

Reinventing the EU Studies Curriculum for the Digital Era

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Abstract: *Considering current labour market trends, an International Relations and European Studies curriculum might seem too theoretical. Students often wonder what they will become once they graduate, but this question is worthy of the 20th century, while the faculty should prepare them for the 21st century. Digital skills are a significant part of 21st century skills and they are not only hard skills. In this sense, the underlying assumption is that individuals require digital skills training to properly engage in society and to function on a competitive labour market.*

This paper discusses the need to update the EU studies curricula for the digital era by integrating training within the framework of the Digital Competence Framework 2.2. Methodologically, this paper analyses a case study of academic subjects taught within the International Relations and European Studies curriculum. First, the paper details the Digital Competence Framework 2.2 and the role of the EU in digital policies. Then, it focuses on presenting the Internet in international affairs syllabus and its correspondence with the Digital Competence Framework. Finally, it discusses the labour market implications for such a horizontal and vertical approach to digital skills training.

Keywords: digital skills, European Union, future of work, European Studies.

1. Introduction

The European Commission has designated the year 2023 the European Year of Skills, based on the acknowledgment that a *workforce with the right skills* is a “crucial factor underpinning the current and future competitiveness of our social market economy” (European Commission, 2022c). Having the right set of skills is not necessary only for the workforce, but it is crucial for the proper working of our democracies. In her State of the Union address, the President of the European Commission highlighted the reasons behind this initiative, such as a shortage of low-skilled and high-skilled staff alike, lack of cooperation with the companies, or the need to match the offers with people’s aspirations (Ursula von der Leyen, 2022). At the same time, the speech addressed the threats to our democracies,

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stemming from disinformation and the malicious use of technologies (Ursula von der Leyen, 2022). In fact, the Commission has addressed this topic quite a lot, aiming to create a value-based digital space in the European Union, where democratic values and principles are respected. Hence, there are two avenues by which digital skills are relevant for the digital era in the European Union. The first is their relevance for the labour market. The second is their significance for the health and safety of our societies and democracies.

In the current digital era and economic circumstances, matching skills with the requirements of the labour market is crucial and universities play a significant role in this balance with more or less success (Hotnews, 2022). At the same time, there are “stark differences” between Member States regarding the level of digital skills, as some states report figures below 50%, while others are much closer to the Digital Decade targets (European Commission, 2022a, 20). Digital skills are crucial both for the labour market and for exerting our rights and responsibilities for a democratic society. They are not only hard skills, but rather soft skills requiring a critical and balanced attitude towards the technologies we use in our daily lives. For this sense, they are not only the attributes of information and communication technology (ICT) training but require horizontal and vertical integration in other study programs.

The purpose of this paper is to investigate the potential for horizontal and vertical integration of digital skills training in a social science program. The underlying assumption is that individuals require digital skills training to properly engage in society and to function on a competitive labour market. In this sense, the European focus on digital skills, both regarding the labour market, but also for social and democratic participation will provide the backdrop of the analysis. The theoretical framework will focus on two aspects, a brief analysis of future work trends, as well as discussions regarding the digitalization of higher education institutions (HEIs). Indeed, this is where this research aims to intervene, namely to bridge the gap between the integration of digital technologies in HEIs and the usefulness of digital skills training for the world of work and the digital society. The literature focuses quite significantly on advanced digital skills and the need for universities to integrate digital technologies, such as automation and artificial intelligence to prepare students for the future of work (Ahmad, 2019). But this is just one side of the story, given that not all study programs train for advanced digital skills for the digital economy and Industry 4.0. Thus, this research paper focuses on the way a social science program can adapt to the requirements of the world of work, but also contribute to the cultivation of citizens aware of their digital rights and individuals that can use technology in a critical sense.

Methodologically, this paper analyses a case study of an academic subject taught within the International Relations and European Studies curriculum. After the literature review focused on digital skills and the future of work, it moves to empirical analysis, detailing the Digital Competence Framework 2.2 and the role of the EU in digital policies. The case study presents the *Internet in international*

affairs syllabus and its correspondence with the Digital Competence Framework. The paper ends with a plea to extend this model and a brief discussion on the implications for the labour market.

