GENIE: Generative AI for Inclusive Education and Empowerment

Needs Analysis report

Co-funded by the European Union

Programme: Erasmus+ KA2 Cooperation Partnerships

Project No: 2024-1-LT01-KA220-ADU-000250871

Summary

1. Introduction

This report has been prepared within the framework of the European project "GENIE: Generative AI for Inclusive Education and Empowerment", funded by the Erasmus+ program, with the aim of analysing the level of knowledge, training needs, and areas of interest of trainers, educators and learners regarding generative artificial intelligence (generative AI).

Generative AI refers to artificial intelligence systems designed to create new content, such as text, images, music, or video, based on models learned from existing data. These tools are rapidly transforming numerous sectors, including education, offering new opportunities for teaching and learning. Some well-known examples include:

- **ChatGPT**: generates human-like text from textual input.
- **DALL·E**: creates images based on textual descriptions.
- **Music generation models**: compose original pieces based on training data.

In a context of accelerated digital transformation, the GENIE project aims to address crucial needs related to the integration of generative AI in adult education, helping learners, teachers and trainers understand and use these tools effectively and consciously.

The collected evidence will guide the design of innovative and personalized training programs, with the aim of providing educators with concrete tools to leverage generative AI effectively, ethically, and inclusively.

The report is divided structured into the following sections:

- **Methodology**: describes the data collection and analysis process, the reference sample, and the techniques used to process the results. It includes details on survey administration, sample composition, and the analytical methodologies applied to interpret the responses.
- **Results**: presents the key findings of the study, it is divided into separate sections for educators and learners. It analyses participants' reported skills, challenges encountered, and training preferences, with a particular focus on knowledge gaps and emerging needs for integrating generative AI into educational settings.

- **Conclusion**: summarizes the main findings of the report, interprets the collected data, and provides practical recommendations for developing targeted training materials. It also highlights some suggestions and recommendations for the following steps of the project.

2. Methodology

The questionnaires used for the survey were designed by the partners of GENIE Project to collect data on respondents' demographic characteristics, their knowledge and skills in using generative artificial intelligence, their preferences as well as challenges and support needs in integrating such tools into teaching (for educators) or in adopting such tools in their daily and professional lives (for learners).

2.1 Survey Administration and Sample

The questionnaires were created in a common English version and administered through Google Forms, each partner also translated the forms in their national language (Estonian, Italian, Lithuanian and Slovenian) ensuring an accessible and easily completable format.
Some partners also used the original English version in order to reach respondents outside their countries. Data collection took place between December 2024 and February 2025.
For the educators, the sample consists of adult educators and trainers working in the education and training sectors, identified through the networks of the GENIE project partner organizations in, Estonia, Italy, Lithuania and Slovenia. In total, 391 participants completed the questionnaire. The distribution of respondents reached by country is as follows:

LITHUANIA: 134 respondents (6 of which were from international environment)
ESTONIA: 30 respondents
ITALY: 56 respondents
SLOVENIA: 171 respondents (127 of which were from international environment)

The sample of the learners consisted of adult learners reached through the networks of partner organizations in the GENIE project across Estonia, Italy, Lithuania and Slovenia. In total, 636 participants completed the questionnaire. The distribution of respondents reached by country is as follows:

LITHUANIA: 359 respondents
ESTONIA: 53 respondents
ITALY: 117 respondents
SLOVENIA: 107 respondents (45 of which were from international environment)

2.2 Data Analysis Methodologies

Several methodologies were adopted for analysing the collected data:

- **Descriptive analysis**: used to calculate the percentage distribution of responses and identify major trends emerging from the data.

- **Likert scale evaluation**: a 5-point Likert scale (1 = not relevant/no experience, 5 = highly relevant/expert) was used to measure familiarity with generative AI and the perceived relevance of different educational topics.
- **Frequency and means analysis**: for multiple-choice questions, frequency analysis was conducted to identify the most common responses among participants.
- **Qualitative analysis**: open-ended responses were analysed to identify recurring themes and qualitative insights into educators' perceptions and needs.

3. Results

This section presents the main results of the questionnaires, they are divided into two sections: one section for the educators and one section for learners.

3.1 Educators

The educators questionnaire is divided into two main sections:

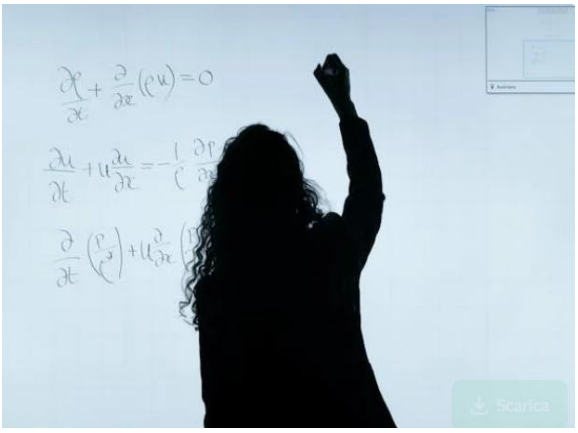
1. **Educators profile**: collects demographic information (age, gender, country of origin) and data related to the work context (type of educational organization and categories of students supported).
2. **Knowledge and skills on generative AI tools**: explores the level of familiarity and competence in using artificial intelligence tools, interest in various AI applications in education, level of support and the main difficulties encountered in integrating these technologies into teaching. In addition, it explores the educators opinion about learners' perspective on the relevance of different AI areas and their view of training.

Below is a detailed analysis of their responses collected through the educators questionnaire, with the objective of:

- Assessing the level of knowledge and skills of educators regarding the use of generative AI.
- Identifying the thematic areas that would be most relevant for their learners, considering their needs and the profile/work field of their organization.
- Identifying the level of support they find most beneficial in order to effectively integrate the topics of generative AI into their teaching.
- Identifying the specific challenges they anticipate or have experienced when offering AI training for learner
- Exploring preferences in terms of teaching methods they think is most effective for engaging participants in learning about generative AI.
- Identifying what kind of format they would prefer if they were to teach adult learners about generative AI.

3.1.1 Educators Profile

- **Age and gender (question 1.1 and 1.2)**



As shown in Table n.1, the largest age groups among the respondents are 50–59 (29.66%) and 40–49 (28.64%), followed by 30–39 (23.78%). The youngest group, 18–29, accounts for only 6.93%, while those aged 60–69 makeup 10.23%, and 70+ just 0.76%.
Women represent a strong majority of the educators at 82.35%, while men account for 16.88%.
A small portion of respondents (0.77%) did not specify their gender.

Table n.1 - Age and gender of educators (% of total respondents)

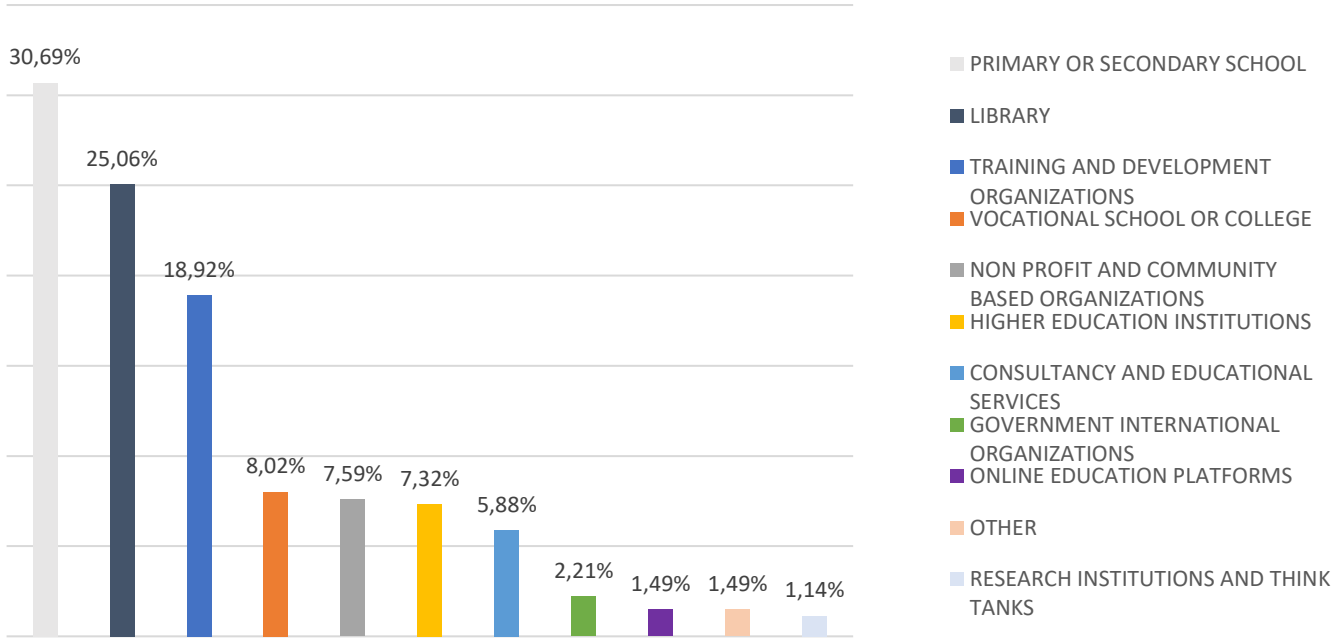
Age		**Gender**	
18-29	6,93%	**Female**	82,35%
30-39	23,78%	**Male**	16,88%
40-49	28,64%	**Not specified**	0,77%
50-59	29,66%		
60-69	10,23%		
70 and above	0,76%		

T

- **Type of Organization where educators work (question 1.3)**

Participants had the possibility to choose more than one type of organization they work for.
The majority of respondents work in primary or secondary schools (30.69%) and libraries (25.06%).
Training and development organizations (18.92%) also have a significant presence, vocational schools, nonprofits, and higher education institutions each represent around 7-8%, while consultancy and educational services make up 5.88%. Government bodies, online platforms, and research institutions have lower representation (1-2%).

