IDEA Tools and good practices:

Gaming industry campus Pismo Novska

Croatia

Provided by

University of Dubrovnik, Department of Economics and Business, Center for research on digital transformation

The Institute of Economics, Zagreb

Category: DE Hub

Provider: Development Agency of Sisak – Moslavina County, Sisak – Moslavina County, Zagreb Innovation Center - Zicer

Established in: 2017

Target group(s):

- Young entrepreneurs
- Gaming industry
- Students

Main goals/focus:

- Development of ecosystem of Croatian gaming industry and one-stop-shop for all those in need of support for development of business ventures or acquisition of skills required for doing business in gaming industry.

IDEA Tools and good practices: Gaming industry campus Pismo

Brief description:

Gaming industry campus Novska is ongoing project with roots in already established gaming industry incubator – Pismo in the same location. This is the first digital innovation hub in this Croatian county and only one dealing with gaming industry. The initiative draws its support from DIHELP Enhanced – Learning Programme of mentoring and coaching for Digital Innovation hubs. DIHELP programme is implemented by a consortium that includes the following partners: CARSA (Lead partner), Ecorys, IMProve and Eurada. Gaming industry campus is logical next step in development of this initiative. In December 2019, regional and local authorities announced their intention of extending incubator with services such as student dormitory, accelerator, e-sports incubator and faculty for education of future gaming industry entrepreneurs that would enroll 50 students each year as well as high school programme with 24 pupils annually.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

Pismo provides three types of activities essential for digital entrepreneurs. Their educational activities are aimed at learning about technologies for making of video games, programming, creation of graphical elements and sound. In this way, individuals and companies have access to skills relevant for withstanding challenges of a digital era. Users of their services also have an opportunity of starting their business within incubator and benefiting from its offer of working space and access to advanced equipment such as VR technology, a music studio, filming equipment, a conference hall, motion capture, additive manufacturing, multimedia space etc. Users have access to counselling and mentoring services of experts from gaming industry and support in marketing activities who accompany clients in their first steps in digital world and lead them later throughout the process. Moreover, regularly held workshops provide opportunities for networking with existing entities from gaming industry. Finally, clients have support in access to local, regional, national and EU funding of their entrepreneurial ventures.

Activities of Pismo envisage development of gaming industry center. For this reason, five stages have already been undertaken. First stage foresees compulsory learning of English language for all children in county's kindergartens. Second stage consists of workshops for elementary and high school pupils about tools used in development of video games. Third stage is establishment of entrepreneurship incubator. Fourth stage involves implementation of high school qualification "technician for development of video games". Finally, in fifth stage financial support should be provided for start-ups arising from existing educations.

At the moment two types of educations are offered to clients. BLENDER is professional open source tool for computer graphics and 3D Unity open-source game engine. Activities are underway on development of higher education curriculum (3+2 years) that will take place in Gaming industry campus Novska with support of Croatian, European HEIs and HEIs from USA, Japan and Malaysia. In addition, project foresees establishment of e-Sports incubator and 4000 seats e-Sports arena as well as various other facilities for students.

Future HEI should enroll 50 students each year divided in groups focused on graphics and programming. Project idea was approved and it is expected that next steps in this initiative should take place in 2021 with support of European fund for regional development.

Funding source:

- European Regional Development Fund project “Creating a stimulating entrepreneurial environment in the Sisak-Moslavina County by establishing the PISMO Novska business incubator”.
- Croatian employment service provides minimum wage to all those taking part in six-months education within Pismo
- Local and regional authorities

Outputs and outcomes:

- 33 startups within first three years
- 100 participants in taking part in gaming entrepreneurship education
- Digital Innovation Hub of gaming industry
- Plans for development of Croatian gaming industry center
- Development of gaming industry ecosystem within region

Key success factors in implementing this initiative:

- Vision of creators
- Support of local, regional, national and EU entities
- Support of business community

Key failure factors in implementing this initiative:

- Risk of obtaining funds for further development
- Human capital remaining below threshold levels

List of references

- Vidilab on Pismo incubator (In Croatian)
- Pismo incubator website

Interesting links and further reading

- Techcrunch on gaming industry trends

IDEA Tools and good practices:

PhotoMath

Croatia

Provided by

University of Dubrovnik, Department of Economics and Business, Center for research on digital transformation

The Institute of Economics, Zagreb

Category: Digital internships

Provider: PhotoMath

Established in: 2014

Target group(s):

- Students
- Elementary and high school pupils

Main goals/focus:

Development of student digital entrepreneurship skills through working in organization responsible for creation and distribution of most downloaded Croatian digital application.

IDEA Tools and good practices: Photomath

Brief description:

PhotoMath is company behind world renowned PhotoMath application, downloaded to this day by more than 100 milliion users. The application provides in real time functionalities of scanning, solving and intuitively explaining mathematical procedures with help of mobile phone camera. Users are able to learn mathematics through concrete examples. Its development involves experts from fields of machine learning, C++ engineers, iOS and Android engineers, math teachers, UI and UX designers, QA experts, marketing experts and others. Application is available in 31 language and it is capable of reading handwriting. Since 2019, application has been integrated within social network Snapchat, one of leading social networks for population between 13 and 24 years. More than 1.2 billion mathematical problems are solved through application monthly and its users have spent about 2.000 years together using it. Company was awarded 4YFN award in mobile technologies category in world largest start-up competition in Barcelona in 2014. They won Netexplo Forum Award for the development of educational technologies in 2015 and Zlatna kuna award for best post start-up in 2018. in Croatia.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

PhotoMath team continuously works on developing new app functionalities and bringing it to a new, higher level. This makes it attractive for students interested in work in challenging projects within world-leading mobile application. The company pays great deal of attention to brainstorming and team work in problem solving as well as research and experimentation with potential solutions. Students are given opportunities in all areas of app development. From their entry into organization, students are assigned to ongoing projects and have an opportunity to experience results of their work. Their activities are organized in small teams under mentorship of experienced employees. Student-mentor activities involve in addition to knowledge transfer discussions about progress and further plans of former. The company provides also apprenticeship opportunities and part time jobs for students.