2. HEIs, digital skills and the future of work

This section addresses the theoretical outlook regarding the future of work, thus aiming to conciliate this research with the research on the effects of digitalization of HEIs.

Firstly, analyses on the future of work tend to focus on the integration of technologies within companies and map out scenarios on the types of tasks that will be automated (Acemoglu and Restrepo, 2018; Zande et al., 2019). Acemoglu and Restrepo (2018) trace the way in which technologies will reduce the demand for labour, leading to more automation, but end up maintaining an optimistic perspective, concluding that automation will create new types of tasks in the workplace and will require new skills. This scenario puts the pressures on HEIs to stay on top of the curve, but the literature looks more towards entities, such as labour agencies or companies and their role in upskilling and reskilling (Bernhard Schmidpeter & Rudolf Winter-Ebmer, 2021). In this scenario, possessing digital skills and understanding how different technologies work are basic requirements for the labour market, given that upskilling and reskilling can take place within the company.

Secondly, the future of work entails another significant trend, namely *platformisation*, defined as “the penetration of infrastructures, economic processes and governmental frameworks of digital platforms in different economic sectors and spheres of life, as well as the reorganization of cultural practices and imaginations around these platforms” (Poell, Nieborg, & Dijck, 2019). Looking at the labour market, platformisation changes traditional employer and employee relations, but it also requires from participants in such arrangements knowledge on algorithmic governance and on their digital rights. In the case of platformisation, skills are traded easily, but the autonomy of such workers is reliant upon their knowledge on the way in which such digital platforms function. Attempts to regulate platform work in the European Union have drawn upon this need, as a proposal for such a directive includes requirements on algorithmic management (European Commission, 2021b).

Thirdly, integration on the labour market, which is complicated by automation and other similar trends, requires a proper set of skills and HEIs play a significant role in this respect. Most of the literature on the digitalization of HEIs focuses on two perspectives, which mirror the horizontal and vertical integration of technologies in study programs. The first looks at the integration of digital tools to improve the teaching experience, a trend accelerated by the COVID-19 pandemic and discussed in the literature (Roy, Gruslin, & Poellhuber, 2020; Monteiro & Leite, 2021). The second concerns the need for HEIs to contribute to students’

digital competences as tools for the labour market. Quantitative analyses reveal the need for universities to develop students' digital skills, based on needs analyses for various industries (Spada et al., 2022). Given the current focus on advanced digital skills, the literature also develops the concept of teaching factory, whose mission is to produce skilled workers (Mourtzis et al., 2018). Analyses emphasize the significance of achieving digital skills, not only for the world of work, but as prerequisites for thriving in a digital society (van Laar et al., 2017).

This research starts from the theoretical backdrop related to investigations into the world of future work, which require rethinking of skills training and attainment. HEIs have the mission of training such workers, but the world of work does not entail only technical and hard skills directly for the factory floor. This is where the research intervenes, by looking at how a social science program – International Relations and European Studies – can contextualize digital skills both within the logic of the program and with an eye on students' digital skills. This requires both a vertical and a horizontal integration in the curriculum and teaching methods, as the case study will reveal the correspondence between the topics approached and the Digital Competence Framework, a policy document of the European Commission aimed at measuring citizens' digital skills. In this research, such digital skills are the foundation for functioning and thriving in the digital society, both as citizens and as workers. The next section dives into the empirical research, by looking at the EU policy context that resulted in the Digital Competence Framework 2.2.

3. European Union and digital policies. Analysis of the Digital Competence Framework

The vision that the EU has taken on the digital space influences the definition and prioritization of digital skills. The EU has developed a vision of a *European digital society* that cherishes “solidarity, prosperity, and sustainability”, it is “anchored in empowerment of its citizens and businesses, ensuring the security and resilience of its digital ecosystem and supply chains” (European Commission, 2021a). Citizens are empowered when their digital rights are respected and when they possess the necessary digital skills to properly engage with authorities and businesses. For this reason, the European Commission has put forward the European Declaration on Digital Rights and Principles with principles, such as: *a secure and trusted online environment, universal digital education and skills for people to take an active part in society and in democratic processes, or accessible and human-centric digital public services and administration* (European Commission, 2022b).

