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HANDBOOK OF DEMONSTRATED GOOD EUROPEAN PRACTICES

INTRODUCING OPEN INNOVATION AND STAKEHOLDER CO-CREATION IN INNOVATION IN THE HIGHER EDUCATION SECTOR



Integrating Talent Development into Innovation Ecosystems in Higher Education

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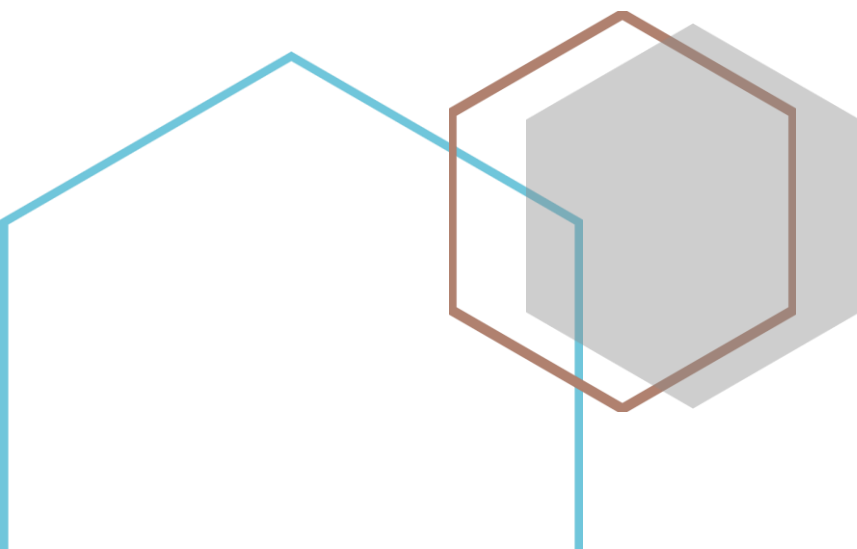


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The purpose of the good practices included in the Handbook is to present the concepts and practice of open innovation and stakeholder and student co-creation in innovation, in particular as they relate to the involvement of students in research activities and entrepreneurial learning. The presented good practices can help higher education institutions in Partner Countries devise concrete initiatives or broad institutional frameworks for embedding employability in education through co-curricular activities, in particular as regards opportunities and structures for engaging students in applied research and live innovation projects in direct cooperation and with the participation of external stakeholders. The good practices can also contribute to efforts to improving students’ commercial awareness, entrepreneurial readiness and innovation skills.



INTRODUCTION

The purpose of the good practices included in the Handbook is to present the concepts and practice of open innovation and stakeholder and student co-creation in innovation, in particular as they relate to the involvement of students in research activities and entrepreneurial learning. The presented good practices can help higher education institutions in partner Countries devise concrete initiatives or broad institutional frameworks for embedding employability in education through co-curricular activities, in particular as regards opportunities and structures for engaging students in applied research and live innovation projects in direct cooperation and with the participation of external stakeholders. The presented good practices can contribute to efforts to improving students' commercial awareness, entrepreneurial readiness and innovation skills.

As will be evident from the good practices, open innovation and stakeholder co-creation in innovation in higher education presuppose, but in turn also encourage, strong university-business linkages and interactions, as well as increasing linkages and interactions with the citizen and public sectors in view of implementing research and innovation addressing the public good and societal challenges. In view of the current policy priorities in the higher education sector in the Partner Countries, they will be highly applicable for Partner Country universities.

Each of the good practices is exemplified with a case study. In addition, we have analyzed the processes and conditions that have made the practices successful in order to facilitate the transfer of these approaches in non-EU contexts.

This compendium will be useful not just to Partner Country universities, but also to regional and local policymakers or community leaders who wish to develop strategies and recommendations for increasing the contribution of universities to regional and local development. Student leaders and representatives who wish to develop recommendations to their universities in the areas of graduates' employability and talent development may also find inspiration in the presented case studies.



Student and Stakeholder Co-Creation good practice

Bring students together in multi-disciplinary teams and task them with developing projects to address a challenge identified by a company

Student teams thus become co-creators of solutions or innovations for the companies

CASE STUDY: LEARNING TO BE

ORIGIN AND LOCATION

The practice is implemented by University of Aveiro, Portugal. It has been in effect since 2014.

OBJECTIVE

The main objective of Learning to Be (L2B) is to build students' entrepreneurial skills and develop strong entrepreneurial attitudes through direct engagement in projects inspired by actual business problems. L2B aims to:

- Promote the development of students' entrepreneurial mindset and cross curricular competencies
- Enable students to explore real-world problems and challenges, thus getting prepared for a transition to the world of work
- Intensify university-business collaboration.

BACKGROUND

L2B was designed by two professors who sought to improve entrepreneurship education delivered at their University by focusing on the development of practical skills.

The program was launched in 2014 with a focus on improving internal facilities and process at the home University. Students were tasked with analyzing and improving them. However, the pilot phase made it clear that the participation of companies in the delivery of entrepreneurial education is critical for success. As a result, companies willing to share their actual challenges became co-participants in the program from 2015 onwards.

The L2B programme is strongly supported by the University of Aveiro. The Rectorate is promoting the plan to replicate the programme at affiliated polytechnic schools. The socio-economic climate in Aveiro, and more broadly in Portugal, is auspicious for low-cost and collaborative methods to improve education and innovation performance. Corporate attitudes are also increasingly open to more sophisticated approaches to knowledge transfer.

DESCRIPTION OF THE APPROACH APPLIED IN THIS CASE STUDY

L2B involves 60 students working on business challenges every year. The challenges are pitched by companies participating in the programme. The program is innovative in its approach to entrepreneurship education, as it is designed to offer students a hands-on training in dealing with entrepreneurship challenges. Students work in multidisciplinary teams.

The L2B program passes three major phases: Business Empathy, Value Create, and Strategy Test. The Business Empathy phase is designed to allow students to understand the context of the challenge before proposing possible solutions. Students are expected to visualize the problem from the company and customer perspective. Field visits,



interactions with customers, and observations of the business processes of the company are undertaken.

Once students have a clear understanding of the challenge from the perspective of both the company and the customers it serves, they enter the Value Create phase which includes idea generation activities such as brainstorming and ideation techniques aimed at finding a feasible solution to the challenge. The last phase - the Strategy Test - allows students to test and assess the feasibility of their proposed solution by discussing it with customers and employees of the company. This is ideally an iterative process: feedback received from customers and employees can inspire modifications, and the testing process is repeated. At the very final stages of the program, following completion on the testing phase, the students present their proposed solution in an open event where faculty members, company representatives, and other stakeholders are present.

Early impact assessment suggests that L2B students benefit from the hands-on experience, especially through enhancing their problem-solving skills, critical thinking abilities, and creativity. Participating companies benefit from the co-creation process as the ideas of the multidisciplinary teams of students tend to be innovative and different from established company approaches. Additionally, companies get access to a pool of talent from which they can recruit.

In the near future, the challenge is to find support for the establishment of a 'fab lab' or 'hackerspace' where students can do their prototyping with 3D printers and other tools and infrastructures.

INNOVATIVE ELEMENTS

The innovation in this practice is in the hands-on approach to teaching entrepreneurship and in the engaging co-creation process. The involvement of companies in higher education curriculum development is of paramount importance to building the skills of the future labour force. Also, when it comes to teaching innovation and entrepreneurship, classroom culture has to foster collaboration, creativity and autonomy. Teachers have to assume the role facilitators in the classroom, while letting students govern their own learning process. The student co-creation approach allows for this shift to be integrated into entrepreneurial learning.

RESULTS

Currently, the program is in its 6th edition. More than 600 students from 12 different scientific fields have participated and they have collaborated with 24 companies. More than 145 innovation projects were implemented.

Several scientific papers have already summarised the methodology, results and impact of the program. In 2017, the European Commission recognised the L2B program as one of the exemplar practices of university-business collaboration (see more at: <https://www.ub-cooperation.eu/index/casestudies>).



TRANSFERABILITY AND APPLICABILITY ANALYSIS

FACTORS AND PRECONDITIONS FOR SUCCESS

Internships can also be a direct outcome of L2B student projects. When the participating company recognizes a proposed solution as having good potential, it can invite the students to undertake an internship to work on their proposal further within the company itself.

Companies involved in the L2B program have also benefitted from the field data that student teams have gathered, which they can obtain at no cost, often in direct interaction with customers and typically less biased than the data gathered by the company itself.

Further evaluation is needed in order to measure impact. In the medium term, a key indicator of success would be the development of new products and new services emerging from, or linked to, L2B. At a broad institutional level, evaluation needs to focus on evidence about whether or not L2B is helping create conditions for open innovation.

Learning to Be® has already been registered as a trademark in Portugal. Recognizing the potential for replication of the practice, the founders of L2B are working on a book and programme modules to make the approach more easily accessible and transferable to other regions and universities.

Factors that can contribute to the success of this practice include:

- Strong institutional support for the program
- Motivated academic staff able to mentor students during the projects and integrate the learning results with the overall teaching and learning process
- Strong university commitment to collaboration with companies from the immediate external environment and some prior experience with providing consultancy or engaging in applied research in collaboration with such companies
- Willingness and ability of the involved academic staff to stick to a collaborative and interdisciplinary approach to entrepreneurial learning
- Internal capacity of local companies to deal with the additional workload associated with the implementation of student co-creation projects, especially in terms of available staff time and the skills of staff members
- A programme quality assurance strategy focused on gaining the trust of participating companies
- A programme strategy for enticing stronger contributions from the companies themselves.



STRENGTHS AND WEAKNESSES OF THE APPROACH

Strengths

- The approach is relatively simple to package and disseminate
- The approach is low-cost and does not require great financial investment

Weaknesses

- The approach puts a strain on human resources both at the university and in the participating companies
- The co-creation innovation projects are necessarily of a limited scope
- Networking with local companies can be difficult and time-consuming and requires the dedicated work of boundary spanners within the university.

CONSTRAINTS

The practice is a relatively low-cost initiative, especially at the stage of establishment, so financial constraints are not great. However, the lack of human resources can be a serious constraint that can force the university to limit the scope of the program. A further constraint would be the lack of awareness of the benefits of university-business cooperation within the entrepreneurship community. If there is no experience of prior collaboration, the university looking to implement this practice will have the difficult task to first set the ground for cooperation by developing common understanding, effective communication channels and perceptions of mutual benefit.

SUSTAINABILITY

Sustainability of the program in its basic form should be relatively easy to achieve since there is no need for substantial financial investments. Yet the practice is naturally geared toward deepening the co-creation and collaboration activities and widening the scope of the projects in which students are involved. For sustainability to be coupled with growth, it is necessary:

- to invest time and resources in human resources training, notably in the training of boundary spanners and academic staff willing and able to support students' extra-curricular learning. Specifically as regards the academic and university staff involved, sustainability will be enhanced if program activities are included in the official job portfolios of the involved staff rather than expected to be a voluntary contribution. Alternatively, the University can devise a scheme for awarding and recognizing the volunteer efforts of involved staff in order to promote their motivation
- to invest resources in laboratory research equipment that would allow the live innovation projects to become more sophisticated and to deepen the collaboration in the direction of more valuable



research and innovation.

TRANSFERABILITY

The practice of including students as innovation co-creators in live business projects is highly transferable to other universities that wish to promote student talent and entrepreneurial learning. The particular characteristics and objectives of the live projects are by definition determined by the participating companies, so the model is designed to be very context-specific. Transferability is enhanced by the low investment requirements for launching the programme. It is low-cost, does not put a great strain on the university budget and creates no significant barriers for the participation of private sector partners.

Transferability can be hampered only by the availability of staff (at the university and at the companies) but these constraints can in principle be overcome by starting small - with the most capable partners and staff - and gradually building capacity for more extensive reach of the program. Since the practice is perfectly scalable (i.e. it is possible to start with as little as a single project), this strategy is very viable. Further development of the program through investment in more sophisticated research laboratories is optional and will be more suitable for universities with more ambitious goals or with access to public funding.

The practice is even transferable to universities specialized in the social sciences, though collaboration in that case should target civil sector organizations and the public sector. Limited autonomy of the university should not significantly deter the replication of the practice because the live innovation projects can be organized as extracurricular activities.

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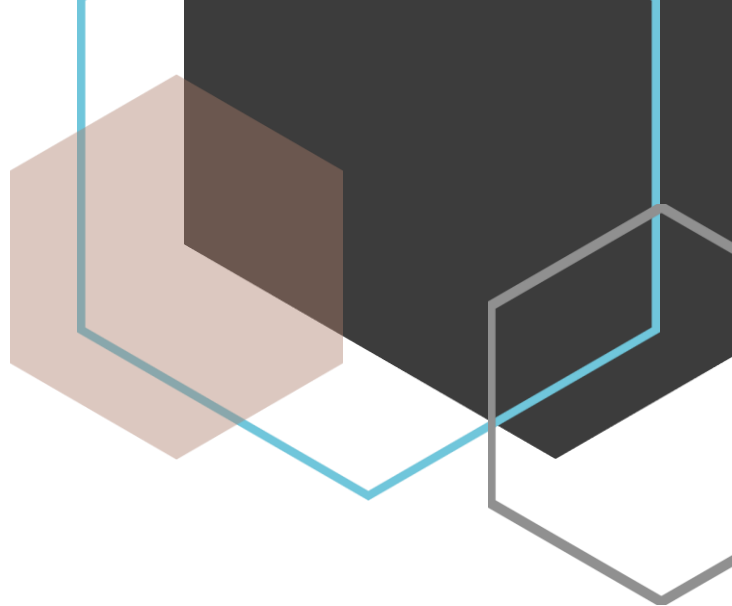
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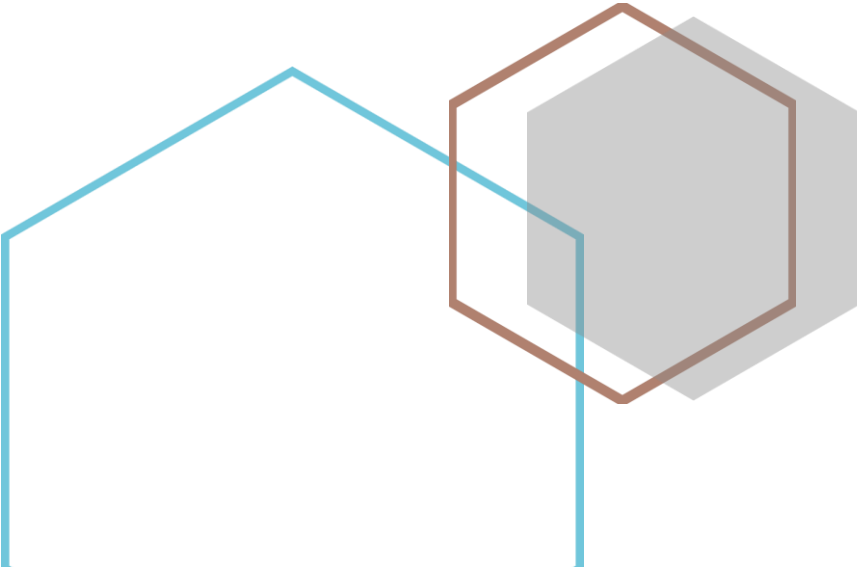
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Open Innovation good practice

Integrate and co-locate a University campus with structures promoting knowledge flows between academia and business (start-up incubator, business park, technological centres), thus bringing students, entrepreneurs, researchers, academics and local government to interact in the local entrepreneurial ecosystem to share knowledge, innovate and launch entrepreneurial ventures.

This practice promotes comprehensive entrepreneurship education and helps introduce the principle of open innovation not just in the participating University, but also in the participating entrepreneurial community



CASE STUDY: TECNOCAMPUS

ORIGIN AND LOCATION

The practice is implemented by Universitat Pompeu Fabra (UPF) Barcelona, Spain.

OBJECTIVE

In the Tecnocampus ecosystem students, entrepreneurs, researchers, academics and local government interact to share knowledge, innovate and launch entrepreneurial ventures. University faculties, an incubator, a business park and technological centres are located in the Tecnocampus area, connected through the common focus on entrepreneurship.

The objective is to create a knowledge and business ecosystem that contributes to economic and social growth through collaboration and generation of new opportunities. The following elements are essential for the functioning of this ecosystem:

- high quality education and learning opportunities for students
- channels for formal interpersonal interactions
- support of emerging start-up companies
- stimuli for informal relationships among Tecnocampus users.

BACKGROUND

The TecnoCampus Mataró-Maresme Foundation is a non-profit organization - public-private collaboration - initiated by the Mataró City Council and the Maresme County Council in order to manage and develop the university studies and business and enterprise park of the TecnoCampus. The Board of Governors consists of representatives of public authorities, the university and the company.

