# CREATIVE.SKILLS²¹

Intellectual Output 1:
# 21st century skills
# for the creative industries

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# Introduction

This report is part of the Erasmus+ project *Creative Skills 21*. It is the result of a survey sent to employers in the creative industries in seven EU countries to determine which of the 21st century skills are most important for creative industry professionals. In this report, you can find the general results as well as a short analysis per country and per professional role.

The report starts with an elaboration of the methodology used, followed by general results, and results per role and per country respectively.

Finally, also the achievements of the participating schools in teaching these skills are evaluated, by asking these employers (many of them providing internship or employing former students) how well graduates of these schools in their opinion master these skills upon graduation.

The study has been carried out by Artevelde University of Applied Sciences and GBS St. Gallen, with the other project partners helping with translations and sending out the surveys in their own regions.

Finally, it's important to mention that the fieldwork for this study has been carried out just before the covid-19 pandemic. The attitudes of the sector towards the importance of certain skills might have shifted due to the experiences with working in the pandemic.

# Methodology

## SURVEY CONTENT

The survey consisted of three parts.

In the first part, the respondent was asked to pick a role that he or she knows well, meaning they have people with this profile working in their company as either employees or interns. While not all schools have exactly the same profiles in their curriculum, the goal was to cover a broad spectrum of the creative industries, and as such the following roles or categories of roles have been identified that students are trained for by one of more of the schools in the project:

- Animators (2D and/or 3D);
- Audiovisual designers, including sounds and video specialists;
- Branding experts, marketing specialists and project managers;
- Fashion designers;
- Graphic designers;
- Interaction designers, digital media designers, UI /UX designers and software developers;
- Printing technologists;
- Photographers and photo designers; and
- Visual merchandisers and packaging experts.

In the second part, the list of sixteen 21st century skills were introduced, including short explanations. We used the skills as identified by the World Economic Forum.[1]

1. **Literacy**: being able to interpret and write texts;
2. **Numeracy**: being able to interpret numbers and make calculations;
3. **Scientific literacy:** being able to interpret sources and find answers to complex questions;
4. **ICT literacy:** being able to work with ICT tools;
5. **Financial literacy:** basic understanding of financial administration and budgeting;
6. **Cultural and civic literacy**: cultural understanding and good citizenship;
7. **Critical thinking and complex problem solving**;
8. **Creativity**;

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[1] https://www.weforum.org/agenda/2016/03/21st-century-skills-future-jobs-students/

9. **Communication skills**;
10. **Collaboration skills**;
11. **Curiosity**;
12. **Ability to take initiative**;
13. **Persistence / grit:** being determined and not giving up;
14. **Adaptability:** coping with changing environments;
15. **Leadership**;
16. **Social and cultural awareness**.

Respondents were asked to keep the role they chose in part 1 in mind, and to rate for each individual skill, whether they consider this skill for the role 'not important', 'a little important', 'very important' or 'essential'. A fifth option, 'no opinion / I don't know' was also offered, in which case the answer will not be included in the analysis.

In the third part, the respondents had to rate the same skills, but this time they were asked for their impression of the level of skill interns and students have or have receive upon graduating from their school. The options were 'students are lacking these skills', 'students have rather low skills', 'students have rather good skills' or 'students have excellent skills'. Again, an option 'no opinion / I don't know' was offered as well.

## LOCALISATION AND OUTREACH

The survey has been developed in English and has been translated by the local partners into German, Finnish, Portuguese, Spanish, Italian, and twice in Dutch (similar translation with minor differences in technical terms between the survey in the Netherlands and Flanders). This way, eight different local online surveys were created in a tool (Askallo) provided by the Swiss partner.

The partners have all reached out to their network of professional experts in the local or regional creative industry, ideally professionals who know guide internships or employ former students of the schools in question.

