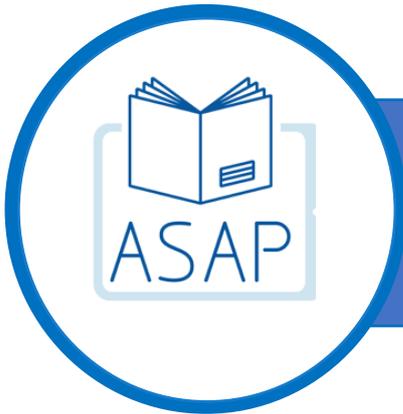




Co-funded by the
Erasmus+ Programme
of the European Union



Anticipatory Skills for Adapting the Publishing Sector

References

Agreement 2016-2992/001-001
Project n. 575884-EPP-1-2016-
1-IT-EPPKA2-SSA

R2.9 SYNTHESIS REPORT - MAPPING OF COMPETENCES AND SKILLS NEEDS ASSESSMENT IN THE PUBLISHING SECTOR

WP2 DEFINING SECTOR SKILL SHORTAGES/NEEDS AND ECVET STRATEGY





Project information

Project acronym:	ASAP
Project title:	Anticipatory Skills for Adapting the Publishing Sector
Agreement number:	2016 – 2992 / 001 – 001
Sub-programme or KA:	KA2 Sector Skills Alliances
Project website:	http://www.erasmus-asap.eu
Authoring partner:	Federation of European Publishers
Version:	4.0 (final)
Date of preparation:	28.07.2017

Document history

Date	Version	Author(s)	Description
05.06.2017	1.0	Enrico Turrin	Synthesis report structure
18.07.2017	2.0	Enrico Turrin	First draft
20.07.2017	2.1	Enrico Turrin	Editing
23.07.2017	3.0	Enrico Turrin	Editing, final draft
28.07.2017	4.0	Enrico Turrin	Final formatting

With the support of the Erasmus+ Programme of the European Union.

The European Commission support for the production of this publication does not constitute endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



R2.9 Synthesis Report - Mapping of Competences and Skills Needs Assessment in the Publishing Sector

Introduction: objectives and structure

This report looks at the training and certification needs of the book publishing sector in the countries participating in the project (Greece, Italy, Spain and the UK) and in two additional countries (France and Germany). It is based on an analysis and comparison of the national reports from the four participating countries, which in turn rely on the information collected through the extensive survey conducted among hundreds of stakeholders using the questionnaire previously elaborated within the project (deliverable R2.3 *Needs Assessment Survey Template*). This exercise was complemented by the inclusion of two more countries from the network of the Federation of European Publishers – France and Germany – for which national reports were based on fewer questionnaires and targeted expert interviews.

Results were checked against some secondary sources of information (such as Cedefop and EUROSTAT¹), mainly to find out that the existing sources of information do not usually reach a level of detail that allows to single out the book publishing sector – focusing instead on the broader cultural and creative sector – or provide very limited information at the level of individual sectors²; hence a confirmation of the importance of the exercise carried out by the ASAP project. There are in fact very few studies or data sets that focus specifically on the skills needs of the book publishing sector. One can however draw analogies from those that encompass the whole of the creative industries: current challenges to the creative industries include long-standing skills shortages stemming from inadequate training provisions in school education and a high demand for talent, as well as a need for design and technical skills.

This report thus quantifies the new needs of the publishing sector, in order to build the subsequent steps of the project upon those findings. It provides an overview of the changes the publishing sector is undergoing due to the digital transition, of the publishing occupational standards in the countries analysed and of new trends and best practices in education and training for the publishing sector, and lays the ground to linking the skills needs and competences gaps with learning outcomes – a task that shall be taken further at a

¹Cedefop's sectorial data breakdown gets to an 'Arts & entertainment' sector; EUROSTAT collects information on job vacancies at macro-category level: data are available for the whole 'Information and communication' sector, for which there is also information on the percentage of companies that employ ICT experts.

²Some examples include a recent study by Cap Digital on the transformation of professions in the content industries: *Contenus transmédia dans une économie de la donnée : hybridation des compétences et transformation des métiers* (www.capdigital.com) and the report *Workforce Survey 2017: Skills Shortages*, published on 13 September 2017 by the British Chambers of Commerce: <http://www.britishchambers.org.uk/policy-maker/policy-reports-and-publications/bcc-workforce-survey-2017-skills-shortages.html>.



subsequent stage of the project. To this end, the report concludes with some specific recommendations on linking learning outcomes with qualifications that match the labour market needs which will be used in the design of the curricula, certification and assessment in the following steps of the project.

The national reports – and the present report, accordingly – have been drafted on the basis of the structure suggested by the survey template and outlined in a non-deliverable document produced by the project. This comprises: an overview of the current skills needs, based on an assessment of the absolute and relative relevance of the skills and competences identified in the questionnaire (including whether the competences can be acquired once already in the job, and whether any essential skills are missing from the list) and of the job profiles and needs of publishing houses; an overview of recruiting practices and career paths in publishing houses, highlighting where publishers look for personnel, what kind of in-job training is available and how much it matters for determining career paths; an assessment of the effects of digitisation, looking at new competences made necessary by the digital transition and how publishing houses are adapting to the new environment; an assessment of the current training and qualification framework, looking at national education and training opportunities; and a broader outline of current trends and challenges for the publishing sector in the area of digitisation and employment, including what difficulties publishers encounter in hiring and/or training personnel and the impact of digitisation on outsourcing practices.