TecnoCampus dates back to 1982 when the Polytechnic University College of Mataró was created. Its engineering centre was the result of the efforts of the Mataró City Council and the textile industry. In the early 1990s, this centre became more oriented toward a model underpinned by a strong commitment to knowledge exchange with the business sector. New campus facilities were created and the TecnoCampus park became a reality in 2010 in the city's new development area, El Rengle.

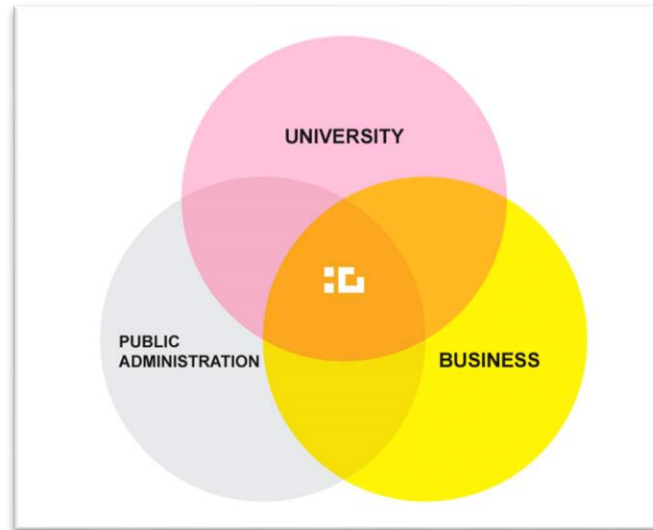
DESCRIPTION OF THE APPROACH APPLIED IN THIS CASE STUDY

Tecnocampus is an affiliated centre of the Universitat Pompeu Fabra (UPF) Barcelona. This integrated campus combines university faculties, a start-up incubator, a business park and technological centres. These elements are co-located and share common space. This allows for education activities, incubation services and commercial activities to be interlinked on the campus in view of activating strong entrepreneurial mindsets and preparing successful future entrepreneurs. They are connected through the common focus on entrepreneurship. Entrepreneurship is introduced in all three areas of education at



TecnoCampus: Business, Health and Technology.

Entrepreneurship support at Tecnocampus encompasses activities related to education, incubation and business that together create an entrepreneurship ecosystem (triple helix approach).



The core education areas are Technology, Health and Business. They are mirrored by research activities and the presence on campus of start-ups and established companies working in these areas. There is a direct link between education and incubation and business support activities on the campus.

The incubator has the capacity to host up to 25 start-ups originating from both inside and outside the university. The time spent in it is maximum three years.

Start-ups are required to transit to the Business Park after successful completion of the three years in the incubator. TecnoCampus also hosts one of seven business accelerators that make up the Start-Up Catalonia network. A benefit of having the Business Park co-located with the incubator is that students from the Business School can undertake internships with companies in the Business Park as part of their courses. Most companies in the Business Park participate in the internship programme, in which students work on tasks or projects currently underway in the business.

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Students with innovative ideas can qualify for residency in the pre-incubator located next to the incubator. The pre-incubator was developed to allow students to interact with role models from successful start-up companies in order to get inspiration and support. To this end, students from the pre-incubator are invited to spend time with CEOs of start-ups, some of whom may become their tutors.

Extracurricular activities such as the Innoempren programme and the Weekend Challenge are designed to promote entrepreneurial culture and attitude among students from the onset of their university education, and to offer initial guidance and support for those with feasible business ideas.

In the frame of the so-called Junior Enterprise programme, since 2015 a student enterprise gets temporary residence in the Business Park. This activity is designed to help bridge entrepreneurship training and practice. Junior Enterprises often involve students from all three schools. This approach introduces an interdisciplinary approach to entrepreneurial activities.

Another entrepreneurship support programme is the Business Community programme, which creates opportunities for collaboration and networking by providing a platform for participants in the Business Park to get to know each other. TecnoCampus offers shorter-term entrepreneurship training activities, too, such as a three-week summer school and an investors' forum organized two or three times per year to connect start-ups and investors.

The Innoempren High Performance Programme for entrepreneurs provides differentiated needs-based support specifically for start-ups that are nearly ready to transition to the market. On the other hand, those at the very beginning of the entrepreneurship journey and lacking initial development finance can benefit from the TecnoCampus Incubator pre-seed funding.

INNOVATIVE ELEMENTS

TecnoCampus is a University campus integrated into an entrepreneurial ecosystem promoting open innovation through a combination of formal and informal interpersonal interactions, co-located and purpose-built infrastructure, institutional coordination and cooperation.

TecnoCampus actively looks for introducing innovations in its own structure and activities. For example, a new business centre for health sector start-ups has been developed.

RESULTS

TechnoCampus has over 3,500 enrolled students collaborating with the 25 resident companies in the incubator. It has over 900 university and company cooperation agreements in place. A total of more than 60 start-ups are created per year. Daily users of the Business Park are over 3,500. A total of over 800 companies have passed through the business accelerator programme. Most students who complete coursework



TRANSFERABILITY AND APPLICABILITY ANALYSIS

FACTORS AND PRECONDITIONS FOR SUCCESS

internships with companies in the Business Park have been hired upon graduation by the firms where they did their internship.

The following factors are preconditions for the success of this practice:

- Strong university commitment to applied research, technology transfer, knowledge transfer and university-business links
 - An economically vibrant region offering competitive advantage and market opportunities
 - Public support for university-business links and knowledge exchange, preferably underpinned by a relevant regional strategy for growth and competitiveness that fits into the academic areas of the integrated campus
 - Commitment to a focused communication strategy that can provide visibility for success stories in order to increase the motivation of entrepreneurs to get involved
 - Strong institutional capacity and autonomy of the university, as well as prior experience with managing university-business links and knowledge transfer on a local or regional scale
 - University investment into the training and retention of boundary spanners – i.e. staff working with both academia and business.
-

STRENGTHS AND WEAKNESSES OF THE APPROACH

Strengths

- This is an example of a genuine Triple Helix collaboration between academia, business and the public sector
- The approach is long-term and allows for differentiated support for students and incubator residents at various stages of their entrepreneurial development
- Collaboration is local and there is trust based on co-location and proximity
- The practice offers direct support for student entrepreneurship through incubation, and indirect support through entrepreneurial mindset activation and strengthening of entrepreneurial competencies
- Success stories are likely to increase the reputation of the integrated campus, creating a virtuous spiral of business involvement, government support and student motivation
- Innovation is supported through an interdisciplinary approach
- Entrepreneurship is introduced into all courses, which is an

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effective way of developing the entrepreneurial attitudes and thinking of all graduates.

Weaknesses

- Funding for start-ups is necessarily going to be limited, as campus seed money cannot replace investors
- The maximum capacity for educational and business park operations of the integrated campus is likely to be reached quickly as the support provided is long-term and extensive, as well as expensive
- The interdisciplinary approach used in the integrated campus can be rather complex for implementation.

CONSTRAINTS

The constraints that universities looking to implement this practice are likely to face are:

- The approach is very resource-intensive, both in terms of financial investment and human resources
- Impact and generation of success stories can be hampered by the inevitable lack of funding for early stage start-ups. Seed funding can be provided (but increases the resource intensiveness of the approach). However, it is necessary to combine it with completion of agreements with private investors, which will inevitably increase complexity and is likely to put additional strain on human resources; it is also very far from the traditional role of universities. At the same time, low impact is likely to undermine the reputation of the whole undertaking and can result in sluggish business engagement and low student motivation
- The approach requires suitable space and careful planning of co-location of facilities in order to maximize the potential for interaction between academia and business
- The approach requires an adequate number of boundary spanning staff to facilitate and coordinate the interactions among business, the university and the public authorities. This is likely to be a constraint for universities with less developed innovation capacity, as well as for resource-poor universities.

SUSTAINABILITY

Institutional sustainability can be advanced through a governance model that includes a mix of industry, government and education stakeholders (similar to the TecnoCampus Foundation Board in the case study above). Such a governance body will have a genuine interest in the continuation of the education-business interface.

The sustainability of an integrated campus also requires continuous innovation in the campus structure, curriculum and the co-curricular and



TRANSFERABILITY

start-up support activities.

Internationalisation is a key element of sustainability due to the global nature of competition. Internationalization, however, should not be limited to the academic activities, but also to the business residents in the park.

The integrated campus model is in principle transferable and can be tailored to local and regional needs in terms of technical and educational specialization. The areas of study and the sectors on which start-up support focuses can be chosen to reflect the local or regional economic system.

However, the model requires a large financial investment and a high level of triple-helix coordination combined with very strong institutional flexibility, which makes it difficult to implement in resource-poor institutions or institutions with limited capacity. Last but not least, the model presupposes great institutional autonomy to design and continuously re-design the curriculum through direct collaboration with business. In non-EU context, all of this makes the practice difficult to implement outside the most established and the largest universities.

The approach is in itself a complex solution that is difficult to implement on a smaller scale. Universities that do not have the institutional and financial capacity to transfer the practice in its entirety, however, can replicate elements of it. For example, co-location of business relations and educational activities can be implemented on a smaller scale in the frame of ad hoc events or co-curricular activities, but it will still allow students to interact with external stakeholders.

In countries like India and Sri Lanka, there is substantial potential for obtaining government funding for incubators, Business Interaction Cells, Innovation Cells and other structures linking businesses to academia. Such funding would enable interaction between the university and business. The challenge would be to achieve the maximal possible integration of the educational process with these linkage activities, whether in a curricular or extra-curricular context. In sum, while a fully integrated campus may be a too ambitious model, elements of it are highly transferable.

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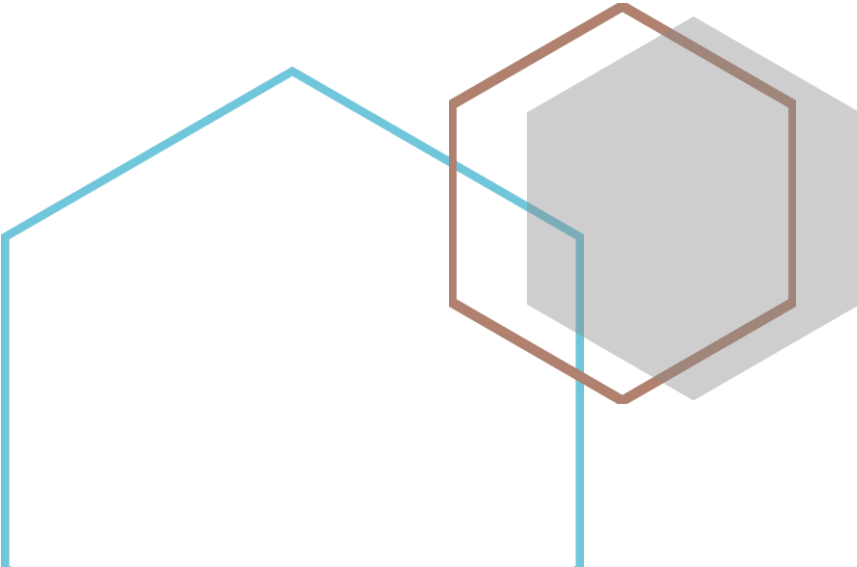


Student and Stakeholder Co-Creation good practice

Involve students and local business in co-creation of innovation in projects initiated by the university and focused on a sector that is vital to the local economy

The projects should focus on improving or developing actual products that may reach the market

The practice has to be implemented by utilizing the support of sectoral business associations and focusing on maximizing publicity and visibility of the achieved results



**CASE STUDY:
COLLABORATION FOR
THE DEVELOPMENT OF
INNOVATIVE FOOD
PRODUCTS**

ORIGIN AND LOCATION

The practice is implemented by the Department of Food Science and Nutrition, University of the Aegean, Lemnos, Greece.

It has been in effect since 2009.

OBJECTIVE

The Department of Food Science and Nutrition of the University of the Aegean collaborates with the Association of Greek Food Industries and local food businesses in order to develop innovative products. These products are presented each year in an annual contest called ECOTROPHELIA.

The objective of the practice is to bring students and local businesses together in order to develop innovative products in the food sector, focusing on local production. The collaboration of students, businesses and a sectoral association was intended to combine all stakeholders' strengths and know-how.

The presentation of the results in the ECOTROPHELIA contest is meant to showcase the results of the collaboration between students and businesses.

BACKGROUND

The University of the Aegean was founded in 1984 with the aim to introduce new approaches in higher education in Greece and worldwide, and to promote regional development.

Situated on 6 islands in the Aegean Archipelago, in less than thirty years the University has evolved into an international research-oriented university offering 18 undergraduate (BA or BSc) and 40 postgraduate (MA or MSc) programmes in modern interdisciplinary thematic areas such as environment, communication systems, cultural informatics, product design, food and nutritional sciences, education design and Mediterranean studies.

The University of the Aegean is a relatively small and geographically isolated University. As such, its reach and range of choices (in terms of connecting to businesses) are somewhat limited, compared to some of the central Universities in the country. What it does have in common with all other Greek Universities is the fact that it is operating under severe budget cuts and very limited resources.

The Department of Food Science and Nutrition is a very focused Department, one of the few in this particular field of study in the country. It has been in operation since 2009. The Department has managed to establish strong links with the local community and local businesses. The Food & Nutrition area is a very active research and service field, with numerous different themes and subjects to work on.



**DESCRIPTION OF THE
APPROACH APPLIED
IN THIS CASE STUDY**

The Food Business Management & Innovation Research Unit has been operating in the Department since 2011.

Collaboration with industry began in 2009, allowing students to work closely with local businesses, with the support of the Association of Greek Food Industries, in an attempt to improve or develop new products. The main focus was to develop actual products that may be put on the market.

The collaboration activity allows Student teams work with businesses during the whole semester in order to develop an innovative product which can be launched on the Greek market (e.g. a new snack based on Aegean region products).

The success of this practice was very much due to the fact that it was implemented in a relatively isolated geographical region (island). Local business in such an isolated region is more inclined to maintain close collaboration with a locally-based University because it has few other sources of support for innovation and because the university is a major skills provider in the locality. However, the constant proof of good work – as showcased each year in the ECOTROPHELIA contest – also brought larger and not locally-based partners in this collaboration.

The participation of co-created products in the yearly ECOTROPHELIA contest was set as a milestone for the results of this collaboration. While students worked with local businesses to develop products for them, successful companies in the food sector collaborated with the Department of Food Science and Nutrition in the educational process, especially in subjects related to product development.

**INNOVATIVE
ELEMENTS**

The practice stands out for its focus on a specific sector, the support of a strategic partner – a sectoral association, and the existence of a systematic venue for demonstration – a sectoral event.

The innovative element in this practice is the creation of an ongoing and persistent model of cooperation between academia and industry which involves the students directly in the creation of marketable products. An additional innovation is the decision to showcase these products in a major commercial event.

RESULTS

In 2011, a student team achieved 2nd place in the ECOTROPHELIA contest. In the following years, several student teams collaborated with food companies and frequently managed to get recognition. In 2018, one of the student teams received the “best marketing plan” award.

The challenges faced when implementing this practice are related to the small number of academic staff and the limited resources of the Department. A further challenge is the access to diverse businesses. While some businesses from other parts of Greece may be willing to join



TRANSFERABILITY AND APPLICABILITY ANALYSIS

FACTORS AND PRECONDITIONS FOR SUCCESS

the programme and work with student teams, the majority of potential collaborating businesses have been located within the Aegean region. Also, the location of the Department has led to a number of issues with travel (distance, weather conditions, etc.) making it difficult to meet and work with businesses that is not situated on the island of Lemnos. All of this has limited the possible joint projects and has curtailed the potential for growth and diversity of the programme.

The following are the preconditions for successful implementation of this practice:

- Support from local businesses
- Capacity of the local business to get engaged and implement innovation projects in general, and in co-creation innovation projects in particular
- Capacity of the local business to mentor and collaborate with students
- Integration of innovation projects with a major sectoral event, which allows both for evaluating performance and for generating publicity
- Existence of a strategic partner from the sector
- Adequate human resources capacity of the university to maintain persistent and systematic collaboration with industry and other organisations, which includes not just innovation development projects for students but also contribution by business to curricular advancement and development
- Adequate financial capacity of the university to support the collaborative activities, and especially the visibility activities
- The practice may require a very focused effort on the part of the University to train and retain specialized personnel that can facilitate the interactions of students with local business and assist them in developing awareness and skills for knowledge transfer.

STRENGTHS AND WEAKNESSES OF THE APPROACH

Strengths

- The approach can be easily focused on a specific sector, which is important for the regional economy
- The approach foresees a systematic venue for demonstration, recognition and celebration of achieved results, which helps to increase the motivation of students and provides publicity and benefits for the participating business

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- The approach allows for a regional University to support local businesses and local economic development (the focus on the region maximizes proximity, ability to focus on relevant sectoral needs and trust)
- The approach aims at tangible results (real marketable products).

