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Methodological Guide for internship programmes in Asian Universities – Del. 3.1, WP3

Modernization of curriculum of Textile Engineering and Textile Technology in Indonesia, Malaysia and Pakistan

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Abbreviations and Acronyms

EACEA	Education, Audiovisual and Culture Executive Agency
EC	European Commission
EU	European Union
GA	Grant Agreement
HEI	Higher Education Institution
ICT	Information and Communication Technologies
PC	Project Coordinator
WP	Work Package

1. Introduction

In this section, we will move the first steps toward the definition of an internship and those features and characteristics that define its importance in nowadays job market especially for younger generations. This introduction will provide an important framework of reference for the following sections, namely those addressing the delivery of Quality Internships in Asian universities. In order to do so, a brief recap of SMARTEX is included in this Chapter as to maintain a steady goal-oriented approach in defining the guidelines for internships.

1.1 The role of internships in modern-day youth employment

Internships have become a sort of cornerstone in the early employment history of many students and graduates, in Europe as well as in the rest of the world. It is usually the first approach that Higher Education Institute's (HEI) students have with the job market and it works as a link between graduates and their first employment contract. However, there is no clear definition over what internships are or what characteristics should have. Internships have risen in popularity in the early 1990s with the disappearance of accessible entry-level job opportunities for young people (graduates or not) and the stagnant economic outlook over the past 20 years. In this situation, the degree of competitiveness over the few real job opportunities has increased exponentially, and young people found themselves in need to prove their capacities through different forms of employment, among which internships represent usually one of the most important steps.

A study carried out by the McKinsey Center for Government in 2014 depicted the following situation for the European countries analyzed: graduates who have carried out at least an internship before the end of their academic program have received a job offer within the first six months after graduating, at least to a certain extent (SPRINT, 2015). The Eurobarometer presented a somewhat similar situation in 2015, when half of the interviewed youth people had carried out an internship and that 71% of them believed that this would help them finding a job in the following months (European Commission, 2018).

Important to highlight early on is the difference between internships, apprenticeships and traineeships. Although usually used without much attention, these three terms bear important differences in the work-based learning (WBL) programs they describe – something that is particularly true for the first two words. Traineeships, as also described later on, is the term used by the European Council for describing internships. However, this last term, covers very different programs if compared to apprenticeships. The European Council has defined it as follows:

"[..] *a limited period of work practice, whether paid or not, which includes a learning and training component, undertaken in order to gain practical and professional experience*

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with a view to improving employability and facilitating transition to regular employment."
(Council of the European Union, 2014)

The keywords to understand the definition above regards its limited duration in time, the training and learning components and the capacity to boost the employability of the intern. It must be said that interns are usually students in a HEI framework (possibly under a curricular obligation to undertake the internship) or young graduates. Differently, apprenticeships are usually schemes of work-based learning intended as an Initial Vocational Education Training (IVET): they combine company-based training with school-based education which will eventually lead to and IVET certification degree. Furthermore, apprenticeships are regulated by a working contract – something that is not always true for internships. Thus, the difference between the two is clearly deeper than what it appears (EQAVET - European Quality Assurance in Vocational Education and Training, 2012).

The definition offered above will be looked more in-depth in the following sections of the Guidelines: it was proposed here as it is the one presented by the Council of the European Union in its Recommendation on a Quality Framework for Traineeships in 2014. However, a more holistic approach to internship is in order for the scope of SMARTEX: indeed, the Council definition aims to be very general and inclusive, but it also conceals the main objectives of the European Union in terms of employment, inclusiveness and social security. Internships includes also other fairly important aspects, especially when these are carried out under a HEI – Host Institution Agreement or Framework. Some examples are the presence of a mentor as a supervisor, the promotion of soft skills development on the workplace and so forth. These will be more closely looked at with the presentation of the principles for a Quality Internship.

Without going much into details, it is important to highlight that soft skills, as in those mentioned before, represent nowadays a crucial factor for employment. These skills go beyond the mere technical knowledge and include interpersonal or emotional competences that are highly valued by employers. In this sense, internships provide the perfect opportunity for companies to evaluate on the job these skills, effectively reducing employment cost with a form of employment limited in time. This is only one example why internships can be considered a win-win solution for students, HEIs and companies. Even further, a closer relationship between HEIs and the industries can represent a real solution for the growing skills gap problem, lamented by many economic operators in the last decade (Kochan, Finegold, & Osterman, 2012)

It is important to understand the benefits for businesses when providing internship programmes: however, a fruitful relationship with the HEIs remain at the core of every schemes. In fact, also HEIs benefit from successful experience of its graduate students when approaching the internship opportunities that the Institution has helped mediate:

such benefits will be more coherently understood in Chapter 3, along with the presentation of what is required from HEIs for the delivery of quality internships.

However, many problems still lay ahead of all the stakeholders involved to successfully achieve qualitative and meaningful internships. Too often young people face unfair labor conditions stemming from unregulated internship opportunities, having to deal with lack of social security, remuneration while carrying out the same tasks of a regular employee. Other times the tasks assigned are menials, and they do not deliver the learning outcomes as agreed upon mostly due to the lack of a proper feedback or communication between all the stakeholders involved. The Eurobarometer assesses that at least one third of all the internships carried out in Europe do not meet necessary standards. There is a great demand for jobs on behalf of young graduates, and this is only poorly addressed by an increasing number of internships that do not meet any labor or learning requirements and thus even worsening the situation, especially if left unchecked.

This brief introduction to the role of internships in modern-day youth employment provides only glimpses of the reality that many young people have to face on a daily basis when trying to approach the job market for the first time. However, it remains of utmost importance to address this issue in a proactive way, with the delivery of quality internships that can actually boost the employability of graduates, while contributing to competitiveness of the firm, the economic growth of the country and the effectiveness of HEI's curricula.

1.2   SMARTEX project and its objectives

The project SMARTEX (full title: Smart textiles: modernisation of curriculum of Textile Engineering and Textile Technology in Indonesia, Malaysia and Pakistan) aims to mobilise enough support from partner HEIs, especially in Europe, in order to promote the modernisation of university curricula in the sector of textile engineering, with a particular specialisation in smart textiles and all its innovative applications, in Asian universities (in particular Indonesia, Malaysia and Pakistan). In addition, partner universities will not only promote and disseminate the best practices in terms of curricula development but also in terms of internationalisation, cooperation with relevant stakeholders (business associations etc.).

The support will be transversal: it will not only address substantial challenges such as the definition of the innovative contents and learning objectives in the area of smart textile, but it will also aim to renovate the process of quality assurance, equity of access, planning, management and governance at the university level. The European partners come from Greece (University of West Attica, IDEC S.A.), from Belgium (Ghent University) and Spain (Universitat Politecnica de Valencia). The Asian universities partner and participants to SMARTEX come from Malaysia (Universiti Teknologi MARA, Universiti Tn Hussein Onn Malaysia), Indonesia (Politeknik STTT Bandung, Faculty of

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Visual Art and Design Institut Teknologi Bandung ITB) and from Pakistan (Bahauddin Zakariya University College of Textile Engineering and NED University of Engineering and Technology).

The general objectives of this project revolve not only around the modernisation at the university level but also to improve its capacity and relevance to be noted by the labour market when it comes to the placement of its graduates. A particular attention will be given to cross-cutting skills and other key competences relevant for businesses in smart textile. Ultimately, by boosting cooperation under the auspices of the Erasmus+ Programme, many benefits in terms of regional cooperation and integration will emerge.

2.   Quality assurance for internships in Europe

This second chapter has as its objectives to explore the reality of internships across Europe and the European Union in order to understand the situation young people face when looking to intern in terms of the framework for quality assurance. As these Guidelines will be employed to create real internship schemes in Asian universities, the best practices now in use in Member States will be sorted and highlighted in order to provide the most accurate picture for what the state of the art in this sector is concerned. The first element to introduce is that in the European Union, at the time of the writing, no agreed upon framework exists for the quality assurance of internships. Member States have all in place different forms of legislations, guarantees and social protections for interns or trainees. In fact, countries still do not agree on a common taxonomy for what internship are concerned: a non - exhaustive list of names counts 32 terms that address more or less the same phenomenon (SPRINT: Standardize best PRactices about INTernships, 2018)

Although beyond the scope of this study, it is important to note that for what Vocational Education and Training is concerned, more well-established quality criteria do exist and have been already implemented in the past few years. It is called EQAVET and it has been adopted by European Council and Parliament in 2009. As a common tool for the management of quality in VET, it has standardized six "building blocks" or quality criteria that have helped improving quality assurance in this form of WBL.

The lack of an agreement over the matter of quality internships does not imply a lack of attention on behalf of the European institutions regarding the problems highlighted in the previous chapter. On the contrary, internships are seen as an important tool to address other crucial priorities for the whole Union, such as youth employment and bridging the skills gap. In this sense, the cornerstone of the EU (and for this Guide) for quality internships is a Recommendation made by the European Council in 2014 on a Quality Framework for Traineeships (QFT) (Council of the European Union, 2014). Despite remaining as of now a document that has not entered formally into force, it has managed to exert a great deal of influence over Member States in the past few years.

The QFT introduces 20 formal principles for the assurance of quality internships as intended in the definition provided by the document itself and presented in the previous Chapter for the purpose of this Guide. They focus on all the phases of the internship process, spanning from the preparation phase to the delivery and then the concluding and post-internship evaluation. All these principles will be duly presented and discussed in the following Chapter.

It is important to highlight that the QFT builds upon previous experiences and call for a more quality-oriented approach for what internships are concerned, which usually go beyond the mere learning outcomes. In fact, as also mentioned before, internships respond to the necessity of bridging the distance between young people and the job market. An attempt at doing so came one year before the QFT, which was the Youth

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Guarantee program in 2013 (Council of the European Union, 2014). Its goal was to provide 25 years old young people a good-quality offer in terms of employment or continuation of studies. The Guarantee managed to create 700 thousand job places for young people and mobilized 9 million job offers (European Commission, 2018), but it revealed the necessity to frame these opportunities in a quality framework such as the one recommended in 2014 by the European Council.