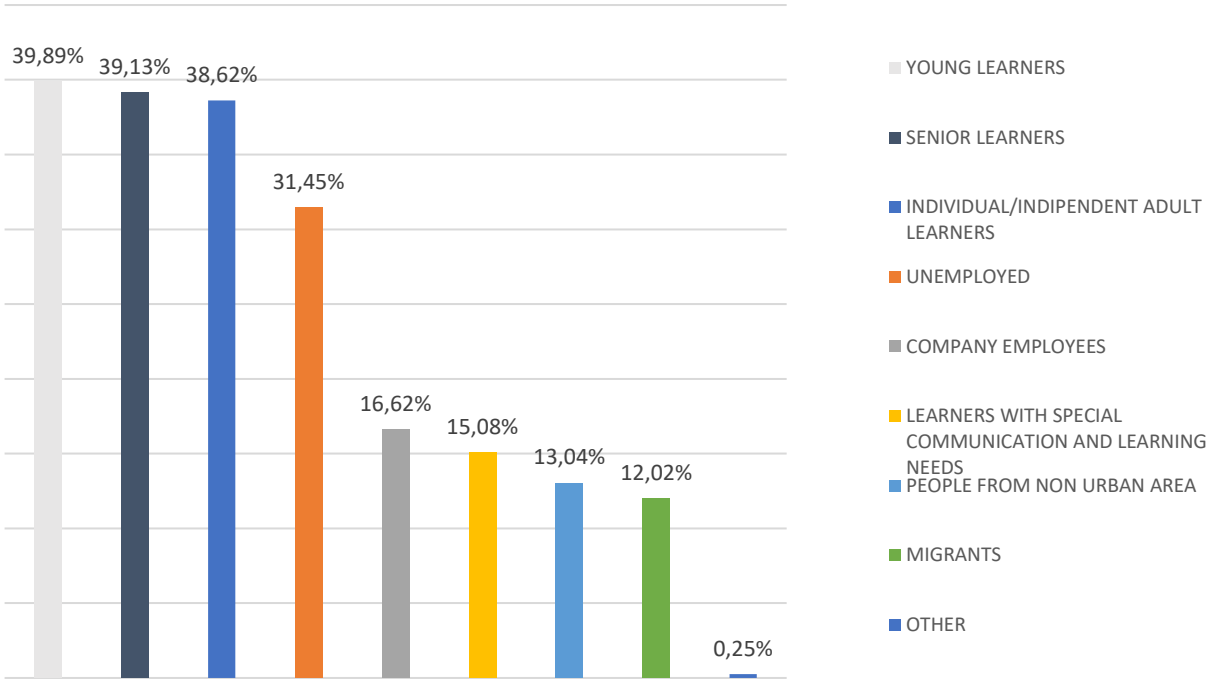
Chart n.1 - Type of organization where educators work (% of total respondents)



- **Target group with which educators work (question 1.4)**

  Respondents reached by the partners of the project work with a variety of learners, so they could choose multiple options. A significant portion engages with young learners (39.89%), senior learners (39.13%), and independent adult learners (38.62%), covering different age groups.
  Many also support unemployed individuals (31.45%), indicating a focus on reskilling.
  Some work with company employees (16.62%) and learners with special communication and learning needs (15.08%). Others assist migrants (12.02%) and people from non-urban areas (13.04%), addressing educational inclusion. A very small percentage work with other groups (0.25%), such as Roma people (1 respondent).

Chart n.2 - Target group with which educators work (% of total respondents)



3.1.2 Educators' Knowledge and Skills on Generative AI Tools (question 2.1)

This area investigates the level of knowledge of the participants in the following different tasks that could be performed with Generative AI. Participants could choose among these different options:
1 – No experience (I have no knowledge or experience in this area).
2 – Beginner (I have basic knowledge or experience, but I require significant guidance to complete tasks in this area)
3 – Intermediate (I can perform tasks in this area independently with occasional help or resources)

4 – Proficient (I have strong skills in this area and can complete most tasks independently and effectively)
5 – Expert (I have advanced knowledge or experience and can teach others).

In the chart n.3 the collected data regarding the level of knowledge and skills on generative AI tools of educators in the different tasks are aggregated (question 2.1).

Chart n.3 - Level of knowledge and skills on generative AI Tools (%)

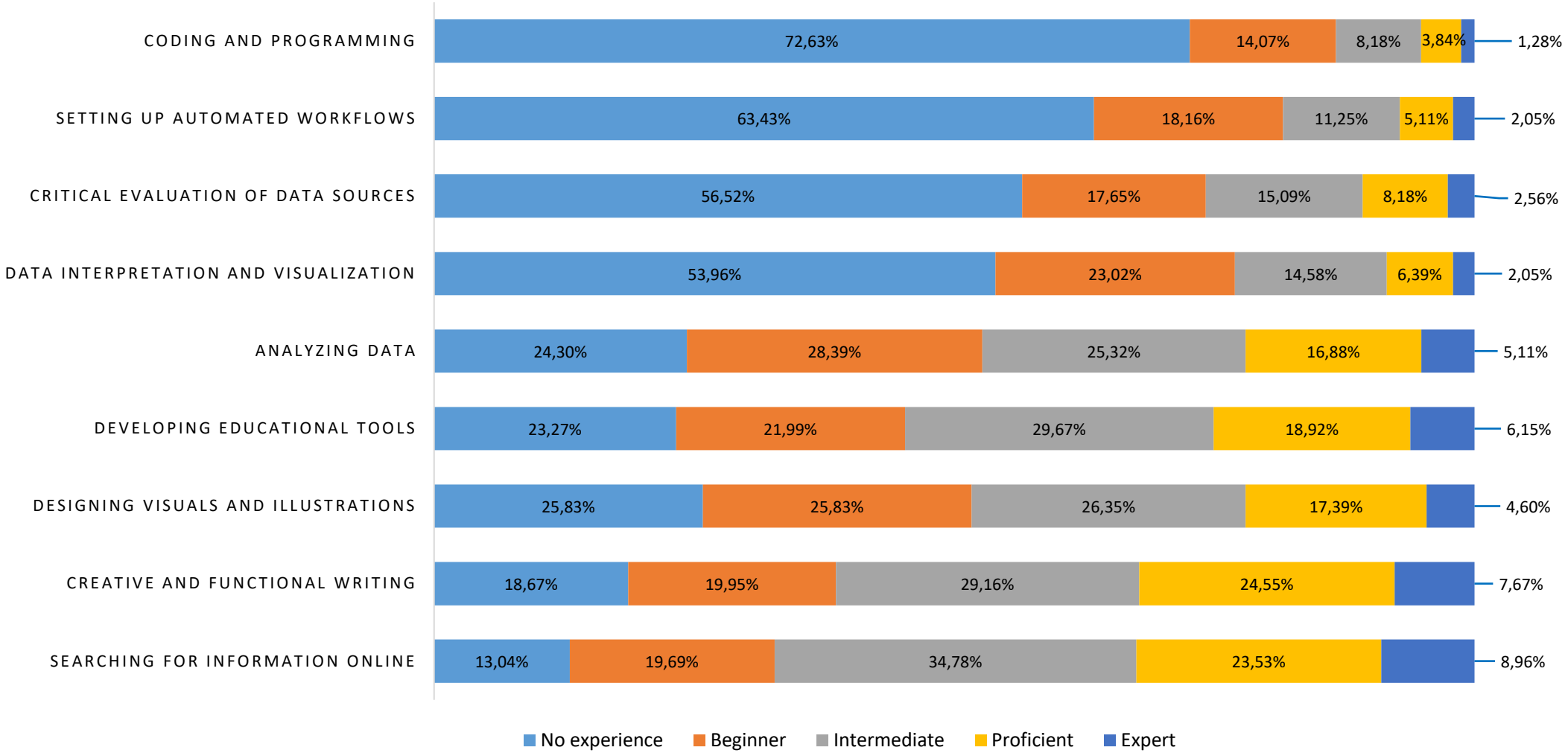
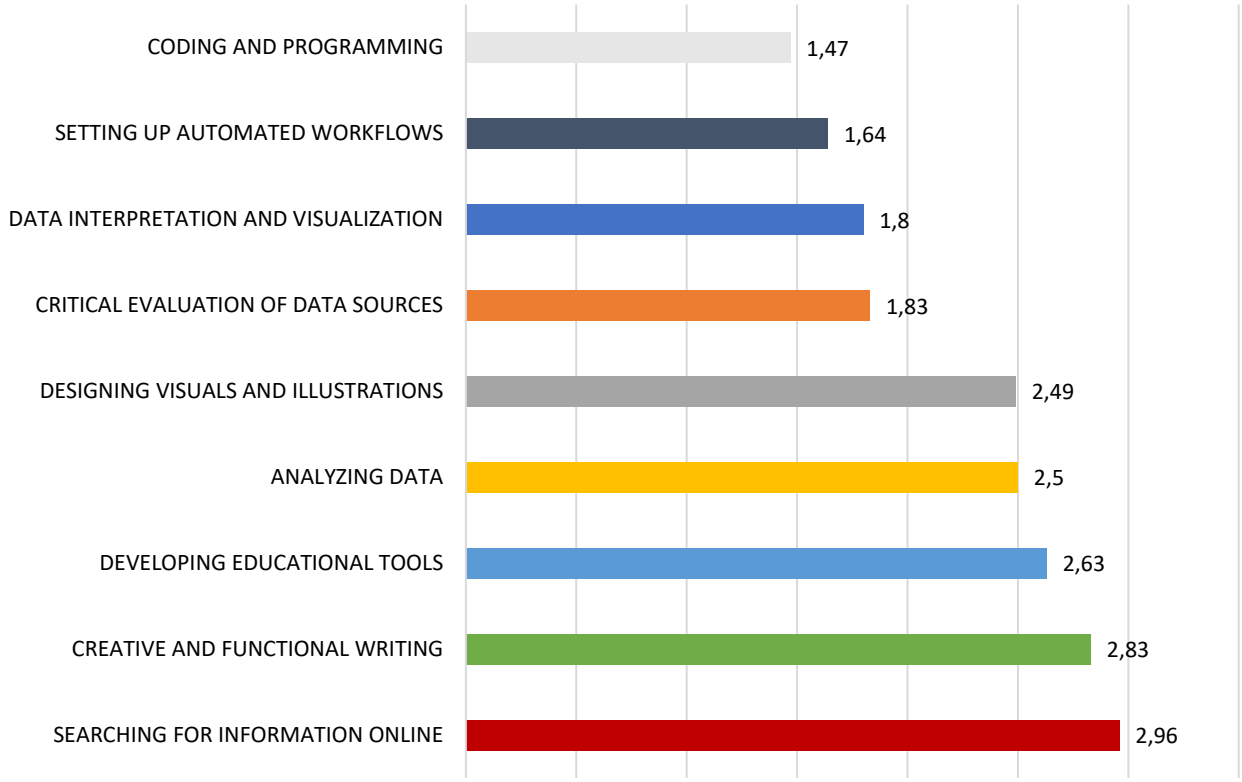


Chart n.4 shows the means of the collected data (from 1 - No experience to 5 - Expert) regarding the level of knowledge and skills on Generative AI tools of educators in the different tasks (question 2.1).

Chart n.4 - Level of knowledge and skills on generative AI Tools (Mean Values)



The graphic shows the following areas of **highest proficiency:**

- Searching for information online has the highest level of competence, with 34.78% at the intermediate level and 23.53% proficient, the mean score is 2,96.
- Creative and functional writing follows closely, with 29.16% at an intermediate level and 24.55% proficient, the mean score is 2,83.
- Developing educational tools also shows notable competence, as 29.67% are at an intermediate level and 18.92% proficient, the mean score is 2,63.

Areas with **moderate knowledge** but need for improvement are:

- Analyzing data is similar, with 25.32% intermediate and 16.88% proficient, the mean score 2,5.
- Designing visuals and illustrations has 26.35% at the intermediate level, but a relatively lower 17.39% proficiency, the mean score 2,49.

The Areas with **significant training needs** are:

- Data interpretation and visualization shows a knowledge gap, with 53.96% having no experience and only 8.44% proficient or expert, the mean score is 1,83.
- Critical evaluation of data sources is another weak area, with 56.52% having no experience and only 10.74% proficient or expert, the mean score is 1,80.
- Setting up automated workflows has a large skill gap, as 63.43% have no experience, and only 7.16% are proficient or expert, the mean score is 1,64.
- Coding and programming is the weakest area, with 72.63% having no experience and just 5.12% proficient or expert, the mean score is 1,47.