Weaknesses

- The approach is by definition limited to impact at local or at best regional level
- The practice is demanding in terms of staff time that has to be dedicated to it, and it does require the investment of resources into the organization of the innovation development projects.

CONSTRAINTS

For universities outside the capital or outside regions with a very vibrant economy, one of the likely constraints will be the availability (or lack of) businesses to work with the student teams. By design, for such Universities the practice can be applied on a limited (local or regional scale), as collaborations will be easier to forge and maintain and logistics will be easier to organize. However, this is likely to limit the range of available options that the students can choose from.

Another constraint in the implementation of this practice is related to the institutional capacity of the implementing university. Insufficient number of academic staff (able or willing to get involved) and limited financial resources to implement the practice would restrict the scale of the activities and hamper the growth of the programme. However, the practice is easily scalable and can be implemented in a less ambitious form by institutions that do not have substantial capacity.

Local companies' capacity for innovation can also be a serious constraint. Local companies also need to have adequate human resource capacity to cooperate with university students on major projects.

SUSTAINABILITY

The key to sustainability will be maintaining mutually beneficial cooperation with local business and the local community. Another important factor for sustainability is to carefully judge the scale on which the practice can be applied, so that it does not put a strain on institutional resources. Linking the practice to a visible sectoral event where achievements can be evaluated and celebrated is also likely to strengthen sustainability by improving the motivation of participants (from the side of both students and business) and by creating perceptions of mutual benefit.

The practice is likely to be far more sustainable if it is planned and executed as part of a broader strategy for university involvement in knowledge transfer and cooperation with the external environment. The same holds for integrating the practice into a broader strategy for talent development at the University.



TRANSFERABILITY

The practice allows Universities to involve students in the process of technology transfer and knowledge exchange with the external environment. It is likely to be interesting to many non-EU countries, as students' research skills and innovative potential are important resources in otherwise resource-poor institutions. Currently, in many non-EU universities, students' research potential is underused, so applying this practice can strengthen the positive impact of the University on the external environment in a very cost-effective way. The approach will have the additional benefit of improving students' employability and preparing them for a smooth transition to the world of work.

The practice of involving students in the creation of marketable products in collaboration with local businesses can be applied in any situation where there is a University with strong local community involvement. Transferability is not limited to any particular sector, but the practice only makes sense if it is applied by a Department that is clearly linked to a particular economic sector and if there is possibility to focus on innovation development projects with a clear market potential.

Inasmuch as the innovation projects in which students are involved can be organized as a co-curricular activity, the practice is transferrable also to universities with limited autonomy for including stakeholder collaboration into the official curriculum.

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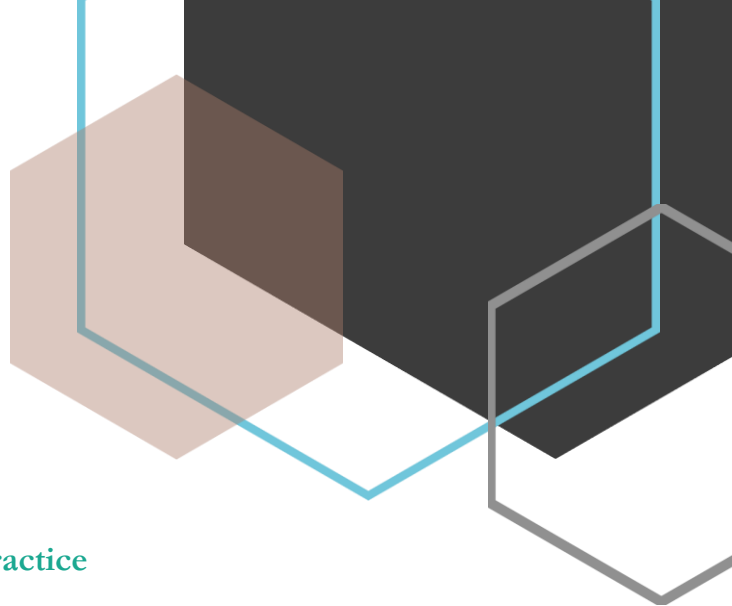
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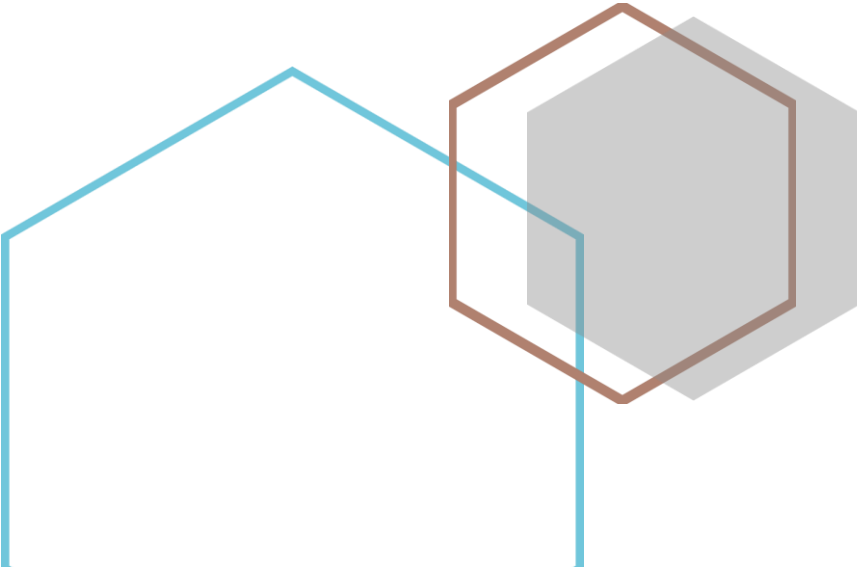




Student and Stakeholder Co-Creation good practice

Strengthen the teaching of creativity, innovation and entrepreneurship by “teaching the teachers” at secondary school level

This is an example of secondary school teacher co-creation in entrepreneurship education



**CASE STUDY:
ENTREPRENEURSHIP
ACROSS****ORIGIN AND LOCATION**

The practice was implemented at University of South Denmark. It ran in the period 2008-2010. The original title was "Entreprenørskab på kryds og tværs".

OBJECTIVE

The main objective of the presented initiative is to upskill secondary school teachers in the region and empower them to develop the entrepreneurship skills of younger students before they come to the university.

BACKGROUND

In recent years, more attention has been focused on the topic of entrepreneurship and how countries, industries and institutions can possibly shed light on and support this career path. While higher education institutions have focused on educating students, new pathways have been implemented and should be considered as well when it comes to supporting entrepreneurship and the development of entrepreneurial competences.

Small and medium-sized enterprises (SMEs) account for 99% of all businesses in the European Union (EU) (European Commission n.d.). SMEs and entrepreneurship create jobs and growth in the regions of outlying areas, they promote innovative ideas and market new products or services. In order for this virtuous spiral to be sustainable and enable regional development and competitiveness in the long run, entrepreneurs and SMEs need a strong entrepreneurial ecosystem. This ecosystem should provide assistance, less regulatory burden for company creation and innovation as well as learning, in order to help SMEs survive, grow and eventually compete on an international level. This agenda is in line with the Small Business Act (European Commission 2008, p. 3 f.) and Strategy 2020 (European Commission 2010, p. 5 f.) of the European Union.

The EU describes entrepreneurial competence as a transversal competence which can be applied by citizens to all spheres of life, from nurturing personal development to actively participating in society, to entering the job market as an employee or a self-employed person and to starting ventures (cultural, social or commercial). (Bacigalupo et al, 2016 p. 6).

To enable effective entrepreneurial competence development, educators are increasingly focusing on entrepreneurial learning. Entrepreneurial competence combines the tasks of entrepreneurial learning and entrepreneurial culture and mindset activation in one theme. Entrepreneurial learning happens through education, training, mentoring, consulting and learning with and from experienced individuals or businesses. Culture promotion and mindset activation refer to modules, networking and sensitisation activities, stressing



entrepreneurship as an attractive opportunity.

Thus, institutions seeking to improve entrepreneurial competencies need to focus on:

- Teaching methodologies with theoretical and practical methods as well as consultancy, mentoring programs and learning with and from existing businesses
- Programmes, activities and interaction in the region for activating entrepreneurial mindsets and stimulating young people to embrace the idea and the opportunity to be an entrepreneur
- Critical to the success of entrepreneurial competence building activities are:
 - High general quality of the provided activities
 - High quality of Teachers / Mentors – this can be achieved through selection of teachers as well as providing them with the programmes, materials, skills, motivation and information they need.

The overall environment needs to be positive towards entrepreneurship, promoting networks, role models and initiatives and also providing funding for activities and entrepreneurs. A clear focus on entrepreneurial needs and goals enables a better outcome (McKevitt and Marshall 2014, p. 273).

**DESCRIPTION OF THE
APPROACH APPLIED
IN THIS CASE STUDY**

This case provides a useful example of a project that promotes entrepreneurial competence with the University acting as a driver of regional economic and social development and working within a collaborative entrepreneurial ecosystem. 180 teachers from three profession-specific colleges participated in the project and were taught by university professors. As a result, the project expected to create 100 new (student) entrepreneurs. The main activities were:

- Developing a new pilot educational course
- Implementing the course on a pilot basis with 30 teachers
- Fine-tuning the course and developing an entrepreneurship competition
- Completing 6 educational courses for 150 teachers
- Evaluation
- Developing a follow-up course
- Completing the follow-up course and the entrepreneurship competition
- Developing and coordinating a future knowledge bank.

The main stakeholders and beneficiaries that were involved were Universities, University colleges, teachers and students.

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As a result of the project, high school teachers obtained new skills in the areas of creativity, innovation and entrepreneurship. Through teaching these skills can be transferred to high school students who could thus obtain the entrepreneurial competences to start and run their own business.

Activities / methodologies employed in the case study focus on the core competence areas of entrepreneurship:

- “Ideas and Opportunities”: including competences such as spotting opportunities, encouraging creativity, idea generation, ethical and sustainable thinking
- “Resources”: including competences such as learning self-awareness, motivation, right use of resources and communication, mobilization of others
- “Into Action”: including competences such as increasing willingness to take action, ability to work in a team, ability to evaluate risks, skills in management and planning.

The methodologies have included:

- Modules for educators, trainers and teachers to promote the theme of entrepreneurship
- Actions that increase the level of interaction between education and the community
- Programs that improve the entrepreneurial capacity of young people.

INNOVATIVE ELEMENTS

High school and college teachers are not usually skilled to become innovation consultants and develop innovative study courses and teaching for their pupils and students. Upskilling the teachers was an effective way of transferring knowledge from the University to the school / college student.

The impact of the project was to improve the quality of college courses, which in turn led to the emergence of student start-ups. This work to develop high schools and vocational colleges had the added benefit of supporting University initiatives to develop innovative courses of study.

RESULTS

The methodological materials developed in the project were distributed to other educational institutions after the project. An external evaluation report showed that the project was a success in terms of:

- Enhancing the qualifications of all 180 participants.
- Creating new job functions for 60 participating teachers
- Creating 100 new (student) entrepreneurs
- In addition to the above, the project contributed to creating more female entrepreneurs, as the majority of the students at the



involved institutions were female.

The 3 participating University Colleges have educated innovation consultants to act as catalysts in the general promotion of innovative study courses and the training of entrepreneurship at university colleges. A formal Innovation Network across the 3 University Colleges of Southern Denmark has been set up. Dissemination of the project has given other university colleges and educational institutions possibilities to get knowledge and inspiration.

The project has achieved what might be described as ‘must haves’ in the field of entrepreneurial education:

- Practical oriented methods
- Support, activation or stimulation of entrepreneurial ideas and activities
- Idea generation, business planning, creativity and communication
- Fostering entrepreneurial culture.

This initiative recognizes that Universities are a key support structure for entrepreneurial learning and mindset activation, but other educational institutions should also be involved in the development of entrepreneurial competences.

The approach promoted by the project ensured active involvement of important actors in the region, fostering entrepreneurial culture in different ways and spreading the ideas of an entrepreneurial region, entrepreneurial community, entrepreneurial university and an entrepreneurial person.

TRANSFERABILITY AND APPLICABILITY ANALYSIS

FACTORS AND PRECONDITIONS FOR SUCCESS

The practice is especially suitable for universities that have strong competences within entrepreneurship research (as is the case of the universities in the Region of Southern Denmark). It allows for utilising the universities’ knowledge outside the academic environment.

The implementation of this practice requires resources necessary for implementing a training of teachers. The needed resources could vary depending on the available expertise and the general costs of training at a particular university. The practice also presupposes a high level of commitment from the academic team and the target group, i.e. the teachers.

The practice requires cooperation with secondary schools and university colleges, which in turn presupposes the availability of staff skilled and experienced in maintaining cooperation with these institutions and coordinating joint activities. The implementation of the practice also requires educational approaches that treat the trained teachers as



STRENGTHS AND WEAKNESSES OF THE APPROACH

partners bringing domain expertise. Thus, there needs to be an investment into the development of suitable methodologies.

If the project is to be successful, it is indispensable that it has the support of the university management, as well as the managers of the target schools and colleges. Cooperation with regional directorates of education or other public authorities responsible for school education would significantly facilitate the organization of the trainings, lend it credibility among the target teachers, and eliminate difficulties associated with the involvement of teachers in the activities.

Strengths

This represents a relatively low-cost approach to strategic engagement with schools and colleges. The main advantages of the transfer of University expertise to teachers in other institutions such as schools and vocational colleges is that it can increase the attractiveness of the University to potential students and support the development of ‘feeder’ institutions.

The approach potentially supports regional economic strategies in that it develops entrepreneurial competence at lower educational levels, thereby increasing rates of entrepreneurship among students at an earlier stage. It also has the potential to generally strengthen the linkages between the University and Schools / Colleges in the region.

Weaknesses

Achieving long-term impact may require a Phase 2 to be implemented after the project. This phase should be more closely based on user experience.

Longer time for training and implementation of the project is needed in order to measure long-term impact. There has yet been no focused effort at determining this impact.

CONSTRAINTS

The main constraint for the implementation of this practice is the need to generate investment to support the activities. The University of South Denmark secured European Social Fund financing to the amount of 158,500 Euros. This investment was topped by the region’s own business development funds with additional 33,400 Euros. It should be noted that the needed investment in non-EU countries may be substantially lower than in Denmark.

The other constraint is that the practice requires substantial investment of time and effort by professors from universities and teachers from the target educational institutions. To overcome this constraint with respect to the teachers, it may be necessary to devise and implement a focused and intensive communication campaign in order to promote the initiative. To overcome the constraint with respect to university academic staff, it may be necessary to devise an incentive structure or to



incorporate this activity in the regular duties of some staff members.

SUSTAINABILITY

Sustainability is dependent on:

- Commitment of schools and regional colleges
- Alignment with wider University strategies e.g. longer-term or broader collaboration with partner or feeder colleges and schools
- Continuous training of university staff capable of managing relations with secondary education schools and colleges, as well as capable of coordinating trainings of external stakeholders
- Alignment with regional economic policies and programmes related to entrepreneurial competences
- Support from regional authorities or agencies responsible for secondary education.

TRANSFERABILITY

The presented practice can be an effective and relatively-cost approach to developing entrepreneurial competences of students before they come to the University. The practice also helps the University strengthen its impact on its surrounding environment and develop collaboration across the wider entrepreneurial ecosystem.

The concept of “Teaching the teachers” could be implemented almost everywhere. Therefore, transferability is high. There is, however, recognition that effective transfer requires a high degree of localisation. Therefore, it is the principles behind this project that are most transferable. Successful introduction will require programme design that is cognisant of the local entrepreneurial ecosystem and regional priorities, thereby recognising cultural differences and political frameworks.

Transfer can be partial and focused on a low-cost variation of the practice. A low-cost variation would engage selected University professors in the delivery of high-impact learning for schools and colleges teachers. A higher-costs model would see this supported by mentoring in terms of both institutional embedding and practical delivery.

Transfer would be more successful if it fits with broader University engagement strategies regarding partner colleges and feeder schools / colleges.