Other calls for similar measures made their way into the European institutions over the years. The European Court of Auditors, already in 2013, to be followed by the Council again and the European Parliament in 2016. Other organization outside the EU perimeter have contributed to the continental-wide discussion on the matter, such as the European Youth Forum (European Youth Forum), the International Youth Foundation (International Youth Foundation, 2013) etc. Many actors involved in education, employment and entrepreneurial sector in Europe have gathered their competences and strengths to create consortiums under the auspices of the Erasmus+, such as SPRINT or GRADual projects, also used as references for the purpose of this Guide. This wide debate over the assurance of qualitative and finally fair internships across Europe has only strengthened the importance and awareness stakeholders and Member States have of the problems affecting internships and, broadly speaking, young people in the job market. (SPRINT: Standardize best PRactices about INTernships, 2018) (GRADual: Increasing Student/Graduates Employment Readiness, 2015).

Specifically, the Erasmus+ projects mentioned before provides important insights on what the actual situation in Europe is for what internships are concerned, especially in relation to their best practices. Certainly, they describe even further the differences present in terms of actors and organizations involved across European countries. What is important to highlight is not only the presence of these differences, but also the best practices, which somewhat reflects the principles contemplated by the QFT:

- Written Agreement signed by all the parties concerned;

- Social protection of students during their internships;

- Legal duration of the internship;

- Legal income, remunerations and reimbursement;

- Supervision of interns;

- Evaluation;

- Validation of the internship.

It is clear that this is a non-exhaustive list of principles that can be intended as best practices across the European Union for the delivery of internships, although it will be thoroughly expanded and discussed in the appropriate following chapter. Before moving to that section, it is important to present at least partially the differences mentioned so far regarding the legal framework for internships across Europe. For this purpose, the countries of the three participating European HEIs will be discussed, namely Belgium, Greece and Spain.

All three countries comply to the QFT to a certain extent. Spain can be even considered an early player in this sense, given that it firstly regulated this form of work-based learning in 1981. As of now, the Iberic country recognizes two forms of internships: the traineeship work contract and the non-labour traineeships. Both ensures social security coverage and a certain amount of remuneration (either 60& or 75% of an average salary for the first contract, and 80% of the Public Income Indicator of Multiple Effects for the second). The situation is similar in Greece: although less strictly regulated, paid opportunities do exist and are regulated by the general laws of labor. Belgium as well has worked in the last few years in order to update its legislation on a regulatory framework for open market traineeships (those occurring outside an agreement between an HEI and a company). Overall, the three countries fall in line with the QFT, only missing a more transparent approach when it comes to hiring processes. (European Commission, s.d.)

3. Quality Framework and Principles

In this Chapter, the quality principles identified by this study for the purpose of internships in Asian universities and in general for the SMARTEX's purpose will be presented. These principles have been developed according to the current state of the art as presented in the previous chapter and the different challenges that setting up an internship framework present nowadays.

The research carried out in order to deliver the following principles proposes a dual approach. The cornerstone this Guide is represented by the Recommendation of the European Council on the establishment of a QFT in 2014: this first document lays the basis for the most comprehensive quality principles. The second important focus of this Guide is represented by the academic research on the topic: the papers taken into consideration study the experience of universities in organizing internships, the challenges they faced and what were their most innovative solutions or guiding principles that could have averted certain critical situations.

By bringing together these two approaches it is possible to develop this Guide in a comprehensive and efficient fashion.

3.1 Formal written Agreement

The establishment of a formal written agreement represents the first principles according to which it is possible to recognize an internship that respects a quality-oriented approach: however, it is important to understand that this agreement cannot come into existence if a thorough background work is not prepared beforehand. In fact, it is this very formal agreement that defines the cooperative nature of this form of work-based learning.

This document should work as the very basis of the internship scheme and works as a "contract" between all the parts involved: HEIs, business, students and eventually other organisations e.g. social partners supporting the overall effort. In order to come to a common understanding between the mentioned parties (which are all included in the Agreement), a good deal of communication is advisable so to smooth from the beginning any relevant impediments that might come up in the following phases of the internship. In fact, communication works as a transversal principle that permeates every aspect of setting up internship schemes: it is important that the HEIs in particular, but also students and companies joining the framework, communicate in a proactive way so that their necessities are well understood and taken care of as soon as possible. The role of the HEIs in developing the Agreement is crucial: at least one-third of all the internships surveyed in 2013, as reported by the Commission, are carried out in sub-standard working conditions. This can be particularly true for open market internships: however, being only curricular internships part of SMARTEX's focus, it is important to underline that the HEIs can balance the influence of businesses in demanding decent and fair

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working conditions. The work done to achieve this is carried out before the signature of the Agreement by all the parties involved: the specifics of the working conditions will be duly presented in the following sections.

Generally speaking, the Agreement also comes into place in order to formally agree upon other important characteristics and features of the internship framework. These can be:

- Parties involved

- Expected duration of the internship

- Location of the internship (either in home country or abroad)

- Daily hours of work

- A summary of the tasks to be assigned

- Rights & duties of all the parties involved

- Eventual remuneration

- Credits assigned

Another important aspect that the HEIs and businesses should bear in mind when developing such frameworks is the form of management that they will see implemented in order to coordinate the activities and the communication. This is usually specified in the Formal Agreement by indicating the person of contact at each institution and the mentor assigned to the intern. It is extremely important that the management agreement is clear and understood by all the parties involved, as it will greatly simplify the carrying out of the internship by streamlining procedures and communications among the stakeholders. For example, the Agreement should include certain tools such as templates for internship evaluation and other similar documents that will ensure maximum clarity among HEIs, companies and students, additionally to the clear allocation of responsibilities for monitoring, communication and so forth.

Finally, such Agreements should include two other elements, which for their importance will only be discussed in the respective sections to ensure clarity. These are: the definition of learning and training objectives, which will be the object of the following section, and the rights and obligations of both employers and employee as briefly mentioned before.

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3.2 Learning and training objectives

Internships can be understood as a form of cooperative education, often taking place off campus and within the premises of a partner's business. Acknowledging the fact that an intern should be able to experience a real working situation on the job place, it is also important to underline that internships remain an educative experience. For this reason, the framework Agreement as presented before should include extensive and complete learning objectives for the internship in general and specifically for the intern.

Particularly open market internships, but often also curricular ones, fail to provide a clear description of the learning and training objectives. This negatively affects not only the proper delivery of the internship, as a project without clear objectives cannot gather the proper resources and achieve valuable outcomes, but also for the satisfaction of the intern on the workplace (D'Abate, Youndt, & Wenzel, 2009).

In this sense, a very important figure that can enhance the experience of the intern at the host company is the mentor. This figure, who can also be the supervisor itself of the intern, provides guidance to the learner and helps the intern integrate into the working procedures at the company. For example, great satisfaction has been recorded when an intern receives valuable feedback for the work carried out (an important aspect which will be dealt with in the final section of this Chapter) (D'Abate, Youndt, & Wenzel, 2009). The learning objectives should thus be very specific and possibly measurable statements, upon which a clear agreement has been reached by all the parties involved given the other contextual characteristics of the internship (duration, working hours, curricular or extra-curricular etc.). Especially in the engineering area, focus of the SMARTEX project, undergraduate and graduate students challenge themselves in internships by joining particular projects that will give them the chance to put in practice what theory they have learned at the home institution (Ozek, 2018). Generally speaking, an internship also serves the companies in evaluating the soft skills of the learner (although these may not be mentioned in the learning and training objectives).

Finally, it can be said that internships necessitate the clear definition of the learning objectives in order to provide qualitatively measured feedback to all the parties involved and provide the best possible experience to the students/interns/. These objectives can revolve around a short-term project or other activities that can be closely monitored by the mentor/supervisor.

3.3 Rights and obligations of both employers and employee

The first element that usually comes up when it comes to the working conditions is that more often than not, internships are unpaid experiences. This can be averted with the intervention of social partners, which may provide funds on the basis of merit or other academic parameters, or the business host itself that decides to provide some form of

compensation. However, it can be noted that it is not so uncommon to find young graduates interning for free.

While this can be definitely a very serious obstacle in terms of accessibility for students that cannot afford the internship to be unpaid, it is an aspect that is becoming more and more discussed among stakeholders and to provide some form of remuneration is becoming a best practice, at least across European countries.

The basic assumption is that without a specific working contract, as in the case of curricular internships, no salary can be provided by the host company. However, the HEIs, in cooperation with social partners, may mobilise enough funds to provide scholarships to students, and the host company itself may provide some form of compensation for meals and lodgings (especially if the internship takes place abroad). As mentioned before, it is important to bear this aspect in mind in order to deliver an accessible internship opportunity that secures the satisfaction and motivation of all the partners involved.

However, the working conditions for interns do not only revolve around the cause of compensation or remuneration. The absence of a regular contract tells us also of the absence of proper guarantees for the learners: these span from social security, health assistance and similar assurances that make the internship a safe and enjoyable work experience.

The very basis to guarantee a fair internship from this point of view is that the host company does not see the interns as free or cheap labour that takes the place of regular employee. The number of hours should be drafted in line with the national legislation and should not exceed 40 hours per week (or 8 hours per day). Other elements may concern a decent allocation of materials to carry out the tasks assigned and, at least to a certain extent, vacation days.

Other very important elements, as briefly introduced above, are the provision of social security and an insurance policy for accidents at work, borne by both the host company and the intern. For example, for internships taking place in Europe, health insurance is usually guaranteed with the employment of the European Health Insurance Card.

In conclusion, it can be said that the goal of internship is to provide a real work-based experience for undergraduate and graduate students: for this reason, it is important that all the stakeholders involved in the drafting of the internship scheme make sure that interns are recognized all the guarantees of a working employee despite being outside a formal work relation with the employer (as in the case of curricular experiences).

3.4   Recognition of the working experience (curriculum credits)

Curricular internships are forms of WBL with a focus on achieving relevant working experience but always within the scope of broader learning objectives. These objectives, as introduced in the previous sections, should be clearly stated in the formal Agreement:

additionally, the Agreement should include a clear and coherent process of recognition of the working experience within the academic path of the student/intern.

This aspect is crucial in order to make the internship a valuable experience not only for the sake of the student's CV but also for his or her academic career. Internships are becoming more often compulsory within academic curriculum, which is increasingly seen as a best practice across Europe.