This soft law document illustrates the EU vision with regards to digital technologies, which O'Hara et al. (2021) deem the *Brussels Bourgeois Internet*. In this model, the individual has a fundamental right to privacy and autonomy, moral foundations should underpin the development of new technologies and legislation

is put in place to safeguard these values. The individual is empowered in this model, but this cannot happen without transparency of these regulations, but also without a proper educational framework in place. Hence, digital competence plays a key role for the growth not only of a high-skilled labour force, but also for the exertion of proper citizenship.

As a matter of fact, digital competence has been listed as one of the life skills of the 21st century by the European Commission (Directorate-General for Education, 2019). Given the constant technological change, digital competence requires constant upgrading, and, as such, the Declaration includes a commitment to support the acquiring of digital skills necessary to participate “in the economy, society, and in democratic processes” and to allow for the opportunity “to adjust to the changes brought by digitalization of work through upskilling and reskilling” (European Commission, 2022b). The signatories of this Declaration have assumed this mission to prepare the conditions for Europeans to be empowered in the digital society and HEIs represent major players in this field.

In education, the Commission aims to achieve this vision with the pillars of the Digital Education Action Plan. The second pillar of the plan is aimed at “enhancing digital skills and competences for digital transformation”, planning to pilot a Digital Skills Certificate by 2023 (European Commission, 2020). Indeed, standardization is a significant aspect for the assessment of knowledge, skills, and competences. Such a certificate thus becomes a means by which the individual is empowered to participate in the digital society and economy in a flexible manner. The assessment will be based under the Digital Competence Framework, meant to codify and standardize the necessary digital skills and competences for Europeans.

The initial version of the Framework was launched in 2013 and it has gone through several updates, which reflect the evolution and major debates related to the digital space. The current framework contains six major transversal areas, with usages in various life scenarios. Table 1 provides an overview with examples of abilities from each area.

Table 1. Digital Competence Framework 2.2 with examples from learning scenarios.

Source: author’s composition based on (Vuorikari, Kluzer, and Punie 2022)

Digital Competence Area	Digital Competence	Example
Information and data literacy	1.1. Browsing, searching, filtering data, information and digital content 1.2. Evaluating data, information and digital content 1.3. Managing data, information and digital content	• The ability to use keywords to refine search for specific literature • The ability to identify credible and reliable sources of information • The ability to recognize the existence of “filter bubbles” that reinforce existing views

Communication and collaboration	2.1. Interacting through digital technologies 2.2. Sharing through digital technologies 2.3. Engaging in citizenship through digital technologies 2.4. Collaborating through digital technologies 2.5. Netiquette 2.6. Managing digital identity	• The ability to use chat applications to organize class work • The ability to use the cloud to share materials or to solve cloud-related issues • The ability to create a public consultation for a social issue, using social media or blogs
Digital content creation	3.1. Developing digital content 3.2. Integrating and re-elaborating digital content 3.3. Copyright and licenses 3.4. Programming	• The ability to create and update an online presentation with interactive tools • The ability to correctly choose content that is copyright free for usage in an online and interactive presentation
Safety	4.1 Protecting devices 4.2. Protecting personal data and privacy 4.3. Protecting health and well-being 4.4. Protecting the environment	• The ability to protect one's accounts using a strong password and two-factor authentication • The ability to manage one's data on social media platforms • The ability to recognize and defence oneself against cyberbullying
Problem solving	5.1 Solving technical problems 5.2 Identifying needs and technological responses 5.3 Creatively using digital technologies 5.4. Identifying digital competence gaps	• The ability to adjust language settings for certain software • The ability to follow a massive open online course (MOOC) and to ask and/or answer questions

As observed in the table, the competence framework provides a sign of the times in terms of abilities and of concepts and major debates regarding the digital society. For instance, one specific ability is identifying filter bubbles, a significant debate in the age of social media. Showcasing this commitment towards the state of the art, the Digital Action Plan will update the Digital Competence Framework with competences and abilities related to AI (European Commission, 2020).