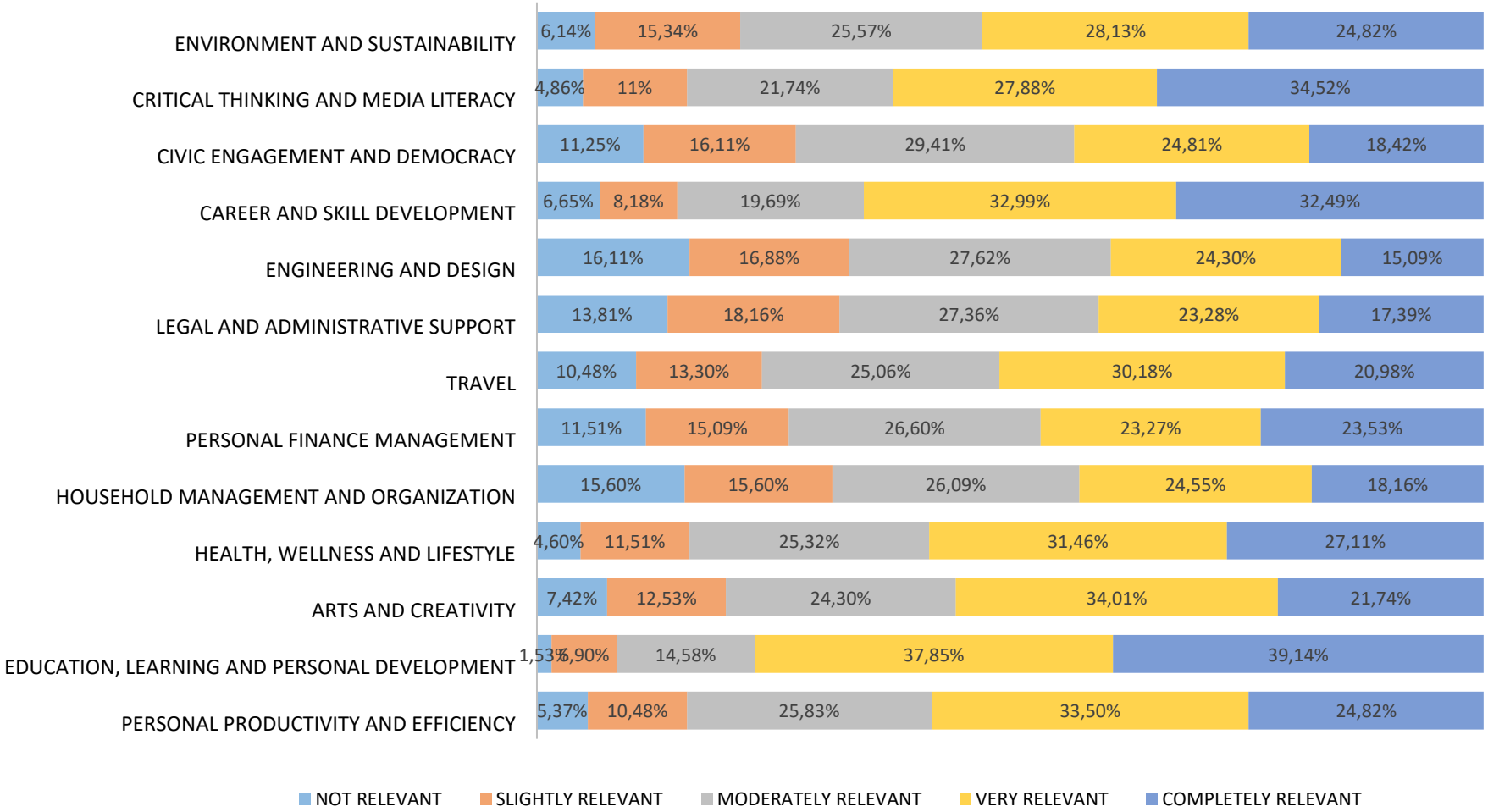
3.1.3 Relevance of AI Topics for Educators (question 2.2)

This area investigates the thematic areas that the respondents think would be relevant for their learners and their organizations, starting from some selected fields in which Generative AI could be used. The selected AI topics are listed below. Participants could choose among these different options:

1 – Not relevant
2 – Slightly relevant
3 – Moderately relevant
4 – Very relevant
5 – Completely relevant

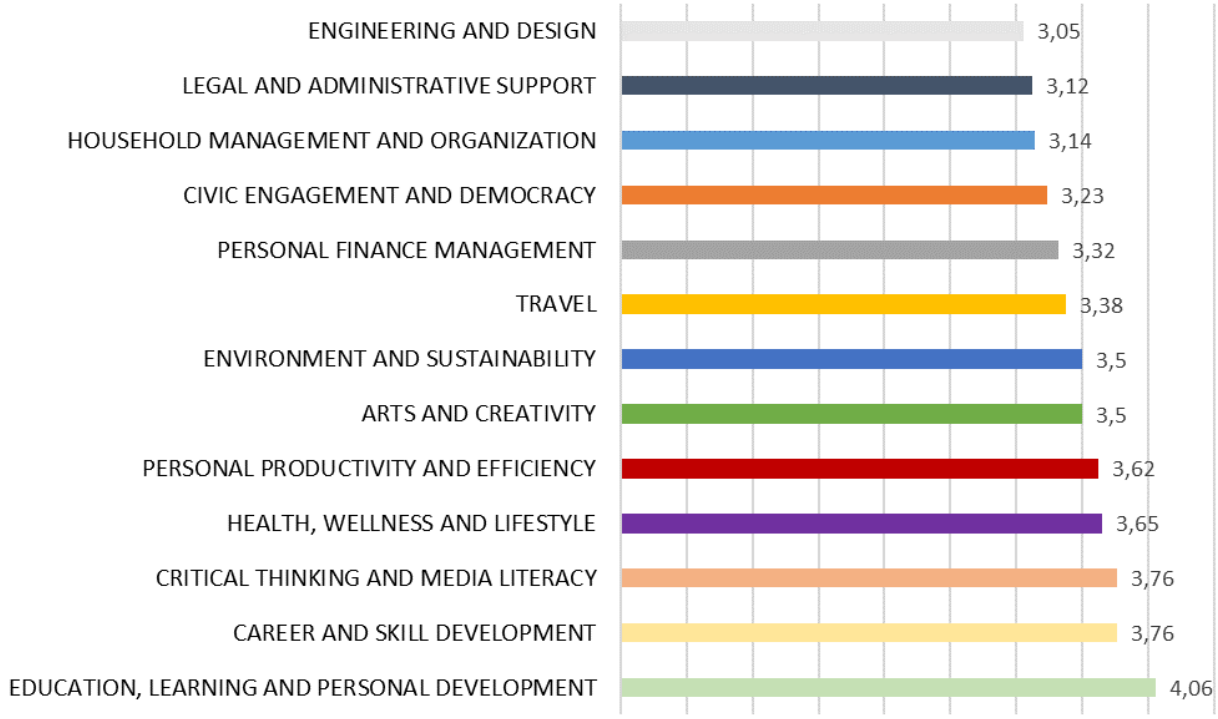
Chart n.5 displays the collected data regarding the thematic areas that the respondents think would be relevant for their learners and their organizations, starting from the selected fields of Generative AI, are aggregated (question 2.2).

Chart n.5 - Level of relevance of AI topics for educators (%)



In the following chart (n.6) are listed the means of the collected data (from 1 - Not relevant to 5 - Completely relevant) regarding the thematic areas of AI topics that the respondents think would be relevant for their learners and their organizations (question 2.2).

Chart n.6 - Level of relevance of AI topics for educators (Mean Values)



The **most relevant** areas are:

- Education, learning, and personal development with 77% rating it as very or completely relevant, mean score is 4,06.
- Career and skill development is another highly valued area, with 65.48% finding it very or completely relevant, with a mean score of 3,76.
- Critical thinking and media literacy is also a key concern, with 62.4% ranking it highly, mean score is 3,76.

Educators perceived as **moderately relevant** the following areas:

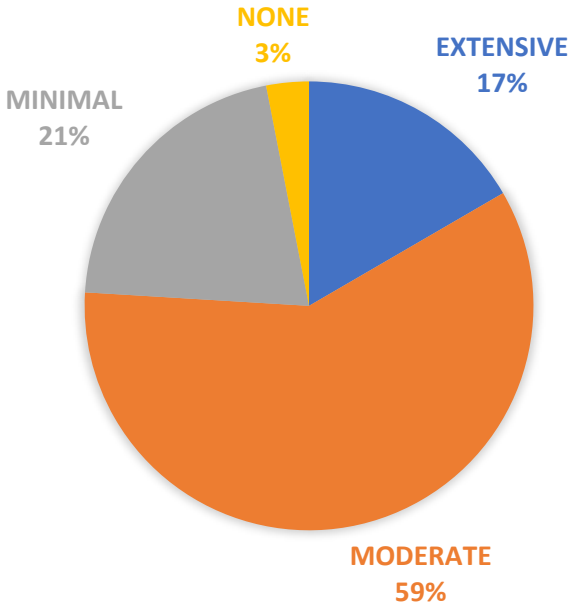
- Health, wellness, and lifestyle (58.57%, mean score 3,65)
- Personal productivity and efficiency (60.32% very/completely relevant, mean score 3,62)
- Arts and creativity (55.75%, mean score 3,5)
- Environment and sustainability (52.95%, mean score 3,5)
- Travel (51.16%, mean score 3,38)
- Personal finance management (46.8%, mean score 3,32)

The areas considered as **less relevant** are:

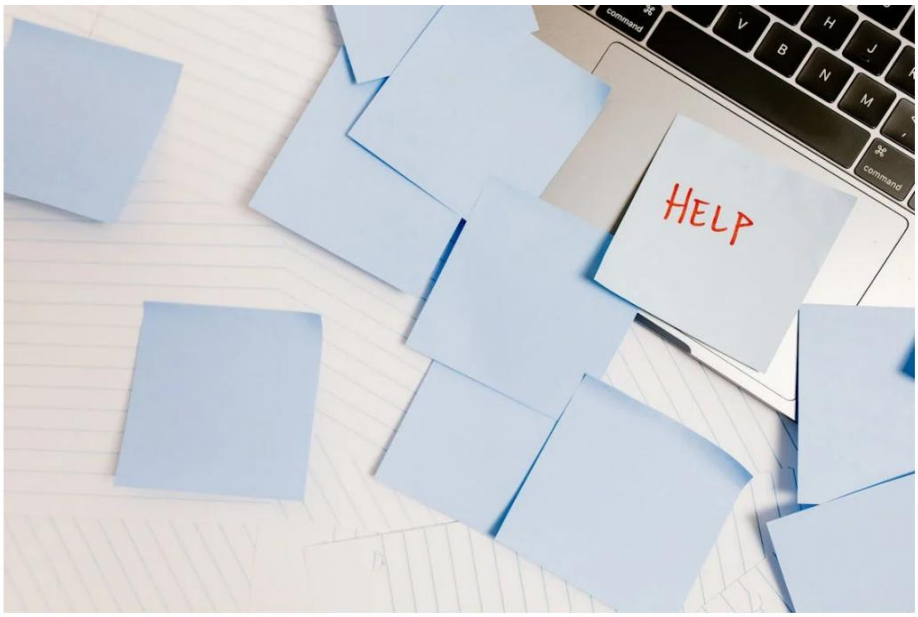
- Civic engagement and democracy (43.23%, mean score 3,23)
- Household management and organization has a lower perceived relevance, with only 42.71%, rating it highly, the mean score is 3,14.
- Legal and administrative support (40.67%, mean score 3,12)
- Engineering and design (39.39%, mean score 3,05)