Funding source:

Goodwater Capital, Learn Capital, Cherubic Ventures

Outputs and outcomes:

- Building of digital entrepreneurship skills
- Building of skills for work in multi-disciplinary competitive teams
- Creativity development among students

Key success factors in implementing this initiative:

- Flexibility towards student faculty obligations
- Focus on job responsibility and openness to learning among students instead of prior experience
- Transfer of frontier knowledge about diverse set of skills required for digital entrepreneurship to students

Key failure factors in implementing this initiative:

- Risk of students not being able to dedicate themselves
- Risk of conflict emergence in working teams

IDEA Tools and good practices: Photomath

List of references

- Cnet on photomath
- PhotoMath company profile (in Croatian)
- Interview with mr. Damir Sabol (creator of PhotoMath) (in Croatian)

Interesting links and further reading

- Techcrunch
- Mashable

IDEA Tools and good practices:

H-FARM

Italy

Provided by

IDP European Consultant

Category: DE Hub

Provider: H-FARM

Established in: 2005 – on going

Target group(s):

- Youth
- University students
- SMEs and Enterprises

Main goals/focus:

Leading the digital transformation of companies and produce culture through new educational and business models.

IDEA Tools and good practices: H for HUMAN

Brief description:

H-FARM is an innovation hub dedicated to the creation of new business models and the education of young people and companies in a digital perspective. Established in 2005, H-FARM has been the first innovation center to gather finance, business consultancy and digitally enhanced training programs all in one place.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

(Re)skill-you Programme:

- Digital management
- Dynamic branding
- Digital Entrepreneurship
- Business Communication
- Business strategy
- Digital Marketing and Experience Design
- Information technology and Law
- Storytelling and Executive Communication
- 3D design and concept art
- Project Management
- Blockchain
- SEO & SEM
- e-Business
- Social media customer care and social media marketing
- e-Commerce
- Sport digital revolution
- Product digitalisation
- Online value creation
- Digital management and strategy
- AI
- Creativity and leadership
- Business planning
- Social Media and live events
- Fundraising and Finance for innovation

H for HUMAN Foundation:

H for Human is the foundation of H-FARM, born under the mission to build and spread digital culture among the new generations

The H for Human Foundation wants to facilitate access to H-FARM Education's innovative, high quality and digitally oriented training courses, providing scholarships to talented students based on merit and income requirements.

The scholarship program may concern an international school training cycle, a three-year degree course or master's courses.

H-FARM Plus

Webinars, courses with self-assessment tools, interviews, open days, streaming events, online lessons represent the resources of H-FARM Plus – H-FARM's educational platform. Training and entertainment are the two key concepts around which the project revolves: new digital skills empowerment combined with the gamification process of the training.

Funding source:

Private sponsorship from partners such as AUDI and MIT

Outputs and outcomes:

To date, H-FARM is the largest innovation center in Europe and provides for 42 education programs tailored on digital culture and ICT literacy.

Of those, 38 are specifically dedicated to 18-28 y/o demographic

For 2020 and 2021, the training staff has already scheduled the following courses:

- Digital Marketing & Experience (09/2020)
- Digital Strategies & Business Plans (09/2020)
- Project Management & Agile Methodology
  I edition: (10/2020)
  II edition: (02/ 2021)
- Social Media & Live Events (10/2020)
- Storytelling & Executive Communication (11/2020)
- Blockchain for Managers (10/2020)
- Artificial Intelligence (12/2020)
- Creativity and Leadership (01/2021)
- Fundraising & Finance for Innovation (02/2021)
- "Make-a-startup" and final workshop (02/2021)

Key success/failure factors in implementing this initiative:

To date, H-FARM is a worldwide "magnet" of talents in the field of digital entrepreneurship and ICT solutions applied to business management. Such reputation has consolidated over time thanks to a continuous update of its offer highly diversified for each market, business and employability trend. The wide diversification of its training portfolio and in-depth engagement of a very extended number of relevant stakeholders contribute to make of H-FARM a real knowledge ecosystem in which training and learners are exposed to experienced-based scenario and authentic learning on-field environments.

List of references

- https://www.h-farm.com/it

Interesting links and further reading

- https://www.h-farm.com/it/education
- https://www.h-farm.com/it/news/h-farm-plus
- https://www.h-farm.com/it/chi-siamo/fondazione-h-for-human

IDEA Tools and good practices:

MADE Competence Centre I4.0

Italy

Provided by

IDP European Consultants

Category: Training and support

Provider: Polytechnic of Milan (w/ 3 other Universities, 39 private firms and MISE)

Established in: 2019

Target group(s):

- Innovative Start-ups
- SMEs
- Young graduates in Management, Science and Engineering (but not exclusively)

Main goals/focus:

MADE, a center of technical and managerial skills, supports established companies as well as aspiring entrepreneurs on their digital transformation path towards Industry 4.0.

It provides a wide panorama of knowledge, methods and tools on digital technologies that span the entire life cycle of the product: from design to engineering, from production management to product delivery embracing the whole product life cycle.

IDEA Tools and good practices: MADE Competence Centre I4.0

Brief description:

MADE stand as a technical interlocutor in support of whoever passionate and professionally inspired by innovation management, technology transfer, applied research and 4.0 technologies.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

The special growth path towards digital transformation is based on:

- informing and showing Industry 4.0 technologies
- explaining them through ad-hoc training activities
- transfer and implement technological solutions at any level of the value chain

Funding source:

11M from MISE (Ministry of Economic Development) and 11M from other private funding

Outputs and outcomes:

To date, MADE counts 14 fields of expertise distributed among 3 main cluster of services:

1. **Orientation** – Mainstreaming and disseminating the opportunities of the digital revolution:
   - Introduction to I4.0 Technologies
   - Corporate tours
   - Workshops
   - Demo, toolbox and use cases
2. **Training** – Mastering the digital opportunities:
   - Teaching factory
   - Train-the-trainers
3. **Projects** – Joining the digital revolution:
   - "Strategies 4.0"
   - Innovation projects
   - Test, Demo and Validation
   - Technological scouting
   - Technological consultancy

Key success/failure factors in implementing this initiative:

The excellence of the facility lies in its 14 "technological Islands" – one of a kind counselling point highly specialized on avant-garde IT solutions for business and entrepreneurship. Their establishment and development allowed MADE to diversify its offer from all the other competence center.

