An ocean refuses no river.
Expanding the borders of international cooperation

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This article builds on the opening speech of Luk Bouters at the 49th Conference of the ICEIGATM and the 8th China Academic Conference on Printing and Packaging, held in Beijing May 14-16, 2017. We provide four sets of arguments to continue investing in an international network of professional contacts as a good return on investment for a Higher Education Institution (HEI): the benefits for educational quality, the benefits for the necessary specialization and collaboration, the benefits for research, and finally our moral obligation as educational institutions.

The International Circle of Educational Institutes of Graphic Arts, Technology and Management, better known under its abbreviation the International Circle, was established in 1957 in Lausanne. Initially founded by representatives of higher education in Europe, it gradually expanded its network from higher education institutes to partners from relevant industries and research institutes. The network currently spans the five continents and counts over 150 institutional members. As the IC does not require the payment of membership fees, it operates thanks to the continuous effort and dedication of volunteers active in the organization.

At the time when the IC was established, its founding fathers felt the need to interconnect and exchange views and experiences across national borders. As universities specialized in the very specific niche of printing, they realized that they had to go abroad to meet colleagues and peers, and that an international learning environment provides a favorable context for a conducive learning environment for the students. Today, this vision is as accurate as ever. There is a huge and daily need for a platform like the IC to exchange project ideas and expertise in our sector and to promote joint research and education. It is a starting point for meeting educational institutions, printing and publishing businesses, suppliers and organizations, and a necessary platform to turn these meetings into sustainable collaborations.

The necessity for international connection, exchange and collaboration obviously holds for all economic sectors and higher education institutions. But it is particularly relevant for the domain of information and communication technology. This should be no surprise given the technological innovations in those areas and their effect on changing consumer preferences. Driven by these changes, completely new industries have arisen (such as computer gaming, 3D printing, web design and mobile app development), and traditional consumer industries have been forced to redesign and repackage their offerings to suit consumers' desires while combatting disruptors (see, e.g., [1] and [2] , or specifically for our industry [3, pp. 9–10]).

Higher Education Institutions (HEIs) have a pivotal role to play in international exchange and collaboration. The Erasmus Impact Study from 2014 [5] underscores the fact that higher education, with its links to research and innovation, strongly influences not only economic growth but also the personal development and the mindset of people, both students and staff. They need to be aware of the new skills portfolios in order to shape educational programmes accordingly to ensure that their graduates competence profile is 'future proof'. Integraf notes especially "[h]igher VET [has gotten] an increasingly important role" in the industry. [4, p. 9] Today, our knowledge is outlived quickly and developing abilities to cope with these challenges is imperative and vital to remain relevant.

In what follows, we focus on four arguments supporting the need for continuous investment in international collaboration from the perspective of HEIs specialized in (print) media production. It should be noted however, that the impact of mobility on the institutional development of higher education transcends the perspective of structural and institutional change and the quality of the professional education; it touches on and affects the whole person and the individual personality.

Educational quality

First of all, the internationalization of the industry and the globalization of our society have an effect both on our work and the (future) work of our students. Business has more than ever gone international and this trend will only intensify. Many of the companies that will employ our students will recognise one or more of the following:

- they serve customers in different national markets;
- they are subsidiary to an international corporation or network;
- they feel new competition from international players on their market;
- they innovate together with partners from other countries;
- they use technologies or products from international vendors.

To underline this: Intergraf reports that the EU imported €3.1 billion worth of printed products from outside Europe in 2016, while exporting €5.6 billion in the same year, with China, the United States and Switzerland being the biggest trading partners. [6, pp. 32–33]

This implies that the higher education students, who are these businesses' future employees, need to have an international perspective on business. They need to be able, e.g., to recognise international business opportunities, to spot international innovations, to be alert for international competition, and to analyse international trends and predict the impact on their local markets. As a consequence, "[t]he share of employers who considered experience abroad to be important for employability also nearly doubled between 2006 and 2013 from 37% to 64%" [5, p. 16]. This clearly requires a specific curriculum at least partly inspired by the international developments themselves.

Secondly, employers increasingly emphasise the importance of soft skills of graduates. As Intergraf notes: "training needs will not just be in technical areas […] but also in "soft skills" such as sales, marketing and customer service." [4, p. 35] This list can be extended with soft skills that play on an international dimension. Students need to have sufficient language skills and intercultural understanding to be competitive in the job market and to be valuable employees, excelling in cross-cultural competency. [7, p. 7] They must be open to other cultures and other ways of doing business, while at the same time realising that their own culture is not universal. Intercultural learning opportunities occur mostly after being exposed to others' experiences [8], which suggests facilitating intercultural dialog should be an important task within higher education. Studies on the impact of the Erasmus-programmes demonstrate that "[o]n average, Erasmus students have better employability skills after a stay abroad than 70% of all students. Based on their personality traits, they have a better predisposition for employability even before going abroad. By the time they return they have increased their advantage by 42% on average." [5, p. 14]