3.1.4 Level of Support Needed to Integrate Generative AI in Teaching (question 2.3)

Chart n.7 - Level of support needed to integrate Generative AI in teaching (%)

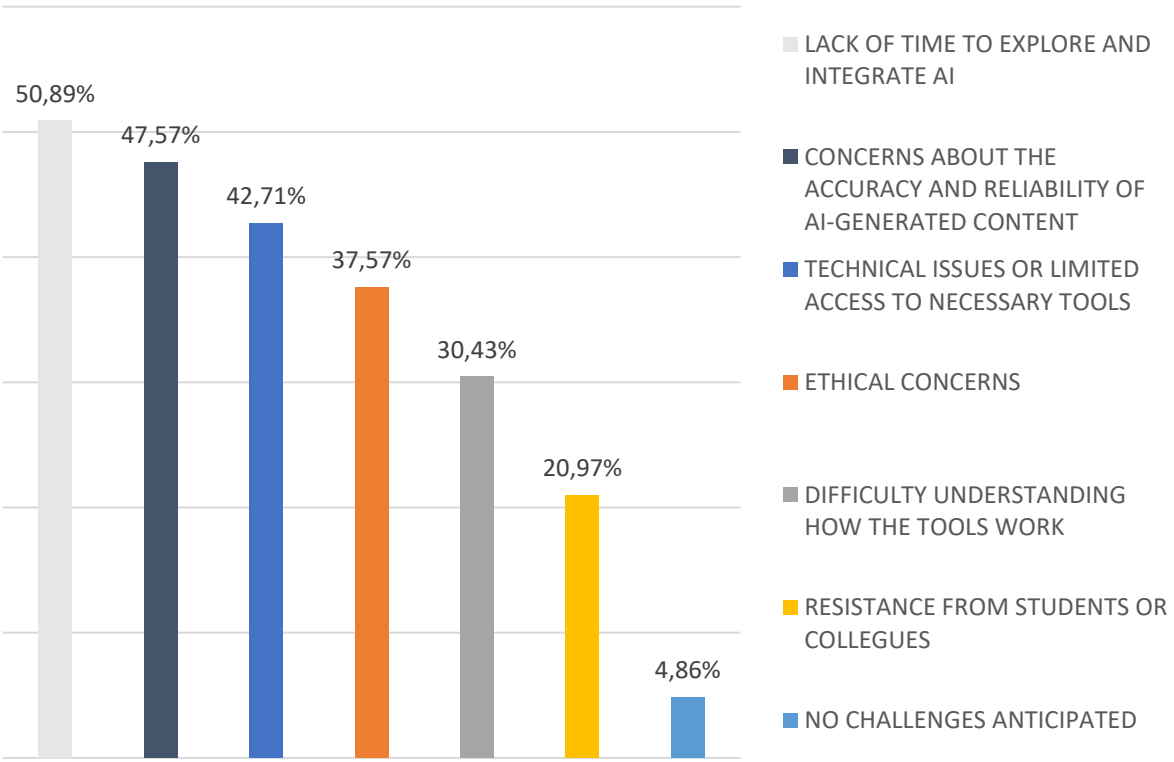


The majority of educators (59.33%) chose the option “Moderate" (a structured training program) to integrate Generative AI into teaching, highlighting the need for well-organized learning resources. A smaller but significant group (16.62%) needs extensive ongoing support, indicating challenges in adapting to AI tools. Meanwhile, 20.97% feel comfortable with minimal support (basic guidance), and only 3.08% are confident in learning independently as they choose “none” among the options.



3.1.5 Main Challenges in Offering AI Training (question 2.4)

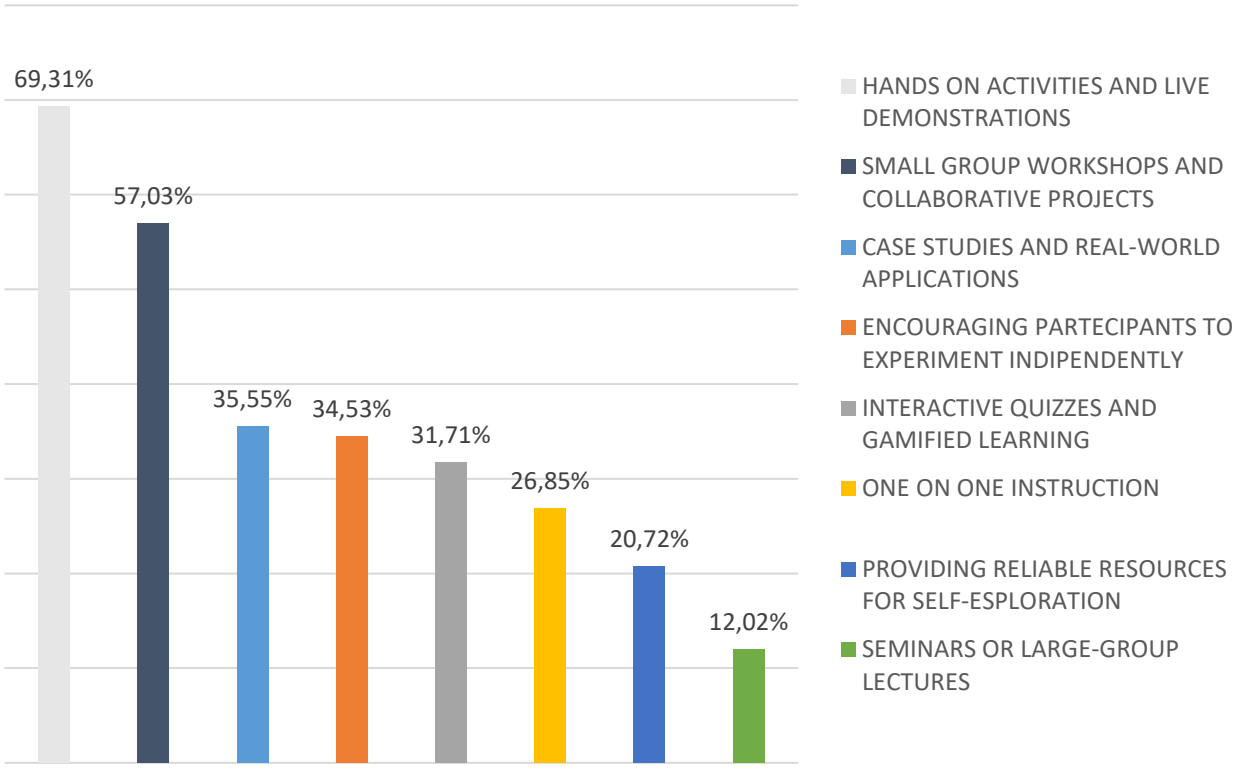
Chart n.8 - Main challenges in offering AI training (% of total respondents)



Participants could choose multiple options about the specific challenges they anticipate or have experienced when offering AI training for learners. The biggest challenge for educators is the lack of time to explore and integrate AI into teaching (50.89%). Concerns about accuracy and reliability of Ai Generated content (47.57%) and ethical concerns (37.57%) highlight trust and integrity as major barriers. Technical issues or limited access to necessary tools (42.71%) and difficulty in understanding how the tools work (30.43%) further complicate implementation. Resistance from students or colleagues (20.97%) is a less common but notable challenge. Only 4.86% don't anticipate challenges.

3.1.6 Most effective learning method for educators (question 2.5)

Chart n.9 - Most effective learning method (% of total respondents)



Participants could choose multiple options among different training methods they found more effective for learning about AI.

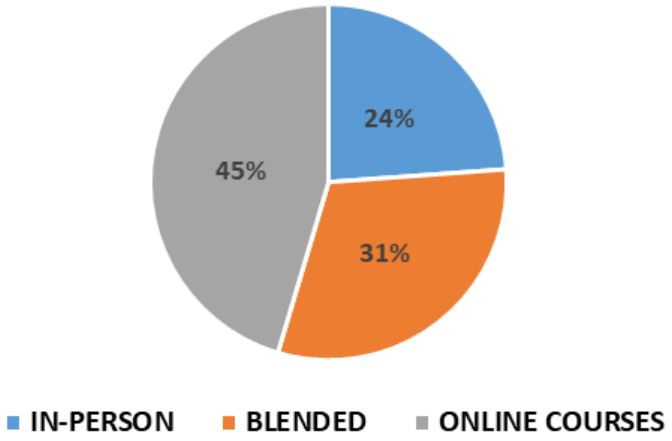
Educators find hands-on activities and live demonstrations of AI tools (69.31%) to be the most effective learning method and small group workshops and collaborative projects (57.03%) are also highly preferred.

Case studies and real-word applications of generative AI (35.55%) independent experimentation with AI tools (34.53%) and interactive quizzes and gamified learning experiences (31.71%), are moderately favored, showing a mix of structured and exploratory learning approaches.

Meanwhile, one-on-one instruction (26.85%) and providing reliable resources for self-paced exploration (20.72%) have lower demand, and large-group seminars or lectures (12.02%) are the least preferred. In conclusion, there is a strong preference for interactive and applied learning over passive instruction.

3.1.7 Educators' Preferred Teaching Format (question 2.6)

Chart n.10 - Preferred teaching format (%)



The majority of educators prefer online courses (45%). Blended learning (31%) is also highly favored, suggesting that a mix of in-person and online instruction is beneficial. In-person learning (24%) is the least preferred: while face-to-face interaction is valued, many educators prioritize the convenience and adaptability of digital formats.

3.2 Learners

The Learners questionnaire is divided into three main sections:

1. **Learners profile:** collected demographic information (age, gender, educational qualification and geographic area of residence) and data related to participants' employment status and migration background.
2. **Access to technology:** investigated internet connectivity and/or device availability.
3. **Knowledge, skills and relevance perceived in generative AI tools:** explored the level of familiarity and competence in using AI tools, relevance perceived in different AI applications in personal and professional settings, as well as the main difficulties encountered in their use.

The report aims to:

- Assess learners' level of knowledge regarding generative AI.
- Identify the relevance participants perceive in different AI applications.

- Identify the main challenges in using such tools.
- Explore learning preferences to develop targeted training programs.
- Provide recommendations for the effective integration of generative AI in educational contexts.