Each Island is further trained to match and respond on unique and sophisticated digital challenges:

- Building a "Digital Backbone" (i.e. transferring the architecture of the enterprise in a system of digital assets)

- Virtual design and 3D modelling
- Smart Energy Consumption Monitoring
- Remote control and evaluation of industrial processes
- Remote quality assurance
- Smart systems for operators and technical staffs' assistance
- Machinery Maintenance 4.0
- Smart Additive Manufacturing
- Lean 4.0
- Collaborative robotics and human-machine interaction
- Industrial Cyber Security
- Big Data Analytics
- Internal logistics and real-time product tracking

List of references

- https://www.made-cc.eu/

Interesting links and further reading

- https://www.agendadigitale.eu/industry-4-0/competence-center-made-di-milano-taisch-cosi-evolve-lindustria-4-0-in-italia/
- https://www.som.polimi.it/nasce-made-il-competence-center-per-lindustria-4-0-a-guida-politecnico-di-milano/

IDEA Tools and good practices:

Master in “Manufacturing 4.0”

Italy

Provided by

IDP European Consultants

Category: DE Education (HE context)

Provider: Polytechnic of Turin

Established in: 2018

Target group(s):

- Undergraduates and fresh graduates in engineering

Main goals/focus: The aim of the Master, held entirely in English, is to train young and motivated graduates in Engineering, in order to prepare a new generation of high-level specialists in the field of industrial production systems of the future.

Brief description:

Project Manager, Technical Leader, System Technologist and Technical Coordinator in Industry 4.0 represent all near-future specialized professions, for which companies require figures who must be

trained with advanced skills and able to operate in an increasingly international environment to deal with the introduction of enabling technologies in new manufacturing processes, integrating technical and managerial skills essential for the manufacturing of the future.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

- The use of data for the centralization of information and its conservation, the computing power and connectivity, big data and open data, the Internet of Things, machine-to-machine and cloud computing;
- The use of analytics to transform the collected data into value;
- The development of the interaction between man and machine, which involves increasingly popular touch interfaces, and augmented reality;
- The transition from digital to "real" which includes additive manufacturing, collaborative robotics, communications, machine-to-machine interactions and new technologies to store and use energy in a targeted way, rationalizing costs and optimizing performance.

Funding source:

Piemonte Region "Apprendistato di Alta Formazione e di Ricerca 2016 – 2018"

Outputs and outcomes:

Expected Outcome: great automation and interconnection of the industrial manufacturing sector through the development of new digital technologies

Key success/failure factors in implementing this initiative:

Since the inception of the Italian Digital Agenda, the Polytechnic of Turin has always been at the lead of the new national priorities from the HE perspective. The University proactively encouraged the digitalization of the overall HE system and the emergence of a new disciplinary focus on digital and ICT studies applied to business management. Such cultural vanguard allowed the Polytechnic of Turin to strategically position in a relatively unexplored market and to be affirm as one of the very first academic counterpart of the entrepreneurial environment in the field of digital and ICT exploitation for business performance.

List of references

- http://www.politocomunica.polito.it/press_room/comunicati/2018/manufacturing_4_0_il_nuovo_master_in_apprendistato_per_i_professionisti_dei_sistemi_di_produzione_industriale_del_futuro

IDEA Tools and good practices:

Digital360HUB – University2Business

Italy

Provided by

IDP European Consultants

Category: Digital internships

Provider: Digital360HUB

Established in: Milan

Target group(s):

- University Students

Main goals/focus:

It is a “Crowdsourcing” experience on university students. Through the University2Business platform it is possible to start Crowdsourcing activities based on university students. Because of their training and their extraneousness to current business schemes, students can represent a powerful source of “lateral thinking” and innovation “out of the box”.

Brief description:

The benefits that can be obtained from Crowdsourcing activities based on university students are:

- "out of the choir" innovative ideas
- In-depth analysis of students' needs and desires
- Talent scouting and early hiring, selecting the students who generated the best ideas or stood out in the contests
- Employer branding towards communities of students particularly proactive and attentive to innovation.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

- Helping students to better understand the changes taking place in the labour market, and to develop the most consistent skills / background
- Helping students to get in touch with companies, also by carrying out concrete activities on behalf of the companies themselves, thus enriching their training path
- Helping companies access university students' qualified skills and creativity in a fast, innovative and minimally invasive way
- Carrying out research and surveys for students, aimed at detecting specific attitudes and skills, but also at conveying cultural messages

Funding source:

No reference found

Outputs and outcomes:

The expected outcomes are essentially two:

1. Promote significant role models for youth aspiring entrepreneurs
2. Encouraging and inspiring digital entrepreneurship education as a social science that takes theoretical and operative contributions from the collaborative relation between HEIs, practitioners, VET ecosystems and students.

Key success/failure factors in implementing this initiative:

Out of all the case studies extrapolated from the Italian scenario, University2Business is particularly significant considering the strong and very in-dept student-centred framework in which in develops. The mainstreaming of such teaching and training paradigms sustain and valorise the exploitation of great cultural discussion, knowledge and expertise exchange and the emergence of new collaborative frameworks between the HE ecosystem, Private and public sectors – a mutual recognition that greatly enriches all parties involved:

- The students have the opportunity to experience in first-person real-business scenarios that stimulate and challenge their creative and critical thinking
- Private firms have the opportunity to have a unique insight on the talents-of-tomorrow population
- HEIs have the opportunity to compare their educational offer to the actual market needs

List of references

- https://www.university2business.it/
- https://www.university2business.it/chi-siamo

IDEA Tools and good practices:

Asseco Innovation Hub

Poland

Provided by

University of Information Technology and Management in Rzeszow, Poland

Category: DE Hub

Provider: Asseco Poland

Established in: January 2019

Target group(s):

- Young people wanting to become entrepreneurs,
- Students.

