INTEGRATING ENTREPRENEURSHIP AND WORK EXPERIENCE INTO HIGHER EDUCATION

WEXHE JOURNAL
JANUARY 2018 ISSUE
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WHY WEXHE?

WHY WEXHE? Our Partners’ Testimonials

ROBERT WAGENAAR, University of Groningen
“The WEXHE project enhances the value of higher education and supports the transition of graduates into employment. Furthermore, it facilitates the relevance of degree programmes for enterprises, resulting in a better match between attributes of graduates and societal needs. This enables employers to hire graduates who are better skilled and prepared, leading to lower training costs and faster adaption times.”

RAÚL MÍNGUEZ, Spanish Chamber of Commerce
“Analized programs, as GAIA, allows companies to arrange graduates who have completed their regulated studies with a specific course focused more on business skills. The employability of recent graduates is clearly increased, while companies find human resources more productive and close to their daily needs. This traineeship programs have a remarkable success, strengthening the effective collaboration between the business world and the university environment.”

ANDRE PERUSSO, FH Münster University of Applied Sciences
“Participation in the WEXHE project put me in contact with a number of interesting examples of innovative WBL practice. In addition to their direct contribution to the research, such cases offered me great material for thought on how to improve my teaching and how to offer more engaging learning opportunities to students.”

LINDSEY KERBER, ENQA
“WEXHE’s ambition to enhance the quality of work-based learning is aligned with the interests of ENQA’s membership and its stakeholders, as well as its partners in the Bologna Process, to better orient higher education provision towards student-centred learning and teaching. The project’s identification, incorporation, and dissemination of innovative examples and good practices will ensure its impact in this evolving field.”

THE WEXHE CONSORTIUM WISHES ALL OUR READERS A WONDERFUL NEW YEAR!

Our journal greets 2018 with its long-awaited new issue, which also marks the start of the second year of the WEXHE project. The year 2017 has been one of achievements since our partners explored the WBL landscape in seven countries and identified 84 good practices cases.

In this issue you can read the latest news from the consortium partners, learn about WBL developments across Europe, while taking a peek into engaging WBL examples embedded within university-business cooperation practices.

The news section opens with an overview of the latest WEXHE project presentation at the University-Business Commission of the Spanish Chamber of Commerce and the introduction of a new university-business cooperation by the National Center for Professional Education Quality Assurance Foundation (ANQA). The topic of quality assurance is followed by an informative article on the accreditation of medical internships by the European Council on Chiropractic Education (ECCE).

For further exploration of the wide WBL landscape, we encourage you to read about what skills and abilities Spanish employers prioritize in the search for graduate talent according to the recent University-Business Ranking in Spain. Also be informed on how our partner EURASHE promotes WBL through projects that support apprenticeship schemes between universities and businesses.

This issue also contains a number of good practice examples of implemented forms of WBL in Europe: a special dual-study programme at Baden-Württemberg Cooperative State University, a master track at the University of Groningen in which science, business and policy are connected through WBL, and the collaborative practices from an industrial producer KOLEKTOR. The University of Warwick shares its story of integrating innovation and entrepreneurship in education.

For those, who are eager to explore more ongoing WBL practices outside the WEXHE landscape, we present several examples from the largest University-Business Cooperation Study in Europe. For instance, you can read in this issue how the University of Tartu improves the employability of its students, or how AREA Science Park develops talents in the Italian Friuli region.

Just as our partners’ representatives express in their testimonials, in its short life span the WEXHE project shows promise in changing the way work-based learning is perceived in Europe. We trust that this edition of our journal will keep you updated on the recent developments in our project and beyond, and inspire you to further improve the quality of work-based learning practices with your own initiatives.

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WE WISH YOU A PLEASANT READING!
The University-Business Commission of the Spanish Chamber of Commerce was constituted in April 2015. It is formed by Spanish influential companies, universities, the General State Administration through the Ministry of Education, Ministry of Employment and Security Social, and the Ministry of Foreign Affairs and Cooperation, and, finally, are part of the University and Business Commission, two Chambers of Commerce (Chamber of Madrid and Chamber of Lanzarote).