3.2.1 Learners Profile

Table n.2 - Age, Gender and Educational Qualification of learners (% of total respondents)

Age		Gender		Educational qualification	
18-29	9,75%	**Female**	79,40%	**Higher education**	76,58%
30-39	22,17%	**Male**	20,12%	**Lower secondary school**	12,42%
40-49	24,53%	**Not specify**	0,47%	**Upper secondary school**	8,96%
50-59	25,47%			**Primary school**	1,57%
60-69	13,21%			**Other (vocational education)**	0,47%
70 and above	4,87%				

Table n.3 - Geographical area, Migration Background and Employment status of learners (% of total respondents)

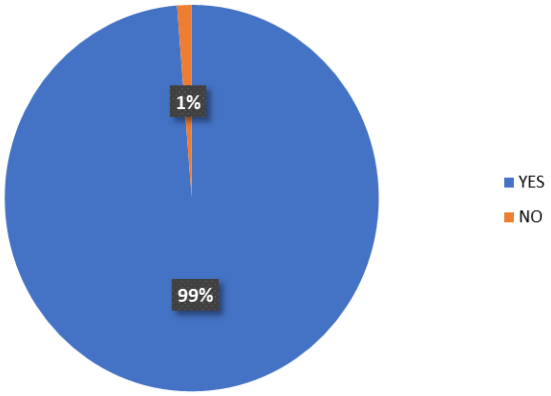
Geographical Area		Migration Background		Employment status (% of total respondents)	
Urban or semi-urban area	83,02%	**Born and raised in their own country**	92,61%	**Employed**	62,26%
Non urban Area	16,98%	**Born in another country and moved**	6,92%	**Self-employed worker**	11,48%
		Other (experiences of emigration and return)	0,47%	**Retired**	11,32%
				Unemployed and looking for work	10,38%
				Student	6,45%
				Unemployed and not looking for work	3,46%

3.2.2 Access to Technology and Generative AI (question 2.1)

The questionnaires investigated the participants' level of access to digital technology and generative AI. The following charts shows the participants responses to the two question below:

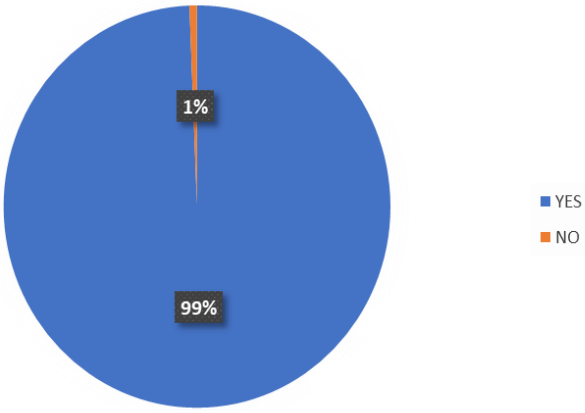
- **Do you own or have access to a device that has access to Generative AI tools (e.g. Laptop, PC, Smartphone, Tablet)?**

Chart n.11 - Access to device with Generative AI tools (%)



- **Do you have access to an internet connection?**

Chart n.12- Access to an internet connection (%)



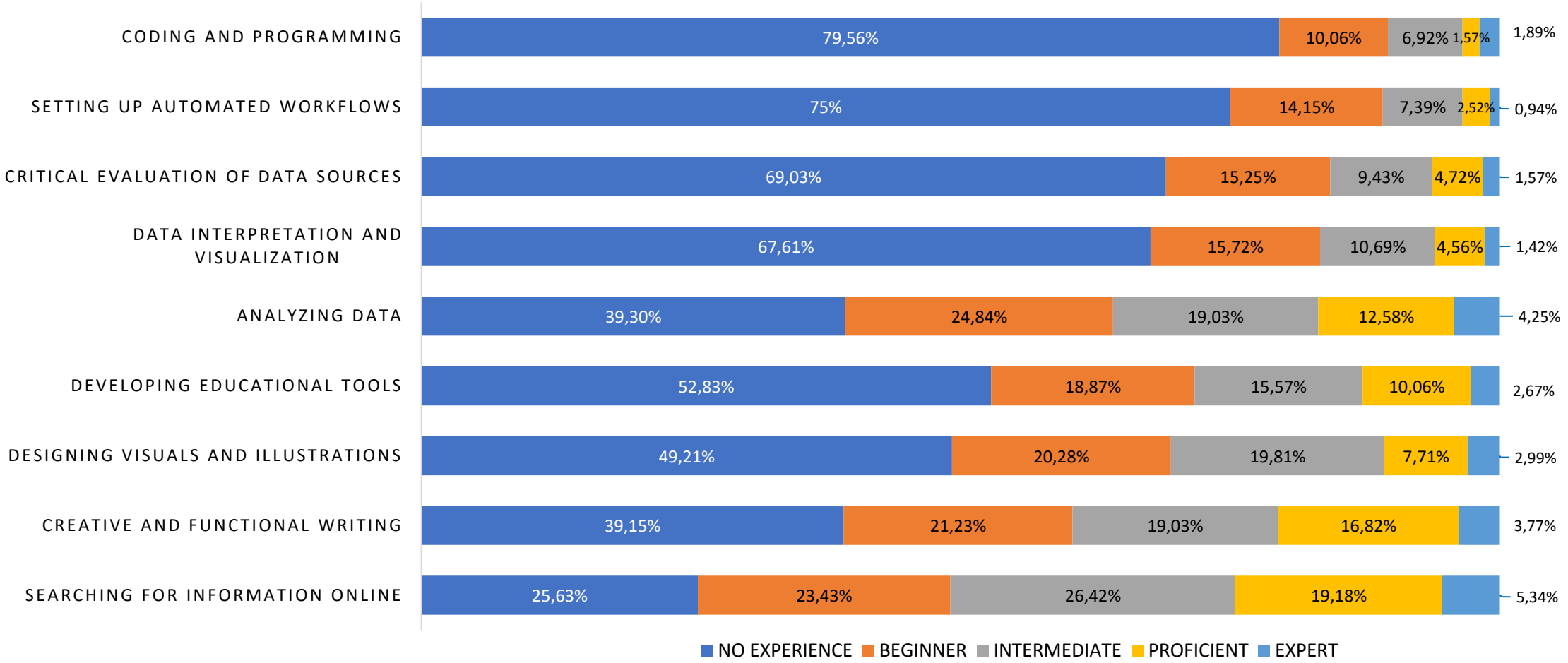
The vast majority of respondents have access to both a device capable of using Generative AI tools (98.74%) and an internet connection (99.37%), indicating minimal barriers to technological access. Only a very small percentage (1.26% for devices and 0.63% for internet) lack these resources.

3.2.3 Learners' level of knowledge and skills on generative AI tools (Question 3.1)

This area investigates the level of knowledge of the participants in the following different tasks that could be performed with Generative AI. Participants could choose among these different options:

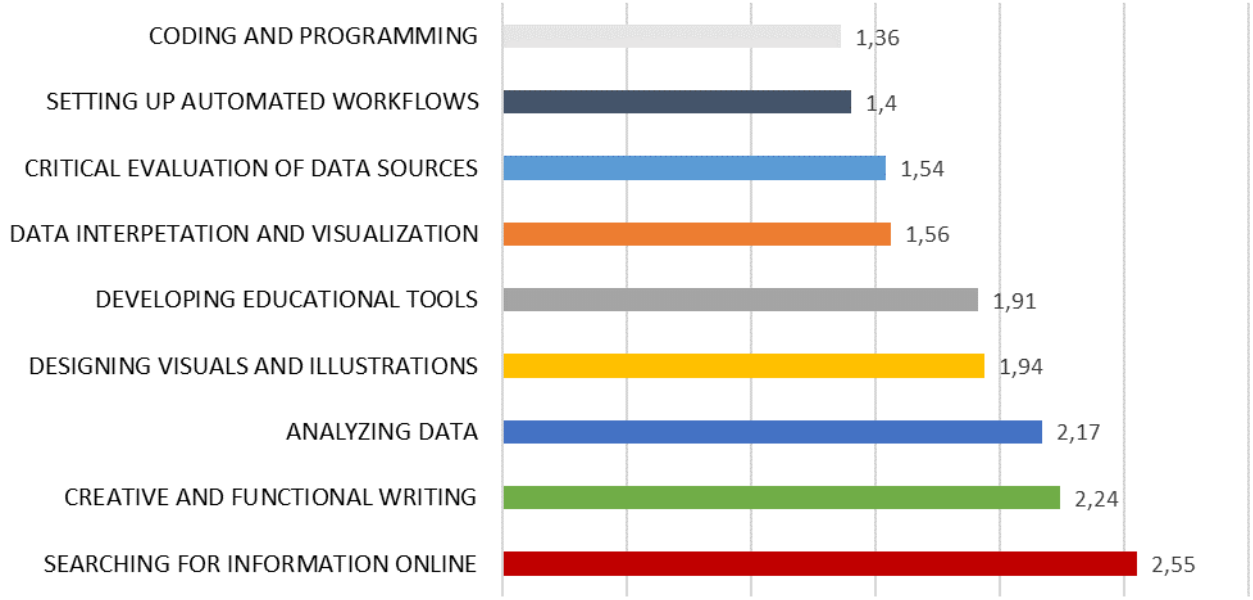
1 – No experience (I have no knowledge or experience in this area).
2 – Beginner (I have basic knowledge or experience, but I require significant guidance to complete tasks in this area)
3 – Intermediate (I can perform tasks in this area independently with occasional help or resources)
4 – Proficient (I have strong skills in this area and can complete most tasks independently and effectively)
5 – Expert (I have advanced knowledge or experience and can teach others).
In the chart n.13, the collected data regarding the level of knowledge and skills on generative AI tools of the participants in the different tasks are aggregated (question 3.1).

Chart n.13 - Level of knowledge and skills on generative AI Tools for leaners (% of total respondents)



In the following chart (n.13) are listed the means of the collected data (from 1 - No experience to 5 - Expert) regarding the level of knowledge and skills on generative AI tools of the participants in the different tasks (question 3.1).

Chart n.13 - Level of knowledge and skills on generative AI Tools for learners (Mean Values)



The graphics show the following areas of **highest proficiency**:

- Searching for information online has the highest level of competence, with 26.42% at the intermediate level and 19.18% proficient, the mean score is 2.55
- Creative and functional writing follows, with 19.03% at an intermediate level and 16.82% proficient, the mean score is 2.24.
- Analyzing data also shows notable competence, as 19.03% are at an intermediate level and 12.58% proficient, the mean score is 2.17.

Areas with **moderate knowledge** but need for improvement:

- Designing visuals and illustrations has 19.81% at the intermediate level, but a relatively lower 7.71% proficiency, the mean score is 1.94
- Developing educational tools has 15.57% intermediate and 10.06% proficient, the mean score is 1.91.

The areas with **significant training needs:**

- Data interpretation and visualization shows a knowledge gap, with 67.61% having no experience and only 5.98% proficient or expert, the mean score is 1.56.
- Critical evaluation of data sources is another weak area, with 69.03% having no experience and only 6.29% proficient or expert, the mean score is 1.54.
- Setting up automated workflows has a large skill gap, as 75.00% have no experience, and only 3.46% are proficient or expert, the mean score is 1.40.
- Coding and programming is the weakest area, with 79.56% having no experience and just 3.46% proficient or expert, the mean score is 1.36.