Main goals/focus:

The company focuses on reaching projects based on innovative IT solutions. Special attention is given to the projects that are at an early stage of development. Asseco provides all the necessary support in

their implementation and creation of readymade products or services that will be next included in the company's offer.

Brief description:

Asseco Innovation Hub provides participants of the projects with financial support, tools, workspace, support of experts in the field, and the possibility to create relationship with potential customers. The company divided its support into stages. First one – Pre-seed stage is focuses on incubation process which lasts up to three months and during that time the utility of the project is being tested by building Minimum Viable Product. Second one – Seed stage accelerates the project by cooperation between initiators and implementation team form the company's side. When the start-up is created it lasts about six months to release a new ready-to-sell product.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

The company provides back-end in form of the company's facilities created by professionals so that there is no need to worry about legal, accounting, logistics, marketing and promotion aspects. Asseco Innovation Hub also provides front-end in form of giving a chance to build one's brand and credibility as an Asseco partner. One gets references from institutions tested and recognized on the market.

Funding source:

Financial assets of Asseco Poland.

Outputs and outcomes:

Two projects are currently being realised:

- "Scan and pay"
- "Voice banking"

Both of them started in 2019.

Key success factors in implementing this initiative:

- Asseco as the biggest IT company on the Polish market and leader in innovative projects connected to the IT sector. Due to its recognition it is not hard to find potential customers.
- This company has a huge variety of customers in different economy sectors.
- Advanced form of the project is not required in order to start.
- The company constantly looks for new projects, so it is not hard to start due to the lack of deadlines for submitting projects.
- Supply created by the company is currently bigger than demand.

Key failure factors in implementing this initiative:

- The information about this initiative is not wildly spread.
- Company's innovation hubs are not located in all major cities in Poland which might cause difficulties for some students to submit their project.

List of references

- [1] https://innovationhub.asseco.com/
- [1] https://innovationhub.asseco.com/projekt/skanuj-i-plac/
- [1] https://innovationhub.asseco.com/projekt/voice-banking/

Interesting links and further reading

- https://pl.asseco.com/aktualnosci/rusza-budowa-asseco-innovation-hub-w-rzeszowie-2638/

IDEA Tools and good practices:

E-BIZNES

Poland

Provided by

University of Information Technology and Management in Rzeszow, Poland

Category: DE Education (HE context)

Provider: Warsaw School of Economics (SGH)

Established in: 23.04.2014

Target group(s):

- Students; people starting higher education studies.
- Young entrepreneurs wanting to get higher education.

Main goals/focus:

To provide the latest knowledge on the functioning of companies in the digital economy and develop the skills necessary to conduct business on the Internet.

IDEA Tools and good practices: E-BIZNES

Brief description:

These are masters studies which are cross-sectional - they include e-business issues taught in practical terms and the necessary theoretical foundation. The study program is designed to allow a view on competing companies using the Internet from different perspectives: marketing, management and information technologies. This is reflected in the specialties of the direction. The idea was born from the desire to offer an original, new field of study on competing companies using ICT (ITC), in particular the Internet.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

Program of studies as well as activities offered during the studies aiming to encourage students to take part in competitions and conferences.

Funding source:

State budget funds.

Outputs and outcomes:

- A graduate of second-degree studies in e-business at Warsaw School of Economics (SGH) in particular:
    - knows the economic, social, technological and legal conditions of e-business,
    - knows the basic patterns of consumer behavior on the Internet and in information and communication systems,
    - understands the impact of information and communication technologies on the functioning of the organization and its stakeholders, as well as on society as a whole,
    - can critically analyze, interpret and evaluate phenomena in the field of functioning of companies in the digital economy,
    - knows how to formulate project problems as well as plan and control the implementation of projects and programs as well as manage the project portfolio,
    - is able to design a venture in the digital economy, in particular in the field of business model and strategies focused on developing relationships with clients and other stakeholders,
    - demonstrates the ability to work in teams, lead teams (including task teams) and organize own work,
    - demonstrates the ability to communicate effectively, negotiate and work in a team, also using information and communication technologies,
    - shows entrepreneurial attitudes in solving problems and searching for and implementing innovations.
- Number of students involved in this field of studies is around 1000.

IDEA Tools and good practices:

Digital Workshop – Hub in Your University

Romania

Provided by

Malgrande Solutions

Category: DE Training (HE context)

Provider: Junior Achievement Romania in Partnership with Google

Established in: 2016

Target group(s):

- students
- aspiring entrepreneurs, people taking the first steps in the field of entrepreneurship and online marketing willing to develop their digital skills and start their career with an internationally recognized certification from Google.
-

Main goals/focus:

The ‘’Digital Workshop“ project’s main objective is to young peoples’ entrepreneurial, digital and marketing competences.

IDEA Tools and good practices: Digital Workshop – Hub in Your University

Brief description:

Through the project, 14 universities benefit from fully equipped digital workshops/hubs in different regions of the country (Arad, Craiova, Oradea, Galati, Sibiu, Constanta, Timisoara, Bucuresti – 3 locations, Brasov, Targoviste, Iasi, Cluj Napoca).

Training courses for students are also available, with 23 modules, covering aspects such as:

Data and Technology:

- Programming basics
- Understanding Automated Learning
- Improving company's online security

Digital Marketing

-Digital Marketing Basics (certification included)

- Launching and online business

-Online Visibility

-Promoting a company using online ads

-Extending your business internationally

-Communicating with clients via mobile devices

-Promoting your company using content

-Understanding your clients' needs and their online behavior

Career Development

- Increasing confidence through self-promotion
- Increasing workplace productivity
- Digital Well-being
- Effective Networking
- Business Communication
- Communicating Your Ideas Through Stories and Design
- Public Speaking

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

The training program combines entrepreneurship notions with programming and other digital skills, provides students access to resources and involves trainers and mentors from the business community

Funding source:

JA Romania in Partnership with Google

Outputs and outcomes:

14 fully equipped digital workshops/hubs in 14 Romanian Universities

3 students benefited from a training experience in New-York

Key success factors in implementing this initiative:

- Integrated approach of entrepreneurship, programming and other digital skills is innovative and necessary; the project has been carried out in partnership with important stakeholders.
- Project objectives (in terms of digital workshops set up) have been reached.