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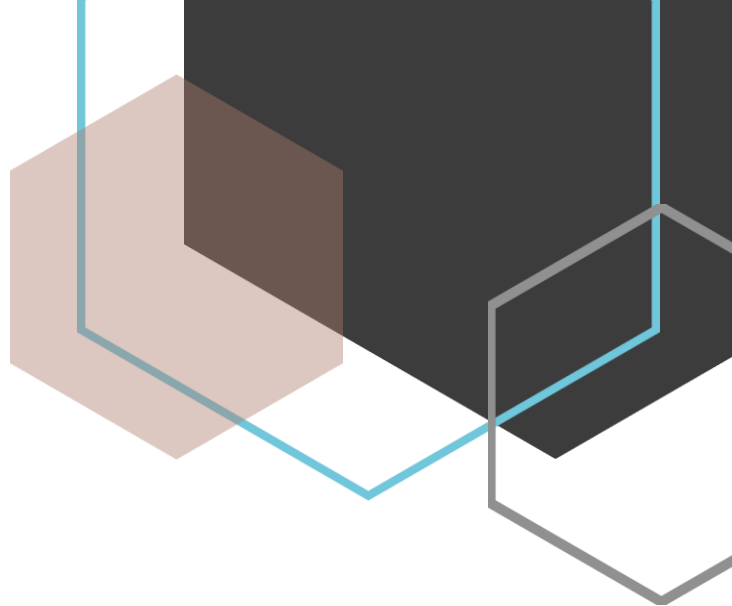
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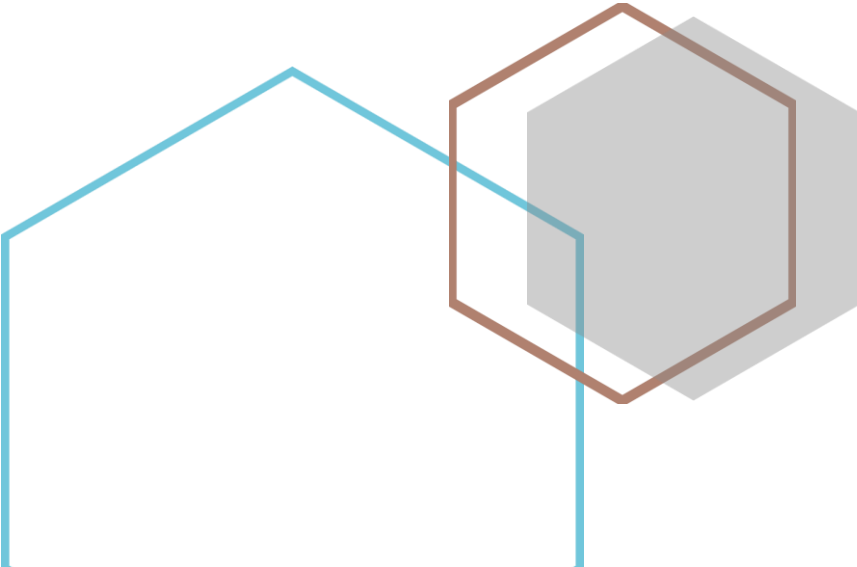




Open Innovation good practice

Work with family business owners as learning partners to develop learning and other programmes of support

This is an example of an open innovation approach at University level, allowing the University to support innovation in a vital segment of the economy



**CASE STUDY:
PROMOTING
ENTREPRENEURSHIP
AND INNOVATION IN
FAMILY BUSINESS**

ORIGIN AND LOCATION

The practice has been implemented by University of Ulster, Northern Ireland, UK.

OBJECTIVE

The objective of the practice is to establish regional succession planning hubs providing cross border expertise, training, and mentoring for the family business. The focus is on part-time learner engagement targeting owners and families of family owned businesses in the region.

The practice involves engagement of the businesses in the development, design and delivery of support programs, which further strengthens impact.

BACKGROUND

Family businesses account for the majority of businesses across the UK, Ireland and elsewhere. Unfortunately, however, some family business owners do not plan for succession and research shows that this lack of planning is one of the major reasons why family businesses fail to sustain or grow their business beyond the first generation of ownership.

The Ulster University programme aims were:

- To build capacity within the regional SME sector to increase, enhance and sustain regional economic development
- To ensure the sustainability of the project by utilising the participant companies as future ambassadors to encourage other family business owners across the regions to adopt a proactive approach to succession planning, incorporating innovation, change and growth as part of their company strategy
- To create a wide range of additional entrepreneurial firms as an option for future ownership where family business owners have failed to identify a successor e.g. management buyouts, social enterprises or family business investment groups
- To address skills deficits and provide SME owner/managers and their teams with the knowledge and skills to effectively address succession challenges
- To increase capacity to absorb external knowledge within participant organisations
- To increase uptake in knowledge transfer activities, e.g. via research centres and third level higher education institutions.

Whilst institutional links to business were reasonably strong at Ulster University, there had not been a direct focus on family business. There was recognition of the importance of family business to the economy, and some limited actions were delivered over many years. In a Northern



Ireland context, family-run businesses currently contribute more than 40 per cent of Northern Ireland's wealth, are responsible for 305,000 jobs, and remain the backbone of the economy. These jobs are especially significant in a region with a population of only 1.8 million. They are also especially significant to Northern Ireland which as a region suffered the effects of a long period of conflict which dampened the economy and made it unattractive to invest in. During this time family businesses continued to do business and to employ people.

The higher education system is well placed to meet the needs of local businesses. It has the research, teaching and innovation expertise and resources broadly aligned with the current and emerging needs of the regional economy. The University also has well-developed links with key elements of the entrepreneurial ecosystem and in particular shared objectives with regional state actors who wish to see sustainability, growth and export activity among indigenous businesses (most of whom are SMEs).

Government support for family business as a priority plus identifying partner regions with the same challenges enabled public funding support to be accessed through EU funds. Recognition by stakeholders of the vital role of the University, its ability to build and maintain relationships with family owned businesses and its capacity to manage large scale public funded contracts were all key to achieving support. It might also be noted that research evidence was central to making a solid case for support.

This project was delivered at scale thanks to the level of public funding it achieved (€1.6 million). However, it is not an initiative that necessarily requires having this level of investment to be effective. It does require, however, the effective engagement of family business owners in learning and other support activities.

DESCRIPTION OF THE APPROACH APPLIED IN THIS CASE STUDY

The practice has the following elements:

- Identifies the importance of family businesses to the economy and works with them to understand challenges and opportunities. Delivers a range of interventions to deal with family dynamics as well as business focus.
- Works with part-time learners in business and involves them actively in the learning process
- Delivers detailed family business and innovation audits
- Develops appropriate pedagogical strategies
- Engages owners and family employees in mentoring, events and workshops
- Identifies research and innovation projects within the businesses
- Develops resources and tools to support family businesses and academic teams



The practice includes the following concrete activities:

- Training in entrepreneurship: entrepreneurship training can be aimed at potential and practicing entrepreneurs and adult learners, not only students (Valerio et al. 2014, p. 3). It can for example be done through business plan training, pitching or courses on business basics but also workshops focused on creativity and innovation (Jansen et al. 2015, p. 176)
- Mentoring: this is a key element of entrepreneurship training for potential and practicing entrepreneurs. It involves a long-term relationship where a ‘mentor’ provides advice and guidance on any topic needed on the basis of regular interaction (Willbanks, 2013, p. 94). Such consistent interaction is one of three basic features of mentoring relationships. It has potential to improve the mentee’s career and everyday work
- Learning from existing businesses: such learning activities encompass different approaches. Successful but also unsuccessful businesses as well as experienced entrepreneurs or intrapreneurs, for example, are suitable for such learning. Role models are a source of knowledge and inspiration which they pass on to others, activating their self-efficacy and entrepreneurial intention (Laviolette et al. 2012, p. 720)
- Sessions to train the trainers/ educators: such sessions activate trainers’/ educators’ mindset, giving them the knowledge background and methods or tools to deliver the intended training results, and guaranteeing a better result by ensuring trainer and delivery quality (Valerio et al. 2014, p. 48 f.)
- Networking: this is an important element to effective entrepreneurial learning. It gives way to business relationships and knowledge exchange as well as marketing opportunities (Jansen et al 2015, p. 178).

INNOVATIVE
ELEMENTS

-
- A Family Business focus
 - Targets part-time learners
 - Identifies Research and Innovation projects
 - Family businesses are employers, so enhancing the University’s relationship with them has potential to increase / improve graduate employment
 - A wide range and type of pedagogical strategies applied.
-



RESULTS

The project had the following outputs:

- 180 businesses attended Awareness Raising events
- 60 businesses were assisted, some of which were new businesses and others existing businesses. Among existing businesses, some were developing new and innovative products and processes and others sought to improve sales and marketing skills
- 3 regional project managers were involved
- A toolkit was developed for phases 2 and 3 of the project
- A website was developed (including new database of role models and ambassadors available to support and encourage other SMEs)
- 1 networking project was supported
- 4 new innovation networks were developed and implemented, of which 1 cross-regional and 3 regional

The following results were achieved:

- 60 companies participated in the intensive programme
- 5 mentoring/workshop support sessions per company were organized– 300 sessions in total
- 60 family business and innovation audits were completed
- 60 research projects were published and distributed
- 18 Workshops were held
- 2 Family business conferences to present results of the project to the regions SMEs were organized
- 3 best practice visits were organized
- Increased overall support (in terms of access to and awareness of support available) received by participant companies from support agencies, colleges and universities
- A database of family business experts for use by the SMEs in the regions was established to develop their potential for creative problem solving
- 75% of all businesses assessed the course as being beneficial
- 6 launch events for a tri-regional business network were organized
- 60 businesses attended launch events for a tri-regional business network
- 60 businesses got involved in the tri-regional family business network.

The impact of the project was as follows:



- 60 succession plans were completed
- 5% increase in sales was achieved in supported businesses
- 100 new jobs were created
- There was 10% increase in turnover of supported firms after two years of receiving support
- 5% of turnover in assisted businesses after 2 years came from export sales
- 80% of the participating businesses were still in existence after 2 years
- 10% of the assisted businesses entered new markets, both domestic and international

The key issues included in the Mentoring Support Programme were:

- Finance
- Legal issues
- Organisation Development/Leadership/General Management
- Business Psychology.

The participating regions established a Family Business Forum to create learning and networking opportunities for family businesses. Such involvement of the businesses in the development, design and delivery of support increases engagement and therefore impact. In Northern Ireland this has been led by a private sector company with support from the Ulster University Business School. In October 2015, a local accounting firm ran a joint-event celebrating family businesses in Northern Ireland. Over 100 guests heard stories from successful family businesses and also witnessed an interesting panel discussion which involved short performances from a theatre company, simulating some very realistic family business scenarios. The feedback from this event was very positive and demonstrated a real appetite from within the local family business sector for a way to network and learn from each other. This led to the formation of the Northern Ireland Family Business Forum.

The Northern Ireland Family Business Forum has been created as a hub for family firms to connect with each other, share experiences, exchange ideas and learn in a friendly and sociable setting. The forum hosts regular events exclusively for family owned businesses, providing an opportunity to meet other business owners, hear stories from guest speakers and benefit from the skills of experts in sector. Each event is focused on a specific theme, hosted in a private, confidential environment and reserved for smaller groups to exchange lively and focused networking.

The initial programme was funded during the 2008-2012 period. In the absence of funding the project did not continue and no apparent mechanism for long-term engagement was in place. It took private

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TRANSFERABILITY AND APPLICABILITY ANALYSIS

FACTORS AND PRECONDITIONS FOR SUCCESS

sector interest in working with the Ulster University Business School to create the Family Business Forum in 2015 which is now actively working with businesses.

The following preconditions guarantee success of the practice:

- Family owned businesses are of central importance to the regional economy and this is recognized by a range of stakeholders
 - The University is able to identify and engage with family owned businesses and convince them of the validity of the approach
 - The practice is private sector-led, with businesses taking ownership of the issues and opportunities
 - Public funding is available – such a practice could not be delivered solely with internal University resources given the nature and intensity of support that is planned to be provided
 - The University is able and willing to invest time and resources in engaging employers, understanding their needs and committing research time to generate the evidence required to access public support (upfront investment)
 - Government (or international) policies and programmes are in alignment with the issues covered by the practice
 - University capability to develop and deliver high quality interventions.
-

STRENGTHS AND WEAKNESSES OF THE APPROACH

Strengths

The key strengths of the approach are in directly addressing a section of the business community that has potential for growth, maintains significant levels of employment and, as members of the community, share a collective commitment to the betterment of their own society. The delivery methodologies appear effective and whilst impact over time has not been measured, the commitment some years later to a Family Business Forum highlights the enthusiasm of family businesses.

Weaknesses

The weakness is the high cost of delivery. Even when taking into account that it was delivered over several regions €1.6 million is a highly significant level of investment. For most regions and institutions, it would be better to start small and low-cost, with growth based on the ability to demonstrate value to all stakeholders. To this end, starting with a Family Business Forum appears a highly effective low-cost option.



CONSTRAINTS

Funding is the main constraint for the implementation of this practice. The initiative does not sit well with existing funding mechanisms at Universities e.g. student fees or Core Grant, given the level of input, and therefore costs, associated with delivery. This constraint can be overcome by attracting investment, e.g. sponsors, forum membership packages and grants.

Any costs covered by the University budget can be justified with the indirect benefits of the practice, which can lead to improved graduate employment, new research and innovation projects, and real-world teaching experience for academics. The practice can also bring guest speakers, graduate project, etc.

SUSTAINABILITY

The recommendation based on this case study is to start small by creating an engagement vehicle such as a Family Business Forum to build relationships, identify needs and then seek financial and other support. It will require initial investment. Sustainability will be difficult to achieve unless there is direct engagement of the family businesses and they believe that the practice brings benefits to all sides. in the direction of more valuable research and innovation.

TRANSFERABILITY

This is an excellent and highly impactful initiative which brings direct benefits to family businesses, the university, and the wider economy. The potential for transferring this programme to other regions is high. Family businesses are the lifeblood of any economy. These organisations face formidable growth problems due to family succession issues which limit innovation and diffuse the equity within the firms. This practice develops ways of directly working with family businesses to overcome such innate problems and enable the sector to innovate, increase competitiveness and improve the survival rate of companies.

We would recommend that organizations or regions looking to transfer the practice establish a Family Business Forum to create learning and networking opportunities for family businesses. Mentoring is a useful element to include in the work of the forum.

Partners are advised to start small and grow. Engaging family businesses will bring ambassadors and will allow scaling. The size and scale can be adjusted to the value of the funding made available, so the practice is essentially easily scalable and can be adapted to fit existing resources and funding. In the case study that we presented, the creation of a Family Business Forum happened outside of the funded project. The forum represents a significant opportunity to develop highly meaningful relationships with an important sector. This in turn has the potential to bring wider benefits to all involved. The Family Business Forum appears to represent the most effective initial mechanism.



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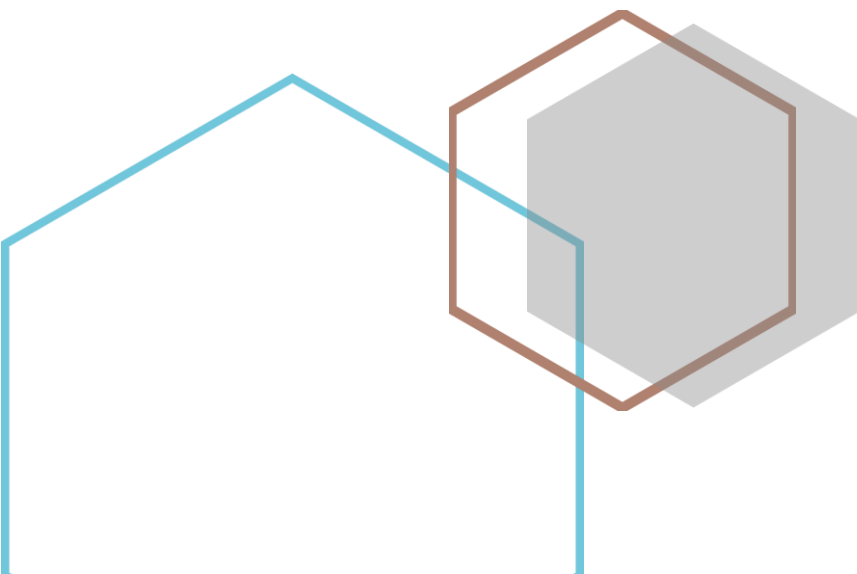




Student and Stakeholder Co-Creation good practice

Implement student retention and success programme in order to promote student talent and improve student retention through effective student engagement

A critical element is the development of a student partnership mindset



CASE STUDY: WHAT WORKS?

ORIGIN AND LOCATION

The practice has been implemented by University of Ulster.

Ulster University took part in a three-year Change Programme (2013-2016), supported by the Higher Education Academy and funded by the Paul Hamlyn Foundation. Within this program, the What Works?1 Student retention and success programme was implemented with the purpose to examine how higher education providers can improve student retention and success. What Works?2 put what was learned from What Works?1 in practice in order to be able to evaluate the impact of various student retention strategies. What Works?2 involved 13 UK Universities with the aim of promoting belongingness within the first year student cohort. Research has shown that this is critical to addressing the issue of early leavers in higher education (Thomas, 2012).