In order to deliver this process, which is closely linked to the next and last principle introduced in this Chapter, a relevant series of documents must be produced: these papers will prove that the learner has properly carried out the activities assigned and worked according to the schedule agreed upon in the framework Agreement. The mentor and the supervisor at the host company fill very important roles in observing, communicating and finally evaluating the work done by the intern and summing up all the information retrieved for the partner HEIs. In this context, the provision of agreed upon templates may facilitate the work for referencing the activities of the intern to the educational institution.

In the EU, after the Bologna process that has created the European Higher Education Area, the establishment of ECTS as credits for academic curriculum has improved the overall quality of the accumulation and recognition process across institutions in Europe, as well as working easily in order to ensure the validation of other curricular activities such as internships. For this reason, it is very important that internship are integrated in academic curriculum ever since the developmental phase, an approach that will closely embed the WBL experience into the larger objectives of the academic path while sending the message that internships are a crucial step in the personal and professional growth of students.

Although beyond the scope of SMARTEX, it is important to underline that internships do provide valuable experience that can be recognized not only by the partner HEIs but also outside companies. In this sense, an efficient validation of the working experience can also lead to the preparation of a reference letter on behalf of the mentor, a document that can provide assistance in finding new opportunities for professional development after graduation.

3.5   Internship evaluation and quality assurance criteria

Possibly the most important aspect, the final evaluation of the internship and the assurance of the quality criteria provide crucial insights on the proper carrying out of the internship and the overall satisfaction of the stakeholders involved.

In order to provide a comprehensive evaluation of the internship experience, proper communication channels between the HEIs coordinator, the tutor/supervisor at the host company and the student. Performance reviews should take place on a regular basis according to the agreement reached by the stakeholders, but in any case, there should be at least a mid-term and a final evaluation. The mentor should be in charge of the daily

assignments of the intern, and thus carrying out a close monitoring of the activities to be then sorted and reported to the home institution for the validation of the experience. To a certain extent differently, the quality assurance of the internship framework as a whole should go beyond the mere evaluation of the work of the intern: rather, it should be an analysis of all the principles presented so far in this Guide and discussed, possibly in different moments, by all the parties that took place to the organization of the scheme. Students should be encouraged to provide feedback on what felt rewarding while working at the host company and, on the other hand, what did not fall into the right place during the experience. This can be provided anonymously to the home institution, as well as in aggregated forms to the host business. Such evaluations should also be carried out according to standardized forms in order to ensure smooth communications between all the parties and a quick review.

The documents mentioned so far can take the form of reports, periodic surveys or even questionnaires and face-to-face meetings. On the other hand, their content should focus not only on the mere tasks analysed but also on the broader objectives identified in the Agreement, such as progression of short-term project or degree of skills developed/demonstrated by the intern this far.

For what the final evaluation is concerned, the insights gained during the duration of the internships should be included in order to describe the process of growth of the learner; at the same time, it is advisable to use quantitative indicators to evaluate the overall performance of the internships programme, such as: period of the internship covered, attendance sheet, number of candidates selected, their permanence, number of interns hired etc.

This structured form of feedback and evaluation can be considered a strong commitment on behalf of participating parties to ensure the highest degree possible of satisfaction and finally improving the internship experience for those who will come after (Naranyanan, Olk, & Fukami, 2010). Overall, it is important that the criteria according to which both the intern and the internship will be evaluated are decided beforehand at the onset of the program, an approach that will ensure coherence in the process of monitoring and clear communication at the end of the experience.

4. General Guidelines

In this Chapter, the quality principles presented so far will be implemented according to the chronological development of the internship programme by the partners involved, firstly the HEIs in cooperation with the student and the host company.

The goal is to understand the quality principles in relation to all the phases of an internship and trying to apply the monitoring and evaluating criteria in these crucial phases when necessary. For clarity, the Chapter has been structured according to what takes place before the beginning of the internship (such as the preparation of the Agreement), during the internship (the monitoring process mostly) and towards the end of the experience (with the final evaluation).

4.1 Establishing an internship scheme

Before it is advisable for the HEIs to start creating partnerships with industries, companies and other host institutions for students wishing to carry out an internship, the procedures must be clearly defined and structured at the educational institution's level.

These are mostly bureaucratic in the documentation requirements they create, but in order for them to be clearly and understandable, the HEIs should have clear in mind the goals and expectations of setting up such programmes: the objectives can span from the number of students to include in the internship scheme every year, the number of companies to be reached with partnership agreements etc.

Another relevant aspect to bear in mind when organising an internship programme is the national legislation. Each country has its own specific regulations and directives which may differ greatly from one another: the examples presented in the first chapter of the Methodological Guide have presented. These can span from the labour rights framework, duties of the parties involved and financial and so forth.

Finally, when the internal assessment is carried out at the HEI level, the institution is ready to prepare the paperwork. These documents do not only include the MoU or the LA models, but also the platform for managing the internship procedures, the channels of communication and the actual procedures for students and companies to undertake when drafting on an internship agreement.

From the basis of a well-established internship scheme, the HEI is ready to start working on building a network of companies willing to host the students of the institution in the

context of an internship programme. The enterprises might come from the city or region where the HEI is located as for a start, but then the network can be bound to expand across the whole country or even further. The important aspect is that the partnership is based on the frequent sharing of information and updates that can help organise internship programmes reflecting the state-of-the-art of the Academia (in case of universities) and the most recent necessities in terms of skills and competences on behalf of the industries.

4.2   Before the internship

The first step in organising an internship is to find the student willing to engage in this experience. These can be done with an open call for application or interest: this campaign can be promoted internally with events, newsletters and other forms of communication the HEI is able to adopt. This process should lead to the shortlisting of candidates according to criteria established beforehand by the institution: this step entails the definition of a team that will work continuously on monitoring all the matters related to the organisation and implementation of internship programmes. Among the duties of this team there is also the responsibility for providing orientation to perspective trainees and the attempt to match candidacies with open positions. Once the selection is complete and the trainees-to-be are identified, the students can now work on the preparation phase of the internship.

Crucial in this phase is the preparation and signing of the formal Agreement. Usually called Memorandum of Understanding (MoU), it can be drafted according to the templates prepared beforehand as long as all the information necessary are listed in this version as well.

The work behind the MoU can be considerable or less demanding in terms of effort or coordination: the first case refers to a new partner, while the second one refers to a long-term and well-established partnership between the HEIs and the business concerned. It goes without saying that a healthy partnership can be nourished and flourish if properly taken care of, with some or even all the principles listed so far in the Guide: good communication, coordination, agreement upon the learning objectives of the internships and good feedback received by the student interning at this company. New partnership can be both exciting and time-consuming for the amount of work they need to establish new paradigms of cooperation. In this case as well, the MoU can work as a standardized template for the core information of the internship. However, it is advisable that the HEIs sending its students to this newly found host company assign a fair number of figures in dealing with smoothing some difficulties and keeping a constant channel of communication with both the intern and the supervisor at the company level. From the HEIs it is expected that it provides a good deal of support in finding the internship and counselling the students according to their academic records, financial possibilities and overall requests of the job market. This last aspect in fact, can only be

achieved if in the months during the organization of the internships, the learning outcomes and the monitoring process are properly discussed with the new partner. This also means the provision of a basic training or briefing if deemed necessary by the parties. For the case of SMARTEX, the internship that is going to be implemented in the new academic curriculum will take into consideration the placement in companies engaged in the sectors of smart textiles and all their applications: in fact, it has been proven the interns can bring a great deal of theory acquired at the university level and boost the R&D or the innovation degree in general of the companies that host them (Ranabahu, 2019).

This coordination effort delivered in the preparation phase will make sure that the internship takes place smoothly and without major issues or surprises during the period spent by the learner at the company.

Overall, the MoU should reflect this background work of communication and coordination between the HEIs and the business institution, and it can be achieved only if the drafted documents contain all the information that follows:

- Parties included

- Period of the internship

- Location of the internship

- Summary of the expected tasks

- Learning and training objectives

- Rights and duties of all parties

- Remuneration

- Social insurance

- Credits for the validation

As mentioned in the quality principles, HEIs should make sure that students receive a fair treatment when interning at the host company: with all its experience and competences (which should be employed when securing the Agreement), the educational institution can discuss and obtain decent working conditions in terms of social insurance coverage for work-related injuries or sick days. The document should

also include the provision of eventual benefits in supporting the carrying out of the internship and the eventual mobility (if the company is abroad).

For what the learning outcomes are concerned, the HEIs and host company should focus on the following points:

- Key competences

- Social skills

- Technical job-related skills

- Intercultural competences

Despite being a non-exhaustive listing of the skills required on the workplace, the learning objectives should also address the goal toward which the intern should work on according to the tasks assigned by the mentor. In any case, they should be measurable, strive to achieve practical and concrete results and tailored to the learning necessities of the new academic curriculum developed within the framework of the SMARTEX project.

Another important point that needs to be stressed is the clear establishment of rights and duties in this phase. It is of utmost importance that HEIs, business organization and students are well aware of the obligations to each other in order for the partnership to proceed properly and nourish the cooperation for further satisfactions. For example, the HEIs should communicate the name of the internship coordinator and on which basis the communication should take place. At the same time, the host company is expected to assign a mentor in order to provide guidance and help with the daily tasks for the student. Finally, the cooperating organization should discuss and agree proper tools to carry out the assessment of the activities of the intern at the workplace: these can include self-assessment, reports, assignments, presentations etc.

4.3   During the internship

Differently to what happens before the beginning of the internship, once the student has begun the program at the host company, most of the monitoring work and other relevant activities will be carried out by the mentor and the supervisors. In case problems should occur, the student should be able to reach out to those in charge of the internship programme at the host institution if it regards a work-related issue: on the other hand, if the problem goes beyond the capacity of the supervisors to handle it, the intern should reach out to the internship coordinator at the home institution.

In any case, most of the monitoring effort in this phase is handled by the staff on the workplace: the supervisor should make sure that the internships are carried out in a

satisfactory manner for the intern in terms of working conditions (and possibly also extra-working ones, if the program involves moving abroad); the mentor is in charge of proving guidance to the intern and monitoring the work done and the milestones achieved according to what was described in the MoU.