For a broader and deeper analysis of how the publishing sector is changing due to the digital transition and some prospective views on further future changes, we refer to the project deliverables R2.1 *Analysis of the status quo and of the strategic perspectives with regard to the publishing sector (difficulties, challenges and opportunities)* and R.2 *Analysis about how digital books are changing the reading and writing behaviours and how these changes impact on the publishing sector.*



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ABOUT THE SURVEY

The survey template presented a number of skills related to professional profiles in book publishing in order to assess their importance and their current coverage in the workforce: the sector-specific competences identified referred to the critical path and range of publications, the editorial processes, the production processes, the sales, marketing and publicity processes, publishing systems and software, data management, design and legal knowledge; a series of generic, soft skill was also included (stakeholder management, communication, public and personal relations, commercial negotiations, language skills, reading comprehension, office management, administration, working independently, problem solving, team work).

Subsequent questions sought additional information on the transformations and needs that the publishing industry is facing: professional profile transformations related to the shift to digital, training and recruitment practices and challenges, and so on.

The questionnaire targeted people working in publishing and in vocational education and training, as well as experts of the sector; it was translated in the languages of the four participating countries and then administered personally (mainly at book fairs and other relevant events) in the case of Greece, and posted online in the cases of Italy, Spain and the UK – the UK questionnaire was also used to collect replies from France and Germany. National partners elicited replies via several channels: telephone, email and institutional communication outlets – supported by the Federation of European Publishers.

The responses received were as follows: 108 from Greece, 100 from the UK, 85 from Spain and 71 from Italy, plus several from France and Germany (the additional reports were based more on interviews and research). However, the collection of replies will continue throughout the project and conclusions will be adjusted if necessary to any new findings.



SYNTHESIS OF NATIONAL REPORTS: MAIN FINDINGS

Mapping of skills and competences

The national reports are unanimous in acknowledging the importance for the publishing sector of the competences and skills identified in the survey, basically all of which rank highly among those desirable for people working or wanting to work in book publishing.

Looking at the individual elements, a thorough knowledge of the path and range of publications of a publishing house is considered paramount; this consists of understanding the publishing journey from commissioning authors to publication as well as the range of publications available in terms of formats and genres. For example, knowledge of the publishing journey/supply chain is from 'moderately important' to 'essential' for 98% of UK respondents, 87% of the Italian and 95% of the Spanish; knowing the range of publications ranks high as well, being 'moderately important' to 'essential' for 96% of UK respondents and 90% of the Italian, and is reported as essential in Germany and France, too. The majority of participants report sufficient knowledge in this area in all countries surveyed.

Editorial processes consist in deciding and overseeing the style and scope of the content that will be produced in addition to researching, writing and checking it. Competences include: commissioning; editing; relationships with authors; market, distribution circuit and client management; typography and pagination; images and illustrations. These too are considered very relevant: the majority of respondents in the UK (61-95%) said that such competences were 'essential' or 'very important' to their business, and the proportion is similar in Italy and Spain. Typography and management of illustrations rank somewhat lower than the rest, possibly due to their higher specificity. UK and Italian respondents consider these competences to be sufficiently present in the sector, the abilities to monitor markets and the more technical ones (typography, illustrations) being a little weaker than the others. Greek respondents signalled some difficulties in finding skilled editors.

Production involves the use of technical skills to produce a finished product and can be specific to digital or print processes, often combining the two. Competence in print production includes knowledge of production and printing techniques and technology, quality, safety and environmental standards and costing whereas competence in digital production involves publishing software and other digital processes. Skills in this area also rank high in the view of respondents, but a difference can be seen in the degree to which the competences are already present in the workforce: for example, most of the UK respondents (78-79%) said that competence in digital production was 'fully', 'almost fully' or at least 'moderately' lacking, compared to the 28-40% who answered the same for print; Italian respondents found the digital skills at least 'moderately' lacking between 23% (software) and 43% (digital production processes); lack of digital skills is also reported in Greece.



Sales, marketing and publicity is the overseeing all the commercial aspects, including: trade partnership management; market, trend and distribution circuit knowledge; marketing/sales strategies and techniques; communication and promotion techniques; social media, influencers and interacting with the reader; e-commerce and digital sales strategy. These competences are particularly relevant according to respondents from all countries: the various skills listed were 'essential' or 'very important' for 76% to 91% of UK respondents, and they are at least somewhat important for 85% to 95% of the Spanish and more than 90% of the Italian; skills in this area are also reported among the most relevant in Germany, and increasingly so in France. On average, half of UK respondents (47%) stated that these competences were not at all or only somewhat lacking and half (52%) stated that they were moderately to completely lacking. Around 20% of Italian respondents reported the competences as lacking to a good extent, and for close to half they were at least 'moderately' lacking, with higher percentages in the digital domain (e-commerce, social media). These competences are also much sought after in Greece, where in particular the digital side is not well covered (social media, for example).

Rights management involves licensing copyright, handling digital rights and managing deal structures and rights management with authors. Most UK respondents (81-88%) said that these competences were essential or very important to their core business activities; Italian and Spanish also value these skills highly (85-90% for Italy, for example). The range between the different competences for those answering moderately to completely lacking is significant: 57-72% in the UK, 28-55% in Italy – in both cases with prevalence of lack of knowledge of digital rights issues.

Data management includes metadata, market and sales data. A significant majority of UK respondents (83-86%) said that these competences were essential or very important to their business, with almost identical (82-86%) proportions in Italy; Spanish respondents also valued these skills very much, and they are increasingly important in Germany, too. Most UK respondents answered that data management competences were somewhat or moderately lacking in their workforce, and this proportion is high also among Italian respondents: two thirds for metadata and 59% for market analysis.

Design includes planning the overall look and feel of a publication, in particular ensuring a consistent design style for different markets and cultures and using specialised publishing and design software. 61-80% of participants in the UK said design competence were essential or very important to their company's core activities; these skills were deemed as at least moderately important for more than 90% of respondents in Italy and Spain. The majority of UK respondents (58--69%) felt that design competence was not at all or only somewhat lacking in their workforce, and to a lesser extent (52-56%) this was the case for Italy, too. This seems to indicate that the professional profile for design, which has almost completely shifted to digital in the last few years, is sufficiently present in the workforce to meet the needs of the publishing sector, though there is margin for further improvement.