In total, 218 surveys have been filled in, in the following countries:

| Country | # of surveys |
|---|---|
| Belgium | 15 |
| Spain | 44 |
| Finland | 23 |
| Switzerland | 49 |
| Italy | 21 |
| Netherlands | 29 |
| Portugal | 31 |
| United Kingdom | 6 |
| *Total* | *218* |

# Overall analysis

At the beginning of the survey, respondents were asked to select one profession or role, and to fill in the survey with that profession in mind.
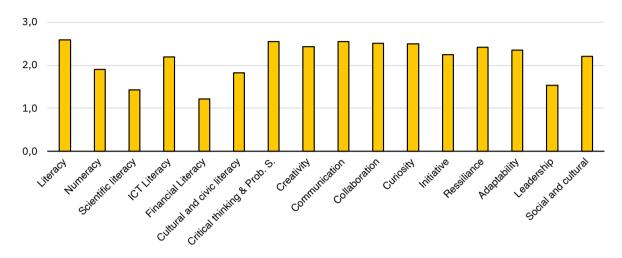
The respondents have been asked to rate each of the twelve 21st century skills based on their importance to the profession they had in mind. To compare the results, we quantified them according to the following key:

| Answer | Score |
| --- | --- |
| Not important | 0 |
| A little important | 1 |
| Very important | 2 |
| Essential | 3 |
| No opinion / I don't know | No score |

This allows for a comparison of the importance of the different skills on a range from 0 (not important) to 3 (essential). The results are as follows:

| | Average score | Amount of answers 'No opinion / I don't know' |
| --- | --- | --- |
| Literacy | 2,6 | 0 |
| Numeracy | 1,9 | 2 |
| Scientific literacy | 1,4 | 8 |
| ICT Literacy | 2,2 | 2 |
| Financial Literacy | 1,2 | 1 |
| Cultural and civic literacy | 1,8 | 2 |
| Critical thinking / problem-solving | 2,6 | 1 |
| Creativity | 2,4 | 0 |
| Communication | 2,6 | 0 |
| Collaboration | 2,5 | 0 |
| Curiosity | 2,5 | 0 |
| Initiative | 2,2 | 1 |
| Ressiliance | 2,4 | 0 |
| Adaptability | 2,4 | 0 |
| Leadership | 1,5 | 5 |
| Social and cultural | 2,2 | 1 |

In the rightmost column, we can see that on most of the skills the respondents had an opinion. Only on *scientific literacy* 8 out of the 218 respondents did not have an answer, and on *leadership* this was the case for 5 respondents.

When shown in a graph, we get the following results:



According to the respondents, the most important 21st century skills for the creative industries are *literacy*, *critical thinking & problem solving* and *communication* (all 2.6), followed by *collaboration* and *curiosity* (both 2.5).

The least important skills are *financial literacy* (1.2), *scientific literacy* (1.4) and *leadership* (1.5).
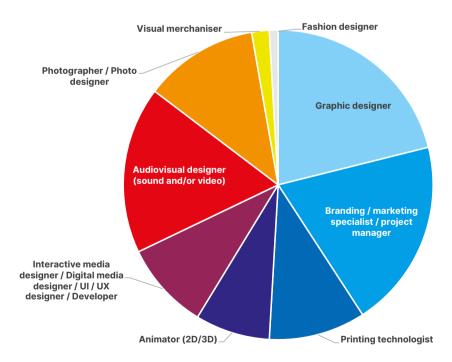
# Analysis per subfield

The data from the different national surveys has been merged to also allow for an analysis per sector over Europe, or at least over the eight involved countries.

The 218 filled in surveys account for the following profiles:

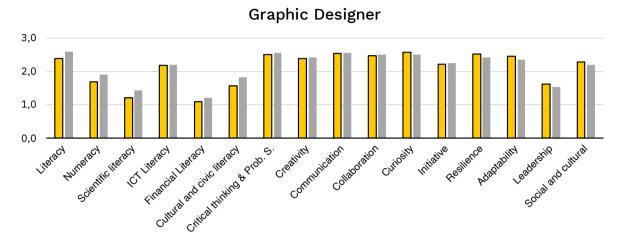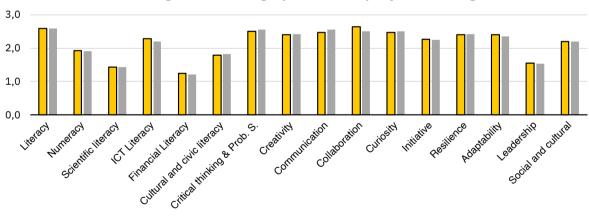| | |
|---|---|
| Graphic designer | 46 |
| Branding / marketing specialist / project manager | 43 |
| Printing technologist | 22 |
| Animator (2D/3D) | 17 |
| Interactive media designer / Digital media designer / UI / UX designer / Developer | 20 |
| Audiovisual designer (sound and/or video) | 38 |
| Photographer / Photo designer | 26 |
| Visual merchaniser | 4 |
| Fashion designer | 2 |

Or visually:

**Overview of roles (n = 218)**



Since there are too few surveys submitted for visual merchandisers and fashion designers, we will not provide analyses of those roles.