Key failure factors in implementing this initiative:

- Although not necessarily related to the quality of the project itself, one limitation is represented by the lack of concrete and centralized information about the project results with clear indicators (such as number of students trained, number of hours). A comprehensive report, factsheet or dedicated website would be extremely useful for the public to better understand the project and its impacts as a whole. Also, information about the beneficiary students' progress after the project lifetime and sustainability measures would be welcomed. At the current moment it is difficult for the public to appreciate the real impact as information is spread over various sources, such as press releases and articles, Universities' websites, etc.

List of references

https://www.jaromania.org/noutati/ja-hub-antreprenoriat-si-tehnologie-digitala-in-universitatea-ta

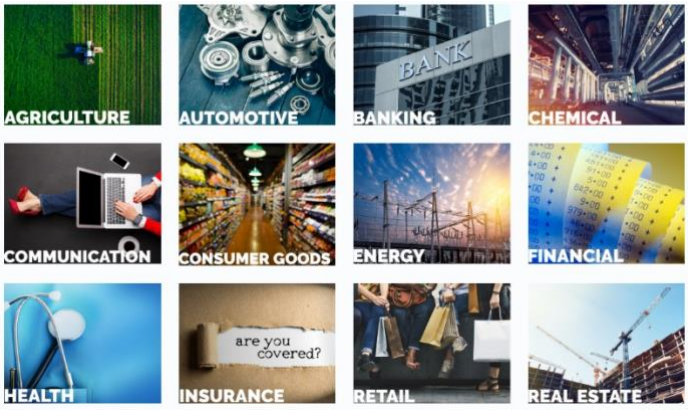
http://atelieruldigital.jaromania.org/

Interesting links and further reading

Information about the project (Romanian Only)

https://www.jaromania.org/noutati/ja-hub-antreprenoriat-si-tehnologie-digitala-in-universitatea-ta

inspiring digital entrepreneurship and awareness in HE



IDEA Tools and good practices:

RoDigital

Romania

Provided by

Malgrande Solutions

Category: Training and support

Provider: Digital Nation

Established in: 2019

Target group(s):

- Any Romanian non-tech registered company

Main goals/focus:

Supporting non-tech business owners to fully digitalize their company over 12 months

IDEA Tools and good practices: RoDigital

Brief description:

RoDigital is a 12 months program aiming to support non-tech companies through all stages of digitalization process. Offered by Digital Nation (a training association established in 2013), in a hybrid format (online and offline), under the supervision of a digitalization specialist.

The program has 5 stages of different lengths as follows:

Stage 1 (2 weeks):

-the company designates a digitalization responsible (preferably a person with a good understanding of the business and access to the company's processes). The digitalization responsible will allocate 4-5 hours/week for the process, during the whole program;

Stage 2 – Discovery (2-4 weeks):

-current processes, technologies, software within the company are analyzed by the responsible together with training providers' specialists; previous digitalization attempts and customer profiles are also taken into consideration.

Stage 3 – Strategy (1-2 weeks):

-defining objectives, tactics and a timeline for the digitalization stages focusing on profits increase, cost and risk reduction;

Stage 4 – Implementation of a first digitalization project (examples: introducing an automated billing system, self-service HR, automated banking, social media campaign, marketing automation, customer engagement mobile app, virtual office, big data system, AI algorithms implementation, blockchain technology);

Stage 5 – Implementation (20-20 weeks):

Depending on the businesses' scope and profile, the company implements, under guidance, all the steps they committed to through the strategy developed in stage 3.

The program is open to any sort of non-tech company, such as agriculture, automotive, banking, chemical, communication, consumer goods, energy, financials, insurance, health, retail, real estate, travel and utilities;

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

This program provides not only a theoretical approach, but also a real-time experience for business digitalization. It involves practical activities customized for every type of company and its specific processes.

Funding source:

This program self-financed (not free for beneficiaries). The costs are covered by a monthly fee of 350€ (VAT excluded)/ participant paid by the beneficiary company.

Outputs and outcomes:

-although no information is yet available as the program is still ongoing, according to the providers' site the maximum number of participants has been reached and enrollments are closed for the moment.

Key success factors in implementing this initiative:

- No session of the program has yet been finalized, therefore no measurable data concerning the concrete results is available. However, it is one of the few affordable (as it gives companies the possibility to work with already existing staff rather than externalizing or hiring a specialist, the last option requiring higher investments, with reduced effectiveness as a person from outside might not have the same understanding of the business) and practical digitalization programs .
- Digitalization, if properly implemented, has the potential to significantly decrease business operating costs, improve customer and staff experience and support the company grow beyond local.
- The program does not require previous IT background or advanced knowledge – opening the opportunity of a larger range of companies to benefit;

Key failure factors in implementing this initiative:

One disputable factor would be relate to the fact that it involves a monthly fee – which can make the program inaccessible to companies with very limited resources; however, at the same time, this fact can increase commitments level, leading to a more effecting implementation.

List of references

https://digitalnation.ro/digitalizare/

Interesting links and further reading

https://digitalnation.ro/digitalizare/

IDEA Tools and good practices:

Butterfly Effect

Slovakia

Provided by

Faculty of Management, Comenius University in Bratislava, Slovakia

Category: Training and support, DE Training (HE context)

Provider: HubHub, Leaf, Pixel Federation, Sygic

Established in: January 2018

Target group(s):

- Current university students, high school graduates, university graduates
- Freelancers
- Start-up entrepreneurs
- Mid-career changers

Main goals/focus:

The main goal of this initiative is to build a platform where successful companies share know-how with young and talented people and prepare them for the digital business era. As a result, they bring innovative ideas to the economy and help build future businesses.