In publishing, legal knowledge includes copyright law, contract law, and an understanding of the national/EU elements of commercial, labour and contract law. A steep majority of UK respondents (80-92%), Italian (86-97%) and Spanish (82-85%) said that legal knowledge was moderately important to essential to their company's core activities, with copyright law being ranked highest in UK and Italy. However, responses seemed to indicate that competences in this profile are significantly lacking with most participants (76-79%) describing them as moderately to completely lacking from their workforce in the UK, and a significant proportion in Italy as well (42-57%). A significant number of respondents (37%) in Greece indicates knowledge of both the copyright legal framework and other relevant EU regulations, a similar proportion (34%) has sufficient knowledge only of copyright laws, while 28% admit they do not have sufficient knowledge of the legal framework. The need for legal knowledge depends primarily on where a person works; those hired in legal departments usually already have specialist training, although this can be very time-dependent: legal department staff can need new training when new legislation is adopted. Legislative issues are very relevant for French publishers (those affecting the sector, obviously) – copyright first and foremost but others as well – and are pertinent to many profiles, not only those in the legal department.

Interpersonal skills recorded the greatest sense of consensus on the various competences highlighted, being regarded as at least moderately important by 90% or more of respondents in the UK (except specialised English and stakeholder management) and Italy and 85% or more in Spain; they are also very important in France (especially those related to communication and personal relations). Evidently, regardless of the digital revolution, interpersonal competences are as important as ever to the daily operations of a publisher. The extent to which such skills are missing varies widely: most of those are found at least moderately missing by between one and two thirds of Italian respondents, for example, and by one out in three or four of UK respondents (with prevalence of more technical skills such as management and administration).

A few participants in each country listed competences they thought were missing from the survey, often mentioning listing highly specialised skills (like the use of reference management software, or competences in SEO or logistics, accessibility, knowledge of raw materials) or variations on listed competences (e.g. leadership, several aspects of communication); soft skills have a prominent role, with respondents including several, from creativity to strategic thinking, from flexibility to crisis management, from innovativeness to change management, from adaptability to the ability to learn continuously and adopt a multidisciplinary approach, and also understanding of the policy environment (especially important for publishers in sectors more easily affected such as educational and STM).

When asked whether the competences listed were necessary at an initial stage of work in a publishing house or could be developed at a later stage, responses were definitely mixed: in many cases, there seems to be no consensus – which is likely explained by the fact that depending on the size and recruitment/career policies of a company, several skills can be



acquired through in-job training. This notion is comforted by the fact that certain technical skills are more likely to be expected at an earlier stage. Soft skills, on the other hand, are often acquired on the job (some only become necessary at later stages); many companies in Germany for example request in-house training on these, especially on customer relations. With a traineeship, applicants obtain skills – including publishing-specific – already at entry level; for those who go to university and then enter a publishing house, it depends on the publishing house. What skills are already available to publishers in-house depends on several factors, including the age of their personnel: some small publishers have younger staff, thus generally able to adapt to digital more easily; on the other hand, these people may lack more traditional, job-specific skills. Indeed, some respondents noted that young people can be involuntary agents of change within the companies.

Publishers in the countries surveyed need all kinds of professional profiles in the areas identified in the framework of the project – to an extent depending largely on the size of the publishing houses. Generally speaking, people working in publishing houses are mostly highly educated and qualified; in the UK, for instance, many of the publishing profiles are typically filled by graduates, although there are opportunities for some with A-levels or equivalent qualifications. For a more detailed illustration, we refer to the mapping of the professional profiles in book publishing carried out by the French Publishers Association (SNE), in cooperation with the Joint National Committee for Employment (CPNE) in Publishing. The mapping, updated in 2017, identifies and describes in a series of professional sheets the 8 main sectors of book publishing – editorial, artistic, marketing, commercial/sales, production, communication/promotion, distribution, supporting functions – and their main professional profiles (35 in total), specifying their main features, activities and objectives, competences required and possible training paths to prepare them, as well as potential related career paths (in annex the mapping, and an English summary table).

The profiles most sought nowadays according to the survey are those in the fields of sales/marketing (including data analysis), design/art, communication and most of all those related with the integration of digital in all sectors especially in publishing houses that produce digital books (but not only): job applicants in most cases will need digital skills in order to make serious candidates. The main skills now in demand due to the digital transition relate to digital production and multichannel distribution and communication: social media, platforms, file conversion, XML, web design and the use of a wide range of programs and applications for computer-assisted production, such as software for layout and design – all depending on the department. Traditional editorial roles are also always needed; in editorial, digital skills may not always be so directly relevant, but people in the department will still have to at least understand what other departments need. Other important new competences involve data management, and knowledge and understanding of customer and target groups in the new environment.



Many publishers – especially smaller ones – look for multitasking candidates, and double-specialisation profiles (in particular combining management and editorial competences) are valued highly. Roles dealing with multimedia production are also increasingly in demand. So are profiles with an economics background (as evidenced in particular in France): people with knowledge of cost-performance, resources management, budget, some elements or overview of business administration competences (at least project management, administrative and financial management). The survey also highlighted a need for some niche profiles, such as translators in certain relatively rare languages.

Industry specific know-how and general publishing knowledge are needed as well in particular by service providers that cater to specific needs of the publishing industry; mostly these are companies more focused on IT than on publishing, which therefore more often lack such skills.