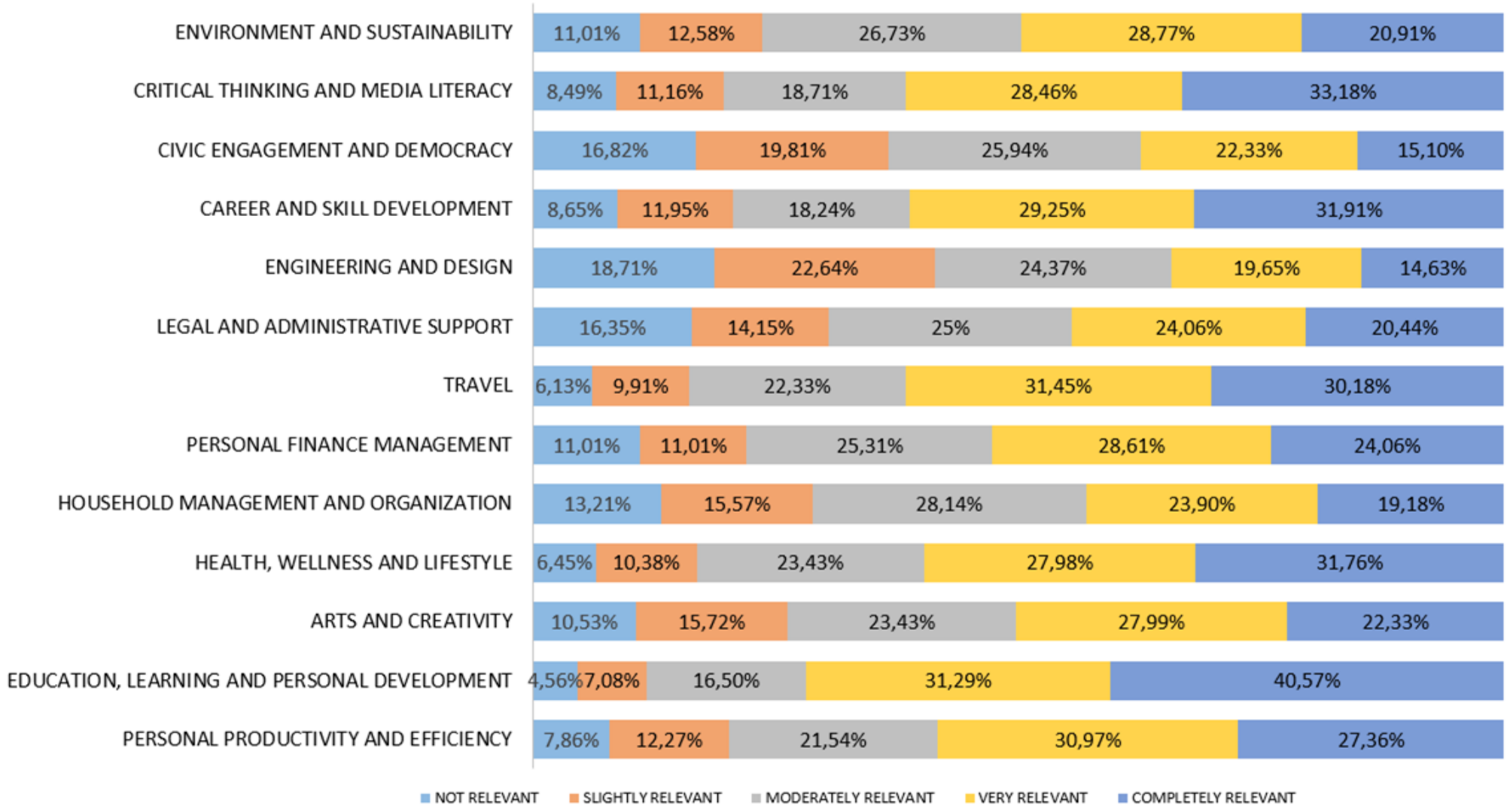
3.2.4 Relevance of Generative AI thematic areas for learners (question 3.2)

This area investigates the thematic areas that the respondents think would be relevant starting from some selected fields in which Generative AI could be used. The selected AI topics are listed below. Participants could choose among these different options:

1 – Not relevant
2 – Slightly relevant
3 – Moderately relevant
4 – Very relevant
5 – Completely relevant

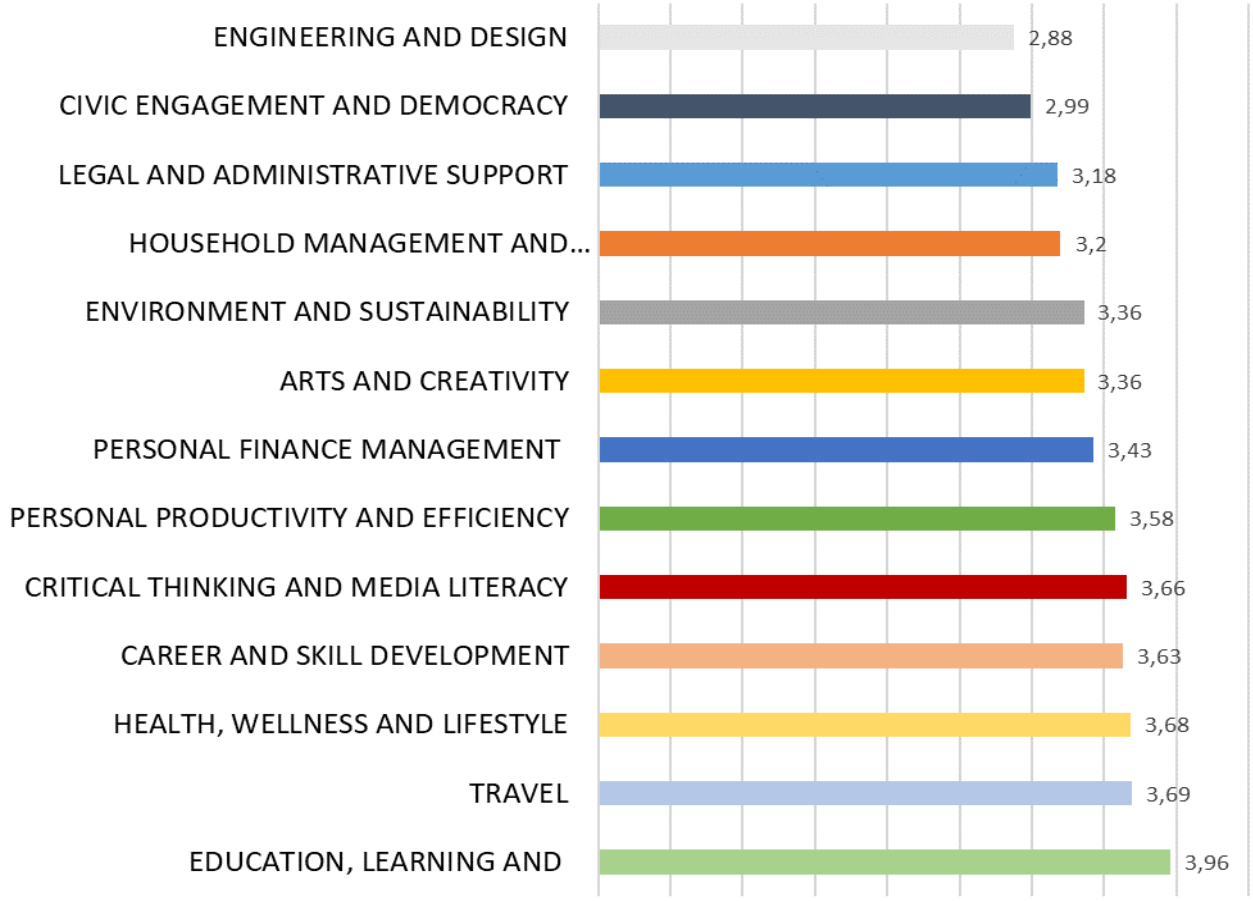
In the chart n.14, the collected data regarding what thematic area in which Generative AI could be used respondents think would be relevant are aggregated (question 3.2).

Chart n.14 - Level of relevance of Generative AI thematic areas for learners (%)



In the following chart (n.15) are listed the means of the collected data (from 1 - Not relevant to 5 - Completely relevant) regarding the thematic areas of AI topics that the respondents think would be relevant for them (question 3.2).

Chart n.15 - Level of relevance of Generative AI thematic areas for learners (Mean Values)



The **most relevant** areas for learners are:

- Education, learning, and personal development, with 71.86% rating it as very or completely relevant, mean score is 3.96.
- Career and skill development is another highly valued area, with 61.16% finding it very or completely relevant, mean score is 3.63.
- Health, wellness, and lifestyle is also a key concern, with 59.74% ranking it highly, mean score is 3.68.
- Travel (planning, itineraries, language translation, etc.), with 61.63% rating it highly, mean score is 3.69.

Learners perceived as **moderately relevant** the following areas:

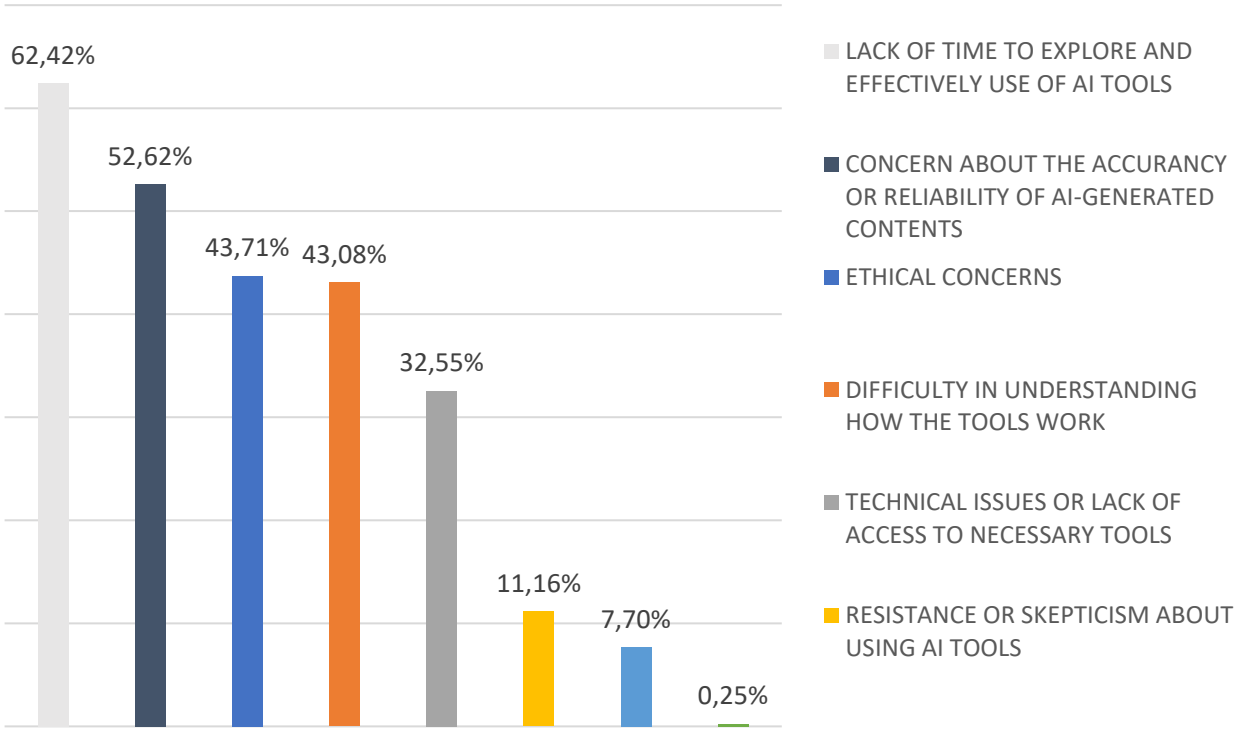
- Critical thinking and media literacy (61.64%, mean score 3.66)
- Personal productivity and efficiency (58.33% very/completely relevant, mean score 3.58)
- Arts and creativity (50.32%, mean score 3.36)
- Environment and sustainability (49.68%, mean score 3.36)
- Personal finance management (52.67%, mean score 3.43)