IDEA Tools and good practices: Butterfly Effect

Brief description:

Butterfly Effect is a platform focusing on practical education for digital business. Within it, students and aspiring professionals from areas such as IT, graphic design and business can participate in a 5-month training program.

How does Butterfly Effect work?

There are two programs: Apps Labe and Games Labe. Two teams are created twice a year. Participants are usually young professionals, freelancers, and students. They are exposed to a real assignment, supported by mentors from successful Slovak startups and IT companies during 5 months' time period. Participants deepen their skills in their area, broaden their understanding of the entire digital product creation process, and focus on their personal development. Their common goal is to create a prototype application or a game.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

Cooperation with universities:

Academy of Fine Arts and Design (Bratislava), Faculty of Informatics and Information Technology (Bratislava), Faculty of Electrical Engineering and Informatics (Bratislava), Academy of Performing Arts (Bratislava), University of Economics and Faculty of Mathematics (Bratislava), Physics and Informatics of Comenius University (Bratislava), Faculty of Mass Media Communication (Trnava), Faculty of Electrical Engineering and Computer Science (Kosice).

In the program, the participant perceives the entire process of creating digital products and services through IT, design, business and gain complex skills and contextual thinking. They will work in a small agile team with other designers, programmers, and business people. Butterfly Effect is a great opportunity for developing, retraining or gaining experience in a new job role.

Examples 1

WHAT: Machine learning from search data

- Analysis of traffic information based on user movement and predictive algorithms of traffic.

Examples 2

WHAT: Create 1-dimensional endless side scroller game

PLATFORM: Mobile devices

Funding source:

Peter Čerešník (HubHub), Branislav Kleskeň (Leaf), Lucia Šicková & Šimon Šicko (Pixel Federation) and Michal Štencl (Sygic).

Outputs and outcomes:

Create a successful mobile app

In AppsLabe, participants go through the entire iOS, Android, or hybrid app development process from idea to app store release within 5 months. Participants work in a small team with other graphic designers, programmers, and business people. Butterfly Effect is an option for retraining, checking online courses in practice or active sabbatical.

IDEA Tools and good practices: Butterfly Effect

AppsLabe start: 2.9. 2020

Create your own game

In the Game Labe, participants go through the entire game development process from idea to release to the store within 5 months. Participants create a full team with other graphic designers, programmers and game designers under the guidance of mentors. They learn how to create not only fun, but also a successful business game.

Games Labe start: 2.9. 2020

Currently, the 5th round of the Butterfly effect project started with 33 participants in Bratislava. The project will continue not only in Bratislava but also in Kosice.

Key success factors in implementing this initiative:

- Over 75% of graduates have found their way into the best gaming studios, global companies, and successful startups during or shortly after the program.
- In 2019, unique digital products were created, two of which were released in Google Play and App Store, 3 mobile apps + 1 game

The successful projects were:

CityBuzZ

The CityBuzZ application was created to inform the inhabitants of Bratislava while traveling in public transport.

Poto.to

Poto.to application allows giving feedback to colleagues across the company with just a few clicks.

TeamRide

TeamRide application facilitates and simplifies shared transport to work between colleagues from the same company.

Tile Towers

Tile Towers is a mobile hyper-casual game (relaxing) that has easy control and a nice visual inspired by Monument Valley.

Key failure factors in implementing this initiative:

The number of participants:

In January 2018 - 40 students,

In February 2019 - 26 participants,

Drop in the number of participants may be caused:

-insufficient marketing (insufficient promotion)

-lack of interest from students

In the future:

The current situation with coronavirus may cause a reduction of participants.

List of references

https://butterflyeffect.sk/o-nas/

https://butterflyeffect.sk/absolventi/

https://butterflyeffect.sk/games-lab/

https://butterflyeffect.sk/apps-lab/

https://www.facebook.com/butterflyeffectSlovensko/?tn-str=k*F

https://www.slideshare.net/Baska_Klimek/butterfly-effect-intro-presentation-75720001?fbclid=IwAR0AVNh96pJ8tgieEdijZW0Hm5WfPS9cYYIcAAF4Kga1C4oG3GMne7Caekw

https://www.startitup.sk/aplikacia-ti-ukaze-kde-je-tvoja-mhd-cka-vznikla-v-ramci-projektu-butterfly-effect/

https://uim.fei.stuba.sk/nasi-studenti-v-programe-butterfly-effect/

https://epale.ec.europa.eu/sk/organisations/butterfly-effect

Interesting links and further reading

https://www.startitup.sk/slovenske-univerzity-sa-pripajaju-k-vzdelavaciemu-programu-butterfly-effect/

https://www.startitup.sk/na-slovensku-vznika-nova-platforma-praktickeho-vzdelavania-pre-digitalny-biznis/

IDEA Tools and good practices:

Digital Garage

Slovakia

Provided by

Faculty of Management, Comenius University in Bratislava, Slovakia

Category: Training and support

Provider: Slovak Google

Established in: June 2016

Target group(s):

- Students,
- Freelancers
- Young people, who want to start a successful business in the digital world

Main goals/focus:

The main goal is to support the development of digital skills in Slovakia.

Brief description:

IDEA Tools and good practices: Digital Garage

"Digital Garage" is Google's new online education platform, especially for future business entrepreneurs - students who want to improve their digital skills.

A successful graduate of the course will receive an IAB certificate from Google, which is an acknowledgment of advanced online marketing skills and can help students in particular to find a job. Digital Garage provides 23 lessons that cover a wide range of topics, from the basics of creating websites or marketing e-mails to tips on how to use search engines, social networks, mobile applications, introduction to analysis to e-commerce, and the basics of how to successfully markets in several countries.

How does Digital Garage works?