The University - Business Commission intends to establish a forum for a debate and reflection on how to improve the link between higher education institutions (HEIs) and companies to adapt university education to the needs and reality of the business world.

At the recent meeting of the University - Business Commission held on January 11th, 2018, the status of the WEXHE project was presented to the members of the Commission. The project aligns with the University-Business Commission’s objectives, and helps to improve the employability of young graduates and the competitiveness of the business field by extending and reinforcing the existing relationship between universities and businesses.

Therefore, the presentation of the WEXHE project attracted the interest of the attendees. Several assistant companies presented their internship programmes (graduates, post-graduates or entrepreneurs) as the case studies to illustrate possible co-operation ways in work-based learning.

In addition, the president of the University – Business Commission urged to continue reporting on the progress of the project in successive meetings, in order to illuminate, further utilise and disseminate the results of the project. Moreover, the attendees of the meeting expressed their satisfaction with the progress of the project and the interest to continue with the efforts for its successful execution.

ANQA PILOTS A NEW COMMUNICATION FRAMEWORK TO ENHANCE UNIVERSITY-EMPLOYER CO-OPERATION

The communication patterns between universities and businesses can greatly vary, yet in many cases they tend to be rather fragmented, often taking place at the executive level. Generally, the role of employers is limited to providing feedback on the content of academic programmes, rather than engaging in more day-to-day pedagogic practices, such as students assessment or student progress evaluation. Lack of more structural penetration of the business world into teaching and learning process might create knowledge gaps for graduates in practice. To address these issues, The Armenian National Centre for Professional Education Quality Assurance (ANQA) is piloting a new model to enhance the communication patterns between universities and employers through a specifically designed framework.

The framework aims to introduce and embed contextual elements from the employers’ recurrent operational and cultural environment into the academic settings of the university. It involves finding “understandable language” for communication with employers, contextualization of assessment activities and student progress monitoring practices. More precisely, the framework revolves around the major products offered by the employers, such as physical goods, services, expertise, and their specific requirements.

The employers reflect on the entire product life cycle and the professional thinking necessary to perform the duties, highlighting the level of responsibility of employees while performing the tasks. ANQA communication model suggests continuous contact between employers and academics with regards to learning outcomes of the course and its assessment practices based on the elements of the framework.

The model was successfully piloted within the TEMPUS ARARAT project in the IT, law, and pedagogy sectors. Furthermore, it was elaborated within the scope of the TEMPUS ALIGN project for the translation business following ANQAs initiative. Business focus group discussions were held with high-, middle-level management and staff with three years of work experience. The results of the process served as a basis for the talks with responsible academic programmes and teaching staff.

This example of university-employer cooperation was presented during the 12th European Quality Assurance Forum in Riga, Latvia, on 24 November 2017. The mechanism will be applied to different sectors and become a tool for the development of field committees, involving both business and university representatives.
The contribution of universities to the development of social and economic welfare within a country is one of the basic pillars for its competitiveness and growth. However, the knowledge society and globalization urge the universities to face the constant challenges of adaptation to society, hence the future skills for social development.

The III edition of University-Business Ranking, presented at the end of 2017 by Everis Foundation, analyzes the opinion of 3,545 Human Resources managers of Spain on the skills of recent graduates. The study provides an insight for all stakeholders into how the universities adapt to the reality of the Spanish labor market.

In particular, each year, the competences of the students are analyzed, understood as key skills for the development of the work. In all the editions of the study, the hiring managers of the companies have been asked about the importance of eight competences in relation to performance: teamwork, interpersonal skills and communication, technical knowledge of the profession, honesty and ethical commitment, ability to learning, analysis and resolution of conflicts, orientation to results and ability to work in multicultural and multidisciplinary environment.

The main conclusions in terms of contracting highlight that, as happened last year, about a third of Spanish companies have hired some recent graduates in the last five years.