4. Case study

This section delves into the curricula and methods of one BA level course taught at the Department of International Relations and European Studies, University of Oradea, Romania. The course is entitled *Internet in International Affairs*, broadly focused on contextualizing current debates in international relations in the context of digital transformation. For this purpose, the course used

the Internet as an umbrella term, as it delves into a variety of technologies that are based on the Internet. This analysis will provide a model to integrate digital skills training into the curricula of social science programs by developing specialized courses aimed at boosting students' digital skills necessary for their integration on the labour market. First, the structure and objectives of the courses, followed by a comparison of the activities and structure of the course to the Digital Competence Framework areas.

Table 2 presents a comparative overview of the two subjects.

Table 2. Overview of IIA at the BA in International Relations and European Studies.

Source: author's composition based on the curriculum

Features of the course/seminar	Internet in International Affairs (IIA) – course and seminar
Allocation in the curriculum	Second year Bachelor's in International Relations (IR) and European Studies – taught in English and Romanian
Purpose of the course/seminar	Contextualizing current debates in international relations in the context of digital transformation
Learning outcomes	Students will be able to apply IR theories with regards to the digital space. Students will be able to identify and analyse the major changes to economy, society and politics due to digital transformation and digital technologies By the end of the semester, students will develop digital skills – in terms of the DigComp 2.2 framework
Number of courses/seminars per semester	7 lectures and 7 seminars over the course of a 14-week semester. Each topic is addressed within 1 course and 1 seminar.
Course/seminar structure	1. Introduction to the topic. Globalization and ICTs 2. The emergence of the digital space. Digital space and international relations 3. The global digital economy 4. Foreign policy and digital technologies 5. EU digital policies 6. Social media –actors in international relations 7. The governance of the Internet. Who controls it?

Digital issues are analysed from an IR perspective. The seminars and the case studies focus on issues that directly affect the experience of students in the digital space, as students explore their own social media accounts so that they understand the business model of social media platforms. Practical exercises for students include testing their ability to recognize trolls or deep fake videos or the possibility to create social media content for political leaders in role-playing exercises (MIT Media Lab, 2022; Media Forensics Hub, 2020). Use of technology underpins all major hands-on activities in class. For more detail, Table 3 showcases the connection between the subjects and activities within the classes and the skills necessary for the digital society.

Table 3. Internet in International Affairs syllabus and its correspondence to the Digital Competence Framework. Source: own composition based on the curriculum and the Digital Competence Framework 2.2

Course and seminar subjects	Digital Competence Framework 2.2 Area and Item	Activities and methods, and learning outcomes during the IIA course and seminar
Introduction to the topic. Globalization and ICTs	Information and data literacy 1.1. Browsing, searching, filtering data, information and digital content 1.2. Evaluating data, information and digital content Communication and collaboration 2.2. Sharing through digital technologies	(Correspondence with 2.2) Students fill in an initial survey where they present how they use technologies daily (Correspondence with 1.1 and 1.2) Students research online the differences between the Third and the Fourth Industrial Revolution and trace major innovations
The emergence of the digital space. Digital space and international relations	Problem solving 5.1 Solving technical problems Communication and collaboration 2.2. Sharing through digital technologies	(Correspondence with 5.1.) Students learn the technical differences between the Internet and the World Wide Web (Correspondence with 2.2) Professor and students collaborate in a virtual canvas to discuss views of major IR theories on the digital space (realism, liberalism, constructivism)
The global digital economy	Information and data literacy 1.3 Managing data, information and digital content Safety 4.2. Protecting personal data and privacy	(Correspondence with 1.3) Students understand the business models of major tech platforms (Meta and Google) (Correspondence with 4.2) Assisted by the professor, students explore their social media accounts to discern the data driven business model and to do a privacy check-up
Foreign policy and digital technologies	Information and data literacy 1.1. Browsing, searching, filtering data, information and digital content Digital content creation 3.1. Developing digital content 3.2. Integrating and re-elaborating digital content	(Correspondence with 1.1) Students explore social media presences of states, political leaders, and international organizations (Correspondence with 3.1 and 3.2) Students engage in a role-playing exercise where they create posts for states, political leaders, or international organizations in a given situation