We've made an analysis of the most relevant 21st century skills for each of the five roles with more than 25 responses. For the other roles, there is not enough data to provide sensible results.

In the graphics below, the yellow bars indicate the score for the skill for that specific role, whereas the grey bar indicates the average score for all skills. This allows for a comparison between the specific role and the average.
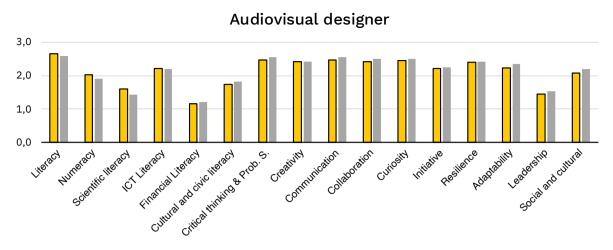
### Graphic Designer



In general, the pattern for graphic designers (n=48) roughly follows the general profile, with curiosity as the most valuable skill. For graphic designers, literacy, numeracy, and scientific literacy is valued less than for the other roles. What's striking is that also cultural and civic literacy is valued less. Curiosity, resilience, adaptability, leadership and social and cultural skills are valued more for graphic designers than for other roles.
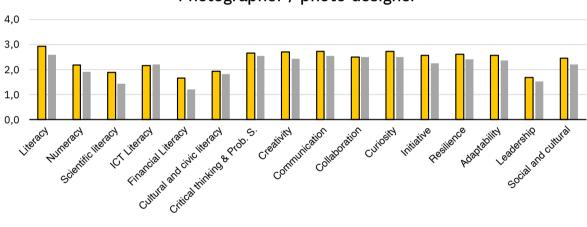
### Branding / marketing specialist / project manager



For the role that deals with branding, marketing and projects (n=46), literacy and collaboration are valued highest. ICT literacy and, again, collaboration, are valued higher than in the other profiles. Surprisingly, critical thinking and communication are valued less than average.

## Audiovisual designer



For the audiovisual designer (n=38), literacy, critical thinking, and communication are the most valued skills. Scientific literacy scores higher than for the other roles but remains one of the least important skills. Many skills, like critical thinking, communication, and collaboration, are considered less valuable for the audiovisual designers compared to the average profile.

## Photographer / photo designer



For photographers and photo designers (n=26), next to literacy, critical thinking, creativity and communication are key skills. Many skills are rated higher for this profile, including numeracy, cultural and civic literacy, and initiative. There is no skill that scores less than the average.

While the above profiles have different nuances than the average profile, the variation is not large. Also given the relatively small sample size for the individual roles, it's hard to make conclusive statements on the values of specific skills for specific roles

# Analysis per country

Apart from the general results, we can split the results per country, to find regional differences. Below are the split results. As a reminder, the question asked was which skills are considered important for professionals in the creative industry, with 3 being the most important. Due to the low numbers of respondes from the UK, this country has not been taken account in this analysis.

| | 1 - Literacy | 2 - Numeracy | 3 - Scientific Literacy | 4 - ICT literacy |
|---|---|---|---|---|
| Netherlands | 2,1 | 1,4 | 0,8 | 2,5 |
| Belgium | 2,5 | 1,4 | 0,9 | 2 |
| Switzerland | 2,5 | 1,8 | 1,3 | 1,6 |
| Spain | 2,7 | 2 | 1,5 | 2,4 |
| Portugal | 2,7 | 2,1 | 2,1 | 2,4 |
| Italy | 2,5 | 2 | 1,4 | 2,4 |
| Finland | 2,9 | 2,2 | 1,8 | 2,2 |

| | 5 - Financial Literacy | 6 - Cultural and civic literacy | 7 - Critical thinking/problems | 8 - Creativity |
|---|---|---|---|---|
| Netherlands | 0,9 | 1,4 | 2,6 | 2,5 |
| Belgium | 1,2 | 1,5 | 2,8 | 2,6 |
| Switzerland | 0,9 | 2 | 2,3 | 2,2 |
| Spain | 1,2 | 1,6 | 2,5 | 2,3 |
| Portugal | 1,5 | 2,3 | 2,8 | 2,6 |
| Italy | 1,5 | 1,7 | 2,5 | 2,2 |
| Finland | 2 | 2 | 2,6 | 2,8 |