The size of the company has a direct impact on the recruitment rate of graduates: the percentage of companies that have recently hired graduates increases as the size of the company increases. That is, 25.3% of the companies between 10 and 19 employees have hired a recent graduate, while 85.4% of the companies with more than 1,000 employees, which register a significant increase in hiring compared to the previous year with 52.2%, almost seven points above the results of the last edition. Between the companies of 100 to 499 workers, the level of hiring goes from 62.5% to 65.9% in this edition.

The most outstanding activities in terms of new hires are Education, Health activities, and social services, and Information and communication.

In concrete, in comparative terms, the sector with the most hiring has been Education, which reached 59.4% in relation to the 50.5% obtained in 2016. The sector of Health activities and social services is in second place, surpassing the results of last year and reaching 64.0% of contracting companies. The third place is occupied by the Information and communications sector, with 53.8% of companies that hire newly graduates, losing the second position with respect to the previous year.

The mobility of recent graduates continues in line with the previous year. Most universities obtain more than three quarters of their demands from companies in the same region. 81.7% of the graduates evaluated work in the same region in which they studied.

The eight analyzed competences are valued as very important by the hiring managers of the firms, which grant all of them a weight of more than 7.9 points out of 10. Once again, and as happened in the past editions, the ethical and honesty commitment is the most relevant competence for employers. As it is shown in the figure, the three most relevant competences for hiring managers of Spanish companies have been maintained in all three editions. Two others, also present in the top 5 this year, complete the set of skills most relevant to employers:
Honesty and ethical commitment reaches 8.97, a result very similar to that obtained in the past two editions. The ability to learn and adapt to change achieves an average score of 8.75 points. Teamwork maintains its third place with an 8.61, two tenths above the last edition and practically the same as in 2015. The interpersonal skills and the ability to analyze and solve problems obtained practically the same results, 8.3, being in fourth and fifth place.

Considerations about competencies have different levels of importance depending on two variables: the size of the company and its main activity sector. In this sense, the competence of Honesty and ethical commitment is considered essential in most companies. In all company sizes, the importance assigned to this competition is close to 9. Furthermore, 73.4% of companies of this size, from 500 to 999 workers, consider it an indispensable value among its employees.

Regarding the analysis by sector of activity, Honesty and ethical commitment stands out in all of them, with an assigned relevance of more than 8.8 in all cases. Health and social activities highlight with an attributed importance of 9.36 points. In addition, this competence is qualified as indispensable by 82.1% of the companies in this sector.

Human Resources managers declare that those hired do not reach the performance of the competencies expected by the employers. Even so, the skills of recent graduates are valued above 7.4 points, achieving a slight but positive evolution of the competences throughout the three years of the Ranking.

As in importance, honesty and ethical commitment is the best valued competition. On the other hand, the capacity of analysis and the resolution of problems presents the valuation further away from the expectation of those responsible for hiring.

It should be noted that the least relevant competence for hiring managers, the ability to work in multicultural and multidisciplinary environments, is the best satisfied by recent graduates.

Regarding the most demanded degrees, they are still Administration and Business Management and Engineering, surpassing 50% of the hiring between them. Thus, those responsible for contracting companies in Spain are focused on selecting professionals who, in addition to the specific knowledge of their task, have important skills or abilities in the business world. These skills demonstrate the relevance of the educational process, especially in the university field, in adapting to the job market that students can achieve.

The completeness of documentation in the patient records (a random sample of documents are reviewed during a site evaluation visit).
3. The ratio of interns to clinical supervisors.
4. The appropriateness and rigor of the clinic exit examination.
5. The pass rate of the clinic exit examination.
6. Observations of interns during their clinical encounters (one site team member spends a day doing this).
7. The way that current research (i.e. evidence-based practice) is incorporated into treatment decisions (based on patient records and discussions with interns and supervisors).

The ECCE standards relating to clinical placement are among a list of critical standards that must achieve a mark of at least “Substantially Compliant” in order for the institution/programme to be accredited.

The European Council on Chiropractic Education (ECCE), an international autonomous organisation in Europe to accredit and re-accredit institutions providing undergraduate chiropractic education and training, performs external reviews of institutions in accordance with a set of educational standards. As a primary contact healthcare profession, the chiropractic clinical internship, which normally lasts at least one calendar year, is critical, and it is thereby given particular attention.