EU digital policies	Digital content creation 3.3. Copyright and licenses Safety 4.2. Protecting personal data and privacy Problem solving 5.4. Identifying digital competence gaps	(Correspondences with 3.3 and 4.2) Students learn about the major policies of the EU and resulting legislation – for instance – the Copyright directive and the General Data Protection Regulation (Correspondence with 5.4) Students use the Digital Skills Assessment Tool to assess their digital skills
Social media – actors in international relations	Information and data literacy 1.2. Browsing, searching, filtering data, information and digital content 1.3. Evaluating data, information and digital content 1.4. Managing data, information and digital content Problem solving 5.2 Identifying needs and technological responses	(Correspondence with 1.2, 1.3, and 1.4) Students research major international political events triggered by social media and compare them (Correspondence with 5.2) Students use online tools to assess their preparedness to spot trolls and disinformation
The governance of the Internet. Who controls it?	Problem solving 5.2 Identifying needs and technological responses	(Correspondence with 5.2) students research Internet governance models and engage in a role playing exercise on to negotiate governance changes

Although not aligned perfectly with the progression of the DigComp 2.2 major areas, the case studies, discussions, student work, and methods help students understand the major debates related to the digital society. The main digital competence area explored in the classes is *information and data literacy* since students make use of online tools to search and evaluate information. They also engage in content creation and learn to use collaborative tools, such as Google Jamboard, and content creation tools, such as Mentimeter or Google Forms. Additionally, the content covered reinforces their knowledge on the digital space. Finally, many tasks are related to their problem-solving skills online, for instance, as they learn to understand where their digital competence gaps are.

At the beginning of the course, they answer an initial survey regarding their Internet usage and worries regarding technology. Social media, streaming, and messaging are the main activities in which students engage online, according to the most recent survey of students from the 2021/2022 academic year. The initial survey is anonymous and applied during the first class. The number of participating students is small (10-15), hence not statistically relevant. However, over a four-year timespan, activities and worries generally remain the same. When looking at the main fears and worries regarding technology for the same cohort of students, sample answers from students include the following:

- “Utilization of data against us, not enough privacy”;

- “How easy it is to fall into an echo chamber where you become surrounded by yes-men and like minded people [...] you become close-minded/manipulated”;
- “Concerned with the status of privacy and anonymity of the individual on the Internet and with how technology and the Internet shape our perspective on certain events”;
- “Concerned that I am not a pro in using it and have some troubles with it”.

As evident from these answers, the students are concerned about their experiences as users in the digital space, from echo chambers to privacy concerns, even if they consider themselves frequent Internet users. Hence, they require contextualized debates on issues related to high politics, but which are subsequently transposed over their own experiences as Internet users.

5. Discussion

The case study presented a model for horizontal and vertical integration of digital issues in an International Relations and European Studies curriculum. Not only do students use digital technologies to research, collaborate, create content, or solve problems, but they also understand the major debates that stand behind the technologies that they use both educationally and recreationally. This feeds into the *Brussels Bourgeoise Internet* vision, as students are empowered in relation to technology since they become critical users and not passive adopters of technologies. This is where the syllabus contributes to the development of active and involved citizens that are concerned for their digital rights.

The implications for their integration into the labour market converge from multiple directions. Empowered users of digital technologies will know how to use them, but they will also be aware of their pitfalls. For instance, they will be able to understand the potential biases resulting from algorithmic processing and will not be too reliant on its results. As both employees and employers, they will understand and apply the data protection regulations and governance accordingly, becoming assets to companies. As the world becomes increasingly digital, politicians and organizations require well-prepared advisors who understand the digital space, and such a subject can become the starting point for further exploration and specialization.

6. Conclusion

This paper has provided a case study of one course integrated in the International Relations and European Studies curriculum, whose aim is to develop students' understanding of the socio-economic and political effects of technology, as well as to boost their digital skills by contextualizing major debates related to the digital space. The need for such a course stems from the growing importance of digital technologies in every area of society and economy and citizens have to be

empowered. This feeds into the EU vision towards the digital society, a value-based space where digital transformation is human-centric.

The article focused not only on the use of technology in class, but also discussing the correspondence between the topics, activities, and methods used in class and their correspondence with the Digital Competence Framework with implications for students' future integration on a labour market marked by technological change. The analysis is focused and thus has several limitations. For instance, the analysis could benefit from a quantitative and statistically relevant analysis of students' online activities, as well as from extended interviews or surveys regarding their perceived level of digital skills before and after the class.

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