1. ***Registration at www.digitalnagaraz.sk***
2. ***Complete the initial questionnaire (to identify needs)***
3. ***Choose from the lessons and create your own education plan***
4. ***Complete online training (educational videos and quizzes) - collect "badges"***
5. ***Successful completion of the course = obtaining an internationally accredited certificate***

Each of the lessons starts with a video that explains the topic clearly and practically and ends with a short test.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

Cooperation with universities:

University of Economics (Bratislava), Pan-European University (Bratislava), J.Seley University (Komárno), University of Sts. Cyril and Methodius (Trnava), University of Trnava (Trnava), Technical University (Košice), University of Prešov (Prešov)

Digital skills also for teachers

The platform was also included in the educational program for teachers accredited by the Ministry of Education, Science, Research, and Sport of the Slovak Republic and guaranteed by doc. Ing. Štefan Žák, PhD., Dean of Faculty of business in University of Economics, Bratislava. An accredited educational program for teachers called Digital Garage - Introduction to Online Marketing is designed for all teachers who are interested in broadening their knowledge and acquiring new knowledge and skills in the digital world and online marketing.

Examples:

Technical high school (Michalovce)

Students have signed up for a free online education platform from Google, an American company. Students take selected lessons in the subject. After each lesson they complete quizzes. After all lessons, they have a final test. By completing a Digital Garage, students receive a certificate pointing to their digital skills.

University of Prešov (Prešov)

There is an ambassador of the Digital Garage doctoral student Mgr. Jakub Horváth from the Department of Marketing and International Trade, who is directly trained by Google. His role is to

spread awareness of the Digital Garage through posters, lectures, workshops and various other activities.

There are many high schools, which promote digital garage on their webpage. For example, Grammar school, Grösslingová (Bratislava), Business college Nevädzová (Bratislava) and many others.

Comenius University and Pan-European University incorporate the Digital Garage into the marketing syllabus from the winter semester.

Funding source:

- Slovak Google

Partners:

- Main partners*:* Sapie, JA Slovensko
- Universities
- State organs
- Companies such as Profesia, Price mania academy, AJ TY V IT
- Nonprofit organizations

Outputs and outcomes:

Online courses are divided into three categories:

1. Data and technology

2. Digital marketing

3. Career development

As a result, you can get to know a variety of tools that are regularly used in digital marketing, such as Google Analytics, Keyword Planner, or Search Console, and get tips on several useful solutions you can use for your ideas - e.g. Shopify or Squarespace to start your online store.

At the end of the course, participants will receive a certificate that is either free or paid. Most courses are free of charge, but some educational partners may charge a fee for the course.

Within the Digital Garage, users will gain more advanced knowledge in the following areas:

- email marketing
- Search ad
- Search engine optimization
- data analysis
- Reaching nearby customers
- Social media
- Mobile-targeted advertising
- export with the help of online marketing
- building an online store
- use of video in marketing

Key success factors in implementing this initiative:

In Slovakia

- Google has trained 55,000 Slovaks since 2016-2019
- In a Slovakia survey commissioned by IPSOS, nearly 18,000 respondents indicated that their training increased their self-esteem and approximately 1900 respondents stated that the newly acquired knowledge made it easier for them to find work.

Across Europe:

- Providing products, training, and tools to help an additional one million Europeans to find a job, grow in their career or grow their business by the end of 2020.
- 428,000 people have found a job or businesses have hired new staff
- 247,000 people have grown their career
- 790,000 businesses reported growth in revenue and customers

Key failure factors in implementing this initiative:

- Insufficient information and not clear provision of information to students by teachers
- Insufficient promotion of the project to young people at schools and universities
- So far, the interest in digital skills in Slovakia is great

List of references

https://learndigital.withgoogle.com/digitalnagaraz/partners

https://www.jaslovensko.sk/student/projekty/digitalna-garaz/

https://androidportal.zoznam.sk/2017/10/digitalna-garaz-vyskolila-27-tisic-slovakov/

https://www.telekom.sk/biznis/blog/digitalna-garaz-od-googlu-alebo-jedna-z-moznosti-ako-spoznat-digitalny-marketing

https://www.skolske.sk/clanok/37892/poznate-program-digitalna-garaz

https://www.studujmanazment.sk/google-digitalna-garaz.php

https://sostmi.edupage.org/news/?eqa=bmV3c2FyY2hpdmVmPTIwMTktMTE%3D

https://www.slsp.sk/sk/biznis/zaciname-podnikat/rady-tipy/digitalna-garaz

Interesting links and further reading

https://www.startitup.sk/rastislav-kulich-z-google-je-par-sposobov-ako-si-urobit-kratsiu-cestu-za-uspechom/

2. IDEA Tools and good practices:

3ª Edición de los Digital Skills Awards Spain

Provided by

Internet Web Solutions

Category: DE Awards and Promotion

Provider: AMETIC. A society that exploits the opportunities offered by digital technologies in Spain and that considers this sector as the main engine for economic and social progress.

Established in: 2017

Target group(s):

- All schools, universities, media, companies and public and private institutions that carry out training projects related to the development of digital talent and training in digital skills may be eligible for the awards.

Main goals/focus:

The "Digital Skills Awards Spain 2020" identify, value and recognize the best projects and experiences in the field of the development of enabling talent in digital competences for society, professionals, education, women and girls, in inclusion and vocational training. This initiative gives university students the opportunity to transform an idea into a great project

Brief description:

7 categories will be taken into account for the competition:

1.Digital Skills for All; 2.Digital Skills for the Digital Market; 3.More and Better Trained ICT Professionals 4.Digital Skills in Education 5.Digital Skills for Women and Girls 6.Digital Skills for Inclusion 7.Digital Skills in Vocational Training.

A prize will be awarded for the best initiative in each category. In addition, 3 honorable mentions may be given for each category.

Each school, university, company or institution may submit a maximum of one project or experience for each category. It is essential that these initiatives have been developed in the last 12 months in Spain.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

AMETIC launched the Alliance for the Development of Digital Talent, a meeting point that brings together about 50 companies in the ICT sector and other entities such as universities, business schools, training centers, foundations, or companies from other sectors interested in transformation and digital talent. The objective of the Alliance is to promote, educate and train in the new digital skills demanded by organizations in the ICT sector and other sectors that are in the process of digitization, and in general, Spanish society, under the new paradigm of digital transformation, involving all stakeholders from an open innovation model and platforms of public-private collaboration.

