases or business development challenges, as well as in the middle or the end for feedbacks and advice. They believe that the expertise of third parties will increase the quality of the ideas and challenges, in addition to providing students with incentive and directions. Here, the considered third parties are mostly successful entrepreneurs, but could also involve business promoters and other relevant actors for start-ups for example.

CONCLUSION: REGIONAL SPECIFIC RECOMMENDATION OF EE

As a result of the expert interviews, the following EE recommendations can be identified for the Ems-Dollart-Region:

Network Universities	<ul style="list-style-type: none"> • binational character of the collaboration could be seen as a pull factor for the region • different specializations of the HEIs could be beneficial to the mentoring of startups by using the network universities programs
Linkage Curricula	<ul style="list-style-type: none"> • internationally accessible programs as a multi-perspectivity education • encouragement to start businesses on both sides of the boarder • Students/Startups could benefit from wider networks
Exchange Professors and guest lectures	<ul style="list-style-type: none"> • exchange of knowledge and competencies by exchanging professors and guest lecturing at each others HEI to provide high quality EE
Events	<ul style="list-style-type: none"> • cross boarder event calander • joint events allow a larger scale and more visibility • specific suggestions: Competitions/Challanges, Summer School
Transparency of informations and offerings	<ul style="list-style-type: none"> • openly displayed collection of EE responsible individuals • documentation of the EE study programs and contents within the Ems-Dollart-Region
Visibility	<ul style="list-style-type: none"> • promotion of the Ems-Dollart-Region beyond the region for a higher nationwide visibility • more visibility could grand an elevated competitive ability of the region compared to startup hotspots
Regional Entrepreneur Overview	<ul style="list-style-type: none"> • listing of entrepreneurs and expertise in the area • linking students with suitable mentoring entrepreneurs • Formats could also profit from more entrepreneur inclusion
Adaptation of regional specific expectations	<ul style="list-style-type: none"> • rural areas of the Ems-Dollart-Region bring up challanges such as intrapreneurship and company succession • EE should address regional trends and problems to ensure up-to-date content

Figure 4: Overview of regional specific recommendations

Network Universities

Network Universities

50% of the respondents named the collaboration and cooperation between the universities in the EDR as a recommendation to accelerate EE. The binational character of the network could be an additional pull factor for students to choose the area. Another linkage could be reached through mentoring of the students in the area. Students could profit from the different mentoring specializations of the HEI's in the EDR by using the network universities programs.

Linkage Curricula

Linkage Curricula

A linkage of curricula within the HEI's of the EDR with internationally accessible programs as a multi-perspective education would be a benefiting factor for the area. Students could gather insight to the different approaches and regional specifications on both sides of the boarder and as a result be encouraged to start businesses on each side as well. The linkage curricula should provide the option to collect credit points in all HEI locations of the area, with the outcome of more open-minded graduates. Students could also build a wider network through changing locations within the Ems-Dollart-Region.

Exchange Professors and guest lectures

Exchange of Professors and guest lectures

The exchange of knowledge and competencies by exchanging professors or guest lecturing at each other's institutions would allow all network universities to provide a high-quality EE, without the obligation to have all knowledge in-house.

Events

Events

Promoting the topic regionally another suggestion is to link the events regarding entrepreneurship with, for example, a cross boarder event calendar. This could also include the introduction of joint events that save resources and allow a larger scale with a higher visibility.

Specific suggestions for events include:

- Joint competitions/challenges
- Summer school
- Networking events

Transparency of informations and offerings

Transparency of information and offerings in the EDR

The experts recommend an openly displayed collection of EE responsible individuals as well as further information and knowledge such as a documentation of EE study programs and their contents in the EDR. Formats and events in the EDR should also be advertised and open to all students from the region, which would also provide the formats to be of new dimensions.

Open Network learning

Students could earn credit points in EE regardless of their location in the EDR. As an additional positive outcome, students would participate to a growing knowledge base over time.

Visability

Visability of EE in the Ems-Dollart-Region

A promotion of the EDR beyond the region could lead to a higher visibility nationwide and lead to an elevated competitive ability of the region compared to hotspots such as Berlin or Munich.

Regional Entrepreneur Overview

Overview of Entrepreneurs in the Ems-Dollart-Region

A listing of entrepreneurs and expertise in the area would be favorable to link student entrepreneurs with suitable mentoring entrepreneurs/companies. Furthermore, the connections could be useful for EE formats which would profit from entrepreneur inputs such as their personal experience.

Adaptation of regional specific expectations

Regional specific expectations

The EE outcome is not required to only result in highly innovative start-ups as the rural areas of the EDR bring up other challenges such as intrapreneurship and company succession. It should be viewed as a topic of regional development that offers accustomed solutions to the existing situations. EE should therefore address regional trends and problems to ensure up-to-date content.

Overall, there is a lot of potential in the EDR for EE. Co-operation between the different HEIs as well as a coherent strategy throughout the EDR for entrepreneurial endeavors are only two of the challenges to overcome.

ENTREPRENEURSHIP EDUCATION FORMATS

The EE formats that seem appropriate based on the previously mentioned findings can be separated into three categories: awareness- modules, qualification-modules, and business model development- modules.

Awareness formats

As a tool to raise awareness about Entrepreneurship amongst students, the EE formats should include modules surrounding personal competencies and development. These could set different focusses on for example the entrepreneur personality, self- and time-management, as well as a personal assessment and goal setting of the students. The lectures could also introduce interdisciplinary team work to the participants, while also including guest inputs from the ecosystem.