OBJECTIVE

The initiative has the following objectives:

- Improving the strategic approach to the engagement, belonging, retention and success of students
- Implementing or enhancing specific interventions in the areas of induction, active learning and co-curricular activities
- Evaluating the impact of changes in both formative and summative ways, drawing on naturally occurring institutional data, bespoke student surveys and qualitative methods.

BACKGROUND

Ulster University was established by Royal Charter on 1 October 1984, merging the New University of Ulster and the Ulster Polytechnic. It has four campuses at Belfast, Jordanstown, Coleraine and Magee in Derry~Londonderry. The University is characterised by a strong sense of regional mission and an excellent track record in widening participation, which places it at the forefront of social and economic development in Northern Ireland. Many programmes of study are strongly vocational and involve periods of placement in industry or carry accreditation or recognition by relevant professional, statutory or regulatory bodies.

There is a strong focus on providing a transformational learning experience with increased levels of student engagement across all levels of the institution. Similarly, in looking at the whole student life cycle, the University's excellent links with schools, Further Education Institutions, employers, and professional bodies are key to attracting, recruiting, and successfully graduating a diverse student body.

Despite successes, it is important to recognise the significantly different environment in which higher education operates in Northern Ireland in comparison to England and Wales. Higher education is a devolved matter and as such the Northern Ireland Executive chose not to raise



**DESCRIPTION OF THE
APPROACH APPLIED
IN THIS CASE STUDY**

student fees in line with England, and student numbers continue to be capped. This has led to a significant loss of funding for higher education in Northern Ireland which has witnessed a decrease of around 20% in funding.

Despite this, Ulster University continues to perform well in the National Student Survey and is clearly focused on providing a transformational student experience across all modes and levels of delivery. Similarly, the University continues to perform extremely well in research and innovation and is now working towards further developing this success in research grant income and international research collaborations.

Improving student retention and progression initially in year one and its subsequent roll-out across all years is a key part of Ulster University's ongoing strategy towards satisfying, and where possible exceeding, challenging internal targets and national benchmarks. As part of the wider monitoring process, the University has established a Student Engagement Committee which reports directly to Senate.

The What Works?2 program focused on the following student retention and success strategies:

- Pre-entry and induction activities that do not consist of just providing information, but involve a more engaging approach with an explicit academic focus. These activities were intended to enable students to get acquainted with each other and with the academic staff, and to develop an understanding of the programme
- Active learning approaches and interventions intended to involve students as active participants in (rather than as passive recipients of) the learning process. These include student-centred and collaborative learning, and the introduction of a real-world focus in the learning process
- Co-curricular activities: personal tutoring and peer mentoring, embedded in or aligned with a particular academic programme and organized as part of the study process, rather than as extra-curricular activities.

Ulster University elected to include into the What Works?2 program seven discipline areas from its four campuses and representing several teaching types and attendance modes across the six Faculties in order to provide a catalyst for wider institutional roll-out of good practices and to clearly identify course challenges. However, more work is needed in some discipline areas and faculties are working hard with staff teams and the Students Union to meet retention challenges against a backdrop of improved institutional performance. A core team comprising student, academic and administrative functions was selected from across the University.

Case Studies of effective practice

Ten case studies of effective practice emerged as a result of this program. They are available to download by clicking on the respective case study title below. Seven of these give further detail on the implementation and evaluation of specific activities in one discipline area. The other three provide further details on key learning points that have emerged from the Change Programme process.

Title	Author	Discipline
Addressing student expectations and building confidence for the study of law through a pre-arrival activity	Amanda Zacharopoulou	Law
Building the environment: Academic Mentors and enhanced communication supporting transition and building belonging	Michaela Keenan	Built Environment
Improving first year student confidence, team working and success through active and collaborative learning strategies both inside and outside the classroom	Terry Quigley	Creative Technologies
Strengthening collaborative partnerships between staff and students through the establishment of a student society	Mrs. Claire McCann	Accounting
Enhancing induction to promote belonging and professional identity of mental health nursing students	Iain McGowan	Nursing (Mental Health)
Cloth, colour and communities of practice: embedding co-curricular learning in Textile Art, Design and Fashion	Alison Gault & Hazel Bruce	Textile Art, Design and Fashion
SPICE: Student Partners In Curriculum Enhancement	Michaela Black	Computing



[Peer Relations: a supportive ‘route’ to student success](#) Aine McKillop

[Building capacity for student engagement through a staff-student partnership approach](#) Roisín Curran

[The importance of team work to benefit the student experience: changing the culture of a course team](#) Avril Honan

INNOVATIVE
ELEMENTS

- A research-informed practice
- Students engaged in the research directly and via the Student Union
- Case Studies of Best Practice across a range of disciplines have been identified
- Staff-student partnership: in this initiative we witness a shift in mindset from viewing students as consumers to embracing the notion of students as partners. An evidence base has been established which ascertains that students as partners builds capacity for staff to be engaging, and for students to engage. Whilst this evidence base is confined to the seven discipline teams involved in the Change Programme, there is additional evidence that students as partners is becoming more widespread across the institution.

Alongside this project, there has been an increased focus on enhancing the student voice at Ulster University. The Students’ Union has worked in partnership with key central departments and faculty staff to develop student representation at every level. Full time officers now sit on internal revalidations and play a role in the interview process for senior management roles within the university. At course level, a particular focus has been placed on electing and recruiting representatives – leading to a significant increase of representatives registering with the Student Union over the past five years. This in turn leads to an improved attendance at Student Union trainings and events which generates greater engagement and therefore representation.

‘Students as partners’ has been a key principle which underpinned implementation of the Change Programme. This has enabled Ulster University to include students in the identification of challenges and the implementation of solutions with regard to curriculum design and delivery.



RESULTS

This Change Programme has highlighted the multifaceted nature of student engagement. The outcomes and impact of the interventions suggest the importance of maintaining a strong focus on the emotional dimension of student engagement as well as the behavioural and cognitive dimensions.

Research has allowed Ulster University to identify four strong themes which should become priority areas for further enhancement of the first-year student experience, these are:

- pre-entry contact
- mainstreaming pastoral care (i.e. the efforts to ensure the physical and emotional welfare of students)
- ways of thinking and practising the discipline
- peer support.

The characteristics of effective practice across the discipline areas have included:

- building of trust relationships between staff and student and between student and student
- engagement through partnership
- building of communities of practice which incorporate ongoing formative feedback
- activities around innovative learning spaces: Student Retention and Success projects at Ulster have involved interactive pedagogic approaches involving active and collaborative learning using existing and new flexible learning spaces on each campus. These projects have generated a significant evidence base on the effectiveness of active learning and learning spaces which has informed the University's current Learning Landscape Transition Project. The Learning Landscape Transition Project aims to address the wider strategic goal for Learning, Teaching and Student Experience that learning spaces should be 'student-centred' rather than 'teacher-centred'; have the necessary technology to meet student and subject needs; support pedagogic, multidisciplinary, multimedia formats that engage students and are flexible, ergonomically comfortable, functional and multi-usable.

The What Works?2 change programme at University of Ulster has been a very successful and highly visible project. There are tangible outputs which will be invaluable to the development of Ulster strategies and policies going forward. There has been learning at both the discipline and institutional level and further appreciation of the needs of today's learner.



TRANSFERABILITY AND APPLICABILITY ANALYSIS

FACTORS AND PRECONDITIONS FOR SUCCESS

The following are the pre-conditions for successful application of this practice:

- Commitment to student engagement
- Research-informed activities
- Effective measurement
- Institutional commitment to implementing Student Retention activities
- Collaboration across disciplines
- Mindset Change within the university towards seeing Students as Partners.

STRENGTHS AND WEAKNESSES OF THE APPROACH

Strengths

This is a collaborative multi-disciplinary approach. It can deliver strategic level results and inform operational delivery.

Weaknesses

The principal weakness of the approach is that it is contextualised to Northern Ireland. That said, its core principles and concepts are highly transferable. Development of one size fits all approaches will not work, so any transfer of this practice has to include adaptation to the local context. The approach does require investment of time and resources.

CONSTRAINTS

The individual interventions chosen within each discipline area, in the main, work well in that discipline but it is evident that one size does not fit all, and so future implementation of the practice needs to take more account of disciplinary differences.

In addition, the course teams have identified two constraining factors for consideration.

Firstly, each year group can be very different and student diversity can change the dynamics of each cohort. Therefore, each course team, whilst adopting what works must remain vigilant and be prepared to adapt their practice to support the students that they have in front of them on an ongoing basis.

Secondly, whilst interventions may impact positively first-year students during semester 1 and semester 2, there can sometimes be a dip in belongingness, engagement and self-confidence amongst second-year students. Therefore, it will be important to consider further the second-year student experience and how it may be enhanced.



SUSTAINABILITY

Sustainability of this practice is a leadership challenge that requires continued commitment to improving student engagement. In many instances this will require culture change. Therefore institutional commitment and academic buy-in are the central challenge.

TRANSFERABILITY

This is a highly transferable practice in that it encourages course teams and the institution as a whole to put effective student engagement at the heart of their activities. It involves a mindset change towards seeing students as partners rather than beneficiaries or consumers. Developing strategies for student engagement that place students in the role of partner have the potential to increase student engagement in any institution and in any national context.

While transferrable as a good practice, the approach has to remain evidence-based, informed by research, and collaborative (bringing together academics and students from across a range of disciplines).

The Case Studies available above can be applied to a range of disciplines. Whilst each case study in itself may not be easily replicable or indeed necessarily ideal, the concepts can be localised and applied.

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The full What Works?2 report, published by the Paul Hamlyn Foundation, draws together evidence from 13 institutions, 43 discipline areas, and many interventions and changes over more than three years. It can be downloaded at <https://www.phf.org.uk/wp-content/uploads/2017/04/Full-report-Final.pdf>

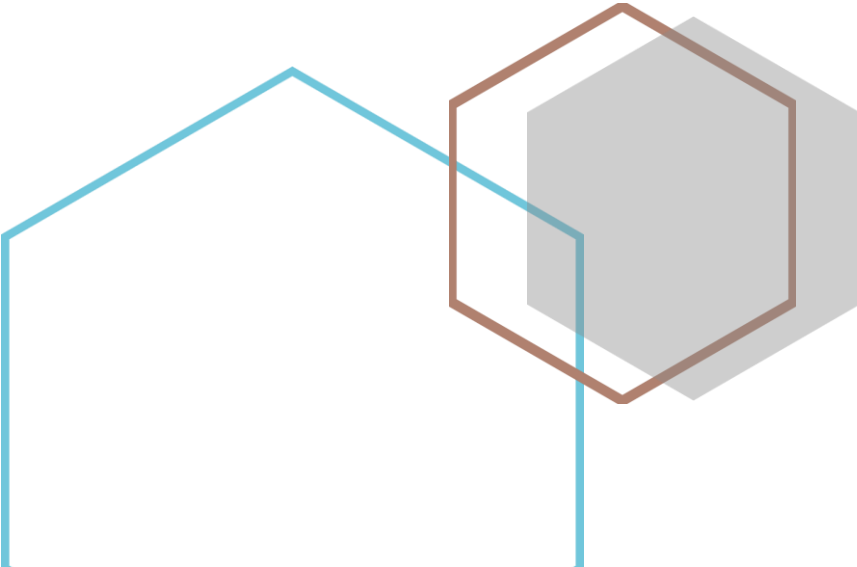
Additional important information is contained in: Supporting Student Success: Strategies for Institutional Change: <https://www.phf.org.uk/wp-content/uploads/2017/04/Ulster-University-final.pdf>





Open Innovation good practice

Launch an open innovation platform that provides students and businesses with a collaborative environment to turn ideas into prototypes or concepts in the frame of live innovation projects



CASE STUDY: DEMOLA TAMPERE PROJECT

ORIGIN AND LOCATION

The practice is implemented by the following universities: Tampere University of Technology, University of Tampere and Tampere University of Applied Sciences. Another other organization is also involved: Hermia Group.

Location: Tampere, Finland

This practice is currently ongoing. It started in 2008.

OBJECTIVE

Demola is an open innovation platform that provides students and businesses with a collaborative environment to turn ideas into prototypes or concepts. It facilitates multidisciplinary co-creation projects by bringing together employees from partner companies and students from higher education institutions in Tampere. The main objective of the platform is to tackle agile problems, boost entrepreneurship and encourage innovation in the City of Tampere.

BACKGROUND

A new innovation strategy to improve Finland's R&D competitive position was published in 2008, in response to increasing competition from emerging economies. The publication - the Finnish national innovation strategy (2008) - recognized that leading companies around the world are involving consumers in the development of new products and services and that organizations and consumers are processing unrecognized needs, which are leading to the emergence of new markets. Demola was developed in 2008 and it can be seen as a response to the Finnish innovation strategy. Furthermore, two years prior to the establishment of Demola, the Aho Group Report "Creating an Innovative Europe" (2006) was published. The report has called on European leaders to take radical action on research and innovation because the current trends are unsustainable in light of global competition. It proposed focusing on the creation of innovation-friendly markets, on the strengthening of R&D resources, on increasing structural mobility and on fostering a culture that celebrates innovation in Europe. The development of the Demola project is therefore strongly linked to the underlying need for promoting innovation in Finland and Europe.

Demola was established by the University of Tampere, Tampere University of Technology, Tampere University of Applied Sciences and Hermia Group. It is located in Tampere, Southern Finland. The city has an approximate population of 232,000 inhabitants (Statistics Finland). It is an international growth centre for creativity, know-how and versatile services and is also considered a forerunner on policies of knowledge-based development in Finland. Demola is partly funded by the City of Tampere.



DESCRIPTION OF THE
APPROACH APPLIED
IN THIS CASE STUDY

The three universities in Tampere have over 35,000 students between them. The University of Tampere has approximately 16,000 students and is popular among prospective students in Finland. Its leading research fields include information technology, journalism and media, and environmental studies. In terms of funding from foreign private companies, the University of Tampere tops nationally. Tampere University of Technology (TUT) has approximately 10,500 students. It is regarded as an industrial university because of its long history of collaborating with industrial companies. Its leading research fields include optics and photonics, intelligent machines, and signal processing. Tampere University of Applied Sciences (TUAS) has about 10,000 students and its main study fields are environmental engineering, computer science, media and arts, and digital gaming.

Regardless of the research fields of the universities, the integration of research, innovation and education is one of the objectives included in their institutional strategies.

Demola is a university-business collaboration model for the creation of prototype products and services. It provides students from higher education institutions in Tampere with a collaborative environment to work with industry experts to solve company challenges. The results of the collaborations are working demos or prototypes that are mostly bought by companies via a licensing system designed for the Demola framework. Although the Demola project was developed in Tampere, the model is now being used in 15 countries worldwide and it has proved effective in environments where university-business collaborations are weak and infrequent.

Before the establishment of Demola, actions were taken to involve all relevant parties in the development of the project. The Demola idea was communicated to important stakeholders including rectors, professors, Tampere city administration, Tekes (Finnish Funding Agency for Innovation) and all other parties that might contribute to the success of the program. The development of the project began after all parties agreed on it. Furthermore, all players were regularly updated on the progress of the project. Another important factor is that Demola's physical premises are not located inside any of the universities. They are maintained as a neutral ground resource, therefore giving all the involved universities the confidence to fully participate and support its innovation activities.

Involvement in the project is voluntary. All participants are aware of the value they get. Firms involved benefits from the prototype the project delivers. Students receive real-life experience, credit point and the possibility to be recruited or to continue building the concept with project partners.

The process:

- A challenge is defined by a company



- Multicultural and multidisciplinary students form a team, joined by a company representative
- An 8 - 12 weeks development process follows with a set milestone
- Prototype/demo is created and the team owns the IPR
- A license agreement is concluded through which the company can buy the IPR from the team.

An initial funding of €200,000 to €300,000 provided by the City of Tampere enhanced the success of the program. During the course of work, partner companies pay for each project, thus allowing the program to generate additional income. The decision to manage the program via a third party (Hermia group) may have also contributed to its success. The involvement of Hermia Group has ensured that viable products and services created in projects are developed further.

To sustain Demola and to foster an innovative culture, innovation projects have been integrated into the participating universities' course structures. Demola is now being offered as a course in universities in Tampere as well as other partner universities in order to encourage students to participate in the program.