| | 9 - Communication | 10 - Collaboration | 11 - Curiosity | 12 Initiative |
|---|---|---|---|---|
| Netherlands | 2,5 | 2,4 | 2,6 | 2,1 |
| Belgium | 2,4 | 2,7 | 2,6 | 2,1 |
| Switzerland | 2,4 | 2,2 | 2,4 | 2 |
| Spain | 2,5 | 2,8 | 2,4 | 2,4 |
| Portugal | 2,8 | 2,7 | 2,7 | 2,4 |
| Italy | 2,5 | 2,4 | 2,3 | 2 |
| Finland | 2,8 | 2,6 | 2,7 | 2,7 |

| | 17 - Ressiliance | 18 - Adaptability | 19 - Leadership | 20 - Social and cultural |
|---|---|---|---|---|
| Netherlands | 2,5 | 2,4 | 1,3 | 2 |
| Belgium | 2,3 | 2,7 | 1,5 | 2,1 |
| Switzerland | 2,3 | 2 | 1,1 | 1,7 |
| Spain | 2,4 | 2,3 | 1,7 | 2,4 |
| Portugal | 2,4 | 2,6 | 1,7 | 2,5 |
| Italy | 2,2 | 2,1 | 1,4 | 2,3 |
| Finland | 2,7 | 2,7 | 2 | 2,6 |

Some insights to take from the detailed results are as follows.

In **The Netherlands** 'classic' skills like literacy, numeracy and scientific literacy are valued less in comparison to other countries, whereas character traits like resilience and adaptability and communication sills score relatively high.

In **Belgium**, like in the Netherlands, the mentioned classic skills are also valued less, whereas adaptability, creativity and critical thinking/problem solving is deemed relatively important.

In **Switzerland**, ICT literacy and social and cultural awareness score surprisingly low, as well as collaboration and leadership. In general, the Swiss numbers seem lower than for most countries.

In **Spain**, literacy is deemed important, as well as social and cultural competences and initiative. Collaboration is valued higher in Spain than in any other country.

The **Portuguese** profile looks like the Spanish, with the main difference that creativity, curiosity and critical thinking/problem solving is valued higher. It scores the highest of all countries on the importance of cultural and civic literacy for creative industry professionals.

In **Italy**, creativity, adaptability and resilience are scoring a low importance compared to other countries. Numeracy and ICT literacy is valued relatively high.

Finally, **Finland** is a top scorer on many of the 21st century skills. Especially with regards to financial literacy, leadership, initiative and resilience, this difference is striking.

# Analysis per school

Respondents all belong to the networks of the partner schools, meaning they employ recent graduates or provide internships to the school's students. This allowed us to ask respondents to rate how well the school they are in close contact with cover the topics in their experience.

As a first question, the respondents were asked to select up to three skills that the school's graduates or students have strong competences in.

Over all countries combined, the following are the results on how well these competences and skills are covered. The best scoring items are marked with a color. The scores are on a ten-point scale, but then summed for the different countries, maxing a score of 70 the maximum.

|  | all countries |
|---|---|
| Literacy | 27,3 |
| Numeracy | 18,5 |
| Scientific Literacy | 8,9 |
| ICT literacy | 19,2 |
| Financial Literacy | 2,7 |
| Cultural and civic literacy | 7,9 |
| Critical thinking/problem solving | 9,1 |
| Creativity | 24,2 |
| Communication | 18,4 |
| Collaboration | 27,3 |
| Curiosity | 11,9 |
| Initiative | 7,1 |
| Ressiliance | 5,6 |
| Adaptability | 10,7 |
| Leadership | 1,2 |
| Social and cultural awareness | 10,3 |

We can conclude that the participating schools do very well in the fields of *literacy*, *creativity* and *collaboration*. Especially *financial literacy* and *leadership* skills do not stand out.