In order to assure the quality of clinical internships, ECCE’s evaluations rely on evidence gathered during an institutional site visit, especially that which pertains to:
1. The numbers of patients each intern sees in a calendar year.
2. The variety of clinical conditions presented to each intern, as demonstrated by clinical log books maintained by each intern throughout their clinical year. The site team randomly selects several log books for review.
SAPS PROJECT: SUPPORTING APPRENTICESHIPS BETWEEN PROFESSIONAL HIGHER EDUCATION & SMALL AND MEDIUM ENTERPRISES

Apprenticeship is a time-tested way to learn from the world of practice for the students and incubate young talents for the enterprises. Apprenticeships are frequently distinguished by their major point of reference or provision. Those offered directly by companies, not in conjunction with educational organizations – are also known as professional apprenticeships or internships, which are solely delivered by the company. The ones offered through educational institutions – are sometimes referred as curricular apprenticeships. These usually take place during the study programme and the responsibility for them is shared between the educational institution and the partner company that provides the placement.

In Europe, co-developed curricular apprenticeship schemes are more frequently found between professional higher education institutions (PHEIs) and larger businesses, which ultimately have come to dominate this market. Small and medium enterprises (SMEs) appear to lack the structures and capacities to establish relevant apprenticeship schemes with PHEIs, as well as general consensus on the added value of apprenticeship arrangements for the SMEs themselves.

Supporting Apprenticeships between Professional Higher Education & Small and Medium Enterprises or SAPS project serves to address these challenges, and support the systematization and creation of a more comprehensive approach to collaboration between PHEIs and SMEs in apprenticeship.

SAPS is an ongoing three year Erasmus+ funded project, realized in collaboration among 10 members from different countries with EURASHE as a coordinating institution. The aims of the project are twofold: develop the resources that can help structure the apprenticeship practices between PHEIs and SMEs, and re-shape the image of apprenticeship for SME with a multi-lingual promotional campaign.

By bringing European experts in apprenticeship practices together, the consortium has developed a hands-on Apprenticeships Quality Toolkit for SMEs and PHEIs to ensure quality collaboration and delivery of the apprenticeships.

The Apprenticeship Quality Toolkit follows a quality management system style approach and works in two directions: inside-in, by structuring the organizational processes for successful collaboration for apprenticeships delivery, and inside out, as a quality assurance tool for transparency.

The further goal to promote the image of apprenticeships within SMEs will be realized by establishing a specialized online portal, serving as a repository of best practices and tools in the field, as well as a space for networking between PHEIs and SMEs.

A combination of seminar appearances, joint promotion with SME-representative organizations, promotion in media and social media will help the consortium spread the awareness of the advantages of apprenticeship schemes for SMEs and attract attention to the question of their quality. With the structured approach to valuable resources creation and well-thought promotional campaign, SAPS projects is to greatly contribute to the development of mutual understanding and appreciation of apprenticeship schemes between PHEIs and SMEs in Europe.

EURASHE 28th Annual Conference in Tallinn (Estonia) on 19-20 April 2018 “Partnerships for a Digital Future – Strategic role of professional higher education for society” will further discuss the development of relationships between PHEIs and the world of practice.
The progress in science fundamentally alters the development of the modern world. Yet, for their complex nature, the latest scientific breakthroughs are frequently accessible only to a narrow pool of associated audience. If not well translated to the key drivers of societal and economic growth, e.g. entrepreneurs and policymakers, expensive forefront research and its novel findings might not be utilized to their full potential. To address this challenge, the University of Groningen and its Faculty of Science and Engineering (FSE) give their masters students the opportunity to select the Science, Business & Policy master track (SBP) as a study path, and thus bridge the dialogue between science, business and policy in a bottom up manner.