Recruiting trends and practices

Recruiting practices are quite varied across the sample observed. In the UK, for example, most respondents recruit through open job vacancies (76%), specialist agencies (66%) and the higher education sector (49%) with only some recruiting from the vocational education and training sector (15%); a small proportion noted “Other” (20%) indicating that personal networks and word of mouth were also a key recruitment tactic. A significant proportion of Spanish respondents indicate that they look for people to hire in professional training, followed by specialised agencies and employment platforms; university came in as fourth option. In Greece, publishing houses search for new personnel in the digital era mostly from vocational education and training and higher education institutions (both around 45%), while the remaining 10% resort to internal staff training. German publishing houses look for personnel mostly among university graduates; for jobs in the editorial department, the most popular aspiration for people with a university degree, publishers can usually select candidates with a Master’s degree. Other profiles can be filled by people with non-academic training, and VET is a common source for certain positions. Traineeships are considered very useful; companies need trainees a lot. All in all, in-job training is the norm in publishing in Germany; several course providers exist and a lot of training is also provided on the job (just as in many other industries in Germany). A few big publishers have their own academies or training centres, offering several programmes. Training centres offer also in-house training for their customers, depending on the size of the publishing houses, and tailor-made seminars on specific topics. In France, publishers traditionally hired people with the appropriate training qualifications, from various paths and levels of higher education; recently, however, more and more they introduce new personnel through traineeships, often taking advantage of the opportunities of the country’s dual education system. Many higher education institutions offer this opportunity with placement in the publishing industry, and there are a number of vocational training institutions focused on publishing. A typical career path these days comprises an apprenticeship, followed by an internship, a determined duration contract and eventually an indefinite duration contract. Traineeships



constitute the most common form of in-job training, but continuous professional requalification is very important, and it is carried out both in-house and in external institutions. For sectors like marketing and communication, in which to some extent the specific knowledge of publishing might not be essential (at least initially), more and more people are being hired from other sectors, especially profiles with a technical education (such as digital marketing), or professionals from sectors where digital is more pervasive. In the past, mobility used to be more intra-sectorial. In-job training is very common; in particular, there is an obligation in France to train workers to adapt to their workplace. Moreover, most trainings now need to be certified, and funds for professional training are created to reimburse workers for the training in most categories.

The panorama is diverse also with regard to the possible difficulties encountered by publishers in hiring new personnel. Nearly half of those surveyed in the UK (45%) had experienced difficulties in hiring or re-qualifying personnel primarily due to a lack of qualified candidates; according to respondents, other issues included a lack of enthusiasm for the professional profile and trouble with finding enough applicants for the role. Among those whose professional profiles had been most affected by the shift to digital, most had experienced difficulties in hiring and re-qualifying personnel, overwhelmingly citing a lack of qualified candidates. In Spain, 88% of respondents reported having had difficulties in the recruitment or professional update of the staff, mostly due to lack of updating opportunities and to resource constraints. The skills most quoted as lacking among candidates pertain to the fields of technology and design or to the domain of soft skills, such as communication, team work and flexibility. Many Greek respondents indicated the presence of difficulties as well: 45% acknowledges the lack of funds for training, another 29% the lack of resources for hiring new staff, 10% the lack of opportunities for training while only a 14% attributes the problem to the lack of qualified and trained personnel for hiring. Even so, incomplete staff recruitment and employment is occasionally observed; this is mainly attributed to the unmet additional costs but also to the lack of people with appropriate training, as some businesses report a shortage in skilled manpower within the wider context of the Greek market which results into focusing on investing in existing personnel. A substantial proportion (42%) of Italian respondents reported difficulties, too: 48% of them explained them with the lack of resources and 44% with a lack of qualified candidates. As a result of the country's situation, it is generally not difficult for German publishers to hire qualified personnel; moreover, many people who wish to work in publishing are especially committed. There can be some difficulties with finding rights management and sales experts, as these areas are quite complex and very specific. For generic job descriptions – such as profiles in human resources, administration, public relations – which are commonly found in other industries, publishers naturally have to compete with the other sectors, and salaries become more relevant; this is especially evident in hiring IT people, in which case publishers suffer from strong competition from big companies, in particular technology giants. While all in all it is not too difficult for French publishers to find personnel, there are differences depending on the specific sectors: if on one hand there is a lot of demand for



certain areas – possibly an excess in cases like editorial and communication – there are some difficulties for example in production, mainly due to the lack of qualified personnel (applicants often have undertaken training but not at a sufficient level).

The impact of digitisation

All countries surveyed report significant effects on the publishing sector from the shift to digital, also in the area of employment and qualifications, with changes in the professional profiles in publishing houses prompted by new competences being made necessary by the digital transition. An extensive analysis of the effects of digitisation on the publishing sector is presented in deliverable R2.1; national reports broadly confirm such findings. The national reports provide some further insights into this area.

The UK publishing sector is described as having “undergone phenomenal and rapid change in recent years”, which has included rapid growth and the attainment of a significant share of the market coming from digital sales – some 35% of the total revenues of sales of books and journals, and about 17% of those of books alone, the highest in Europe. This growth – particularly in digital products and services – has created an upshot of demand for much-needed digital skills, as the needs assessment has revealed. This is true elsewhere across the UK economy: a recent survey of over 1,400 businesses across the UK by the British Chambers of Commerce found that 84% of companies described digital and IT skills as important to their business but 76% reported a shortage of them in their workforce. In other countries, the effects of digital have been felt very strongly, even though its market penetration hasn't been so deep. As the book market starts growing again in Italy after some years of crisis, ebooks represent some 5% of total sales and e-commerce is constantly on the rise (+20% in 2017). Digital reading is growing: 4.2 million of people read an ebook in 2016 in Italy; 37% of readers read both digital and paper books (but only 1% reads only ebooks). The sales of e-readers (-9.4%) and of tablets (-7.6%) are declining; 10% of the population declares to read books from digital devices (it was 8.9% in 2015 and 2.9% in 2010). Only 7.3% use an e-reader; 64.8% use smartphones, and 28.3% use tablets. In general, the main changes have taken place in the reader's behaviour: the processes of search and acquisition of information, the choice of the places of purchase, the social sharing of preferences and in the way readers access content. Also in Greece, the sector is said to have undergone “tremendous changes”: the internet, on the one hand, made books and journals more accessible to the public, while the development of digital technology has affected production processes and somehow costs; it is highlighted, however, that along with remarkable transformations in the market for cultural goods there has been a tendency for many of those goods to be considered as having to be distributed for free, which has led to high levels of digital piracy, while at the same time publishers have made important investments to reconvert their workflows. Digitisation is widely recognised in Germany, too, as a driving force for change in the publishing sector in recent years, also from the point of view of skills and competences and the dynamics of human resources. And undoubtedly digitisation has had an impact on French publishers, including with regard to their



professional profiles and hiring and training practices. The changes, however, are perceived as to have been rather gradual. Initially, the focus was on the integration of digital in the jobs and tasks that required it; the panorama is still evolving, though, and for some publishers is now easier to hire people already formed with digital skills.

