Stakeholder Consultation via Y2 Survey: Overview

This report is based on 104 responses collected by March 2024 using the questionnaire (which can be seen here). Below, it reports the answers to all the questions.

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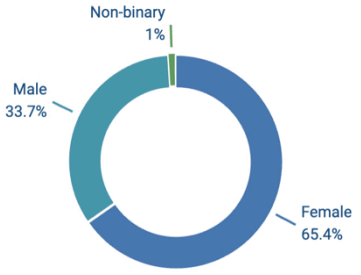
Section 1: Tell us about you.

1.1 What is your age?

Submissions	Count	% of submissions	
18-24 years old	1	1%	1%
25-34 years old	28	26.9%	26.9%
35-44 years old	44	42.3%	42.3%
45-54 years old	18	17.3%	17.3%
55-64 years old	11	10.6%	10.6%
65-74 years old	1	1%	1%
75 years or older	1	1%	1%

1.2 What gender do you identify as?

Submissions	Count	% of submissions
Female	68	65.4%
Male	35	33.7%
Non-binary	1	1%
Prefer not to say	0	0%
Other	0	0%

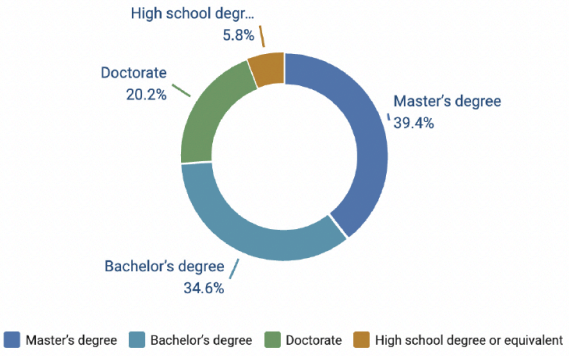


1.3 In which country is your work based?

Belgium = 1
Czechia = 1
Germany =2
Greece = 5 + 1 = 6
Hungary = 2
Ireland = 3
Italy = 2
Netherlands = 2
Poland = 4
Portugal = 8
Spain = 7
Sweden = 1
UK = 66 (52 + 11 England + 2 Scotland+ 1 Wale)
Norway = 3

1.4 What is the highest degree of level of school you have completed?

Submissions	Count	% of submissions
Less than a high school diploma	0	0%
High school degree or equivalent	6	5.8%
Bachelor's degree	36	34.6%
Master's degree	41	39.4%
Doctorate	21	20.2%

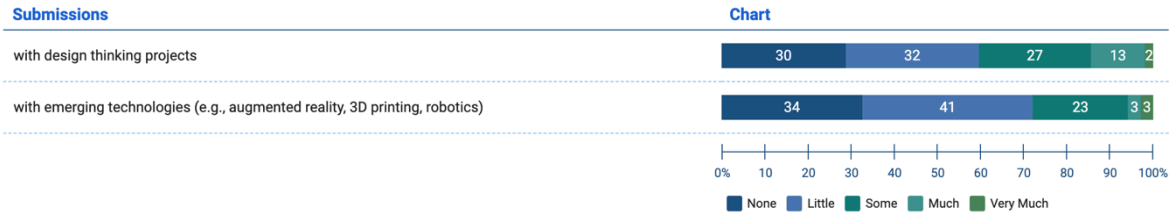


1.5 What role(s) do you identify yourself?

NB: Respondent may identify as more than one role.

Submissions	Count	% of submissions	
Teacher	81	77.9%	77.9%
Education practitioner (e.g., instructor, facilitator for educational activities etc)	32	30.8%	30.8%
Education technologist (e.g., developer, IT specialist etc)	9	8.7%	8.7%
Education designer (e.g., involving course design, program design etc)	13	12.5%	12.5%
Educational researcher (e.g., involving conducting education-related research etc)	14	13.5%	13.5%
Policy maker (e.g., involving making education-related decisions etc)	4	3.8%	3.8%

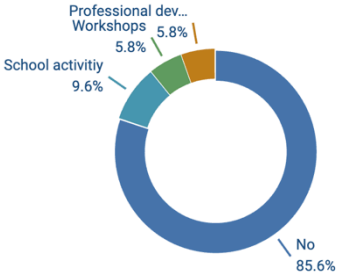
1.6 How much experience do you have previously?



1.7 Have you been involved in activities as part of the ExtenD.T.2 project?

NB: Respondent may choose more than one answer.