The work of the HEIs, although reduced, is not completely uninterested of the internship in this phase. In addition to providing assistance on a requested basis from the intern, the internship coordinator or the staff selected to follow the activities of the HEIs' students in partner companies are expected to keep in touch with the supervisor at the host institution and the students, especially since the internships usually take place over a period of 3-6 months and it is thus easy to lose sight of each other. The communications should include progresses made on the workplace, the conditions the interns have been experiencing on the place and other issues that have come up at the job-level.

4.4   After the internship

The conclusion of the internship entails a certain range of activities that require an active participation in order to ensure all parties' satisfaction.

Towards the end of the period at the host company, both the supervisor and the mentor are supposed to provide a comprehensive feedback to the intern: this process can take place via a written report, a face-to face meeting or the mere monitoring that took place over the past months. In any case, a written and signed feedback should be provided to the student so that it can be sent back to the academic institution for the validation process to take place. The evaluation should be carried out according to objective and qualitative marks, as well as qualitatively from the point of view of the mentor.

Students should also be encouraged to engage in an open discussion with both the staff at the company and the internship coordinator. The programme itself should benefit all the parties involved, and it is important to take into consideration the point of view of those who did participate in the internship personally. Satisfaction of the interns is strictly related to the feedback they provide and receive, giving the perception that this experience will help improving the conditions of other fellow interns in the future.

Finally, the validation process can take place. Once all the documents have been gathered and the assessment has concluded, the HEIs can award the credits gained by the student in accordance to the learning outcomes reached and the relevance of the internship experience in the belonging academic curriculum. The validation can take the form of a credit allowance for more structure educational pathways, or the substitution of other exams. In any case, the weight of the working experience should be relevant at the academic level at least as much as it is in the job market nowadays (as already seen in the introductory chapter).

As a follow-up to the internship, the HEIs should have gathered not only the proof of attendance and the report of the tasks delivered but also the feedbacks from other

concerned parties on the overall internship experience. This information represents an important asset for reviewing the internship just concluded and optimizing the next programmes for the future.

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5. Checklist for Universities' staff

This section will present an easy-to-use tool for the staff of partner Universities to internally self-evaluate the overall internship process that is currently being implemented. The checklist is based on the practices and indications presented in this Methodological Guide and will provide important insights on all the steps that are to be followed when setting up, implementing and gathering feedback on an internship programme.

Requirement	Check	Comments	Actions
Before the internship			
Memorandum of Understanding (MoU)	☐		
Parties included	☐		
Period of the internship	☐		
Location of the internship	☐		
Summary of the expected tasks	☐		
Learning and training objectives	☐		
Rights and duties of all parties	☐		
Remuneration if applicable	☐		
Social insurance	☐		
Credits for the validation	☐		
Definition of Learning Outcomes	☐		
Key competences	☐		
Social skills	☐		
Technical job-related skills	☐		
Intercultural competences	☐		
Tools for assessment	☐		
Identification of supervisor for the internship in the HEI	☐		
Identification of mentor at host institution	☐		
During the internship			
Monitoring of the internship on behalf of the mentor	☐		

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Open channels of communication between students-HEI during internship	☐		
After the internship			
Provision of feedback on behalf of the mentor to the student	☐		
Provision of feedback on behalf of the supervisor to the student	☐		
Provision of overall feedback on behalf of the student on the internship	☐		
Gathering all the documents for the validation of the internship (by HEI)	☐		
Gathering all feedback (by HEI)	☐		
Proof of Attendance	☐		
Awarding of credits if applicable	☐		
Other form of internship recognition if applicable	☐		

6.   Annexes

6.1   Best Practices – UNIWA's Internship Programme

Name of the internship programme:
- In UNIWA because of the merging we have two kind of practical trainings/internships for our students:
- The first one is an obligatory paid six month training at the final year of studies for the seniors of the two former Technological Educational Institutions that merged to create the University of West Attica and attend the specific cycle and
- The second one is the one not obligatory but optional for the students of the new University, with the duration ranging from 2months till 6months.

Running time of the internship programme*: 1st one six month, 2nd one ranging from 2months till 6months

Number of students that participated in an internship under this programme:

For the 1st kind of practical training all students after the eighth semester are obliged to perform the six-month practical training in order to graduate. As a result all the graduates of the specific cycle have participated in the program thousands of them.
For the 2nd kind of practical training only the students that optionally chose the internship instead of a course have performed it. University of West Attica is new, as a result there aren't many that have participated in the specific program and definitely less than 1000 from 2018 till today for the whole University.

Number of companies that hosted an intern in the framework of this programme*:

For the 1st kind of practical training there are more than 4000 companies that have hosted an intern in the framework of this program however for the 2nd kind of practical training
There are less than 400 companies that have hosted an intern since 2018. Some companies might have hosted more than two interns in different specialties at the same period.

The context of the internship for the 1st kind of practical training

Introduction

Conditions for internships

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Prerequisites for the cooperation of the department with bodies conducting the internship are, in principle, the bodies to be related to the subject of the department and to develop integrated organizational-administrative structures with a significant range of administrative-management processes.

Creating a network of companies for internships

Each Department in the context of its continuous cooperation with productive and social institutions and especially in the context of developing its research project with institutions and services of the public and private sector, develops on a systematic basis initiative to ensure internships for students. Besides, the University has established the Career, Liaison Office which by defold from its establishment has a continuous cooperation with the market and the industry.

Preparing students for finding an internship position in productive organizations

The internship in the public and private sector is conducted twice during an academic year with the beginning of the winter and spring semesters, respectively.

In October and April of each year, a table is posted on the website of the department, with the institutions that have expressed interest in the internship of the students of the department.

The actions (communication with the institutions, sending a CV, setting an appointment for an interview, etc.) to find a place for an internship are undertaken by the students themselves one month before the internship begins.

Students internships in productive organizations

During the internship, an internship book is kept in which the daily, weekly and monthly occupations of the students are recorded.

The internship book is completed by the employer, signed, sealed and upon completion of the internship is submitted to the Secretariat of the department.

It is then checked and signed by the Internship Monitoring Committee.

If the subject of the daily internship is different from the specialty of the Department or in any other case when there are serious reasons, then it is possible to change the internship body, after the consent of the Internship Monitoring Committee.

Monitoring, evaluation of the internship and support of the trainee students

The Internship Monitoring Committee is in systematic communication with both the trainee students and their supervisors in the internship body, in order to be informed about the course of their internship, to settle any practical problems or to manage issues related to the employment relations, with the employees of the internship organization.

In the internship book, students and supervisors record the work done by the trainees on a weekly and monthly basis. In this book, a member of the Internship Committee also **records his observations as well as the final evaluation of the internship.**

Linking the internship with the dissertation

Although the purpose of the internship is different from that of the dissertation, however, if students wish to relate the subject of the internship to that of the dissertation, every effort is made to link and, above all, to adapt the subject of the dissertation. internship, in order to form a strong network of development of students' cognitive skills and abilities in real working conditions.

In many cases, the topics of the dissertation require information and data to which the trainee students have access, as a result of which they facilitate the elaboration of their dissertation.

In this way they also contribute to the processing of this data for the benefit of the trainee.

Internship opportunities for trainee students

The internship offers students the opportunity to improve their professional skills, problem-solving skills and development of initiatives, gaining professional and experiential work experience in a rationally structured business environment. This opportunity also offers employers the opportunity to assess the ability to apply the knowledge of trainee students and to consider the possibility of their future employment.

• The 1st kind of practical training is established for the first time based on Law 1404/1983 "Structure and operation of TEI." as an integral part of the studies and has a compulsory character for the students who follow the TEI study program.

Students' interest is enhanced as they gain an additional competitive advantage in the job search after graduation, while in several cases they develop a professional activity immediately after completing their internship. The internship lasts six (6) calendar months, is guided and evaluated and takes place in services and companies of the public and private sector as well as in social organizations related to the subject of each Department. The Internship Monitoring Committee has been set up and operates in every department, consisting of members of the Department.

This Internship program has 20 ECTS).
This internship is always paid through an employment contract with the company. The company also receives a subsidy from the employment national agency. There is a strict procedure to be followed for internships by all students that do internship. There is first of all the Career, Liaison & Innovation Office where companies are listed in a database

and students have access to the positions that are announced through the website but also students search themselves for a company based on university contacts, outside internship organizations, or their own contacts.

Application process

Step by step

- Information from the website of the Career, Liaison & Innovation Office as well as the department for the positions and the institutions that are looking for students for internship.

- Students who are interested in starting their internship must one month before be contacting the service or company that interests them to make an appointment for an interview.

- Renewal of registration.

- Application to the Secretariat of the Department for the Issuance of a Referral (those who carry out the internship in a private company or service).

- Certificate from the company or service, stating that they accept the student for an internship and that his / her fee will be borne by the company or service.

- Receipt of the Internship Book, the referral (public & private companies or services) & three contracts (only those who will do the internship in private companies), from the Secretariat of the Department in the last week of the month (the Secretariat will inform with an announcement students).

- Immediate submission of the three (3) contracts and submission of the Referral to the Head of the company responsible for the internship to be signed and stamped.

- Receipt of the three (3) contracts from the internship employer.

- Submission of the three (3) contracts to the Secretariat of the Department to be signed by the President of the Department.

- Receipt of two (2) contracts from the Secretariat (one remains in the file of the Secretariat, one in the file of the Institution and one for the file of the student)

- Submission at the end of the Internship of the Internship Book as well as one (1) Certificate from the Head of the Employment Agency where he / she will state the successful completion and the start and end dates of the internship.

Prerequisites for starting the training

The student should:

1. Renew his enrollment for the 7th semester of studies.
2. Have attended and succeeded in at least 2/3 of the courses required to obtain the degree.
3. Submit to the secretariat an application for the issuance of a Referral.
4. Owe up usually to two (2) specialty courses.

Preparation for finding a training location

The Internship Periods in the Public Sector & Private Sector are:

- April 1st-September 30th and October 1st-March 31st.

On the website of the Career, Liaison & Innovation Office as well as that of the department, there is a board with all the institutions, who have expressed interest in the internship of the students of the Department.
The actions (communication with the institutions, sending a CV, setting an appointment for an interview, etc.) to find a place for an internship are done by the students themselves one month before the internship starts with the help of course of the counselling services of CLIO.

Training Book

- The daily, weekly and monthly activities of the students are completed in the Internship Book.

- It is given to the employer at regular intervals to complete it where needed, to sign it and to seal it with the rectangular or round stamp (indicating the name and the VAT number).