Even sectors for which digital sales are not a very significant source of revenue are being affected by changes in technology, for example through access to a greater amount of data, which has the potential to increase companies' efficiency and effectiveness. The potential for innovating is huge, and many publishers are seizing the opportunities offered by digital publishing. One important new paradigm is the shift to a customer-centric approach, in a scenario of evolving readers' expectations; moreover, workflows become increasingly non-linear. In moving to a digital catalogue, publishers may thus need an overhaul, or at least an integration of their skills pool, as new competences become necessary.

As explained in deliverable R2.1, digital technologies have long been present in the publishing sector, but only relatively recently reached the stage of final consumption. The rapid expansion of ebooks in this short period is reflected in the survey, with 84% of UK respondents who publish books also publishing ebooks, 67% of the Italian, 63% of the Greek and 58% of the Spanish. This confirms the notion that the majority of publishers in the main European markets are publishing digital books (France and Germany are no exceptions).

Recruitment – like many other areas – has been affected by digitisation (more on the effects of digitisation below). In recent years, the majority of respondents (74%) in the UK had both hired new personnel and re-qualified existing personnel, with a significant proportion mostly hiring new people (20%). In Spain as well publishers have resorted a lot to the hiring of new people as well as the training of the existing workforce. In Greece, the majority of respondents relied on staff training (60%), with 30% hiring new personnel and 10% doing both. Both practices are frequent in Italy, Germany and France.

At the explicit question whether professional profiles in publishing houses changed because of the shift to digital, nearly all of UK respondents (97%) said that they had indeed changed, and of those who reported that digital skills were both important to their business and lacking in their current workforce, 47% felt that the professional profiles had changed significantly. 75% of Spanish respondents find digital has changed the professional profiles 'a lot' or 'drastically'; also vocational education and training centres perceive a need to adapt their curricula to the new needs (90% of respondents in the field said so). 82% of Greek respondents deemed the changes 'significant' or 'radical'. This has understandably brought along some difficulties for publishers to adapt their workforce, especially as most companies in the sector are small or medium-sized.

The overall effect of digitisation on professional profiles seems to have taken place more as an integration of digital in most existing profiles than in the creation of many brand new ones (but there are exceptions). As already underlined, most applicants for jobs in publishing now need some kind of digital skills to be taken seriously into consideration. The editorial



profiles, much like design, have been irrevocably changed by the digital revolution; the latter, in increasing demand for consumer-facing content, has in turn meant a shift to online and digital marketing and selling. Digital has also brought in new legal implications, affecting significantly all profiles with legal aspects. The continued growth in demand for digital content and services can be expected to drive the expansion of the digital publishing sector: growth in technology demands; the growing importance of cyber security; media and platform convergence; cloud computing; big data/analytics; and the development of new business models. In some cases, there is a concern that digital may put some jobs in danger. On the other hand, technology can also improve the professional integration of people with disabilities.

In this framework, publishing houses find themselves in a wide range of different situations: some need very limited change and/or have already accomplished it – often helped by younger workforces that adapt more easily – while others do not need to change, and still others have not undergone the necessary changes yet. Once again, the size of a publishing house is very important in determining these dynamics. In any case, many publishers are looking into requalifying their personnel; in Germany, for example, a number of them went to digital natives at first, but the need for skills works both ways: IT people need to know the industry, and people in the industry need IT skills. An interesting phenomenon is the emergence of many start-ups that have been created to offer services to publishers covering new competences.

On a related note, the survey explored also a very specific domain in which the effects of digitisation on employment and professional profiles are quite likely to be felt, i.e. outsourcing (the extent to which publishers recur to external service providers): the replies confirmed this intuition. Not only can it be too difficult or costly to internalise certain competences; with the increase of technological complexity and specialisation in certain domains (such as file conversion, storage and distribution), some activities necessary to digital publishing end up being far too removed from the core mission, competences and roles of publishers.

At least half of UK respondents (52%) had increased their level of outsourcing due to the shift to digital due to the satisfactory supply of services from third parties (53%), because it was too hard and costly to internalise new tasks and skills (33%) and because new tasks and skills are now beyond their core activity (18%). Almost three in four Spanish respondents acknowledged an increase in outsourcing, indicating as the main reason the cost of internalising the new skills (65%), followed by the fact that the new tasks and competences are too distant from the company's main activity (32%) and the satisfaction with the supply of external services (23%). A similar proportion of respondents from Greece (79%) declared having increased their level of outsourcing, due mostly to cost issues (49%) and satisfaction with the services provided by freelancers (47%). Partially in countertrend, only about a third of Italian respondents (32%) reported an increase in their recourse to outsourcing, and the majority of those who did (two thirds) indicated the main reason to be a satisfactory supply



of third-party services. The digital transition has also increased the level of outsourcing by German publishing houses: certain tasks, especially in the ICT field, are covered by an increasing number of specialised service providers. Bigger companies are likely to try and build those services in-house; but for the huge number of small and medium publishers, which constitute the vast majority of the sector, this is usually out of reach. The same applies to France, where the level of outsourcing in publishing has increased, too; the profiles mostly affected – besides the digital services taken up by new specialised companies – are in the artistic and proofreading sectors.