Submissions	Count	% of submissions
Workshops	6	5.8%
School activitiy	10	9.6%
Professional development	6	5.8%
Other	0	0%
No	89	85.6%



Section 2: Overview of the framework

Section 2A: Review of Perspectives

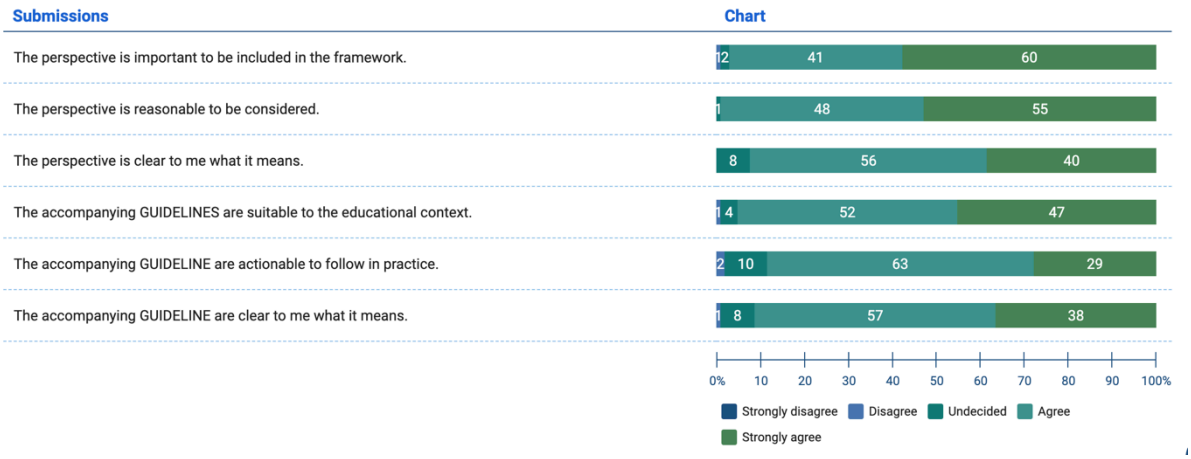
2A.(1) The Student perspective and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- This perspective is important to be included in the framework. (Important_Framework)
- This perspective is reasonable to be considered. (Reasonable_Framework)
- The perspective is clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Student Perspectives

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	2	5	4.54	.590
Reasonable_Framework	104	3	5	4.52	.521
Clear_Framework	104	3	5	4.31	.609
Suitable_Guidelines	104	2	5	4.39	.614
Actionable_Guidelines	104	2	5	4.14	.660
Clear_Guidelines	104	2	5	4.27	.642
Valid N (listwise)	104				



2A.(2) Provide your thoughts about the Student perspectives and guidelines (e.g., what is missing, how to improve, etc.).

While there are some repetitive comments, here we list some of the interesting comments:

- Overall it's an excellent guideline. The only thing I'd add is about student's with learning difficulties, e.g. modifying the program to their needs and also educating others that such things do not mean that the student is less bright or capable.
- take into account your social background
- I like that this is an inclusive framework that actively seeks to promote a level playing field. A barrier to this in my field is resources which a are continually stretched. Children with additional needs require additional resources which are not always forthcoming form local authorities.
- Making students feel inclusive to the learning environment especially for students from different backgrounds.
- Needs to be written in more student friendly language and to be accessible to all involved with the study.
- The committee could review curriculum materials, textbooks, and resources to ensure they are inclusive and representative of diverse perspectives. They could provide feedback to educators and administrators on ways to improve the inclusivity of teaching materials and learning experiences.
- student perspective is, in and of itself, quite broad- and we can end up with a lot of focus on the majority -without thinking of minority groups (e.g., neurodivergences, learning disorders, ethnic and cultural minorities) - so a specific focus on this may be worth considering.
- I think the student perspective is vital. Perhaps more incorporation of other diversities (not just gender equality but specifically others too)
- Overall the guidelines provide a strong foundation for promoting equity and inclusion in education, although I think there are enhancements that could be done. I think there could be a more explicit emphasis on cultural competence. That could be done by providing materials in different languages but also integrating diverse cultural perspectives into the curriculum. Also, there could be more explicit attention to supporting students' emotional well-being.
- I believe the idea of resilience in the classroom should be developed much more. something about a safe space for discovery? anything on collaboration? Working with others, sharing, be open to share and listen and discuss?

- I think that it is excellent. Traditionally/historically girls have been at a disadvantage when it comes to tech. This certainly is not relevant today. Girls need to be engaged and encouraged in this field.
- What I think is missing is recognition that timelines for engagement and mastery vary from student to student.
- Relevant to real-life so that students can transfer skills learnt in the classroom to their every day lives.
- Best-Practice examples would be valuable. From the map it seems as if students relate to all parts of the framework (which they do), but in my opinion not equally. For example, materials and resources can be chosen together, but the teacher bears responsibility. The same holds true for the platform. Thus, real-world examples would help to underscore the importance of this perspective.
- Address the issue of socioeconomic background ie: students who don't have access to a personal computer or other technological resources. Also, who for socioeconomic reasons are unable to participate in extracurricular activities. Avoid bias based on socioeconomic factors.
- Maybe more on the hierarchies (between "student" and "educator") might be aimed to be minimized/diminished. This might include for example both providing and receiving feedback.
- Point 1: Engagement and participation could also be included in the guidelines. Point 2: Also include other factors such as race, gender, socio-economical context and ethnicity. Promote critical thinking so as to give them tools to prevent the development of such biases. Point 3: This one is the hardest to realistically incorporate, even though it is important. Point 4: Not sure if this would fit here or in another document, but some more specific resources may be useful. Overall, a complete guideline.