**INNOVATIVE
ELEMENTS**

-
- Utilizing a neutral location that is not dependent on any university or company
 - Multidisciplinary and multicultural students and company employees are brought together to solve real-life problems
 - Teams own the IPR so they put effort in the project knowing that a successful demo will earn them financial rewards
 - There is an effort to communicate to all parties involved what the benefits from the project are
 - All available projects are published on Demola's platform and students can apply to them directly.
-

RESULTS

Through the Demola project, the following has been achieved:

- About 15% of students have been employed by partner organizations
- 80% of the projects outputs are licensed by partner organizations
- Over €500,000 has been awarded to students
- Students enhance their innovation skills and 75% of them consider becoming entrepreneurs
- The co-creation projects encourage innovation among company employees and gives the companies new ideas and perspectives



TRANSFERABILITY AND APPLICABILITY ANALYSIS

FACTORS AND PRECONDITIONS FOR SUCCESS

- Demola has grown to become a global innovation ecosystem. It is currently working in 60 universities in 15 countries, and involves over 700,000 students.
-

The following preconditions are likely to result in successful open innovation platform focused on student co-creation:

- Link to national or regional innovation strategies
 - University commitment to collaboration with external stakeholders and a strategy for harnessing the brains of their students for innovation
 - Availability of qualified and motivated staff at the university to manage the projects and to support students and external stakeholders in the process of co-creation
 - Commitment of the students to participation and strong problem solving abilities
 - A solid framework for IPR management assures companies that they will not lose control over innovations
 - If more than one university is involved, the location of implementation should be in a neutral place rather than in one of the universities
 - Publishing available projects online increases the chances that interested students will be able to participate and promotes transparency.
-

STRENGTHS AND WEAKNESSES OF THE APPROACH

Strengths

A key strength of the model is that it is built on interdisciplinarity and experiential learning based on input from the real business, so it has a very strong positive impact on students' skills. The practice is designed to run in a cost-efficient and agile manner, allowing for a quick response to changing environments.

Weaknesses

The practice requires some initial funding to kick-start the activities, so it could be more challenging in resource poor institutions unless they secure public funding.

Due to the number of parties involved in the practice, making strategic decisions may be challenging, as permission will be required from all parties.



CONSTRAINTS

The following factors are likely to impede the successful implementation of the practice:

- Unfavorable economic situation
- Low student motivation and performance, and a general lack of interest in extracurricular activities
- Unwillingness of partner companies to participate in the program (in addition, if companies are willing to participate but are unwilling to provide some funding for the projects – as could be expected in a non-EU context – this would put more strain on the financial sustainability of the initiative)
- Lack of motivation of key personnel at the university or in the companies
- Withdrawal of an important stakeholder
- Weak financial capacity of the university
- Lack of public support for such initiatives.

SUSTAINABILITY

Sustainability is dependent on:

- Access to public financing or financing from the involved companies
- Consistent communication efforts to stress the benefits of the projects to all parties involved
- Continuous search for new business partners
- Embedding the practice into the official curriculum in order to increase the motivation of students to participate.

TRANSFERABILITY

The practice is highly transferrable and easy to replicate. Indeed, the Demola model is in use in over 60 universities around the world. This expansion has also opened up new possibilities, for instance a project can run simultaneously in multiple locations to check if it will yield the same results in different environments.

Since co-creation projects tackle a specific problem determined by participating companies, they are designed to be directly applicable to any environment where they are applied. The model is transferrable also to environments where university-business collaboration is weak or infrequent as it is a cost-effective way to start such collaboration. In terms of scalability, the agile approach of the program makes it possible to be applied to problems of different sizes. The project duration can be modified and the number of involved students and professionals can be adjusted to fit different needs.



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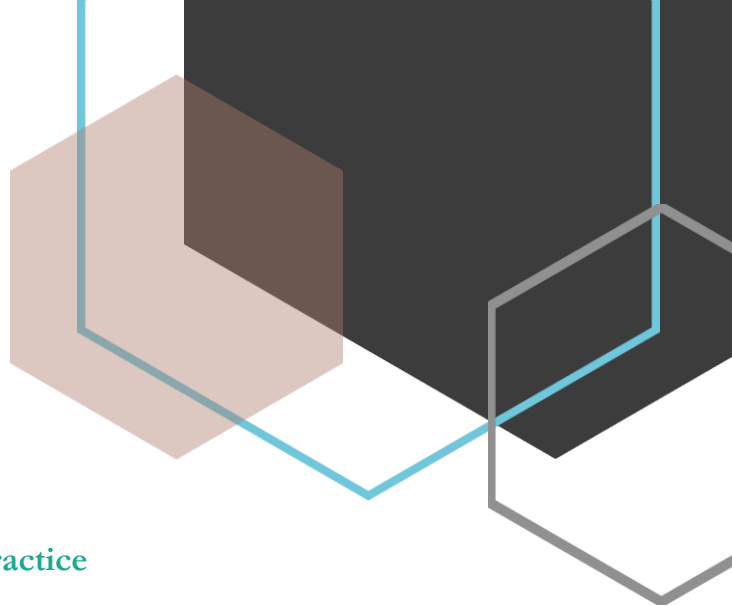
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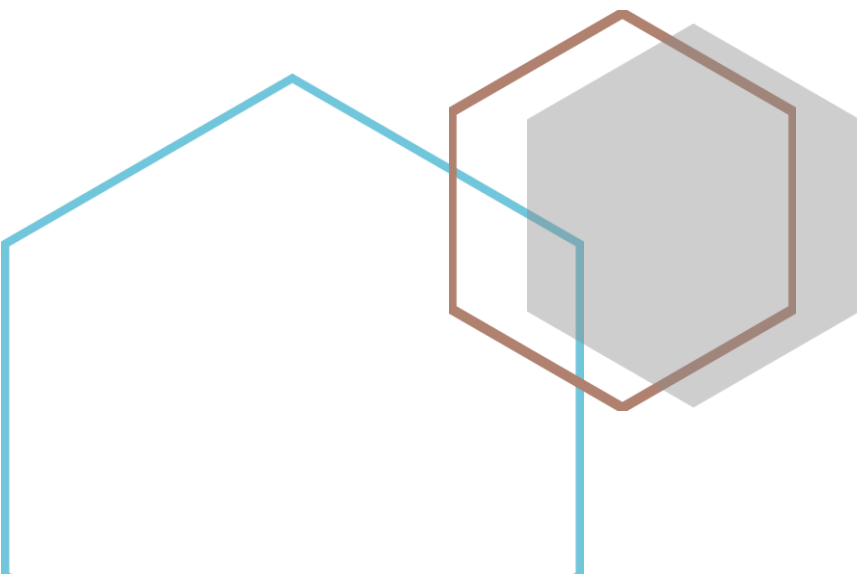
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Student and Stakeholder Co-Creation good practice

Implement a multi- and cross-disciplinary process which brings together enterprises and higher education students in collaborative activities of medium-term duration (up to 3 months)



**CASE STUDY:
DESIGNCAMP****ORIGIN AND LOCATION**

The practice was implemented by Design Center Muova/ Vaasa University of Applied Sciences (Finland).

OBJECTIVE

The practice aims at providing SMEs with opportunities to develop early stage ideas and to try out how design can influence their business and competitiveness. The objectives of the collaborative process are to strengthen the use of market-oriented design in SMEs, to develop SMEs' innovation potential and skills through multi-disciplinary tasks, and to bring together education, innovation, SMEs and (applied) research.

BACKGROUND

DesignCamp has been realised in the region of Ostrobothnia which hosts a great number of SMEs. The bilingual region is also home to higher education institutions offering study programs in both Finnish and Swedish. The Regional programme of Ostrobothnia 2011-2014 set as one of its goals to strengthen research and development activities, cross-disciplinary innovation environments and cooperation between educational institutions.

DesignCamp has addressed these regional goals by:

- being realised in cooperation between two local (/national) educational-research organisations
- being bilingual
- focusing on developing the innovation potential of enterprises and students
- developing competitiveness of enterprises
- creating a platform for cooperation between companies and higher education and research, thus integrating applied research and design thinking in support of innovation in the region.

**DESCRIPTION OF THE
APPROACH APPLIED
IN THIS CASE STUDY**

DesignCamp is a multi- and cross-disciplinary collaborative process which brings together enterprises and higher education students. During its first instalment, a team of 6 multi-disciplinary students worked on projects commissioned by 6 Ostrobothnian SMEs. The process was supervised by experienced designers.

DesignCamp is based on the Knowledge Triangle:

- It addresses the need to develop the innovation capacity of SMEs, as well as the future work competences of students
- It develops a sense of initiative and entrepreneurship of tertiary level students



- It allows students to gain real-life work and entrepreneurial experience as they are fully in charge of particular projects.

The companies that participated in DesignCamp were recruited through an open call and represented different economic sectors. The openness to different sectors created new learning and benchmarking opportunities for companies, transfer and exchange of practices across various sectors and thus further increased the transfer and multiplication effect of the processes.

- DesignCamp reaches its aims and goals through the following organizational structure:
 - Planning and initial phases of the project: meetings with rectors, and study counsellors; call for students; selecting and interviewing participating students.
 - Call for SMEs and selecting/recruiting participating SMEs
 - Starting up and running the DesignCamp
 - Closing, final workshops and reporting

Blueprint for student – company cooperation:

- Experts from the higher education institutions meet the participating companies before the start of the DesignCamp to go through the process and discuss their needs, challenges and wishes. Based on the meeting, the experts write a description of the project task set by each company - a design brief. The design brief is revised by the concerned company. This preparatory phase is intended to match the needs of the companies with the skills, know-how and background of the students
- Background survey and basic training: in the beginning of the Camp students receive the company cases and design briefs and start work on a background survey – i.e. investigation on issues such as the aims and the current competitive advantages of the company, competitor surveys and user interviews aimed at creating ‘user personas’. The background survey results are presented to companies. Together, students, companies and experts agree on the further focus of the process and the next steps
- The second step includes most of the lectures and educational activities included in the DesignCamp. These focus on understanding user and consumer behavior, project work, design processes, product development, idea generation techniques and service design
- Idea generation: during the second month of the DesignCamp the teams conduct common idea generating sessions for the cases. The experts assist students in selecting appropriate idea generation methods for each company project. The ideas



INNOVATIVE ELEMENTS

developed into concepts are again presented to the companies. Companies and students together select the ones suitable for further development

- Conceptualising: During the last month of the activity, the teams engage in finalising and visualising the selected concepts
- Final presentation event: the final results are presented to companies and stakeholders during an event. The event brings together companies, students, experts, representatives of the city of Vaasa and Vaasa University of Applied Sciences.

The innovative elements in the approach are:

- Cooperative and multi-disciplinary workshops are organized
- Students are engaged in applied research in direct cooperation with external stakeholders, and have important co-creation roles in innovation activities
- Students gain knowledge of and experience with applying design thinking and design methods
- The activity is focused specifically on user and market oriented design
- The practice involves creative methods and activities
- Learning by doing in project work.

RESULTS

The first instalment of the DesignCamp was in 2012. The feedback from this instalment was positive. Companies were happy about the added value from the projects and the concrete outcomes of the DesignCamp. They got new perspectives and ideas which led to novel ways of working. The practice gave SMEs the opportunity to use external experts for problem solving.

Interest among the students was substantial. 45 students from different universities applied for DesignCamp, of which only 6 were admitted. The participating students reported to have learned a lot and stated that their perspective to multi-disciplinary cooperation had changed dramatically during the three months. They also reported a great potential to utilize what they have learned in their further studies and in working life (transfer effect).

Based on the feedback, and the interest demonstrated by the target groups and media, the DesignCamp was a success. The DesignCamp has not had a second instalment due to lack of financing.



TRANSFERABILITY AND APPLICABILITY ANALYSIS

FACTORS AND PRECONDITIONS FOR SUCCESS

The following factors are preconditions for the successful application of this practice:

- A motivated and dedicated team at the participating higher education institution(s)
- Careful selection of companies and challenges to ensure that they are suitable for students in view of their skills and knowledge
- Motivated student teams able and willing to work in multidisciplinary teams (a competitive selection process helps in this respect)
- Focus on fostering student team cooperation and ensuring effective and inspiring mentoring from the side of the involved experts
- Combining co-creation projects with lectures and workshops about design methods in order to ensure that the student teams are prepared for the challenge and to also reinforce the link between theoretical and experiential learning.

STRENGTHS AND WEAKNESSES OF THE APPROACH

Strengths

- Detailed preparatory activities
- Multidisciplinary teams - students and companies learn together
- Students work with directly with companies
- Innovative methods used
- Designer mentors involved.

Weaknesses

- Requires investment or funding
- Potential lack of suitable applicants.

CONSTRAINTS

The following factors can impede the implementation of the practice:

- Lack of time or resources to carry out a detailed selection and prior analysis of the potential partner companies in order to choose the most appropriate and innovative ones
- Lack of qualified staff available to provide professional tutorship and mentorship to the students
- The practice is designed as a medium-term extracurricular activity that is likely to require a significant time commitment on the part of both students and mentors. For this reason, in the

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case study above it was implemented in the summer holiday. However, this timing presents its own challenges because of the limited availability of staff and business during the holiday period.

- Lack of support from the regional authorities.

SUSTAINABILITY

Sustainability would be strengthened if the following actions are undertaken:

- Funding is secured for the activity, preferably from the implementing university, or through national public funding
- There is a strong commitment of the implementing university to collaborating with business, and medium-term extracurricular collaborative activities are seen as an element of the broader university strategy in this regard, in combination with other activities, such as joint research projects, incubators, shared labs, technology transfer, etc.
- There is a strong commitment of the implementing university to promoting student employability, and this medium-term extracurricular collaborative activity is seen as an element of the broader university strategy in this regard, in combination with other activities, such as entrepreneurship education, internships, talent development activities, etc.
- There is a dedicated team of university staff responsible for the activity. In most cases, the team would need some training before they can undertake mentoring and boundary spanning activities
- The university secures a physical space where students can work, and possibly equipment necessary for teaching and prototyping.

TRANSFERABILITY

The practice is transferrable to a variety of universities, also in a non-EU context. The methods used for the co-creation projects can also be different – while the design method was preferred in the case study above, other methods can also be applied depending on the nature of the projects and the challenges presented by the companies.

The practice is scalable and therefore transferrable even to universities that do not have substantial financial and institutional capacity. It can be implemented with modest equipment as long as the challenges presented by the companies do not require sophisticated research. The number of projects that the team deals with can also be reduced.

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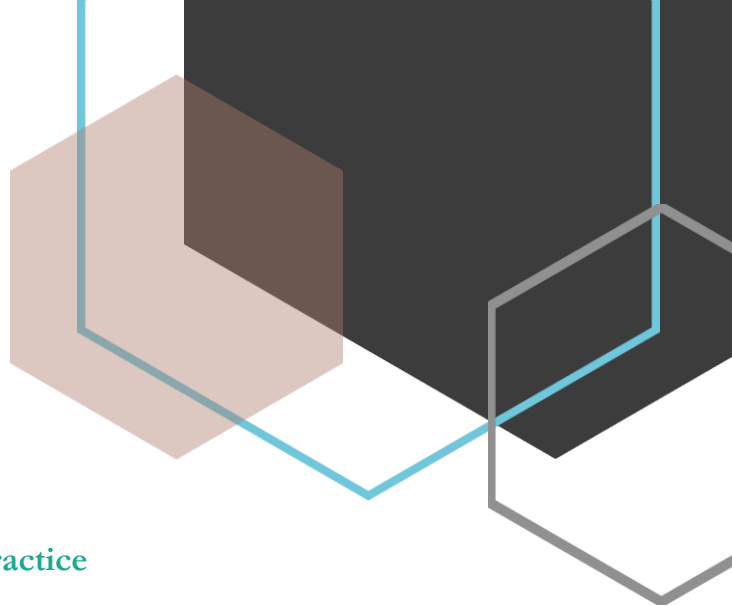
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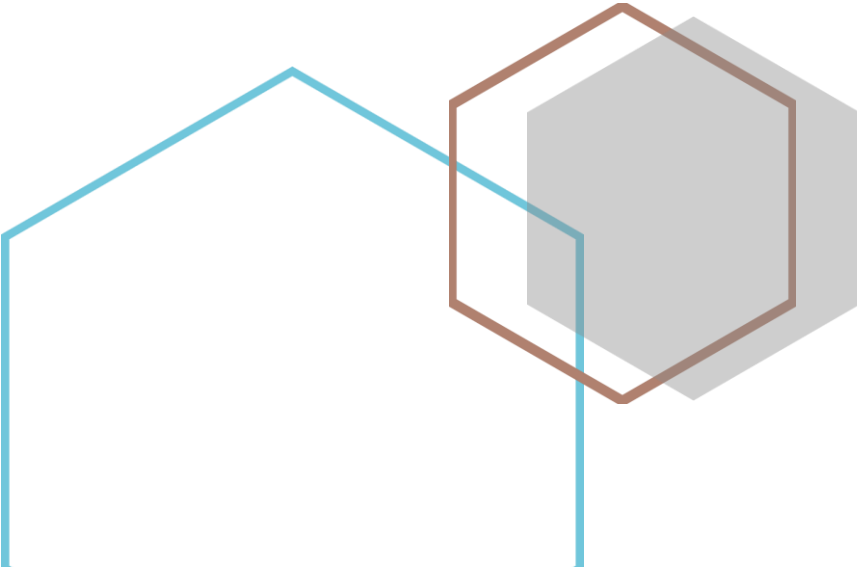




Student and Stakeholder Co-Creation good practice

Bring a group of multidisciplinary and multinational students, teachers and stakeholders together to work on a common challenge of global nature

The challenge is a wicked problem and it develops students' non-cognitive competencies suitable for work life that is rapidly changing under the impact of digitalisation



**CASE STUDY:
RIVER 21****ORIGIN AND
LOCATION**

University involved: University of Antwerp (<https://www.uAntwerp.be/en/>), Antwerp, Belgium

The practice is currently ongoing. It started in 2000. The full name of the project is : River 21 Project: Vision-building for Transboundary River Management, or Integrated Water Management: advanced case River 21.