Funding source:

http://www.todofp.es/comunes/noticias/2019/20191202-digital-skills-award-spain.html

Outputs and outcomes:

The result of this initiatives has been the launch of the Manifesto for Digital Talent. Develop entrepreneurship among students. Increase their digital skills and competitiveness. Improve the level of key competences and skills of young people. Develop synergies among organizations active in different social, educational and employment fields.

Key success factors in implementing this initiative:

The Digital Skills Awards Spain 2020 identifies, values and recognizes the best projects and experiences in the field of the development of enabling talent in digital competences for society, professionals, education, women and girls, in inclusion and vocational training.

AMETIC ensures the identification of initiatives at the national level (STEM programs, etc.) and key stakeholders for the work of the GT "Education 4.0" to identify the digital needs of the labour market.

Key failure factors in implementing this initiative:

Not applicable

List of references

Email of the initiative: desarrollotalentodigital@ametic.es

Interesting links and further reading

The website of the Foundation: https://ametic.es/es/evento/alianza-talento3/digitalskillsawards2020

3. IDEA Tools and good practices:

ICT AND DIGITAL ENTREPRISE RELATED INTERNSHIPS IN MADRID-
PRÁCTICAS INFORMÁTICA Y TELECOMUNICACIONES MADRID

Provided by

Internet Web Solutions

Category: Digital internships

Provider: Omron Electronics Iberia, SAU

Established in: not applicable

Target group(s):

Higher Institution Student Telecommunication and Computer Systems, Electrotechnical and Automated Systems, Electronic Maintenance with a set of Skills: Ability to apply knowledge to practice, Teamworking, Planning and time management, Analytical and synthesis capacity, Motivation.

Main goals/focus:

Paid training scholarships to upskilled programming, design, marketing, communication young students to offer them the possibility to learn and gain new digital competences and boost their entrepreneurship aptitude. In the portal Talentoteca many enterprises publish ICT internships offers to HE students every day. Talentoteca is the portal of internships, training scholarships and first employment of the Universidad-Empresa Foundation, a private non-profit organization.

Brief description:

The internship's goal is to provide its students with IT training that enhances their personal, professional and technological skills so that they can become the professionals demanded by the labor market and/or set up their own business.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

All Talentoteca programs and scholarships include digital training activities carried out by students and supervised by the Universities, whose objective is to provide them with ICT tools and practical

skills to put into practice the knowledge acquired during their academic training to be the builders of their own professional future.

Funding source:

https://www.talentoteca.es/finder/

Outputs and outcomes:

Not applicable

Key success factors in implementing this initiative:

To connect knowledge and training with the business world. It allows students to harness the skill, knowledge, and theoretical practice they learnt in university. Internships offer opportunities to transition into full-time positions and/or to cultivate their entrepreneurship spirit so that they start their own business.

Key failure factors in implementing this initiative:

Not applicable

List of references

Email of the organization: info@fue.es

Interesting links and further reading

The website of the no-profit organization: https://www.talentoteca.es/
The website of the enterprise: https://www.omron.com/global/en/

IDEA Tools and good practices:

1. Programa TELEFÓNICA TALENTUM

SPAIN

Provided by

Internet Web Solutions

Category: Digital internships

Provider: TELEFÓNICA

Established in: For more than 40 years

Target group(s):

- University graduates or students with a maximum of 30 ECTS credits to be approved in IT information and communication technologies;
- Higher or middle of vocational training students

Main goals/focus:

The different Talentum scholarship programs are designed to cover different needs and situations, providing IT young students and graduates with initiatives. Each program is a professional and personal development opportunity for participants and introduce students or newly graduates to the world of information and communication technologies with the specific purpose of widening their horizons in matter of digital entrepreneurship and better informing them of choices in their career pursuits.

Brief description:

The Program, run by the Foundation SEPI together with TELEFÓNICA, is addressed to university graduates or students with a maximum of 30 ECTS credits to be approved in IT information and communication technologies; or higher or middle of vocational training students. The objective is to offer practical training in the digital field in an environment of innovation and entrepreneurship in all the companies involved into the TELEFÓNICA Group and in the companies/accelerators/institutions that adhere to the Program.

Key activities and forms of support in inspiring digital entrepreneurship and awareness in HE / beyond HE / the national context:

This initiative acts as a critical link between the world of digital education and entrepreneurship. It enhances the attractiveness of higher education in Spain and support European higher education institutions in competing on the higher education market worldwide as the programme offers paid internships also abroad.

Funding source:

https://www.fundacionsepi.es/becas/Bases/BasesTALE2020.pdf

Outputs and outcomes:

Not applicable

Key success factors in implementing this initiative:

Training in a team: the selected participants will play an active role in their practical training and will participate in the team of a startup/company/institution that adhere in the Program.

Mentor guide: the trainee will participate, with the support of a mentor or mentor experts in the discipline, in one or more projects within the teams of the startup/company/institution assigned to him/her.

Duration and extendable: from 3 months up to one year. If the duration of the scholarship is less than one year it may be extended at the request of TELEFONICA, up to the maximum period previously established.

Training abroad: the trainees and fellows of the Program may complete their practical training in Spain or abroad, in any of the companies /accelerators / institutions of the Program, under the coordination of TELEFONICA.

Key failure factors in implementing this initiative:

Incompatibility with other jobs (also part-time): the grant could not be assigned to beneficiaries which have a job even part-time, in the opinion of the FUNDATION, it interferes with the correct development of the training period. It will also be incompatible with the collection of unemployment benefits or any other type of scholarship of similar characteristics, of which it must inform the Foundation immediately, once known.

List of references

Email of the Foundation: becas@fundacionsepi.es

Interesting links and further reading

The website of the Foundation: https://www.fundacionsepi.es/

https://www.institutoted.com/programas/