2A.(3) The Teacher perspective and guidelines

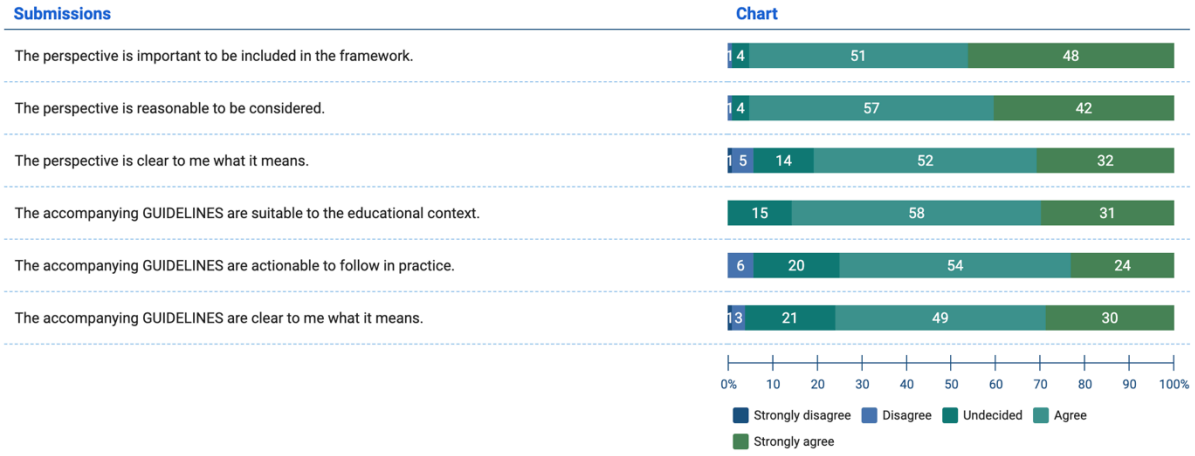
We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- This perspective is important to be included in the framework. (Important_Framework)
- This perspective is reasonable to be considered. (Reasonable_Framework)
- The perspective is clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Teacher Perspectives

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	2	5	4.40	.616
Reasonable_Framework	104	2	5	4.35	.604
Clear_Framework	104	1	5	4.05	.852
Suitable_Guidelines	104	3	5	4.15	.650
Actionable_Guidelines	104	2	5	3.92	.809
Clear_Guidelines	104	1	5	4.00	.836

Valid N (listwise)	104				



2A.(4) Provide your thoughts about the Teacher perspectives and guidelines (e.g., what is missing, how to improve, etc.).

- I'd say that putting your students needs and modifying the program to them, rather than blindly following the program should be mentioned.
- Think about the management of large groups, in our country it is something to consider and difficult to implement these methodologies
- I would only add the possibility of the teacher learning new skills, new situations with different levels of students' skills. Individualizing teaching according to students' abilities.
- Teachers should be able to adapt to changes in technology, for example the use of AI should be allowed in certain cases but with regulation by the teacher.
- I think it's really important to consider the changing roles of a teacher, as highlighted. I think it's also important to consider the teacher's diversity and how this can be used to support EDI principles.
- These guidelines offer valuable insights into fostering inclusive and adaptable teaching practice, but exists potential for improvement.
- There could be further emphasis on ongoing professional development. Providing teachers with regular training opportunities and the effective use of technology can help them enhance their skills and knowledge.
- Teachers should also be encouraged to develop their emotional intelligence skills. (I could not open the link Universal Design for Learning (UDL) Framework, it appears to be broken).
- Ensure that all teachers are up-to-date with safeguarding and Data Protection issues that could arise
- I would say it is important to add Role Flexibility to Teacher perspectives. It encourages teachers to be flexible in their approach, shifting between roles as needed, such as facilitators, supporters, and peers.
- Means to develop a teacher´s mindset are very important. As Hattie pointed out, a teacher´s personality has a big impact in the classroom. Since then, this murky set of skills has been hailed as education´s silver bullet (at least in some of my university

classes). But we need to convert it into actionable trainings and pathways instead of acting as if it can only be a talent that you either have or haven´t got.
- Might be useful to underline the fast changes in AI, and how to incorporate them in the curriculum etc.
- Safeguarding and other legislation need to be added.