The education and training landscape

The national reports indicate a variety of opportunities for training and requalification of people working or wanting to work in the publishing sector. As the digital shift progresses, and technological change accelerates, the continuous need for adaptation will increase the need for support to retrain and upskill, which will need to be addressed by increasing the availability of high-quality specialist vocational provision. Several sources state that the educational and training system needs to remain prepared to respond to the needs of the market, a task that is going to be made more urgent but also more difficult by the parallel need to keep abreast of technological innovations. At the same time, it goes without saying that most respondents consider training and requalification as the best way to cope with the changes brought about by the digital transition, as well as to maintain competitiveness, enhance productivity, improve individual performances and the overall chances of success of a company. Training personnel is an important investment for publishers, and many of them understand it.

Of course, some profiles require higher qualifications than others; managerial and directorial positions, and most editorial profiles, are usually (in Germany and France, for example) accessed after a Master's degree, whereas design, production or proofreading positions are normally open to holders of Bachelor's degrees or University diplomas. Broadly speaking, most often applicants wanting to work in publishing have completed 4 or 5 years of higher education; at the same time, vocational education and training is an essential source of qualification and requalification, and can pave the way to certain positions.

Publishers look to different sources when they want to requalify their personnel, with in-job training being normally the preferred solution. According to the survey, in the UK most publishers (79%) look for requalification opportunities internally, with many turning to the higher education sector (25%) and vocational education and training sector (39%), citing the Publishing Training Centre, Society for Editors and Proofreaders, Certitec, Publishing Research Consortium, and the Association of Learned & Professional Society Publishers. Just like with hiring, Spanish respondents look for training opportunities for their personnel primarily to professional training (31%), followed by specialised agencies, employment platforms and university; internal training here as well is used by a substantial number of companies. In Italy, internal training ranks the highest among sources of requalification (55% of respondents), followed by higher education (32%) and vocational education and training



(28%). Also in Greece, where the prolonged financial crisis has resulted in serious difficulties for publishing companies (especially the many SMEs) in hiring and requalifying personnel, the majority of respondents resorted to internal training as the only economically viable solution. In-house training is very popular in France and Germany as well, though often coupled with the services of external providers. In this framework, internships and apprenticeships are clearly more and more a very important step in pursuing a career in the publishing sector.

The survey provides a broad – though certainly not complete – picture of the courses that either focus on aspects of publishing or allow applying for jobs in publishing. In the UK, for example, there are a range of full- and part-time courses that focus on publishing and other specialist aspects (such as digital publishing). According to UCAS (an independent charity providing advice to facilitate educational progression), there are 398 publishing courses in the UK of which 161 are undergraduate and 237 postgraduate. The skills body for the creative industries (Creative Skillset) accredits a few of these through its Creative Skills Tick scheme. Some larger publishers (such as Penguin Random House) offer a small number of places on graduate training programmes. There are also a number of degree and foundation degree courses in publishing and related subjects. Those working in specialist subject areas, such as music, educational or scientific publishing, may opt for a relevant degree. The UK Publishers Association has worked closely with an industry advisory group to roll out a standard for a publishing assistant apprenticeship. As an advanced apprenticeship (level 3), its completion is equivalent to 2 A-level passes. Applicants must have 5 GCSEs or more, or have completed an intermediate (level 2) apprenticeship. There are also a number of specialist private providers of publishing training courses, such as the Publishing Training Centre (PTC), London School of Publishing (LSP) and Society for Editors and Proofreaders (SfEP). PTC offers short courses, self-study and in-company programmes for editing, proofreading, copyright law and various courses related to digital and web publishing, typically for those already working in the industry. LSP offers short daytime and evening courses for a range of experience levels in areas such as editing and picture research. SfEP also offers short courses, some online, for beginners and those looking to improve existing skills.

Students in Germany can, after middle school, enter a VET programme, which will allow them to get a job as skilled labour or assistants; these 2-3 years of vocational training can be complemented with a so-called “bachelor professional” degree (level 6 in the EQF) of usually 1.5 years, which gives access to more qualified jobs (at managerial level) or to an academic path (to obtain a bachelor degree). Students with a high school diploma can enter university directly to get a bachelor degree. After a bachelor degree, students can do a 1-1.5-year traineeship in a company in order to get a job there, or keep studying to obtain a Master’s and a PhD. The VET framework is particularly interesting for those who want to work in publishing.



Germany has a dual VET system: junior employees receive training from both a company and a part-time vocational school. Such VET programmes usually last 2.5-3 years; the school activities normally take up two days a week. The whole system is highly structured and regulated, and is based on a series of standardised job profiles, regularly drafted or amended jointly by all parties involved in professional education. The job profile 'Managing Assistant in Publishing' is one of the trades recognised in the system. The VET programme lasts some 3 years and during their traineeship, participants will pass through all publishing departments, getting accustomed to the respective workflows, most likely going on working in programme and product development, marketing, sales and distribution or in the production department. The curriculum of the course for managing assistants is as varied as the requirements in a publishing house. After the VET programme, students take a final test with the Chamber of Commerce. They can then start working or enhance their training, through an extra-occupational bachelor programme or through a bachelor professional degree; or they can go to university.

There are several course providers that cover the publishing sector. One of these, Mediacampus (an educational centre for the publishing sector that is a subsidiary of the German Publishers and Booksellers Association), offers an extra-occupational bachelor programme in Publishing and Media Management, comprising 2 study courses: publishing and media management and book trade and media management. Studies last 3 years. The curriculum includes courses in Business Administration and in Media Management, and advanced courses of business administration for publishing houses, finance and controlling for publishing houses, product- and project management, rights and licences, digital and print production, as well as integration courses of future scenarios for the publishing industry, market research, public relations, literature, presentation and communication. A bachelor professional is also available in Media Marketing and Distribution, a broad non-academic education programme targeting those seeking a practice-oriented qualification programme in order to pursue a higher career level. The curriculum comprises economics qualifications and professional qualifications.