OBJECTIVE

The objective of River 21 is to bring a group of Belgian and international multidisciplinary Master students together to work on an integrated water management project. The two-week project offers students an opportunity to focus on a real-life challenge, apply theoretical knowledge and practical approaches, and engage directly with stakeholders. As a result of the activity, students are expected to build skills and competencies in work life in general, including non-cognitive (socioemotional) competencies, such as problem-solving, international competencies, etc., and to learn about sustainable development while solving wicked and global problems.

BACKGROUND

The project started as a cooperation of five universities from three countries (Belgium, France and the Netherlands) and it was strongly based on EU policies and the European Water Framework Directive. The first sessions were run in 2000. Today, the practice is part of the University of Antwerp's policies of social responsibility and sustainability.

The university has been working on sustainability since 1999, having social responsibility and sustainability within its Mission and Vision. The university applies social responsibility at many levels from e.g. food, buildings, transport, biodiversity, purchasing, water management, education and research and in courses and activities. The principle is that every student would be familiarised with social responsibility and sustainability. River 21 is an offshoot of this strategy.

Belgium as an EU country applies the principles and policies of the EU. In addition, water management is an essential policy and research area of increasing importance globally. It tackles issues such as flooding, clean water, and risks and consequences of global warming. Hence, the project develops students' talent to contribute to solving future societal challenges and thus has significant importance for the region and internationally on both social and economic levels. River 21 develops future workers with non-cognitive competencies suitable for a digitalizing work life, able to apply theory in practice, and able to tackle major challenges in the society.



**DESCRIPTION OF THE
APPROACH APPLIED
IN THIS CASE STUDY**

River 21 is based on real-life cases and allows participants to apply their theoretical knowledge while working with stakeholders in multinational and multidisciplinary teams.

The River 21 Project, entitled Vision-building for Transboundary River Management –is organised annually by the University of Antwerp. The participating students are from the University of Antwerp, other Belgian universities and international students. These multidisciplinary Master students work on the project of transboundary river management, and the requirement is that their study specialization is connected to this theme horizontally – eligible specializations range from water management to social sciences or legal studies. Their experience level on water management varies. The students work on developing a transboundary vision for the Scheldt Basin, hence the challenge is approached in an international context.

Process:

The River 21 Project develops students' talent, problem-solving and innovation skills, as well as competencies for understanding complex systems and systems thinking.

The two-week long intensive course is structured as follows:

- Week 1 includes excursions along the Scheldt region, meeting experts and stakeholders from different countries and disciplines.
- Week 2 includes work in teams focused on the challenge of proposing sustainable solutions for the management of the river basin area.

The first-stage activities build students' knowledge of the Scheldt basin and the relevant national interests. During the excursions to the Scheldt students get acquainted with the key stakeholders' interests and objectives. In the second stages of the project, students work in teams to develop an integrated vision on the Scheldt management and to elaborate action plans containing possible pathways for sustainable water management and strategies (setting priorities within the pathways). Methodologies are made available for that purpose. The results of this work are included in a report which is presented in the presence of the lecturers and interested stakeholders.

The River 21 project is described above in its current form. However, it started in 2000 as cooperation between three countries (Belgium, France and the Netherlands) and as a project based on the European Water Framework. The case study thus represents a good example of how initial trialing can become a long-term practice and a permanent course offered in the university.



INNOVATIVE ELEMENTS

At the when time River 21 was launched, it was highly innovative, and it is innovative still today, especially as its many innovative parts combine into a functional practice:

- Multidisciplinary and multinational learning around a real-life challenge, more precisely, on a complex, wicked (blurry) and global problem
- Stakeholder and student cooperation on a real-life challenge relevant to major policies in an international economic area
- It addresses social responsibility and is thus future-oriented
- It develops student talent and non-cognitive competencies suitable for future work life in a digitalizing environment.

RESULTS

The extent to which this practice has helped improve graduates' employability has not been measured systematically. However, the University of Gent from Belgium communicates on its website that this course is successful in developing integrated competencies that are increasingly in demand worldwide.

TRANSFERABILITY AND APPLICABILITY ANALYSIS

FACTORS AND PRECONDITIONS FOR SUCCESS

There are several institutional, economic and social conditions/ factors important for the successful implementation of the good practice:

- Clear interest of external stakeholders in addressing the challenge on which the activity will be based
- Experience of the implementing university with cross-border educational cooperation
- Existing, well-developed and active links and discussion between the university, the stakeholders and the surrounding society; University being active on social level.
- General awareness within society of the importance of the specific challenge on which the activity will be based
- Social responsibility (and sustainability) are part of the university's strategy
- Expertise on the topic of the challenge among the university staff
- Availability of qualified staff to get engaged with the implementation of this activity, including availability of staff experienced in working with multicultural and multidisciplinary groups of students
- Active, forward-looking university management, open towards the society and supportive of the practice in particular, and in



**STRENGTHS AND
WEAKNESSES OF
THE APPROACH**

general supportive of innovative methods and practices in teaching

- Existing university strategy enabling the activity
- Autonomy of the university and of the teachers to implement novel methods and engage in flexible teaching
- Funding for planning and implementing the activity, e.g. staff and teacher mobility. This can be internal sources or it can be provided in the form of a grant from an external body.
- Common agreements concluded and legal issues solved: between the universities to ensure collaboration, and between universities and stakeholders (including confidentiality, transferability of accreditation, monitoring of performance, etc.).

Strengths

- Students get engaged in multi- and cross-disciplinary work
- Both students and teachers engage in learning
- Multinational teams work on a globally acknowledged serious challenge, which requires cultural and linguistic competencies from students and teaching staff, and in turn further develops those competencies
- The practice can develop students' talent in topics related to societal challenges
- The practice develops students' skill, competences and talent at multiple levels relevant to the future society and work life, such as e.g. systems thinking, non-cognitive competencies like team work, working in multidisciplinary and international teams, entrepreneurial attitude, problem-solving (including wicked problems), languages, T-shaped thinking, cooperation with stakeholders, ability to combine theory with practice, and innovation skills. Employers are looking for these competencies in the work force. They are also essential in a society where new professions are bound to emerge and where it would be imperative to be able to modify competencies to suit future professions
- The practice relies on a focused dissemination strategy aimed at improving awareness of the activities and the results.

Weaknesses

- The practice requires substantial funding because it involves transnational mobility of students and staff
- The practice is dependent on the willingness of stakeholders to cooperate. Since the practice is focused on societal challenges and the public good, these stakeholders do not receive any direct

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CONSTRAINTS

gains (as would be the case if the collaborative efforts were focused on company issues), which could decrease the motivation for engagement, especially in the long run

- The practice requires stakeholder management.

The factors that may hinder the success of the good practice are:

- Low interest among the students
- Students feeling unprepared to work in multidisciplinary and multinational groups
- Complications with the management of transnational mobilities
- Lack of interest and motivation among the stakeholders, or conflicts with stakeholders
- General lack of information about the societal challenge that the practice focuses on
- Lack or unavailability of qualified staff to implement the practice, both within the university and within stakeholder organizations
- Lack of support from the senior management of the university and of external stakeholders
- Negative political environment, potential legal limitations and change of legislation.

SUSTAINABILITY

The main resources to put in place in order to ensure sustainability are:

- The right human resources (includes training if necessary)
- Enough financial resources
- Collaborative resources enabling exchange with stakeholders and other universities
- A campaign focused on providing information about the practice at multiple levels (from published cases to academic papers and information in media)
- A strategy for evolution of the practice (follow-up, what works, what needs to be adapted to the new situation, etc)..

TRANSFERABILITY

The practice is highly transferrable. The concrete topic (societal challenge) is not a limitation as the general method is sector-agnostic and can be applied to any discipline and issue. Moreover, it has been predicted that wicked problems (blurry problems) will be increasingly important in the future society. The practice suits well efforts at teaching students how to solve them. The approach prioritizes multidisciplinary and hence can be applied in any university or in any university



cooperation.

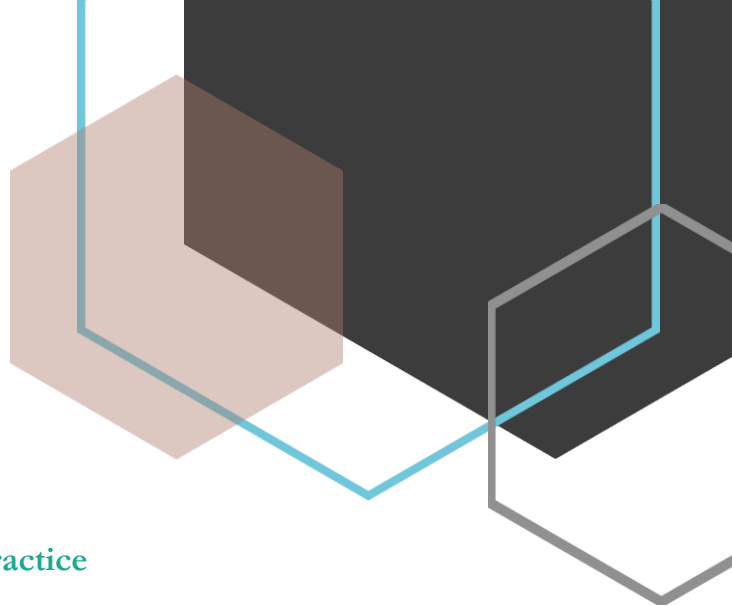
The practice is very easily scalable. It can be applied to problems of different magnitude, to different course durations, and to different sizes of student groups. The global challenge tackled by the students can be divided into smaller sub-challenges. The practice can also be scaled down for application nationally, regionally or locally (instead of internationally). In that case, the constraints related to transnational mobility will be minimized and the resource-intensiveness of the practice will be mitigated.

We conclude that River21 is a good practice that is highly transferable to any region, any discipline and in any scale. It is not only topical but also forward-looking, and it develops students' talent and non-cognitive competencies which will be in increasing demand on labour markets.

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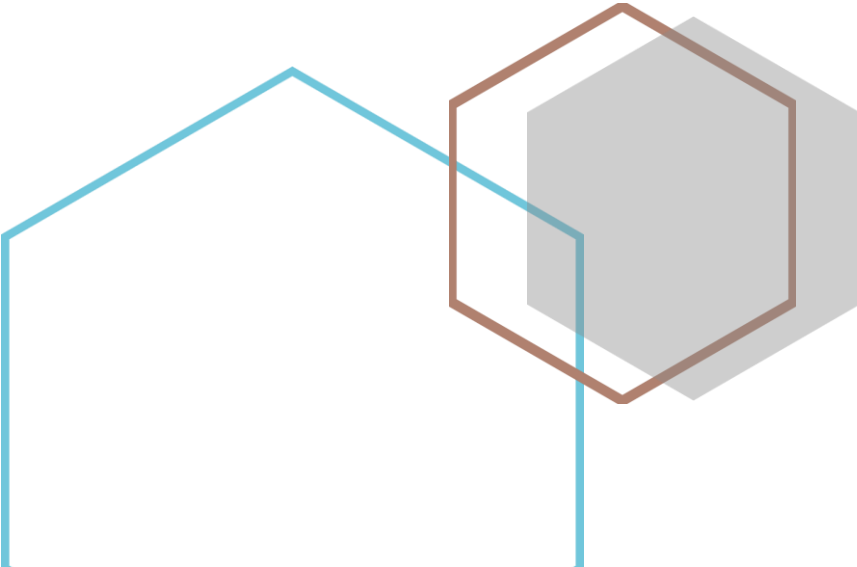
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Student and Stakeholder Co-Creation good practice

Develop entrepreneurship talent among students using real-life projects and student companies as vehicles of learning, as well as learning-by-doing, coaching and teamwork as methods to learn



**CASE STUDY:
TEAM ACADEMY**
ORIGIN AND LOCATION

The practice has been implemented by University of Applied Sciences of Jyväskylä (JAMK), (www.jamk.fi), Jyväskylä, Finland

Tiimiakatemia was launched in 1993.

OBJECTIVE

Tiimiakatemia is an element of entrepreneurship education at JAMK (Jyväskylä University of Applied Sciences). Its objective is to promote entrepreneurship at two levels:

- teach entrepreneurship and develop the entrepreneurial competencies of students
- promote the development of small and medium-sized enterprises.

BACKGROUND

Entrepreneurship education is important in Finland and is promoted by both national policies and EU policies related to education and lifelong learning. Entrepreneurship is expected to increase employment and create new jobs, thus positively contributing to the national economy. It is also an important competence in everyday work life, even for regular employees. Tiimiakatemia reflects such policy frameworks and is the outcome of a few enthusiastic educators. In Finland, teachers are free to apply their own teaching methods to reach the desired learning/teaching outcomes. Tiimiakatemia has benefitted from this flexibility in teaching methods and has become an award-winning method to teach entrepreneurship.

The starting point for Tiimiakatemia was a pedagogical need that JAMK lecturer Johannes Partanen noticed: the need to turn passive listeners into active students and practitioners able to put theory into practice. Two other important insights were the need to change the traditional way of teaching business (tight schedules, classroom teaching) and to introduce international experience to entrepreneurship studies. Partanen caught students' attention with an announcement asking "Do you want to go on a trip around the world and learn some marketing at the same time?". 24 enthusiastic business students enlisted and the first group started work in 1993. It was called "Round the World" or "RTW", as on the announcement. Partanen used an entirely novel way to teach students and gave new names to parts of the course, for instance birth-giving and cross-pollination.

The innovation value of Tiimiakatemia was evident. It abandoned lecture-based teaching in favour of applying real-life cases, activating students, and using learning-by-doing instead of behavioristic methods. Tiimiakatemia has changed the behavioristic way of teaching by, e.g.:

- Activating students to take part in building their own learning path

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**DESCRIPTION OF THE
APPROACH APPLIED
IN THIS CASE STUDY**

- Allowing learning to take place through teamwork and commissioned projects carried out by cooperative student team companies. Students become part of team companies at the beginning of their studies. During their studies they assume different roles in team companies. Each team has its own coach
- Allowing student cooperatives to acquire commissions and projects directly from companies and organizations
- Putting theoretical knowledge into practice by doing business
- Replacing lessons by coaching sessions.

The results of the new method have been evident. Tiimiakatemia manages to employ almost 100% of its graduates and has involved a network of small and medium-sized enterprises and other universities, Tiimiakatemia is an award-winning practice transferred elsewhere, and it manages to inspire students. Despite this, Tiimiakatemia does not stop evolving. It has developed and updated its operations and pedagogical methods continuously. It has also been integrated into JAMK's quality assurance and task management system.

Tiimiakatemia is a good example of how possibilities in the national system can be taken on by a forward-looking management to enable innovative practices developing students' talent.

Tiimiakatemia (Team Academy) is an entrepreneurship center and programme of the JAMK (Jyväskylä University of Applied Sciences). It develops entrepreneurship talent among students using real-life projects and student companies as vehicles of learning, and learning-by-doing, coaching and teamwork as methods to learn. In Tiimiakatemia students run their own businesses applying theory in practice. Real money, real cases and real-life projects are used. The award-winning Tiimiakatemia has a high rate of success in employing its students and its method has been adopted in different countries across Europe.

Students can apply for Tiimiakatemia after completing basic studies in business. Each student participating in Tiimiakatemia fills in a Learning Contract that is linked to their personal development and objectives. This document is updated regularly. Teaching takes place in team companies formed by students and operating as independent cooperative companies. The learning experience and talent development are enhanced by allowing students to regularly change roles in the team company. Tiimiakatemia is a learning platform and therefore each company has a coach to support and guide it.