Another topic that could increase the awareness of students early on is a general module on entrepreneurship. To offer deeper insight to entrepreneurship theories and the forms of entrepreneurship, while also covering innovation management theories, would provide a better understanding and create first connections with EE. This could also be combined with an entrepreneurship project that allows students to test their entrepreneurial skills through a challenge or case study or maybe lead them through a start-up consulting process simulation.

Qualification formats

In order to prepare students for entrepreneurship, it is the task of EE to provide them with the necessary tools. Qualification formats should cover subjects such as idea creation and development with different tools (i.e. Design Thinking, Blue Ocean, prototyping and pitching in front of a jury). Besides just learning about all those tools in theory, students should get the opportunity to gain practical experience with these methods through projects. The challenge-based approach would engage students to leave their comfort zone and engage with a more experimental learning environment.

Opportunity recognition is another important component of EE that should be covered by qualification formats. The development and improvement of ideas throughout further modules is also advised in order to lead the students towards a business model development for their idea.

Business model development formats

As a consequence to the previous endeavors of raising awareness and equipping students with the right tools, the next step in EE would be to create formats about business model development. These should include for example business model theory and tools, such as business model canvas and lean start up. These formats should aim towards participants that join the module with their own idea to develop and assist throughout their personal journey.

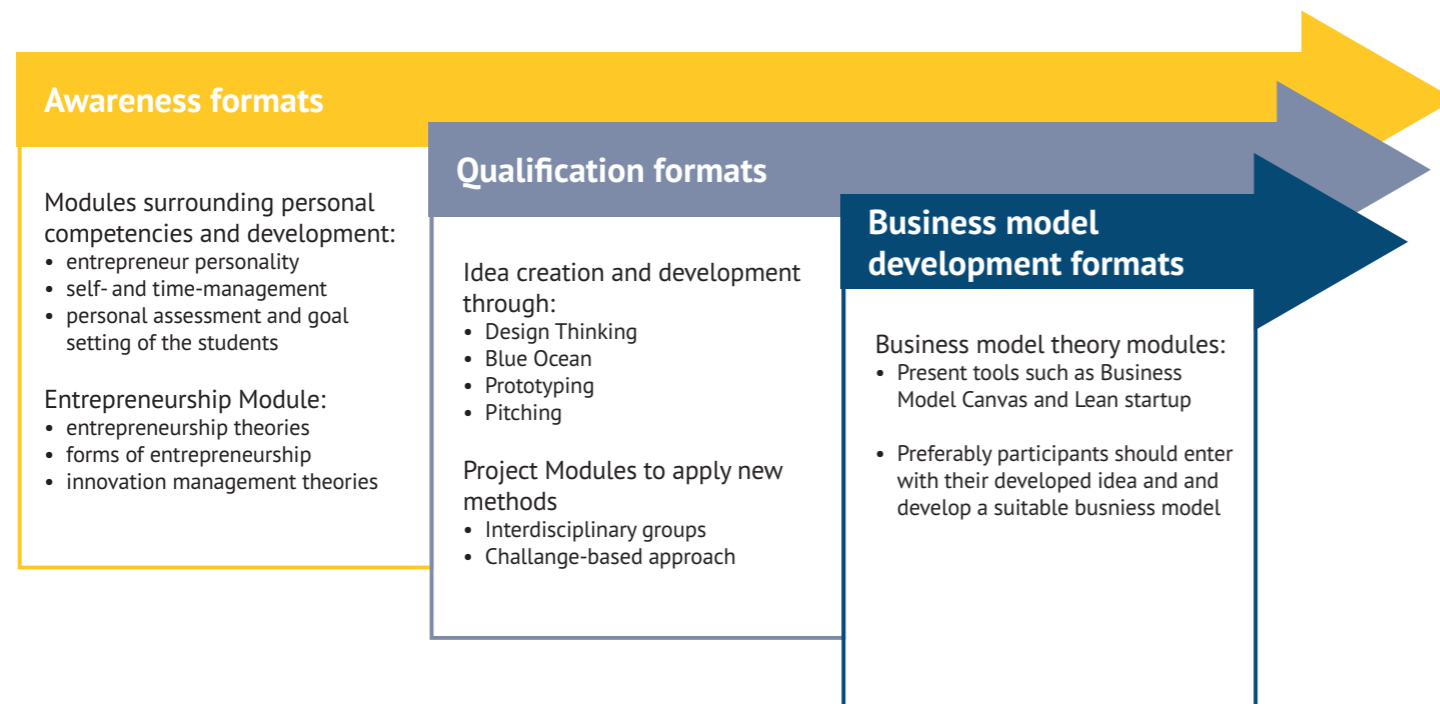
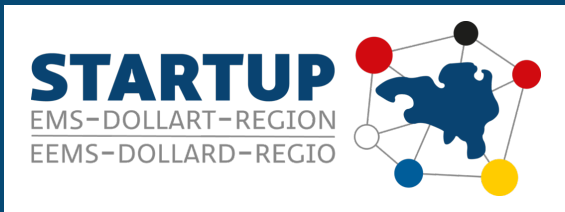


Figure 5: Entrepreneurship Education formats overview



Authors:

Prof. Dr. Annika Wolf

Carl von Ossietzky University Oldenburg (GER)

Dr. Diederich Bakker

Hanzehogeschool Groningen University of Applied Sciences (NL)

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