- It is delivered completed to the Secretariat at the end of the internship.

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Internship compensation

- The amount of the provided compensation of the interns is determined at a rate of 80% on the salary of the unskilled worker that is valid each time based on the National Collective Agreement.

- The trainees are obligatorily subject to the insurance of Social Security Organization- IKA against the risk of accident at a rate of 1% on the compensation paid to the trainees at a time and in accordance with a joint ministerial decision.

- The private institution that employs the students pays a monthly allowance. The company receives 50% of the compensation every month from Hellenic Manpower Employment Organization-OAED, at the end of each quarter. (http://prev.oaed.gr/index.php?option=com_content&view=article&id=759:a-a&catid=20&Itemid=132&lang=en).

- The amount of the gross monthly compensation of trainees paid to public services, local authorities, other NPDD, companies and organizations of the wider public sector amounts to the amount of € 186.19.

- Apart from their right to compensation and insurance, students do not acquire any other right of employment or retirement.

- The internship lasts 6 consecutive months.

- Students are not eligible for Christmas or Easter gifts.

Absence

- Justified absences for serious reasons can be up to five (5) working days in total.

- Absences are recorded in the internship book, considered and signed, approved or rejected by the internship committee.

Oppositions

- If the subject of the employment is different from the specialty or in case for any serious reason a student wants to change employment, then he / she must

immediately inform his / her supervisor as well as the internship committee for a possible change of employment.

- The student must submit to the secretariat a certificate for the time remaining in the position, make a request for a new Certificate of Study for an internship (indicating the remaining time at the internship).

- and prepare new contracts stating the exact period of completion of the internship up to six (6) months.

The context of the internship for the 2nd kind of practical training

Internship procedure

Conditions for the start of the practical training

- The conditions of participation / the criteria for inclusion of a student in the NSRF Internship, are determined by the Departments, are posted on the websites of the relevant Departments and on the Practical Placement Office website, praktiki.uniwa.gr.

- The Internship Institution (FYPA), in which the student will carry out the internship through NSRF, must be certified as an Internship Institution in the Central Support System of the Internship of Students of the University ATLAS.gr.

- Atlas is a central online service, which connects internship providers (internships) with all Academic Institutions in the country, creating a single database of internships that are available for selection at the Institutions.

- At the same time, it offers comprehensive information on issues related to the labor market and the first steps of students in it.

Stages for the beginning of the practice

- At regular intervals, the Scientific Officer of each Department publishes on the website of the Internship Office praktiki.uniwa.gr, as well as on the website of the relevant Department (with a link to the website of the Internship Office) "Announcement of the start of the Internship Program NSRF "in which it invites interested students to submit a relevant application.

- After the declaration of the Internship course by the student, the student is obliged to connect with the codes of Eudoxus in the ATLAS system, atlas.grnet.gr.

- The application is submitted by the student to the secretariat of his Department, where it is registered and concerns only the specific announcement. In case the student is not selected for an internship in this announcement, his application ceases to be valid. The student has the opportunity to re-apply in a new announcement that will be published by the department. The student is solely responsible for the valid and timely submission of the application.

- Communication of a student with a possible Internship Institution (FYPA) and confirmation of the FYPA that accepts the student for an Internship (there is a relevant standard form, which can be download).

- Submission of the "Student Acceptance Certificate" in three original copies to the Scientific Officer of the Department.

Pay special attention to the following:
- The "Certificate of Student Acceptance" is strictly signed by the Legal Representative of FYPA.

- A bank document certifying the accuracy of the IBAN and the beneficiaries of the bank account must be attached to the forms

- In the field "A.M.K.A." is filled in exclusively the Registered Number of the student's Insured and not of the parent to whom the student is medically insured. In case the student has not worked in the past, he must issue a Registration Number to the IKA of his area.

- Drafting of the Issue of the "Special Employment Contract for the Internship" by the competent Department of ELKE. The contract is then sent to the Scientific Officer, who after the necessary check forwards it to the student.

- Signing in five original copies of the "Special Employment Contract for the Internship" between the University, FYPA and student (initially signed by the student and then signed and sealed by the Legal Representative of FYPA, the Scientific Officer of the Department, the Head of the Department and finally

the Legal Representative of ELKE UNIWA). The order of the signatures is strictly followed and cannot be modified.

- Two (2) copies are returned to the student, who immediately gives one to FYPA, to make the necessary procedure in the ERGANI system (you can see about it here). It is pointed out that the registration of the student in the ERGANI system is mandatory and is done by the FYPAs, at the latest on the date of the beginning of the Internship. Then the form E3.5 is sent to the competent Internship Office of the NSRF.

- The student receives the Internship Book (in electronic form) from the Scientific Officer of the Department and completes it according to the instructions in it.

- The student completes and sends electronically the Inventory Card to the respective Internship Office.

Procedure for the end of the practical training?

The student submits to the Secretariat of his Department the Internship Book, fully completed by the student and signed and sealed (where required) by the company supervisor (FYPA) and the supervisor Professor, as well as any additional document requested by the Secretariat of the Department, certify the successful completion of the internship.

- Submission of the student's payment receipts by the company (FYPA), in case the company participates in the student's compensation.

- Submission of the "Certificate of Completion of the Internship" by the Scientific Officer of the Department to the competent Office of Internship NSRF.

- The student completes and sends electronically the Exit Inventory Card to the respective Internship Office.

Where can students perform their practice?

- Students can do their internship in the country and specifically in companies in the Private Sector with a few exceptions that can be done in the Public Sector. These exceptions are examined on a case-by-case basis by the respective Department. These exceptions concern peculiarities of the study program, or

special categories of students and can not exceed a certain percentage in relation to the internship in the Private Sector.

How will anyone find an internship?

One can search for information from:
- From the Internship page, in the "Ads" section.

- The professors of their department, always taking into account the subject matter that interests someone.

- The "ATLAS" system. To enter the ATLAS system one uses the Eudoxus codes, with which you have access to the online student register.

- The lists of collaborating bodies available to each Department.

- Your own people who can work in the field.

- The Internet.

- In any case, a company (FYPA) must be registered in the ATLAS system.

What is the internship remuneration and when is it paid?

- The compensation of the trainee students for one (1) month of full-time employment amounts to € 280.00, including the insurance coverage.

What applies with insurance during the training?

- During the Internship the trainee student is insured only against occupational risk. This insurance contribution amounts to 1% of the imputed salary of the 12th insurance class and is covered by funds of the act "Internship of Higher Education of the University of West Attica" implemented under the Business Program "Competitiveness Entrepreneurship and Entrepreneurship 2014-20 by the European Social Fund (ESF).

What is the duration and what are the hours of the practical training?

- The internship can last from two (2) to five (5) months of full time, depending on the curriculum of each Department of UNIWA.

- As a full-time schedule per month of trainee university students, is considered the corresponding institutionalized full-time schedule of company (FYPA) employees, in the respective specialty.

What are the student's obligations to the company?

- The trainee in his workplace is obliged to follow the safety and labor regulations as well as any other regulations that apply to the staff of the company or service. Arbitrary absences or violations of workplace regulations can lead to termination of employment.

Has the student the right to be absent during his/her internship?

- During the internship, the trainee student cannot be absent, except for justified and serious reasons. The days of absence can be depending on the duration of the internship up to 7 days

- Absences are strictly recorded in the internship book

Can there be a change of company during the training?

- In case the administration of a company (FYPA) does not follow in general the employment program of the trainees or employs them in other ways, it is possible, after a decision of the Internship Committee of the Department, to stop the internship in the specific workplace.

- In the event that the trainee finds that he is not engaged in matters of his specialty in the broadest sense, he must state this in a note, both to the supervisor appointed for the workplace, and to the supervisor professor of his Department. The latter decides whether there is a reason to change job or not. In case there is a reason, it cooperates with the Internship Committee for the placement of the trainee in another position.

- For the months that the student has been working, he / she completes the internship book and receives the relevant certificate from the employer. Then, in the new position, an internship is carried out only for the time remaining to complete the required period of internship.

Where can a student be talking about what is needed for training issues?

- Department Internship Committee / Student Internship Supervisor

- Internship Office on the Campus of Egaleo Grove

- Internship Office on the Campus of Ancient Olive Grove

Publicity

- All the internship procedures are implemented centrally through the Internship website praktiki.uniwa.gr:

- The "Announcements for the Start of Internship through the NSRF program" are posted on the Internship website and republished on the website of the relevant Department.

- It is pointed out that announcements that have not been previously posted on the Internship website will not be valid and any applications that may be submitted will be considered invalid.

- The evaluation minutes of the departments are posted on the Internship website and then the objection process follows. The minutes are posted signed.

- The student who wishes to submit an objection regarding the result, has the right to appeal before the Objections Committee of his Department within five (5) working days from the announcement of the results on the website of the Internship.

- After the end of the objection period, the assignment tables are compiled by the Scientific Officer of the relevant Department and then posted on the Internship website.

- It is pointed out that in all the forms (internal and external) that circulate in the context of the implementation of the NSRF Practice Act, it is necessary to have the logos of the NSRF in visible places.

Accompanying forms and documents

- the "Certificate of acceptance of a student for an Internship".

- the "Internship Book".

- the "Certificate of Completion".

- the "Input Inventory".

- the "Inventory Exit Card".

ATLAS: Centralized Internship Support system for Greek Higher Education Students

About

"Atlas" is a centralized online service which interconnects companies that provide internship positions with all academic institutions in Greece by creating a unique internship positions database.

Aims

The aims of the service are:

- Creation of central database of available internship positions

- Increase in the number of available internship positions

- Simplification of contact procedure between stakeholders

- Mitigation of bureaucracy

Terms and Conditions for participation in the "Atlas" program

1. Every participating Host Company should read these terms carefully before participating in the "Atlas - Central Support System for University Student Internships" program. The participation of each Host Company in the "Atlas" program implies explicit and unconditional acceptance of these terms.
2. The participant Host Company in the "Atlas" program declares and accepts explicitly and without reservation that all of their actions within the Project's Information System will abide by these terms and conditions and the applicable law.

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3. The Host Company's Participation Certificate signed by the legal representative of the HC upon registration in "Atlas" serves as a Solemn Declaration lieu of Law 1599/1986.