There are also arguments that relate to the intrinsic quality of education in the digital age. The developments in the communication and information technology require 'digital competence' [9] from all involved and are affecting the way we learn and teach. Online learning (whether it be blended or fully digital), simulations (including the use of virtual reality and augmented reality), new methods of storytelling, and leveraging the opportunities of the internet for learning are important developments in this respect. Presently, teachers and students are often thinking about learning in different ways. As the digital gap will most probably expand in the near future, how will we cope with this? How will we organize our education and professionalize our staff? How will we make not only our students but also our colleagues future proof? Also in this respect, international collaborations might hold some of the answers.

Specialisation and collaboration

Universities for a long time have lived in splendid isolation. They had a critical distance to the industry, which allowed them to observe objectively and act neutrally. In the last decades, the role of these institutes has changed: more than impartial observers, they have become partners of the industry. This means that trends and changes in the industry, have a direct impact on the universities and their educational programmes. More and more, higher education and the industry have come to realise that the most highly valued educational programs are characterized by a generic basis, complemented with an increasing emphasis on soft skills [10, p. 10], and completed with additional specialisations of excellence. Students as well have come to expect and appreciate a customised curriculum, where they can deepen their knowledge on the specialised topics they are the most passionate about. HEIs can provide the broad basis, and a handful of topics of specialisation, but few can be holistic in this and cover all the various specialisations. This

calls for international exchange for students and professors in expert networks, where each of the educational partners involved has a few specialised topics of expertise that the others cannot offer in depth.

Many specialisations require large infrastructure investments. Whether it ranges from domes for immersive media, labs for usability studies, exclusive software, fast 3D printers or the newest flexo press, only exceptionally few single universities can keep up with all this hardware and infrastructure. A good cooperation network with clear specialisations between the participating institutions allows for targeted investments, while the whole network can benefit by exchanging students (and professors) with a desired area of specialisation.

Technology and market trends are developing in a rapid way. Teachers are usually good at keeping up with this, but converting them into the curriculum and blended learning materials requires investments in analysis, co-ordination, time and money. International cooperation between universities in the same field can provide great benefits in this respect, e.g., by developing learning materials together, or by sharing each other's specialised learning materials. Our educational field features some excellent examples of the qualitative output these cooperative frameworks can generate.

Research

There are also good arguments for galvanizing the international dimension of our research in a networked society. On a global scope developments in research, both fundamental and applied, are increasingly characterized by multi-disciplinary and interdisciplinary approaches, (international) collaboration between research institutes and business partners, and an openness towards sharing findings, data and methods. In this regard, universities, research centres and their partners not only need each other and each other's expertise to study a specialised topic but also need to involve more actively the end users of products in development This is made explicit, for example, in the EC research agenda, with a focus on open innovation and citizen science, acknowledging that "a specific innovation can no longer be seen as the result of predefined and isolated innovation activities but rather as the outcome of a complex co-creation process involving knowledge flows across the entire economic and social environment." [11, p. 11]. So here too, as a general and international trend, cooperation between knowledge institutions and exchange of expertise is now the default modus operandi.

This does not however, imply a disregard for the local context. Of course, local markets have their own characteristics, while some trends have a global impact. International research networks can spot and analyse these global trends and at the same time create a structured approach to facilitate the analysis of the opportunities and impacts for each local market by local institutes. There is no universal way for industries to respond to certain trends but using international analyses, benchmarks and cases studies, universities can provide valuable lessons and recommendations for their national and local industries.

Additionally, funding opportunities increasingly demand international cooperation in project consortia, not only between HEIs but in many cases also between knowledge institutions and partners from industry. International funding agencies require project partners to demonstrate that by joining their complementary expertise they will have a critical and lasting impact beyond the institutional and regional borders and that they are part of international networks to ensure effective cross-national dissemination of the project results. Strong international cooperation constitutes the basis for successful research projects with a lasting impact.

Moral obligation

Finally, besides all the didactic, organisational and financial arguments, we must adhere to our moral obligation. Students are enthusiastic and interested in travelling abroad for their studies or to work in multicultural settings. Top motivations to study or train abroad remain the same in recent years. "Students choosing a study abroad like the opportunity to live abroad and to meet new people, improve their foreign language proficiency, develop transversal skills. Just after comes the wish to enhance employability abroad for more than 85% of students." [5, p. 14] Due to their different situations, they may not all have the possibilities to do so for a longer period of time, but their curiosity is authentic and their motivation is sincere. As educational institutions, it is our responsibility and mandate to come to grips with their petition for the internationalisation of the curriculum with regards to the various programmes we offer.

These four sets of arguments underscore the need for more international collaboration and co-operation. Not taking advantage of this, would be a missed opportunity.

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