Below you can find the detailed results per school. Colours are used to highlight the top skills covered by each school.

| | GLR Rotterdam (NL) | Artevelde Ghent (BE) | GBS Sankt Gallen (CH) | IES Puerta Bonita Madrid (ES) | ETIC Lisbon (PT) | ENAC Verona (IT) | Gradia Jyväskylä (FI) |
|---|---|---|---|---|---|---|---|
| Literacy | 1,3 | 4,7 | 3,5 | 5,7 | 5,8 | 2,4 | 3,9 |
| Numeracy | 0,8 | 4 | 1,6 | 3,6 | 4,5 | 1,4 | 2,6 |
| Scientific Literacy | 0 | 2 | 0,2 | 1,8 | 2,6 | 1,4 | 0,9 |
| ICT literacy | 2,9 | 3,3 | 1,4 | 3 | 3,2 | 2,4 | 3 |
| Financial Literacy | 0,4 | 0,7 | 0 | 0,9 | 0,3 | 0 | 0,4 |
| Cultural and civic literacy | 0 | 0,7 | 1,8 | 1,6 | 1,9 | 1 | 0,9 |
| Critical thinking / problem solving | 1,7 | 1,3 | 1,6 | 0,7 | 0,7 | 1,4 | 1,7 |
| Creativity | 7,5 | 2,7 | 5,3 | 1,8 | 1,3 | 4,3 | 1,3 |
| Communication | 4,2 | 2,7 | 4,1 | 1,4 | 1,3 | 3,8 | 0,9 |
| Collaboration | 3,3 | 4 | 4,9 | 3,2 | 1,9 | 4,3 | 5,7 |
| Curiosity | 3,3 | 1,3 | 0,6 | 1,4 | 1,7 | 1,9 | 1,7 |
| Initiative | 0 | 0,7 | 0,6 | 1,9 | 0,7 | 1,9 | 1,3 |
| Ressiliance | 0,8 | 0,7 | 1,2 | 0 | 1 | 1 | 0,9 |
| Adaptability | 2,1 | 0 | 1,2 | 1,1 | 1,9 | 1,4 | 3 |
| Leadership | 0 | 0 | 0 | 0 | 0,7 | 0,5 | 0 |
| Social and cultural | 1,7 | 1,3 | 1,8 | 2,1 | 0,7 | 1 | 1,7 |

Subsequently, respondents were asked which skills in their opinion still had room for improvement with regards to graduates and students of the school in question. The aggregated results are as follows:

| | all countries |
|---|---|
| Literacy | 8,7 |
| Numeracy | 3,2 |
| Scientific Literacy | 4,4 |
| ICT literacy | 5,1 |
| Financial Literacy | 6,2 |
| Cultural and civic literacy | 11,6 |
| Critical thinking /problem solving | 42,2 |
| Creativity | 15 |
| Communication | 17 |
| Collaboration | 10,7 |
| Curiosity | 15,8 |
| Initiative | 26,3 |
| Ressiliance | 16,5 |
| Adaptability | 12,4 |
| Leadership | 7,8 |
| Social and cultural | 9,9 |

The top scoring item here is critical thinking and problem solving. This means that according to the sector, they feel the creative education should cover this competence better. Also taking initiative and being resilient are highlighted here.

# Conclusions

This report concludes a survey in eight European countries, addressed to the networks of eight schools providing creative-industry education. It investigates the specific 21st century skills that these professionals deem important for and/or lacking in current students and graduates.

The overall results show that the most important 21st century skills for the creative industries are *literacy*, *critical thinking & problem solving* and *communication*, followed by *collaboration* and *curiosity*. On the contrary, *financial literacy, scientific literacy* and perhaps very surprising *leadership* are the least valued skills.

The analysis for specific profiles shows that for **graphic designers**, the important skills roughly follow the general profile, with *curiosity* being the most valuable skill. For **branding / marketing / project management specialists** *collaboration* stands out as one of the most valuable skills, while surprisingly *communication* scores relatively low compared to the other profiles. For **audiovisual designers**, some top skills are similar to the other profiles, but *critical thinking*, *communication*, and *collaboration* are valued less. For **photographers and photo designers** we see that all skills are valued above average.

In the analysis per country, we see that in **The Netherlands** and **Belgium** classical skills like literacy are valued less, in favor of skills like *adaptability*. This is in contrast with **Italy**, where these skills are rated less, while *ICT literacy* and *numeracy* are considered important. **Spain** shows a high emphasis on *collaboration* skills. The **Portuguese** profile looks like the Spanish, and has the highest score for *cultural and civic literacy* of all countries. The **Finnish** profile rates many of the skills higher than other countries, whereas the **Swiss** values many skills lower, which is especially striking for e.g., *ICT literacy*.

The surveys also asked how current interns and graduates perform on the skills in question. According to the employers, especially in the fields of *literacy*, *creativity* and *collaboration* the young professionals are well-prepared.

Of course this study has some limitations, mostly having to do with the amount of respondents, and the means of selecting, inviting professionals specifically from the networks of the participating schools.