4. With the Participation Certificate, the participant HC authorizes legally a natural person, who becomes responsible for the "Atlas" program and automatically accepts the terms and conditions for the participation in the Program and is required to comply with them. Any act or omission by the authorized contact person is considered an act or omission of the Host Company, which is entirely responsible.

5. The participant HC is required to accept and assume any claim raised by GRNET SA and exempt GRNET SA and their directors, officers, employees, partners and agents from any liability for damages, expenses (including legal fees), judgments and any other costs or claims by third parties that may result from violations of the current legislation, when entering the Internship position in the project's Information System and / or during the course of the internship by the students.

6. The participant HC explicitly and solemnly declares that all recorded information is accurate and true. The participant HC is the only responsible to update the registered details in case of any change.

7. The management and protection of personal data of the participant HC are subject to these terms and the relevant provisions of Greek and European law for the general protection of individuals with regard to processing of personal data and privacy of communications, as interpreted by decisions of competent independent Administrative Authorities. In any case GRNET SA reserves the right to change the terms of protection of personal data upon notification of the participating Host Companies via this website. GRNET SA is not involved in any way in any dispute which may arise between third natural or legal persons involved in the "ATLAS" program.

8. Participation in the program involves the explicit and unconditional consent of the HC to a. registration of their personal data in a file that is kept for them, and b. modification of them by GRNET SA in the implementation of this project according to the provisions of N.2472/1997 as applicable. As such, GRNET SA may use personal information to contact participating Host Companies and inform them on issues related to the project. GRNET SA safeguards the personal nature of the information provided by the participating Host Companies and may not convey it without their consent to any third party (natural or legal) for any reason,

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with exceptions resulting from relevant provisions of law and to the relevant authorities only.

9. GRNET may amend / update these terms without any prior notice. For this reason, whenever using the online service "Atlas", every user must check the applicable terms of use, since participation in the "Atlas" program implies explicit and unconditional acceptance of these terms.

Main challenges

The procedure is well worked out and known over the entire University and an information session is organised for the students every academic year. No real difficulties remain, all students can do an acceptable internship. Besides, the companies find students internships a good solution the increase of their personnel with such a small money compensation since they are half funded by OAED. The requirements of contact with UNIWA on the company are low (assign internship coordinator, help draw up the Internship Agreement with the set-out tasks, sign the contract, supervise the student during the internship, give an evaluation at the end through the UNIWA system), so companies can focus on their own work processes.

Benefits

Although the benefits for an internship are mainly for the student and the company involved, some might be of interest for the HEI as well, e.g.:

- Expansion of the industrial network

- Strengthen the ties with industrial partners

- Find common scientific interests

- Complement expertise

- Better knowledge of production processes and workflows

Lessons learnt

The programme given is a programme with limited overhead to run an internship, while still making sure the internships reach their goals:

1. Integrate the discipline-specific knowledge, skills and methods (specific to the own engineering programme or main subject) in the internship.
2. Apply the acquired engineering skills to one or more specific problems in an organized, accurate and structured way.
3. Function as a member of a team in an academic or professional multidisciplinary environment.
4. Operate independently, with a sense of creativity, personal initiative and critical thinking.
5. Report in writing on a technical and/or scientific subject, with attention to lay-out, language and structure of the document.
6. Report in writing on a technical and/or scientific subject with attention to the scientific correctness and soundness.
7. What is also important is that the internship programme in both cases is University wide, allowing for a Board per Department to oversee all internships and make sure the level is comparable between students.

6.2   Best Practices – UNIWA student's internship experience

Name of the partner University*:* University of Birmingham

Curriculum in which the internship program was inserted*:* National Centre for Nuclear Robotics (NCNR)

Name and sector of the company*:* Extreme Robotics Lab (ERL)

Duration of the internship at the host company*:* 6 months

Introduction

The University grew out of the radical vision of the first Chancellor, Joseph Chamberlain. Founded in 1900, Birmingham represented a new model for higher education. This was England's first civic university, where students from all religions and backgrounds were accepted on an equal basis. Over 350 different undergraduate courses offered, from business to biosciences, engineering to psychology. Teaching and research are closely interlinked, encouraging undergraduate students to explore new ideas in their subject and beyond.
The students are chosen by the company based mostly on academic criteria and also on the fact whether the student has been engaged with topics related to AI and robotics

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before. There is an official agreement between the two parties (home university and partner university) that has to be set up before joining the organization.

Description of the internship

The NCNR is a collaborative project involving international experts from 8 UK universities and 30+ partners from the nuclear industry. A consortium of 8 universities led by the University of Birmingham is developing cutting-edge technology to solve the problem of nuclear waste. The mission is to clear the UK of radioactive material - but the human benefits of their tech go far beyond nuclear safety. The Birmingham Extreme Robotics Lab (ERL) is Europe's most prominent university lab dedicated to nuclear and other extreme environment applications of advanced robotics and AI.

Birmingham ERL researchers develop the state-of-the-art algorithms and control methods. The students are highly interested in developing algorithms and techniques that can empower machines with the ability to cooperate with humans in human-robot teams, executing real-world useful tasks and keeps humans away from harm.

The company's support is being constant – the supervisor alongside the manager make sure that the student receives good treatment, knowledge and valuable insights. The employees are as well very generous and open to share their knowledge. From the university side, there is consistent support that contributes to a great internship experience.

The evaluation is done by the supervisor every month based on a written report which is submitted to the university postgraduate researcher community (PGR).

Main challenges

Once the student is selected, the paperwork process needs to be followed is mainly carried out by the supervisor and the manager preventing in that way any difficulties might occur. They are in charge of directly contacting the company and arranging the agreement.

The main challenge is regarding the procedure that students have to follow in order to be settled in. These challenges are related to finding accommodation, social interaction etc. Especially, the difficulty of finding accommodation for a short time period is a significant issue in UK. However, the supervisor helped by getting in touch with letting/estate agents and arranging views.

Other than these, there are also some challenges regarding the access of students in the laboratory during the pandemic. Despite the difficulties, the students are allowed to get access simply by following the precautionary measures and informing the people who are in charge of letting people in.

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Benefits

The scientific education provided by university's programmes and internships, with their emphasis on rigorous observation, data collection and interpretation, means that job prospects for graduates are excellent. The students will develop skills in analysis, research, technology and also in presenting and explaining their work clearly and effectively. They will work on a research project in an area of robotics over with expert one-to-one supervision. The company work environment was inspirational - they have put their focus on providing education and well-being for each personnel. And indeed, working at a company, which is Europe's most prominent university lab, looks very good on the CV.

Lessons learnt

Having a specific project, working under the supervision of postdocs and professors and getting along with them brings strong benefits to the student, the company and the university. This brings better career prospects, increases the qualifications of the student and helps the young graduate make better and quicker decisions upon finishing their degree. The most remarkable lesson for a student, however, is to get an idea of how professional researchers conduct research in the academic career path.

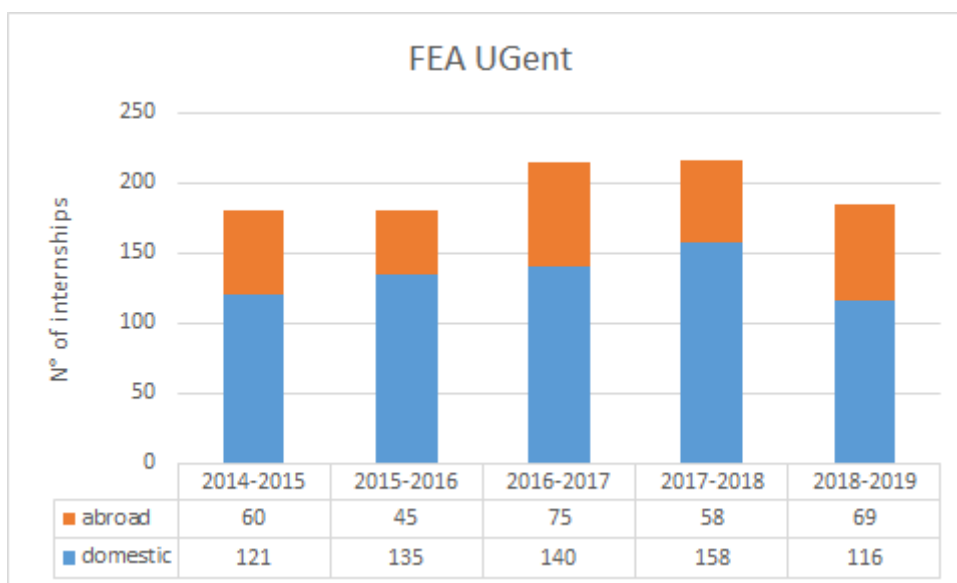## 6.3   Best Practices – UGent's Internship Programme

Name of the internship programme*:* (International) Internship at the Faculty of Engineering and Architecture (FEA)

Running time of the internship programme*:* min 4 weeks

Number of students that participated in an internship under this programme*:*

FEA UGent

	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
abroad	60	45	75	58	69
domestic	121	135	140	158	116

Number of companies that hosted an intern in the framework of this programme: Between 150 and 200 companies each year since 2014.

Introduction

This Internship program at the Faculty of Engineering and Architecture at UGent is organized as optional course credit (3 or 6 ECTS). The goal is to bring the student into contact with the actual industrial, scientific or social environment where the knowledge acquired during the study will be practically applied. Internships are generally possible after the third bachelor or first master year (usually during the summer break), but this might be variable from programme to programme. Students should verify with the programme director.

The internship can be unpaid or paid through an employment contract with the company. No payment by Ghent University is foreseen. There is a strict procedure to be followed for internships by all students that do internship, even if students don't want credits for the internship. In principle, an internship is carried out during the summer recess before the final year, but it can also be done a year earlier.

There is no central program were companies are vetted or listed. Students search themselves for a company based on university contacts, outside internship organizations, or their own contacts. As the program is elective, this works sufficiently good, students that want an internship can normally find a company.

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Application process

Before the start of the internship, students are required to look for a supervisor among the tenured academic staff (professors), specializing in the discipline of the internship. The supervisor must ascertain, through personal contact with the establishment offering the internship and with the on-site internship coordinator, that the level of the internship on offer is technically and scientifically speaking sufficiently high.