WHAT ARE THE PROMINENT FEATURES OF THE TRACK?
SBP track is coordinated by The Science and Society Group from FSE, whose main goal is to align science with social context. The track programme is built around three course components: Acquisitions Tools & Career Management (ACTM), Introduction into Science, Business & Policy and a full-time work placement. The ACTM course provides employability and career-path design workshops. In the introduction course, students learn about economics, business, management and policy design, solve real business cases and design and implement innovative policies. Upon the completion of the Business and Policy introduction course, students are required to put their newly acquired skills in practice and undertake a six month placement as a scientific advisor at a company or a governmental agency. They are encouraged to analyse business or policy problems that need scientific expertise to be resolved.

The programme has established long-term cooperation patterns with the partners from the world of practice. As an example, the participating students have a possibility to undertake their internships in a consultancy agency ASC Academics BV, which makes cost and benefit analysis for innovations in pharmaceutical field. At this internship provider, the students are able to test their analytical skills, learn how to connect the scientific expertise with the real world of innovation, nd how to function in the dynamic world of business. Along with gaining invaluable experience from the workplace and supervision by both academics and practitioners, the students are expected to demonstrate tangible results at the end of their internship, which are to be further evaluated.

WHAT ARE THE PROGRAMME ACCOMPLISHMENTS?
SBP is a unique complimentary programme in the Netherlands. The future scientists, policy makers, and entrepreneurs discover how they can effectively connect with wider audience and more thoughtfully apply their expertise for the greater good during this unique study track. Intensive business and policy courses enriched with real-life examples, multidisciplinary learning commuity experience, and extensive “science-to-society” internship all contribute to the achievement of the goals of the SBP.

Not surprisingly, the track has demonstrated a significant impact on the employability of its graduates: 98% of the alumni find a job within a year of the completion of the programme, almost half of whom are invited by their internship provider to become regular employees. With its work-based learning approach, the track yearly delivers 65 broadly schooled scientific advisors with relevant work experience, who will further ensure the right communication among science, business and policy.
DHBW DUAL STUDY PROGRAMME IN SOCIAL WORK: INTEGRATING EXPERIENTIAL LEARNING INTO ACADEMIC CURRICULUM

Commonly referred as work-based learning (WBL), the models of connecting traditional theoretical education and field-based experiential training have been largely practiced for decades in the German education system, first at vocational schools and later at the uni-versities of applied sciences. Those models have been enhanced by the development of dual study programmes - which integrate “abstract” and “concrete” through a rotation of academic and practical occupations.

Dual study programmes are unique modes of WBL delivery in Germany, which combine in-company work experience with theoretical education at the HEIs in the form of a coor-dinated curriculum. Unlike a traditional programme with disintegrated internship experience, a dual study programme base half of its curriculum on the insights from work experience though internships and close connection with practice. A dual study programme in Social Work offered by the Baden-Wuerttemberg Cooperative State University (DHBW) constitutes a successful example of this model applied to the social sciences.

DHBW DUAL STUDY PROGRAMME IN SOCIAL WORK
Baden-Württemberg Cooperative State University (DHBW) was the first higher education institution in Germany to combine in-company training and academic studies.

As most study programs in the DHBW, the curriculum of Dual Program in Social Work is divided into inter-vals of three months dedicated to practical training at the company and three month of theoretical training at DHBW for the whole duration the programme. The theoretical and practical periods offer the students an insight in social work from various angles, encompass-ing a variety of views.

The theoretical part of the programme introduces the students to a generalist view of social work, covering broad topics in health sciences, legal bases, education and socialization, etc., in the practical period, students work in more specific areas within the partner or-gani-izations (most of them NGOs).

Work conditions are ruled by official labour legislation and students are entitled to a €1,000 monthly salary. The co-operation with the partner organizations, as well as the nature and quality of the work performed by students, is care-fully structured and closely moni-tored through a number of feedback mechanisms.

Moreover, the connection between the theoretical and the practical periods is in part ensured by the ‘practice transfer’ activities. Students receive from the DHBW a series of tasks related to what they have seen in the theoretical modules which need to be applied in during the work phase.