The grounding of the approach into real-world problems and practice is ensured as each company works on real assignments given by small and medium-sized businesses and other organisations. Students must find their own customers. Real money is used in order to increase the effect of the training and also to cover the expenses of the companies (which



itself develops entrepreneurial competencies). The typical 'products' offered to clients are marketing of new products or services, and coaching or developing new practices. The realistic aspect of student companies increases as it is mandatory (by law) for the team businesses to keep proper bookkeeping. Students' financial risk is kept small and manageable. On its website Tiimiakatemia defines the average size of a project to be 10,000-15,000 €.

Product and service innovations have sometimes evolved into startups that students continue running after graduating.

During the 3,5 years of study the students learn about:

- Productisation and service production
- Marketing and sales skills
- Managing company's finances and the use of financial numbers as incentives
- Planning projects and choosing the right people for project teams
- Organising events and learning to manage larger entities
- Leadership
- Working on international projects.
- Specialized training, e.g. graphic design or coaching skills.

INNOVATIVE ELEMENTS

At its launch in 1993, Tiimiakatemia changed the dominant approach in entrepreneurship education from behavioristic, lecture-based teaching to participatory, experiential learning-by-doing, while solving real issues, working with real customers, and taking care of own finances. Instead of lectures on isolated subjects, coaching and projects with team cooperatives are used. Learning is holistic and companies function as the learning environment.

Other methods to support learning are:

- Conferences and Tiimiakatemia's internal training programs
- Practicing teamwork and communication skills
- Dialogue, knowledge sharing and shared thinking.

RESULTS

The results of the program on employability and entrepreneurial activity are:

- Almost 100% employability rate of BBAs
- 91% of students find employment within six months of graduation
- Business launch or continuation rate (from Tiimiakatemia): 37%

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**TRANSFERABILITY
AND APPLICABILITY
ANALYSIS**
**FACTORS AND
PRECONDITIONS FOR
SUCCESS**

- Number of new businesses created: 40
- The highest number of entrepreneur graduates in Europe.

Other results:

- The practice has developed another effective method for increasing cooperation between educational institutes and small and medium-sized enterprises
- Independent Tiimiakatemia-like units (that may be part of an educational unit) have been established in Europe, e.g. in France, the Netherlands, Hungary, and Spain. This has resulted in an active network of units cooperating with the original Tiimiakatemia.

The institutional, economic and social conditions/ factors important for the successful implementation of the good practice:

1) Contextual preconditions:

- Entrepreneurship education is integrated in the national curriculum
- There is perception that old-fashioned teaching methods, e.g. tight schedules restrain creativity and business mindset development and offer minimal possibilities to work on real-life cases
- The educational system enables use of a variety of educational methods and allows flexibility to try out new methods in order to reach the objectives of the curriculum.

2) Implementation-related factors that can lead to successful replication of the practice

- Availability of resources for the implementation of the practice
- Commitment by the leading teacher(s)
- Permission from the management to experiment with the new method
- Prior preparation/training of coaches and other involved staff
- Integrating the method into the university's quality assurance and task management system
- Motivation of students and a general positive attitude to non-tradition methods of learning
- Continuous monitoring of the work of the student companies.



**STRENGTHS AND
WEAKNESSES OF
THE APPROACH**
Strengths

- The program can result in exceptionally high employment rates
- The program acts as a good incentive towards establishing a business
- The program prepares students to the challenges of real-life entrepreneurship
- The program provides students with concrete experience backed up with theoretical knowledge
- The program provides students with the possibility to build their own business networks
- The program provides excellent possibilities to develop students' talent and competencies for employability and work in the modern business environment.

Weaknesses

- The practice is difficult to adapt for use in universities with a strong and established hierarchy between lecturers and students
- Legal and practical issues are involved (e.g. student company opening an account) and may be difficult or impossible to solve in some national contexts
- The main methods – namely learning-by-doing and team learning – may not be suitable for all learners.

CONSTRAINTS

The factors that may hinder the success of the practice are :

- Local, national or institutional policies do not support educational innovations and experimentation with new teaching methods
- There can be other local limitations related to the business ecosystem, culture, or the legal system, particularly affecting the operation of student companies
- Low interest on the part of SMEs to support the implementation of the practice
- Institutional culture within the university opposed to innovations in teaching
- Teaching staff lacks experience in using the required methods
- Financial constraints, e.g. during the introductory phase of the method.



SUSTAINABILITY

The main resources and initiatives needed to ensure sustainability of this practice are:

- Additional specialized training to guarantee the competence level of trainers and coaches
- Quality assurance and accreditation system for the programme, including handling feedback and follow-up
- Systems in place to enable operative processes of the practice from collaboration to legal and financial issues
- Financial resources to run the practice
- Continuing managerial support at the institution and the existence of a core of change-maker staff willing to experiment further and expand the practice
- Branding and information resources to promote the practice and gain visibility.

TRANSFERABILITY

This method is transferable to any higher education learning environment with a business curriculum. The rationale behind the practice and the methods used – promoting entrepreneurship through experiential learning and teamwork – are currently relevant to almost any national higher education system. Indeed, this method has already been transferred to different European countries and adapted to suit their unique conditions. However, the local practices and business policies need to be taken into account in order to adapt the practice accordingly.

This practice is highly scalable. It can be applied to various course durations, group sizes and communities based on the local conditions and contexts. It is therefore suitable for replication in different universities, even to those with less capacity.

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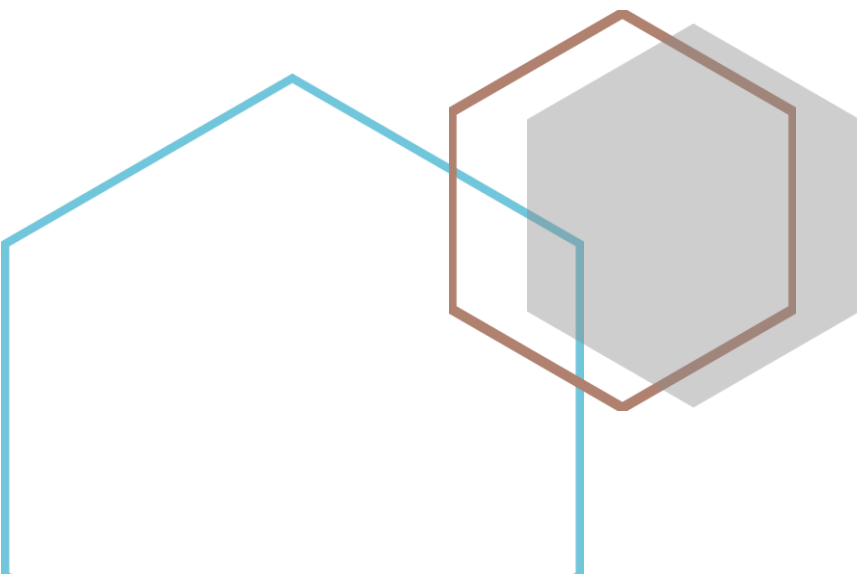
www.tiimiakatemia.fi, for all descriptions of the method





Internationalization at Home good practice

Build students' intercultural competences through extracurricular online learning and promote student engagement with internationalization through Student Multicultural Social Clubs affiliated to the University's International Relations office.



**CASE STUDY:
INTERCULTURAL
AWARENESS AND
CULTURAL DIVERSITY
MASSIVE OPEN ONLINE
COURSE**

ORIGIN AND LOCATION

The practice has been implemented by Varna University of Management, Bulgaria (<https://vum.bg/>).

OBJECTIVE

To promote increased internationalization at home within the university by building students’ intercultural competence and preparing them for learning mobility and international exposure.

BACKGROUND

VUM is a relatively young and small private university, specialized in undergraduate and master programmes in the fields of Business and Management, Tourism, Hospitality and Culinary Arts as well as Software Engineering. Since its inception, it has maintained a strong focus on internationalization. All study programmes are taught in English and students from over 50 countries worldwide are currently studying at VUM.

The University has benefitted substantially from EU programs supporting learning mobility and internationalization. It has been one of the largest beneficiaries of the Erasmus+ International Credit Mobility (ICM) program in Bulgaria.

In 2021, for a fourth year in a row, the University was labelled as top performer worldwide by U-Multirank in terms of student mobility.

Below is the data about student mobility, as provided by VUM’s International Office.

Academic year	Outgoing student mobilities: receiving countries	Incoming student mobilities: sending countries
2015-2016	EU	EU, UK, US + Armenia, Belarus, Georgia, India, Kazakhstan, Lebanon, Moldova, Russia, Vietnam
2016-2017	EU	EU + Albania, Argentina, Brazil, Egypt, Georgia, Jordan, Kazakhstan, Lebanon, Moldova, Montenegro, Mongolia, Mexico, Serbia, Russia, Tajikistan, Tunisia, Uzbekistan, Vietnam



2017-2018	EU	EU + Albania, Argentina, Brazil, Georgia, Kazakhstan, Moldova, Montenegro, Mexico, Russia, Vietnam
2018-2019	EU	EU + Albania, Lebanon, Vietnam
2019-2020	EU	EU + Albania, Iran, Philippines
2020-2021	EU	EU + Albania, Tajikistan, Philippines

Academic year	Outgoing student mobilities	Incoming student mobilities
2015-2016	44	71
2016-2017	72	105
2017-2018	80	140
2018-2019	95	111
2019-2020	110	96
2020-2021	130*	120*

* *Number of planned mobilities.*

VUM has considered internationalization to be a driver of institutional growth and a key element of improving the quality and relevance of education. Internal evaluation has concluded that internationalization increases students' and graduates' intercultural competence, improves the quality of teaching and learning, enhances international cooperation and the institution's own research capacities, diversifies revenue generation and gives valuable opportunities to benchmark institutional performance against international good practices. Apart from improving the university's position in global ranking, it has also increased the number of Bulgarian and international students and the number of double degree cooperation partnerships.

This case study presents the results of an Erasmus+ Capacity Building in Higher Education project led by VUM, which was specifically aimed at promoting internationalization at home. The Project in question is



DESCRIPTION OF THE APPROACH APPLIED IN THIS CASE STUDY

FRIENDS: Furthering International Relations Capacities and Intercultural Engagement to Nurture Campus Diversity and to Support Internationalization at Home. The project was successfully implemented in the period 2018 – 2022 with universities from Hungary, Poland and Turkey and 12 partner universities from Asia (Bhutan, Cambodia, Malaysia, Philippines and Thailand). The overall objective has been to strengthen the involved Asian universities' internationalization capabilities and to develop their students' global competence through the purposeful integration of intercultural dimensions into the universities' formal and informal curriculum.

The project has addressed the interconnected issues of extremely low student learning mobility rates across the Asian universities involved, lack of intercultural education to build students' global competences and insufficient institutional capacity to promote internationalization and campus diversity in the involved Asian universities.

The project sought to build students' intercultural competences and prepare them for international exposure. The impact and sustainability has been strengthened by creating student social hubs affiliated to the International Relations Offices but co-coordinated and run by students.

INNOVATIVE ELEMENTS

Three key results of the project are notable as highly replicable good practices:

1. Intercultural Awareness and Cultural Diversity Massive Open Online Course (<https://erasmusplusfriends.eu/wp-content/uploads/2020/04/IACD-MOOC-Syllabus.pdf>)

The course covers the following main topics:

- The concept of culture. Cultural theories
- Dimensions of culture - cultural distances between countries
- World Values Survey
- Ethnic and cultural diversity
- Linguistic barriers
- Understanding gender and gender roles in different cultural contexts
- European cultural identity and diversity
- European values
- Intercultural communication skills
- Business etiquette and protocol
- Effective strategies for working in multicultural business environments

The course is free for all students. Upon successful completion, they can receive a certificate - <https://erasmusplusfriends.eu/courses/iacd-mooc/>

2. Intercultural Passport (upon completion of the MOOC)

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The Intercultural Passport (IP) certificate has been created to build students' intercultural competence and confidence to get more international exposure, and to dare to live and work in multicultural environments.

IP is awarded to students who have successfully completed the Intercultural Awareness and Cultural Diversity MOOC and have submitted a digital story evidencing their intercultural or international experiential learning.

In the FRIENDS consortium, successful completion of IP corresponds to 4 ECTS to be recognized by the consortium's universities in line with their internal credit recognition procedures.

3. FRIENDS Teahouses

The FRIENDS Teahouses have been created in the 12 Asian universities involved in the project as student social hubs promoting multiculturalism and diversity. The newly established units are in charge of implementing the so-called Home Away From Home programme endorsed at the institutional level. The latter represents an integrated model for international student care and support and aims to help universities co-create and facilitate a student experience that is welcoming, friendly and supportive of international students. The FRIENDS Teahouses play proactive role in defining the university's extracurricular agenda and students' life outside the classroom. The FRIENDS Teahouses are affiliated to the International Relations Offices. However, they are co-coordinated and run by students. They also organize different multicultural festivals, informal gatherings and other cultural events.

RESULTS

The project has achieved significant impact. As of October 2021, over 12 000 students have successfully completed the Intercultural Awareness and Cultural Diversity MOOC. In addition, nearly 3000 students are currently engaged and progressing with their studies in the MOOC. More than 950 digital stories were crafted and more than 600 Intercultural Passport certificates were awarded. There has been around 80% student satisfaction with the course. 72% of the students stated that the experience of obtaining the Intercultural Passport made them feel more confident when communicating with people from other cultures.

TRANSFERABILITY AND APPLICABILITY ANALYSIS

FACTORS AND PRECONDITIONS FOR SUCCESS

There are several institutional, economic and social conditions/ factors that would be important for the successful implementation of the good practice at any university:

1) Contextual preconditions:

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STRENGTHS AND WEAKNESSES OF THE APPROACH

- The university values internationalization and is ready to make efforts to promote stronger international exposure of students
- There is willingness to allow student initiative and give students some responsibility in coordinating various activities supported by the International Relations Office of the university
- There is a degree of government support for internationalization (or at least no restrictions are being imposed) and there are options for student learning mobilities or other forms of international exposure of students.

2) Implementation-related factors that can lead to successful replication of the practice

- There is availability of experienced or motivated International Relations Office staff to coordinate and facilitate the students wishing to pursue an Intercultural Passport award
- Permission from the management to experiment with new forms of skills building in the field of international competence
- Motivation of students and a general positive attitude to non-tradition methods of learning.

Strengths

- The MOOC is free and available online without restrictions
- The approach does not require a lot of resources (apart from providing physical space and some modest support for a Student Multicultural Social Club)
- The approach prepares students for international exposure both during studies and after that (e.g. when they start working)
- The approach promotes greater student engagement.

Weaknesses

- To have a stronger impact, the approach needs to be supplemented by other university initiatives supporting internationalization
- For the approach to have stronger impact, the university must have ways to offer learning mobility abroad or other forms of international exposure
- The MOOC requires fairly good English language skills on the part of students.

CONSTRAINTS

The factors that may hinder the success of the practice are:

- Limited interest at the institution in promoting student

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SUSTAINABILITY

international exposure

- Lack of student culture of self-learning and extracurricular engagement
- The Covid crisis may make some elements of the approach less practical (e.g. the student clubs) but this should be regarded as only a temporary constraint. In addition, student club activities can be implemented online.

The main resources and initiatives needed to ensure sustainability of this practice are:

- A long-term university strategy for the promotion of internationalization at home
 - An operational International Relations Office
 - An experienced or at least motivated International Relations Office staff
 - Some financial resources to support a Student Multicultural Social Club and to finance cultural events promoting internationalization
 - A sustained dissemination strategy to inform students of the possibility to engage in self-learning in pursuit of intercultural competence.
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TRANSFERABILITY

This approach is highly transferable to any higher education learning environment and can be easily applied by any university. Since a MOOC already exists and is free of charge, implementation can be fast and would not require many resources.

In view of the current capacities and existing institutional strategies, the approach is a perfect fit for all 10 INNOTAL Universities.

If Intercultural Student Clubs already exist, the approach can be implemented fairly easy. If not, this would be a good opportunity to promote such a club.

In the context of the INNOTAL project, the activities of the Student Multicultural Social Club can be linked to the INNOTAL Talent Lab or Student Volunteering Center and there could be sharing of space and resources among the two structures.

REFERENCES

The practice has been developed on the basis of information provided by, and with the kind support and permission of, Christina Armutlieva, Director of International Cooperation at VUM, Bulgaria and Project Manager of the FRIENDS project.

The Intercultural Awareness and Cultural Diversity MOOC is open for

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free registration at <https://erasmusplusfriends.eu/courses/iacd-mooc/> .



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