The areas considered as **less relevant** are:

- Civic engagement and democracy (37.43%, mean score 2.99)
- Household management and organization has a lower perceived relevance, with 43.08% rating it highly, mean score is 3.20.
- Legal and administrative support (44.50%, mean score 3.18)
- Engineering and design (34.28%, mean score 2.88)

3.2.5 Challenges in using generative AI tools for learners (question 3.3)

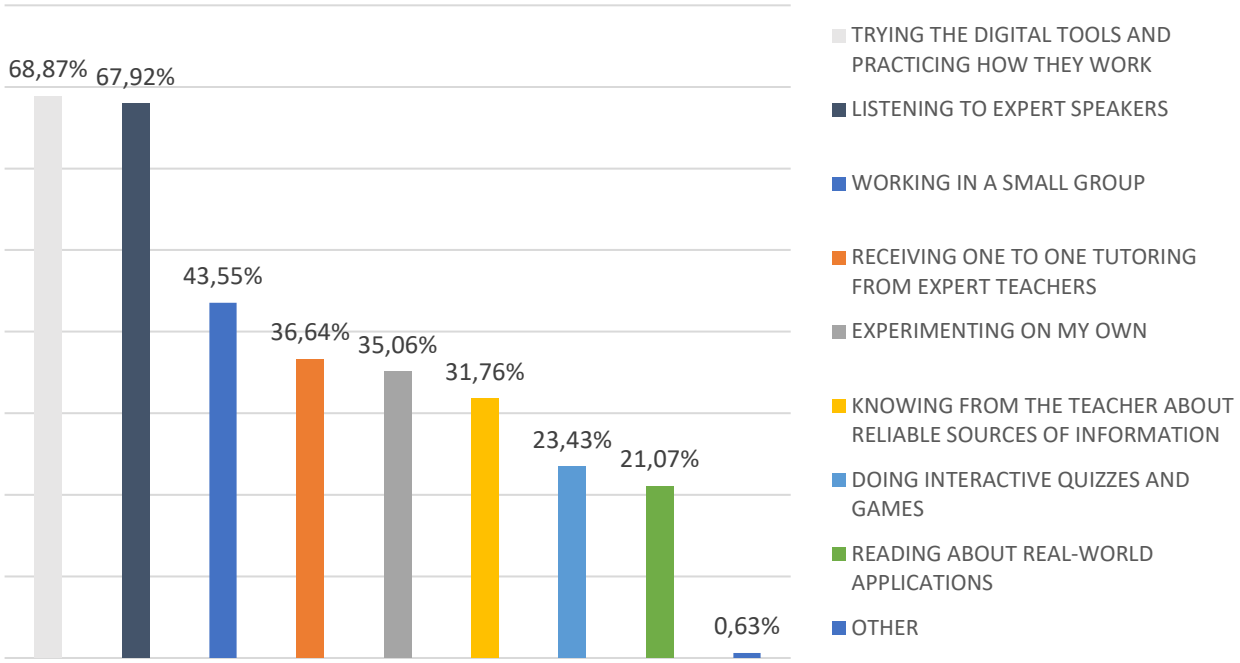
Chart n.16 - Challenges in using Generative Ai Tools for learners (% of total respondents)



Participants could choose multiple options. The most significant challenge for participants is the lack of time to explore and effectively use AI tools (62.42%), indicating that time constraints are a major barrier to adoption. Concerns about the accuracy and reliability of AI-generated content (52.67%) and ethical concerns (43.71%) suggest that trust and integrity are also key considerations. Difficulty understanding how AI tools work (43.08%) and technical issues or lack of access to necessary tools (32.55%) further complicate their usage. Resistance or skepticism about AI tools (11.16%) is a less common but notable challenge. Only 7.70% of participants do not anticipate any challenges, showing that most foresee obstacles in adopting Generative AI.

3.2.6 Preferred learning methods by learners (question 3.4)

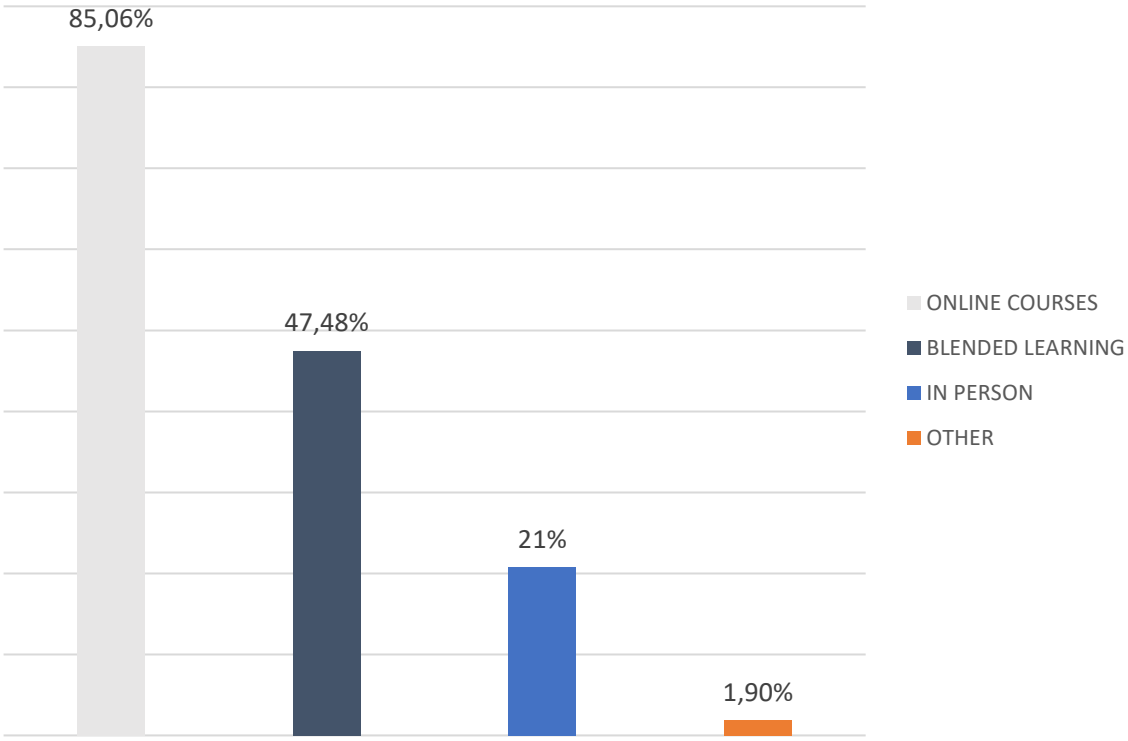
Chart n.17 - Preferred learning methods (% of total respondents)



Participants could choose multiple options among the following learning methods. The most preferred learning method for participants is trying digital tools and practicing on how they work (68.87%). Listening to expert speakers (67.92%) is also highly valued. Working in a small group (43.55%) and one-on-one tutoring from expert teachers (36.64%) are also notable preferences. Independent experimentation (35.06%) and knowing from the teacher about reliable sources of information (31.76%) show a balance between structured and self-directed learning. Reading about real-world applications (21.07%) and interactive quizzes (23.43%) are less prioritized. Only 0.63% expressed no interest in learning about digital tools.

3.2.7 Preferred learning format (question 3.5)

Chart n.18 - Preferred learning format for learners (% of total respondents)



Participants could choose multiple options. The majority of participants prefer online courses (85.06%), highlighting a strong inclination toward flexible and accessible learning formats. Blended learning, combining online and in-person methods, is also popular (47.48%). In-person learning is less favored (20.75%).

4. Conclusion

4.1 Considering skills gaps and interests

Regarding the proficiency in the areas of the two questionnaires, both groups demonstrate strong skills in searching for information online and competence in creative and functional writing. Educators have high proficiency in developing educational tools, while learners have a high proficiency in data analysis.

However, critical evaluation of data sources and data interpretation remain major skill gaps for both groups, indicating a clear need for training in these areas.

In terms of relevance, education, learning, and personal development stand out as the most valued AI applications for both groups, reinforcing the importance of AI in teaching and skill-building. Career development and critical thinking are also highly relevant across both audiences, while personal productivity, health, and travel assistance show strong interest but slightly lower priority, especially for educators. On the other hand, topics such as household management, civic engagement, legal support, and engineering are perceived as less relevant by both educators and learners.

Given these findings, AI training initiatives should prioritize different areas for educators and learners. Among the topics the GENIE project will address in the training, for the **educators** it should focus on **data interpretation and critical evaluation of AI-generated content**, ensuring they can integrate AI effectively into teaching while addressing concerns about misinformation. Additionally, **training on setting up automated workflows** training material could be developed. Training could also address their interests in **education and personal development and career and skills development**.

In the same way, for **learners**, training should emphasize AI applications in **critical evaluation of data sources, data analysis and setting up automated workflows.** It could also address their interests in **education, learning and personal development, career and skills development.** In addition to these results they shared with educators, they showed specific interest in training **about health, wellness and lifestyle, and travel.**

4.2 Addressing Main challenges

Both educators and learners face notable challenges in adopting generative AI, though their specific concerns and support needs differ. The most significant barrier for both groups is the **lack of time** to explore and integrate AI tools, with 50.89% of educators and an even higher 62.42% of learners highlighting this issue. This suggests that training programs should focus on **time-efficient learning strategies** and practical, **hands-on applications** to maximize effectiveness within limited time constraints.

Concerns about accuracy and **reliability** are also common across both groups (47.57% of educators, 52.67% of learners), as are **ethical concerns** such as plagiarism and misinformation (37.57% for educators, 43.71% for learners). These findings emphasize again the importance of training that enhances **critical evaluation skills and ethical AI use**, ensuring that both educators and learners can assess AI-generated content responsibly.

While difficulty **understanding how AI tools work** is a challenge for both groups, it is more prevalent among learners (43.08%) compared to educators (30.43%). This suggests that **learners** require more **foundational** AI literacy training, while **educators** may benefit from **advanced** training focused on integrating AI into teaching rather than basic tool functionality.

Technical issues and access limitations are a more prominent concern for **educators** (42.71%) than learners (32.55%), likely due to organisational constraints that could be faced in the training.

Interestingly, **resistance** to AI tools is more common among **educators** (20.97%) than learners (11.16%), possibly reflecting skepticism from colleagues or traditional teaching preferences. This highlights the need for **change management training** and showcasing successful AI implementations in education to increase confidence and adoption.

4.3 Choosing the right learning and teaching methods

Regarding the methodology, both educators and learners prioritize hands-on practice as the most effective learning method (69.31% and 68.87%, respectively). This strong preference indicates that training programs should be highly interactive and experience-driven, focusing on practical applications of AI tools rather than passive instruction. Therefore both groups favor **learning by doing,** whether through digital tool practice (learners) or live demonstrations and hands-on activities (educators).

Small group discussions and workshops are well-received by both educators (57.03%) and learners (43.55%), suggesting that **peer learning and knowledge-sharing** are valuable strategies.
Some level of self-exploration is moderately valued by both educators (34.53%) and learners (35.06%), showing that while structured learning is preferred, some autonomy is also beneficial.

There are also some differences as the **educators appreciate case studies** (35.55%), while **learners prefer listening to expert speakers** (67.92%). Learners also show a higher demand for **personalized tutoring** (36.64%) than educators (26.85%).