THE BENEFITS OF DUAL STUDY PROGRAMMES FOR ALL STAKEHOLDERS
This example from DHBW, as well as other dual study programme based on a similar mod-el, suggests rather noticeable benefits for the student and the participating companies. The students foresee better employ-ment opportunities after graduation and are able to develop relevant practical skills. In addition, being finan-cially supported during the programme is considered by many students a significant advantage in contrast to more traditional pro-grams. The companies see the potential of dual study programmes in bridging a skills gap and reducing the need for further training of graduates. Not to mention, they simultaneously receive support with new workforce and fresh ideas from participation in such pro-grammes. Therefore, it is not sur-prising that dual study programmes have recently ap-peared in the spotlight: according to the latest study by Hesser and Langfeldt (2016), the number of dual study programmes offering in Germany increased by 137% in 10 years and is likely to grow further.
KOLEKTOR

AS A BEST PRACTICE EXAMPLE IN WORK-BASED LEARNING

The Kolektor Group, based in Slovenia, is one of the highly specialized industrial companies that manages to stay at the forefront of innovation without extensive research capacities. To stay competitive, the organization has established a perfect balance by integrating a multi-functional university-business cooperation (UBC) in its strategic plan and building strong ties with the local educational institutions in work-based learning.

To achieve its strategy, Kolektor cooperates with the faculties of mechanical and electrical engineering of the two largest Slovenian universities. In the group, much focus is placed to employees and their professional growth. Training & education process in the Kolektor group operates by two basic principles, as follows:

1. Training & education of future employees, divided into two parts: granting of scholarships and additional education prior to concluding of an employment contract;
2. Training and educating of the already employed people: training of new workers, schooling with work to acquire adequate formal education grade, and functional training.

Kolektor cooperates with the Institut Jožef Stefan of Ljubljana. Every year the group grants scholarships for schooling in secondary schools and in faculties of technical and social science branch of study. Pupils and students can complete their practice, elaborate term papers and final theses.

The company places great emphasis on the professional development of students – some of them as future employees – via scholarship schemes and through work-based learning. All students who are granted a company scholarship are employed for at least one year. Within this year, the company assesses whether the potential employee fits the needs of the company. If students show considerable potential, a job position may be offered.

Building relationships with students and supporting their education is considered as an important aspect of Kolektor. This is also evidenced through their mentorship programme through which employees with excellent competencies transfer knowledge and provide guidance to students.

Kolektor has also set-up a student group at the UL in 2001 that employs between eight and ten students from mechanical and electrical engineering. This group is part of the company’s research unit. It serves as a recruitment tool for future engineers, especially students of the third and fourth year of their study programmes, through including them in projects.

Overall, this cooperation is valuable for the student and the wider community in addition to the results of direct technological solutions in a form of novel products, licenses and patents. Students multiply their career opportunities through better practical education and exposure to real-life industrial situations, and develop skills relevant to the world of practice.

Can this case be considered an example of ‘good’ WBL practice?

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ENTREPRENEURSHIP AND INNOVATION AT UNIVERSITY OF WARWICK

At a time of global disruption, rapid technological change, economic uncertainty and environmental challenges, the role of work based learning in the form of entrepreneurship and innovation at the University of Warwick has been clearly identified as a key concern to cultivate graduates that are enterprising, capable, and positive contributors to society.

In this context, the Warwick Innovation and Entrepreneurship Programme is an initiative created at the University of Warwick by experienced business practitioners that aims to encourage student enterprise by promoting valuable entrepreneurial skills and channelling creative endeavour in the development of innovative products and services. It is free and open to all students within the university and designed to flexibly fit in with other student commitments.