In France, several specific courses and schools exist that can prepare or requalify people for working in the publishing sector, especially for certain specific profiles, at different levels of qualification. The training and studies available range from Master's courses in Book and publishing professions or in Multimedia publishing and professional editing, to Professional bachelor degrees in Editorial techniques and practices applied to publishing, to University diplomas of technology (DUT) in Information communication, option Book and heritage professions, or Diplomas in Scientific and technical university studies (DEUST) in Library and documentation professions. Besides the specialised courses, several other education and training paths can allow starting a career in publishing, based also on the type of profiles targeted.

Higher education in France comprises three cycles: an initial cycle of three years (but technical diplomas like DUT, DEUST and BTS can be obtained in two years) that lead to



gaining a Bachelor's degree; a second two-year cycle (only accessible after a degree) that leads to obtaining a Master's; and a third cycle of three years, the doctoral training. The French system also foresees the possibility of dual education, which combines apprenticeships in companies and (mostly) vocational education, at all levels: vocational education and training centres offer dual systems to students aged 16 to 25, which can lead to higher education degrees such as BTS, DUT, Professional bachelor degrees and Professional master's degrees. Many different models are used for the alternation of work and study.

In this framework, the SNE has established a certificate of professional qualification of digital publisher, for people already working who want to enhance their digital competences in relation to publishing industry profiles; 3 institutions currently deliver the courses. Moreover, the SNE – in compliance with a general law obligation for category associations – publishes lists of training offers, which count many vocational training institutions.

Replies to the survey reveal that there is scope for enhancing the coverage of the skills and competences perceived as necessary within the current educational and training systems. A quarter of UK respondents said the relevant competences were not at all or only partially covered by existing publishing training, with half (49%) describing them as covered to at least 'a certain extent'. More than one third of the Spanish (35%) said the competences were not covered or only partially; the proportion was almost half (48%) for Italian respondents. Relatively fewer people found the system seriously lacking in Greece (23%, still significant), but another 42% found it comprehensive only 'to some extent'. In Germany and France, the training systems are all in all considered rather satisfactory, but there remains some margin for improvement (in France, for example, with regard to digital and language skills).

The list of the competences not covered is quite diverse, and overlaps (unsurprisingly) with the list of the competences most sought and those missing from the survey; respondents mentioned items such as digital skills (use of new technologies, software and applications – including some very specialised ones, web design, etc.), design, marketing, English (not in the UK) and a series of soft skills (flexibility, multitasking, creativity, organisation, proactivity, etc.). As a consequence, these are also the skills that some respondents consider should be strengthened within training centres – recommendations also point at a need for these to work in closer cooperation with publishing houses (this emerged in particular in Spain).

The difficulties encountered in requalifying personnel mirror to a large extent those related to finding qualified people to hire, and can be attributed to shortcomings in the training offer but most of all to resource (financial and human/time) constraints, which are present independently of the comprehensiveness of the existing training programmes.



CONCLUSIONS AND RECOMMENDATIONS

The survey, interviews and additional research on the competences and skills needed by the publishing sector in the digital transition paint a picture of a sector in transformation, having been deeply touched by the digital shift in most respects, and in particular from the point of view of its professional profiles. In addition, they represent an exercise with few (if any) precedents, given the way it focuses on the book publishing sector, and it is therefore well placed to make specific recommendations on linking learning outcomes with qualifications that match the labour market needs, which will be used in the design of the curricula, certification and assessment in the continuation of the project. A classification of the publishing professional profiles under the EQF Framework (inspired by the situation in the UK) is provided in annex, as well as a description of the main profiles employed in the Greek publishing industry.

Professional profiles in publishing houses cover a wide range of tasks and activities, which in turn rely on a series of competences and skills, some of which are sector-specific and others are rather in the area of soft skills. Both kinds of skills are valued highly by employers in the sector. The digital shift has changed the profiles, mainly by requiring the introduction of digital elements into existing tasks – and in some cases creating fully new profiles, which to some extent has led to an increase in outsourcing, as certain roles go way beyond the core mission of publishing houses. The process, while undoubtedly impactful, is not considered as totally disruptive.

Publishers have both hired new personnel and requalified the people already working in the companies, recurring to in-house training and partly to external training providers. Publishers also rely on national education systems for the recruitment of qualified candidates, and traineeships are increasingly a gateway to a career in publishing. The extent to which the current educational and training offer covers the needs of the labour market is deemed as fairly satisfactory, but with clear margins for improvement. On the other hand, resource constraints are identified as a major obstacle to the updating of the workforce in many publishing houses.

Against this background, several recommendations can be made to frame the linking of competence needs, learning outcomes and qualifications to match them:

- Job descriptions for profiles in publishing houses provide a good basis for the definition of learning outcomes, which should be built on those grounds.
- The process should lead to defining qualification frameworks, focusing on occupational and competence standards.
- Emphasis should be placed on the areas where possible gaps have been highlighted the most: digital skills, design, marketing and sales, and several soft skills.
- Special attention should be dedicated to the framework for the acquisition of soft skills and the related qualifications; as a minimum, the skills necessary should be



signalled.

- The design of curricula should take into account that a significant part of the training is made on the job, as requalification, or initially in the form of traineeships. Companies that provide in-house training should be supported.
- Collaboration and partnerships should be carried out with higher education and vocational training and education institutions, in order to help closing the gaps identified in the existing training schemes by integrating the current curricula.
- The development of curricula should also look at preparing people to work for the service providers that work for publishers – including the possibility of launching start-ups in this field.
- The specificities of national educational systems should be taken into account, as well as the expectations that these generate among employers.
- The framework should encourage the matching of start-ups and other service providers with publishing houses.