More **educators** (31.71%) prefer **interactive quizzes and gamification** compared to learners (23.43%), possibly due to their familiarity with game-based learning strategies in teaching.

Both groups strongly prefer online learning, this underscores the importance of **flexible, digital-first training programs that fit into busy schedules**. Blended learning is a secondary preference for both (47.83% of educators, 47.48% of learners), showing that a **mix of online and in-person training** can be effective. In-person learning is less favored, but more educators (37.08%) prefer it compared to learners (20.75%). This suggests that educators may benefit more from face-to-face workshops, while learners prioritize digital convenience.

4.4 Next Steps

As the GENIE project moves into its next phase, the focus will shift toward developing training materials that help both educators and learners effectively integrate generative AI into education and their professional and everyday life. The abovementioned findings from this report highlight the importance of tailored approaches to meet the needs of both groups in terms of content and material developed, support provided and methodology applied.

To support the implementation of the training materials, the project will also develop practical toolkits and digital resources that educators can integrate into their teaching workflows.

Creating a collaborative learning environment will be a key objective, encouraging knowledge exchange between educators and learners while continuously refining the training content based on feedback.

By following this approach, the GENIE project aims to bridge the AI literacy gap, equipping both educators and learners with the skills they need to engage with generative AI confidently, ethically, and effectively.

5. Attachments

5.1 Educators questionnaire form

GENIE QUESTIONNAIRE (Educators)

This questionnaire is related to the European project "GENIE: Generative AI for Inclusive Education and Empowerment", funded by the Erasmus+ programme, and aims to investigate your knowledge and area of interest in the field of AI.

Generative AI refers to artificial intelligence systems designed to create new content, such as text, images, music, or videos, based on patterns learned from existing data. These models can generate original outputs that resemble human-created works.

Examples:

- **ChatGPT**: Generates human-like text based on prompts.
- **DALL·E**: Creates images from textual descriptions.
- **Music generation models**: Compose original pieces of music based on training data.

The project aims to address several critical needs in the context of the rapid digital transformation and the growing importance of generative AI in various aspects of society and the economy. The analysis of the findings of this questionnaire may lead to training and professional development opportunities, in order to create effective and innovative methodologies that will help integrate AI and other digital tools into your or other people's teaching practices.

The questionnaire is divided into 2 sections and will take you approximately 15 minutes. We would like to thank you in advance for taking the time to complete our survey. Your feedback is greatly appreciated.

Section 1 – Respondent Information

1.1 Your age:*

- 18–29
- 30–39
- 40–49
- 50–59
- 60–69
- 70 and over

1.2 Gender:*

- Male
- Female
- Prefer not to say

1.3 Specify the type of organization you work for: (You may select more than one)*

- Primary or secondary school (public or private)

- Vocational institute
- Library
- Higher education institution
- Training organization
- Non-profit and community-based organizations

- Online education platforms
- Governmental and international organizations
- Research institutes and think tanks
- Educational consulting services
- Other: _____

1.4 Type of learners you work with: (You may select more than one)*

- Adults
- Unemployed individuals
- Company employees
- Learners with special communication and learning needs
- Youth
- Seniors
- Migrants
- People living in non-urban areas
- Other: _____

Section 2 – Learning About Generative AI

2.1 Rate your current level of knowledge and specific skills related to generative AI tools on a scale from 1 (No experience) to 5 (Expert):

- Online information search (e.g., ChatGPT, Perplexity AI)
- Creative and functional writing (e.g., ChatGPT, Gemini, Claude AI)
- Visual and illustration design (e.g., DALL-E, Midjourney, Canva)
- Development of educational tools (lesson plans, activities, quizzes, feedback, modules; e.g., ChatGPT, Canva, Quizizz, Edpuzzle)
- Data analysis (e.g., MS Excel, MS Power BI, SPSS)
- Data interpretation and visualization (e.g., Tableau, Power BI, Google Data Studio)
- Critical evaluation of data sources (e.g., FactCheck.org, Google Fact Check Tools)
- Setting up automated workflows (e.g., Zapier, Microsoft Power Automate)
- Programming and coding (e.g., Visual Studio Code, Jupyter Notebook, GitHub)

2.2 We would like to know your opinion on the most relevant topic areas for your learners, considering their needs and your organization's profile/field. Which of the following do you consider most relevant for your learners?

- Personal productivity and efficiency (time management, task organization, communication assistance, etc.)
- Education, learning, and personal development
- Arts and creativity (visual art, writing, music, entertainment, etc.)
- Health, wellness, and lifestyle
- Household management and organization (meal planning, shopping lists, etc.)
- Personal financial management

- Travel (planning, itineraries, language translation, etc.)
- Legal and administrative support (analyzing and drafting legal documents, guidance through administrative processes, e.g., visas, licenses)
- Engineering and design
- Professional development and skills

- Civic engagement and democracy (active citizenship, policy understanding, participation in democratic processes)
- Critical thinking and media literacy (identifying and analyzing misinformation or fake news, critical content evaluation)
- Environment and sustainability (waste reduction, energy saving, climate action, etc.)

2.3 What level of support do you consider most useful for effectively integrating generative AI topics into your teaching?

- None (I can figure it out on my own)
- Minimal (basic guidance and materials)
- Moderate (a structured training program)
- High (ongoing support and troubleshooting)

2.4 What specific challenges do you foresee or have encountered in providing AI training to learners? (Select all that apply)

- Difficulty understanding how the tools work
- Lack of time to explore and integrate AI into teaching
- Concerns about the accuracy or reliability of AI-generated content
- Ethical concerns (e.g., plagiarism, bias, misinformation)
- Resistance from students or colleagues
- Technical issues or lack of access to necessary tools
- I foresee no difficulties
- Other: _____

2.5 Which teaching method do you consider most effective for engaging participants in learning about generative AI? (Select the 3 most relevant methods you'd like to implement)

- Hands-on activities and live demonstrations of AI tools
- One-on-one training
- Small group workshops and collaborative projects
- Case studies and real-life applications of generative AI
- Interactive quizzes and gamified learning experiences
- Providing reliable resources for self-exploration
- Seminars or large group lectures
- Encouraging participants to experiment independently with AI tools
- Other: _____

2.6 If you were to teach adult learners about generative AI, which format would you prefer? (Select all that apply)

- In-person learning
- Online courses
- Blended learning (a combination of online and in-person)

- Other: _____

2.7 If you have any additional comments, please write them here:

Thank you for completing our survey! Your input is very important to us.

Responses are anonymous and confidential. If you would like to receive more information about the project and take part in the upcoming generative AI training, please leave your contact information here:

5.2 Learners questionnaire form

GENIE QUESTIONNAIRE (Adult Learners)

This questionnaire is related to the European project "GENIE: Generative AI for Inclusive Education and Empowerment", funded by the Erasmus+ programme, and aims to investigate your knowledge and area of interest in the field of AI.

Generative AI refers to artificial intelligence systems designed to create new content, such as text, images, music, or videos, based on patterns learned from existing data. These models can generate original outputs that resemble human-created works.

Examples:

- **ChatGPT**: Generates human-like text based on prompts.
- **DALL·E**: Creates images from textual descriptions.
- **Music generation models**: Compose original pieces of music based on training data.

The project aims to address several critical needs in the context of the rapid digital transformation and the growing importance of generative AI in various aspects of society and the economy. The analysis of the findings of this questionnaire may lead to training and professional development opportunities, in order to create effective and innovative methodologies that will help integrate AI and other digital tools into your or other people's life.

The questionnaire is divided into 3 sections and will take you approximately 10 minutes. We would like to thank you in advance for taking the time to complete our survey. Your feedback is greatly appreciated.

Section 1 – Respondent Information

Your age*

- 18–29
- 30–39
- 40–49
- 50–59
- 60–69
- 70 and over

Gender*

- Male
- Female
- Prefer not to say

Educational background*

- Primary school
- Lower secondary school
- Upper secondary school
- Higher education (Bachelor's, Master's, PhD)
- Other: _____

Geographic area of residence*

- Non-urban area (villages or remote areas far from major cities)
- Urban or semi-urban area (large or small cities)

What is your migration background?*

- I have no migration background: I was born and raised in my country of residence.
- I was born in another country and later moved to my country of residence.
- Other: _____

Employment status (you can select more than one option)*

- Student
- Unemployed and looking for work
- Unemployed and not looking for work
- Self-employed
- Employed
- Entrepreneur
- Retired

Section 2 – Access to Technology and Generative AI

Do you have a device with access to generative AI tools (e.g., Laptop, PC, Smartphone, Tablet)?*

- Yes
- No

Do you have access to an internet connection?*

- Yes
- No

Section 3 – Learning About Generative AI

3.1 Rate your current level of knowledge and skills related to generative AI tools on a scale from 1 (No experience) to 5 (Expert):

1: No experience (I have no knowledge or experience in this area)
2: Beginner (I have basic knowledge but need significant guidance to complete tasks in this area)
3: Intermediate (I can perform tasks independently with occasional help)
4: Good (I have strong skills and can complete most tasks independently)
5: Expert (I have advanced knowledge and can teach others)

Areas to assess:

- Online information search (e.g., ChatGPT, Perplexity AI)
- Creative and functional writing (e.g., ChatGPT, Gemini, Claude AI)
- Visual content design and illustrations (e.g., DALL-E, Midjourney, Canva)
- Development of educational tools (e.g., Lesson plans, quizzes with ChatGPT, Canva, Quizizz, Edpuzzle)
- Data analysis (e.g., MS Excel, MS Power BI, SPSS)
- Data interpretation and visualization (e.g., Tableau, Power BI, Google Data Studio)
- Critical evaluation of data sources (e.g., FactCheck.org, Google Fact Check Tools)
- Setting up automated workflows (e.g., Zapier, Microsoft Power Automate)
- Coding and programming (e.g., Visual Studio Code, Jupyter Notebook, GitHub)

3.2 Which of the following topic areas are most relevant to you?

- Personal productivity and efficiency
- Education, learning, and personal development
- Arts and creativity
- Health, wellness, and lifestyle
- Household management and organization
- Personal financial management
- Travel (planning, language translation, etc.)
- Legal and administrative support
- Engineering and design
- Career and skills development
- Civic engagement and democracy
- Critical thinking and media literacy
- Environment and sustainability

3.3 What specific challenges do you think you might face in using generative AI tools?

- Difficulty understanding how the tools work
- Lack of time to explore and effectively use AI tools
- Concerns about the accuracy or reliability of AI-generated content
- Ethical concerns (e.g., plagiarism, bias, misinformation)
- Resistance or skepticism toward the use of AI tools
- Technical issues or lack of access to necessary tools
- I don’t anticipate any difficulties

3.4 What are your preferred learning methods?

- Trying digital tools and practicing
- Receiving one-on-one tutoring from an expert teacher
- Working in a small group to discuss digital tools
- Reading examples of real-life applications of digital tools
- Participating in interactive quizzes and games
- Direct learning to recognize reliable sources and get inspired
- Listening to experts
- Self-directed experimentation

3.5 What format would you prefer for learning about generative AI?

- In-person learning
- Online courses
- Blended learning (a combination of online and in-person)

Additional comments: [Space for personal observations]

Thank you for participating in the questionnaire!