The programme provides students with the opportunity to connect with Innovation Fellows at Warwick as well as promote access to entrepreneurial networks. Furthermore, an opportunity is available for students to apply for entrepreneurial funding on completion of the course. The topics covered in the Entrepreneurial Programme include:

**SELF**
- Understanding yourself. Strength, skills, culture and value

**TEAM**
- Working in collaboration, building a team and a network

**IDEAS**
- How are ideas generated and developed.

**AUDIENCE**
- Understanding the market place, how organizations operate.

**EXECUTION**
- Prototyping, pitching, resourcing, project management, pivoting ideas

**BEING AN ENTREPRENEUR**
- Skills set needed for starts ups, legal and finance, profile and brand

**WHAT’S NEXT**
- Access to entrepreneurial networks and support while on the course.

WHAT ARE THE BENEFITS OF THE PROGRAMME?
The benefits of the programme for students include participating in or leading the development of an enterprising idea - from conception to delivery; building a portfolio of transferable skills and participating in a tailored programme of personal development; developing commercial awareness and connecting with external partners; and experiencing being part of a team that will harness and celebrate the skills and talents of its members, together with the support of the Warwick Enterprise Partnership.

WARWICK ENTERPRISE PARTNERSHIP
The Warwick Enterprise Partnership is supported by the University of Warwick Senior Executive team and draws together many different parts of the university that deliver elements of enterprise, entrepreneurship and innovation to students including Warwick Ventures, Student Careers and Skills, Warwick Business School, Warwick Manufacturing Group. The challenge identified by the Warwick Partners is to engage all students with this rewarding culture, enhancing both their future employability and their personal development. With respect to the Warwick Innovation and Entrepreneurship Programme it also serves to further encourage the development of a professional network of Entrepreneurs.
UNIVERSITY OF TARTU
CULTIVATES ENTREPRENEURIAL SPIRIT THROUGH EXTERNAL ENGAGEMENT

How to encourage unconventional thinking and a shared passion to break the economic boundaries, and invigorate a region with new, innovative solutions? Confronted with this question, universities worldwide have started to reinterpret their traditional practices through more agile and externally fluid approaches. Likewise, the University of Tartu (UT) has accepted the challenge of fostering organizational change towards becoming more entrepreneurial, and recognized the importance of well-established interactions with community stakeholders, to better prepare students for their contributions to the advancement of Estonian society.

This renowned national research university with more than three centuries of history, UT has taken the leap to go under a major transformation. The institution’s 2015-2020 strategic plan reflects its motivation to become an entrepreneurial university, focusing on two major areas: promotion of student entrepreneurship via start-ups and the enhancement of entrepreneurial education. In accordance with this strategy, university-business cooperation (UBC) is reflected in UT’s entrepreneurship courses, practical learning or internships, pre-incubation and idea incubation programmes, technology transfer activities, and spin-offs.

EXTERNAL ENGAGEMENT IN UT’S CURRICULAR ACTIVITIES

The university adopts a customized approach to external engagement when it comes to entrepreneurial education.

UT Network of Centers of Entrepreneurs, which is also called Mentor Network, connects more than 100 entrepreneurs and specialists who work within companies to actively participate in UT education activities. The members are invited to mentor, supervise, lecture and collaborate with students and academic staff in the respective courses. Project-based internship option also emerges as an attractive curricular activity that promotes connectivity between the student body and the business representatives. As part of their internship, the students are encouraged to connect with the industries by developing a project, to offer solutions for specific market challenges. A specially organized platform for master students, ‘student web’, serves as a meeting point for companies to submit or suggest their practical problems to be resolved by the students.

Besides targeted curricular content, the annual pre-incubation programme STARTER gives students the opportunity to receive substantial practical guidance from more experienced counterparts in the development of their business ideas or start-ups. The programme invites industry and business supervisors to evaluate and pilot the participants’ business models or prototypes, with Vega Fund reward of €80,000 for the best student idea. The programme is organized by IdeaLab service, a platform that supports extracurricular activities for student-entrepreneurs at UT, and is co-designed in collaboration with other eight Estonian universities.

COOPERATIVE TECHNOLOGY TRANSFER THOUGH ADAPTER NETWORK

Strategic external links are also established in the technology transfer unit that oversees the transfer of new research from UT to companies, and supports the establishment of spin-offs. To expand its external outreach, UT serves as a leading partner in the cooperation network ADAPTER, which pair up young companies with the universities for service exchange. The network has established a single-entry online point for the companies to easily send their requests to the participating universities for support, which has collected 50 enquiries in a couple of months. In such pace, ADAPTER is expected to be hosting as many as five inquiries per week in the nearest future.