All communication happens through a UGent Faculty of Engineering and Architecture web portal PLATO. An Internship Contract must be created there, if the company requires a company contract instead, this must be reviewed by the Judicial Review of UGent.

The supervisor must also accept the proposed internship agreement. Next, the Study Programme Committee will decide whether the internship can be accepted as an elective module when the students include it in their curriculum. A health check risk analysis must be performed, which the company fills in. The student undergoes a free health check by DMT, UGent.

During and after the internship

As internships are typically during the summer break and are a contract between a student and a company, there are no requirements during the internship on reporting. The student can however in case of problem contact the standard student support services (doctor, counsel, …). In the company, an internship coordinator must be assigned, and his contact details uploaded in the web platform.

After the internship, the student must submit a report. The student must request the supervisor for the requirements of the report, however, the minimum requirement of UGent is set as follows.

The report must consist of 4 sections:

1. The company and its activities,
2. A description of the internship assignment,
3. A technical report of the internship, and
4. A personal assessment.

Practically, the report must be min. 10 and max. 30 pages (font size 12, 4 lines per inch), possibly supplemented with technical annexes.

Upon report submission, the evaluation process starts. PLATO sends an email to the internship coordinator of the company. He/she must complete a prescribed assessment form on PLATO. PLATO sends an email to the UGent supervisor. The results are

registered as the final grade and are official on the transcript of records of the first or second semester.

Main challenges

The procedure is well worked out and known over the entire Faculty and an information session is organised for the students every academic year. No real difficulties remain, all students that want to do an internship find an acceptable internship. The requirements of contact with UGent on the company are low (assign internship coordinator, help draw up the Internship Agreement with the set-out tasks, sign the contract, supervise the student during the internship, give an evaluation at the end through the UGent system), so companies can focus on their own work processes.

Benefits

Although the benefits for an internship are mainly for the student and the company involved, some might be of interest for the HEI as well, e.g.:

- Expansion of the industrial network

- Strengthen the ties with industrial partners

- Find common scientific interests

- Complement expertise

- Better knowledge of production processes and workflows

Lessons learnt

The programme given is a programme with limited overhead to run an internship, while still making sure the internships reach their goals:

1. Integrate the discipline-specific knowledge, skills and methods (specific to the own engineering programme or main subject) in the internship.
2. Apply the acquired engineering skills to one or more specific problems in an organized, accurate and structured way.
3. Function as a member of a team in an academic or professional multidisciplinary environment.

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4. Operate independently, with a sense of creativity, personal initiative and critical thinking.
5. Report in writing on a technical and/or scientific subject, with attention to lay-out, language and structure of the document.
6. Report in writing on a technical and/or scientific subject with attention to the scientific correctness and soundness.

What is also important is that the internship programme is faculty wide, allowing for a Faculty Board to oversee all internships and make sure the level is comparable between students.

6.4 Best Practices – UGENT student's internship experience

Curriculum in which the internship program was inserted: European Textile Engineering Advanced Master (E-Team)

Name and sector of the company: Liebaert (Textile Sector)

Duration of the internship at the host company: 2 months

Introduction

Ghent University is a top 100 university and it is located in Belgium. It was founded in 1817 and now has 11 facilities with more than 47 000 students. Each of the faculties at Ghent University deals with internships separately. The best practice described in the following sections is an internship experience within the framework of the European Textile Engineering Advanced Master (E-TEAM), coordinated by the Department of Materials, Textiles and Chemical Engineering, part of the Faculty of Engineering and Architecture. The program was spread over four semesters, each at a different location: France, Poland, Sweden and Ghent. The internship was unpaid and entitled to credits, done in the summer period between the 1st and 2nd year of the study program. The company was chosen from a list of companies that have previously collaborated with Ghent University and an official agreement was set up between the three parties. The administrative tasks related to this practice were regulated via an online platform dedicated for internships (Plato).

Description of the internship

Marcel Liebaert nv is a family company located in Deinze, Belgium. The company is vertically integrated, producing yarns, fabrics and textile products completely made in

Belgium. It has been renowned within the European textile industry since 1887. Top quality products and customized solutions made by fabric engineering and garment design verified with the highest standards make Liebaert a market leader in elastic fabrics, narrows and a supplier for various big companies, including Decathlon and Volvo. Recently its popularity has expanded with the successful launch of their own clothing brand "RectoVerso". In terms of facilities, the factory consists of a knitting department (with warp and weft knitting machines); weaving facilities that can process special yarns like metal and carbon; a confection lab with sewing machines and an advanced laser cutter; a large dyeing and finishing department; and physical and chemical labs for testing. There are around 175 machines for knitting and weaving only and over 300 new products are being developed each year.

The internship itself did not include a specific project, but was rather focused on getting an overview of the different processes done in the factory, from the manufacturing processes to quality management and product development. The student got familiar with the work in the different departments. She had to assist in the work, follow several training sessions, contribute to product development for clients and participate in internal and client meetings, problem solving related to manufacturing as well as production planning, product development. The support from the side of the company was constant - the responsible (the plant manager) made sure that the student received good treatment, knowledge and valuable insights. The employees were as well very generous and open to share their knowledge. From the university side, there was consistent support that contributed to a great internship experience. For example, during the collective vacation and thus, temporary company shut down, the university offered its labs and necessary training, as an alternative work.

After the internship was completed, the evaluation was done by the supervisor based on a written report which had to be submitted on the special UGent platform Plato. In the report, the responsible of the company had to write a short evaluation of the student as well.

Main challenges

The primary challenge was to get in touch with the company and make an agreement. From the list of industry companies offered by the university, most were either not accepting interns at the time or took very long to respond. Especially as the internship was done abroad (the student was not Belgian) this difficulty in communication brought high uncertainty for the student in planning and different arrangements. However, the supervisor from the UGent departments helped by directly contacting the company and arranging an agreement. Another challenge was regarding the tasks and responsibilities of the student. There was not a specific project but rather a daily shift between

departments in order to follow the processes and get a general overview of the work-flow. This internship was very beneficial for the student with no or minimum experience in the industry, but for others it could be demotivating as there was not a definite goal and measurable results to be reached.

Other than the work itself, there were some challenges regarding the stay, accommodation and social interaction. Finding accommodation for the short period of stay in Belgium is hard without good assistance and this could be improved in the future by better support from the university. Other than the work itself, there was a lack of social activities within the company and with other students.

Benefits

The internship provided a great value for the student development during the master studies, bringing insights of a successful company and an idea of the industry flow.

The experience increased the student's confidence for future jobs and helped in making firmer career decisions soon after graduation. The student broadened the career network and gained valuable knowledge about the textile industry. Although a short period, there were several new practical skills gained including quality assessment, material handling and product development. The company work environment was inspirational - they have put their focus on providing education and well-being for each personnel. All of these aspects are beneficial for further transfer to improve other environments. And indeed, working at a renowned company looks very well on the CV. The university support played an important role for the internship quality, for instance, by offering their lab facilities and training in order to compensate for the period of company vacation.

Lessons learned

Several important things could be learned from this practice. Stronger collaboration between universities and industries is the key to a high-quality internship. An official agreement for intern acceptance by companies would improve the practice and decrease the stress and uncertainty of the intern during the application. This would also help in preparing project proposals for future interns. Having a specific project brings strong benefits to the student, the company and the university. This brings better career prospects, increases the qualifications of the student and helps the young graduate make better and quicker decisions upon finishing his/her degree. At last, the whole experience can be enhanced by arrangement of social activities within the company and improving connection with other peers.
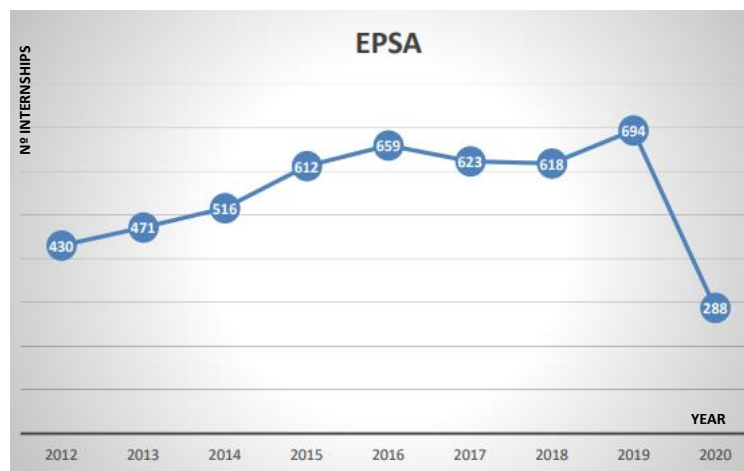
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6.5   Best Practices – UPV's Internship Programme

Name of the internship programme*:* Internship at the Escuela Politécnica Superior de Alcoy (EPSA)
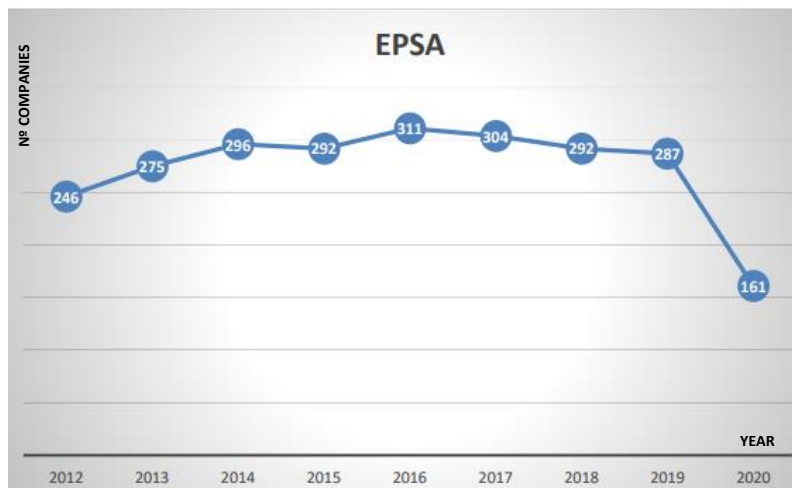
Number of students that participated in an internship under this programme*:*
*Data updated to 22/07/2020

Graphic 1. - Number of internships per year in the EPSA

Number of companies that hosted an intern in the framework of this programme*:*
Between 240 and 320 companies each year since 2012. *Data updated to 22/07/2020

Graphic 2. -Number of cooperating companies per year in the EPSA

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Introduction

All the degrees and masters offered at the EPSA, as part of their educational itinerary, the possibility of entering the world of work through internships in companies.
The Internship Unit aims to complete the training of students in a professional environment and thus improve their curriculum.
There are two types of internships:

- Curricular: they provide degree credits.