ANNEX 1: CLASSIFICATION OF THE PUBLISHING PROFESSIONAL PROFILES UNDER THE EQF FRAMEWORK (UK)

Descriptors defining levels in the European Qualifications Framework (EQF): Each of the 8 levels is defined by a set of descriptors indicating the learning outcomes relevant to qualifications at that level in any system of qualifications.

In the context of EQF, knowledge is described as *theoretical and/or factual* and skills are described as *cognitive* (involving the use of logical, intuitive and creative thinking) and *practical* (involving manual dexterity and the use of methods, materials, tools and instruments). Competence is described in terms of *responsibility and autonomy*. Respondents were asked at what career stage a competence was necessary; the below table links career stage with equivalent EQF level.

Table 1 Correlation between career stage and EQF level.

Career stage	EQF Level	Knowledge	Skills	Competence
Entry level	Level 1	Basic general knowledge	Basic skills required to carry out simple tasks	Work or study under direct supervision in a structured context
Entry level	Level 2	Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy
Entry level	Level 3	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study; adapt own behaviour to circumstances in solving problems
Transition from entry to middle	Level 4	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities
Middle	Level 5	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others



		boundaries of that knowledge		
Middle	Level 6	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups
Transition from middle to advanced	Level 7	Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research Critical awareness of knowledge issues in a field and at the interface between different fields	Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams
Advanced	Level 8	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

Table 2 Classification of professional profiles by EQF level; also broken down by competences.

Profile	Career stage	EQF Level	Competence	Career stage	EQF Level
Data management	Transition from entry to middle	Level 4	Market and sales data	Transition from middle to advanced	Level 7
			Metadata	Transition from entry to middle	Level 4



Design	Transition from entry to middle	Level 4	Consistent design style for different markets and cultures	Middle	Level 5-6
			Specialised publishing and design software	Entry level	Level 1-3
Digital production	Transition from entry to middle	Level 4	Digital production processes	Transition from entry to middle	Level 4
			Publishing software	Entry level	Level 1-3
Editorial	Transition from entry to middle	Level 4	Commissioning	Middle	Level 5-6
			Editing	Transition from entry to middle	Level 4
			Images and illustrations	Transition from entry to middle	Level 4
			Market, distribution circuit and client management	Transition from middle to advanced	Level 7
			Relationships with authors	Transition from entry to middle	Level 4
			Typography and pagination	Transition from entry to middle	Level 4
General knowledge	Transition from entry to middle	Level 4	The range of publishing sectors, formats and genres	Transition from entry to middle	Level 4
			The supply chain	Transition from entry to middle	Level 4
Interpersonal skills	Entry level	Level 1-3	Administration, management and human resources	Transition from middle to advanced	Level 7
			Clear communication	Entry level	Level 1-3
			Commercial negotiation	Transition from middle to advanced	Level 7
			Critical reading and comprehension	Entry level	Level 1-3
			Language skills	Entry level	Level 1-3
			Language skills in specialised English	Middle	Level 5-6
			Office management	Middle	Level 5-6
			Problem-solving	Entry level	Level 1-3
			Public and interpersonal relations	Entry level	Level 1-3
			Stakeholder management	Transition from middle to advanced	Level 7
Team work	Entry level	Level 1-3			



			Working independently	Entry level	Level 1-3
Legal knowledge	Transition from middle to advanced	Level 7	Copyright law and copyright contract law	Middle	Level 5-6
			UK/EU elements of commercial, labour and contract law	Transition from middle to advanced	Level 7
Print production	Transition from entry to middle	Level 4	Costing	Middle	Level 5-6
			Production and printing techniques and technology	Transition from entry to middle	Level 4
			Quality, safety and environmental standards	Middle	Level 5-6
Rights management	Transition from entry to middle	Level 4	Deal structures and rights management with authors	Transition from entry to middle	Level 4
			Digital rights	Middle/Transition from entry to middle	Level 4
			Licensing copyright	Transition from entry to middle	Level 4
Sales, marketing and publicity	Transition from entry to middle	Level 4	Communication and promotion techniques	Transition from entry to middle	Level 4
			E-commerce and digital sales strategy	Middle	Level 5-6
			Market, trend and distribution circuit knowledge	Middle	Level 5-6
			Marketing strategies and techniques	Transition from entry to middle	Level 4
			Sales strategies and techniques	Transition from entry to middle	Level 4
			Social media, influencers and interacting with readers	Transition from entry to middle	Level 4
			Trade partnership management	Transition from entry to middle	Level 4



ANNEX 2: THE BASIC COMPETENCES AND QUALIFICATIONS OF THE STAFF EMPLOYED IN THE BOOK PUBLISHING INDUSTRY (GREECE):

Specialty	Necessary Qualifications
Text Editor	Degree in Philology (Linguistics, modern or classical direction), excellent knowledge of grammar and syntax, research capacity, knowledge of computers and foreign languages (especially English). Experience in training and in field of editing-language correction
Editors- Translators of bilingual books	Excellent knowledge of the Greek language, foreign language skills, critical thinking, excellent computer use, experience in the field of lexicography
Seller	School diploma, competences and experience in marketing, familiarity in a computerized environment, knowledge and experience in foreign language teaching.
Graphic artist	Knowledge of graphic programs, programming skills, experience on web-designing and maintenance of electronic books, knowledge of English terminology related to the above
Typographer	Knowledge of printing and machines, presses, mechanical knowledge, knowledge or offset lithography method
Bookbinder	Knowledge in cutting, presses and folding machines, scissors, glue, vending machines, knowledge of engineering.
Accountant	Licensing, Experience in ledger book keeping, Knowledge of taxation policies, Imports, labour legislation, Very good knowledge of Microsoft Office, knowledge of English
Press Officer	School diploma, competences and experience in marketing, used to computerized environment, experience in public relations, event management, advertising, etc.
Driver	Professional van driver, warehousing experience
Worker	Experience in warehouse management