Beyond successful implementation of entrepreneurial strategies in place, UT shows its commitment to further strengthen its practices by cooperating with external institutions for evaluation and feedback. The university has recently been selected in the first pool of the universities to be accredited by ACEEU, Accreditation Council for Entrepreneurial and Engaged Universities, according to the extent and quality of its engagement and entrepreneurship activities. The outcome of this assessment is expected to provide a clear view to UT to progress further with its goals in creating the innovative society it aims for.

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AREA SCIENCE PARK: INNOVATION ECOSYSTEM THAT REASSURES PRESENT AND FUTURE OF FRUILI REGION

On May 6, 1976, a series of devastating earthquakes shook the lands and the hearts of the citizens of the Fruili Venezia Giulia region of Italy, shattering the familiar image of their once burgeoning home. To revive the spirit and economy of region, and restore its competitiveness following this major setback, the Italian Government envisioned an investment in innovative research as a long-term recovery strategy. AREA Science Park was launched to realize this vision, as a hub designed to translate top quality research into innovative products and services.

From the start, AREA Science Park emerged as a front-runner in regional science and technology, helping position Fruili Venezia Giulia among the top economies in Italy. Stimulating the growth of local and regional commercial enterprises through well-established knowledge translation mechanisms, connecting like-minded individuals, and producing cutting-edge research, AREA Science Park has gradually evolved into a full-fledged regional innovation ecosystem.

AREA operates under the auspices of the Italian Ministry of Education, University and Research (MIUR). As a public body, AREA receives a grant of €7-8 million from MIUR annually. Yet, its own yearly income from rent, provision of services to companies, and participation in multiple level research projects exceeds its central funding. AREA focuses on the development and management of its own sites, the creation of businesses through incubation and acceleration programmes, innovative high-tech research, the development of services for university-business cooperation (UBC), and entrepreneurship training to support the growth of regional SMEs and start-ups.

AREA is also rich in facilities that can support the operationalization of joint activities. To date, the Park has grown into 90,000 square meters of laboratories, offices, and service areas, stretching across the Trieste hills and overlooking the castle of Gorizia with its three campuses. Eight collaborative research institutes have their facilities at the site, which facilitates interactions with the 80 companies residing in the Park. The main knowledge transfer vehicle Innovation Factory is an in-house company of AREA, which functions as an intermediary organization in the regional and national knowledge transfer system.

INNOVATION FACTORY – AN INCUBATOR FOR ALL

Unlike venture capitalists’ interests in promoting only the most commercially ready proposals, Innovation Factory (IF) aims to support equally all new ideas considered worth exploiting and, thus, cultivate the innovation and entrepreneurial spirit of the region. IF assists with the valorization of research results, promotes investment in technology-oriented businesses, supports start-ups in their business development, and creates a platform for partnering and networking.

Innovation Factory has also developed its own methodology to support local entrepreneurship. It matches researchers who have interesting ideas or research results with business development teams that explore the possibility of creating a marketable product or service. Innovation Factory oversees the process of the business idea evolution, its assessment, strategic development toward a market launch, and the establishment of a new company. It then supports new companies for up to three years, or until the start-up reaches relative stability in the market and is ready to be acquired by a serious investor. The figures are impressive: Innovation Factory has evaluated more than 1,600 projects, assessed 281 entrepreneurial ideas, co-created 20 start-up companies, and assisted another 50 in their development.

AN INNOVATION HUB WITH MULTIFACETED IMPACTS

Over the years of its continuous advancement, AREA Science Park has rightfully earned recognition as a national point of reference for technology transfer and a top-level national research body by the Italian Ministry of University and Research (MIUR). Indeed, while the initial government investment has brought high technology companies to the Park, its independent income earning capability has helped to enhance the commercial capacity of the region, particularly through investment in entrepreneurial activities and promising research outcomes. The AREA complex has also attracted an influx of skilled human capital to the workforce in Fruili Venezia Giulia, and continues to support the knowledge transfer efforts of the local universities.

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