- Extracurricular: they provide work experience, but do not provide degree credits.

What academic requirements must be meet?

- For curricular internships in the Bachelor's degree, the student must have completed the first year of the course.

- For extracurricular internships in the Bachelor's degree, the student must have passed 50% of the degree credits.

- In Official Master's Degrees, curricular and extracurricular internships can be carried out from the beginning of the degree course.

A student of the EPSA has two possibilities to do an internship in a company:

- Access the database that the EPSA has with those companies or institutions. These companies or institutions ask EPSA for internships. In this case, if the student complies with the UPV regulations for internships in companies, the student can apply for the offers that interest him/her. In this case it is always the company/institution that selects the student.

- Another way is for the student to personally look for an internship in a company. The student can search through your contacts, visit companies, send e-mails, etc.

In order to be counted as part of an academic year, the internship must be completed between 1 September and 31 August of the academic year.
Minimum mandatory financial package (to be paid by the company):

- For 4 hours/day --> 300€/month

- For 5 hours/day --> 375€/month

- For 6 hours/day --> 450€/month

- For 7 hours/day --> €525/month

- For 8 hours/day --> 600€/month

Also, the company must pay the national Insurance contributions of the student.
The maximum number of internship credits can be taken depends on the degree. Approximately 1800 hours for bachelor's degrees and 900 hours for master's internships. One curricular credit is equivalent to 25 hours of internships.

Application process

1. The student looks for an agreement with a company, either by selecting it from the EPSA's offers or by looking for a company to carry out the internship. If it is the student who directly search the internship, it must comply with EPSA and UPV regulations.
2. The agreement for an internship must be submitted at least 10 days in advance. It is prepared online through the UPV website. The student must find a lecturer from the EPSA, with teaching experience in his or her degree, to be his or her tutor.
3. The Internship Unit will process the agreement.

During and after the internship

When the student finishes the internship, he/she must complete an on-line internship evaluation report (available on the UPV Intranet). This report includes an internship report to be written by the student according to the following script:

- Specific and detailed description of the tasks, work carried out and departments to which the student has been assigned.

- Evaluation of the tasks carried out with the knowledge and competences acquired in relation to the acquired in relation to the university studies.

- List of the problems found and the procedures followed for their resolution.

- Identification of the contributions made by the internship in terms of learning.

- Evaluation of the internships and suggestions for improvement.

Also the company tutor will also fill in an on-line report, and finally your EPSA tutor will carry out the final evaluation. EPSA will carry out the final evaluation.

Main challenges

During the procedure and its development of the internship by the student, there are no great difficulties since the process is well elaborated. Moreover, it is known by the students, as there are talks to give them information, as well as personal tutorials for those who are interested. From the UPV's company internship service, a company tutor, as well as a university tutor is assigned, the student is supervised, maintaining constant contact with him or her, helping to draw up the agreement, sign the contract and complete the final evaluation.

Benefits

This type of activity has an important benefit, both for the student and for the company that receives them. As for HEIs, they can find great benefits, for example:
- Expand the business contacts of the institution.

- Know the advances in technology, problems that arise and know-how of the company

- Find common scientific interests.

Lessons learnt

This programme mainly meets two objectives in the essential practices for the student and for the company that receives them:

- That the student can begin their professional experience with the university degree they are studying.

- That the company can have professional help in specific projects from the student. The company can grade the knowledge from the university degree and even select a future qualified professional.

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6.6   Best Practices - UPV student's internship experience (1)

Name of the partner University*: Universitat Politècnica de València. Campus d'Alcoi*

Curriculum in which the internship program was inserted*: Industrial Design and Product Development Engineering. Textile itinerary*

Name and sector of the company*: AITEX -Textile Industry Research Association Textile research, characterisation testing and certification of textile article.*

Duration of the internship at the host company*: 2 months*

Introduction

The Alcoy Campus is an institution with more than 150 years of history, specialising in technical education. It currently offers 6 bachelor's degrees and 2 double degrees, as well as 4 master's degrees, including the master's degree in Textile Engineering.

The Industrial Design and Product Development Engineering Degree has a textile itinerary, made up of different subjects spread over the 4 years of the degree course. In addition, the last four-month period is made up solely of subjects from the chosen pathway, and the final project of the degree.

At the end of the fourth year, when students finish their lessons and they only have the final project is the perfect environment to do an internship in order to apply all the theorical knowledge in real cases. The university has a online platform where internships are offered and where students can choose the one that best suits their needs.

Description of the internship

The Textile Industry Research Association (AITEX) is a private-sector association for research, characterization testing and certification of textile articles and materials in a wide range of sectors.

The Institute's core objective is to create technological knowledge and transfer it to textile companies, making them more competitive and providing access to new business opportunities, while creating added-value factors.

In this case, the internship took place in the company's research and development department, specifically within the Intelligent Textiles and ICT solutions group, where the student was able to develop part of a final degree project.

During the stay, the student actively participated in projects being developed by the group, through the development of the state of the art, the generation of new ideas and solutions, the design of new 3D products, the design of templates for the printing of conductive inks on textiles, or the materialization of the final project.

The relationship between student and company relied on the figure of the tutor in the company, who was in charge of supervising the tasks carried out by the student, commissioning new projects or activities and solving any type of doubt or problem that might arise during the stay.

In the same way with the university, the figure of the tutor, in this case belonging to the institution, was in charge of supervising that the conditions established in the internship contract were fulfilled so that the student obtained an enriching and complementary experience for his or her training.

Finally, when the student had finished the stay, he had to fill in a final report, including the activities carried out during the whole period, which the university tutor should revise and sign to confirm that the trainee's work placement had been passed in a correct form. The company tutor had to write another report, where he established if the internship had been developed correctly.

Main challenges

In this case, thanks to the previous contract between the company and the university, any difficulty was observed by the interns and Aitex. The conditions were specified in detail so that there would be no misunderstanding.

Benefits

An experience of this kind is crucial in the training of any student as it helps them to confront situations or problems that they had previously only contemplated from a theoretical point of view. It also allows them to put into practice everything they have learnt so far, hence the importance of developing this type of activity in the final years of training, when they already have a solid knowledge base.

Thanks to this experience, students can learn first-hand about the work carried out in a company, in which it is of vital importance not only to have technical knowledge but also creativity, empathy, teamwork, responsibility and collaboration.

Students come away strengthened and with a clearer idea of where they want to focus their future.

Lessons learnt

In order for an internship to be advantageous for both sides, company and student, it is very important to establish what is expected from each of them and the conditions under which it will be carried out. It is also important to choose an internship that suits the student's objectives and that can help him in his future.

The figure of the tutors plays a fundamental role in the good development of the stay, as it speeds up the solution of any kind of problem and allows a closer connection between the student and the institutions and companies.

It is also worth highlighting the importance of the tasks carried out by the student, as they should always be adjusted to the student's educational level, being beneficial both for the company and for the student, and avoiding those tasks that do not contribute anything and that could demotivate the student and not help him in his learning.

6.7   Best Practices - UPV student's internship experience (2)

Name of the partner University: Universitat Politècnica de València

Curriculum in which the internship program was inserted: Master in Textile Engineering

Name and sector of the company: Aitex - Textile Research Institute Duration of the internship at the host company: 3 months

Introduction

The Universitat Politècnica de València is located on the east coast of Spain, specifically in the Valencian Community, and has more than 50 years of experience in teaching higher technical education and research.

Among the training programs offered, there is the master's degree in textile engineering, an official program that combines theoretical and practical knowledge in the textile field, which is also completed with visits to companies and laboratories in the sector, among which is Aitex, the most important textile research laboratory in the country.

After learning about the work carried out in said company, the student enrolled in the internship offers that had been published on the job portal of the university website in collaboration with Aitex.

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Description of the internship

Aitex is a textile research laboratory founded in 1985 that, today, divides its activity between research and development and the performance of laboratory tests of various kinds, such as the detection of harmful substances, thermal properties and comfort, or the mechanical properties of fabrics, among others.

The textile sector in the Valencian Community has historically had a great relevance in the economy of the area and, in recent years, traditional companies have been updated to incorporate the added value that technology provides to their products.

The student joined full time in the research group on smart textiles, a team of eight people, who managed projects of different kinds within that area, including the manufacture of smart textiles, garments with built-in electronic functionalities or assistive devices for people with reduced mobility.

The student's main tasks consisted of supporting the different projects by performing the following assignments:

- Development of textile samples and prototypes.

- 3d printing of small elements such as covers, supports or coatings for electronic components.

- Conducting tests in the laboratory.

- Analysis and review of bibliography.

- Image design for presentations, catalogues, and social networks.

- Contact with suppliers and search for materials and equipment.

- Preparation of reports and documentation.

Main challenges

In the aforementioned company the incorporation of interns for a short period of time, between three and five months, is common in research groups that have been operating for years. As there is no presentation day for the interns, nor training documentation, it is up to the members of the group to train these new people who join, with the time consumption that this entails, and knowing that in a few months they will have to repeat

it with someone different. This directly affected the intern's experience, since some people in the group avoided contributing to their training due to the fact

explained above. Luckily, this was solved thanks to the disinterested involvement of other members of the group who accompanied the intern and answered her doubts throughout the whole stay.

Benefits

Thanks to the internship, the student was able to make contact with new technologies, as well as meet different companies in the sector, obtaining a broader point of view and useful professional contacts. Likewise, the professional relationship between Aitex and the intern has developed beyond the internship period and, nowadays, they collaborate occasionally on various projects.

For the company, it is interesting to have a portfolio of personnel that can be counted on in the numerous projects they carry out, with the advantage of knowing the performance and background of the person in question.

Lessons learnt

Definitely, the internships turn out to have a positive outcome for both the student and the company, favoring their integration into the world of work and expanding the knowledge acquired during their academic training.

As the main lesson learned, it is worth highlighting the need to prepare specific training for the student's arrival at the company, which will bring him up to date on the company's practices to release that burden from their colleagues and ensure a seamless integration.

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