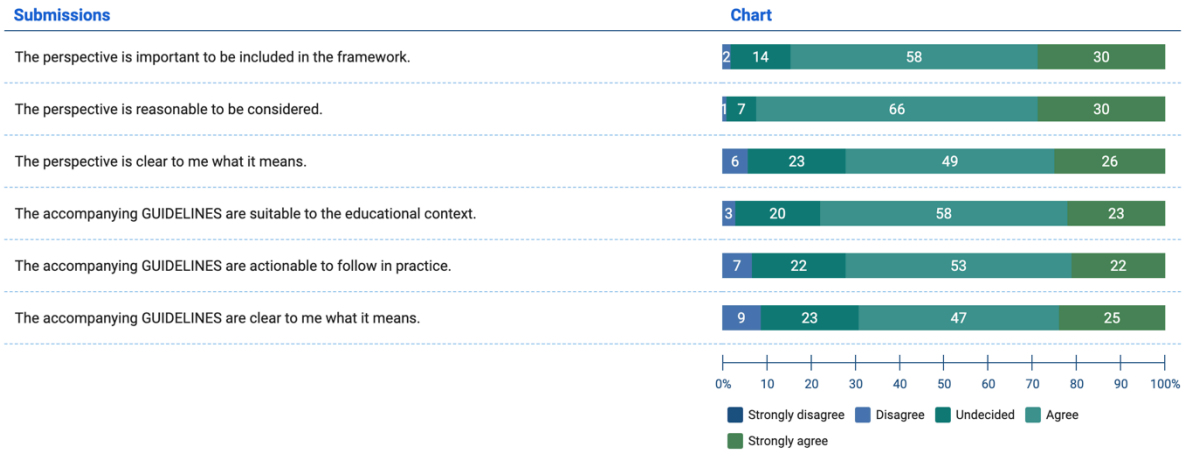
2A.(5) The Educational Stakeholder perspective and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- This perspective is important to be included in the framework. (Important_Framework)
- This perspective is reasonable to be considered. (Reasonable_Framework)
- The perspective is clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Educational Stakeholder Perspectives

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	2	5	4.12	.701
Reasonable_Framework	104	2	5	4.20	.597
Clear_Framework	104	2	5	3.91	.837
Suitable_Guidelines	104	2	5	3.97	.730
Actionable_Guidelines	104	2	5	3.87	.825
Clear_Guidelines	104	2	5	3.85	.890
Valid N (listwise)	104				



2A.(6) Provide your thoughts about the Educational Stakeholder perspectives and guidelines (e.g., what is missing, how to improve, etc.).

- Greater public investment is needed to build work networks
- I think I would be more specific about the guidelines. I would throw away the thoughts that have already been expressed.

- Establish mechanisms for stakeholders to provide feedback on the effectiveness of the knowledge-sharing forum or network and to suggest areas for improvement. Regular evaluations, surveys, and feedback sessions can help identify strengths, weaknesses, and opportunities for enhancement, ensuring that the forum or network remains relevant and beneficial to all participants.
- I think incorporate a student and educational stakeholder liaison skills they hear the student voice in making their perspective.
- I think these guidelines could be expanded, but there are somewhat unclear. There could be a stronger emphasis on ensuring diverse representation within these collaborations between educational professionals. Also they could further emphasize the importance of promoting equity and inclusion within stakeholder collaborations. Another thought is that could be more focus on sustainability and scalability.
- Should there be something about quality assurance?
- This perspective should help to provide a sense of community between skills sharing and helping with information and support.
- While the guidelines mention collaboration between teachers and other stakeholders, it's essential to ensure inclusivity by explicitly mentioning the involvement of students, parents, administrators, policymakers, and community members. Each of these groups plays a crucial role in the educational ecosystem and should be actively engaged in collaboration efforts.
- It would be good for universities to get on board with encouraging girls to do tech courses. For example, by having open days and educating about the paths open to them. There is not enough support I think.
- Schedule activities outside the center together with other schools or people from outside
- These seem to make sense with a focus on education for staff and students, utilising links with other agencies and educational bodies to support and enhance DT teaching/learning. Specific guidelines on how to implement this or how often to revisit these ideas could be useful.
- Arrange workshops including stakeholders from different backgrounds, thus bridging the gap between what's learnt and how it can be implemented later in the future.
- Primary and smaller school settings may struggle financially or be unable to build links as high schools and colleges would. Technology is expensive to keep up to date - is there any budgeting support in the plan?
- I agree with the perspectives and guidelines provided. Maybe showcasing examples of good practice with video blogs and marketing.
- Especially here, I think we need to stress the benefits of collaboration across institutions. In my limited experience, teachers sharing resources and training with each other can have a huge impact. In addition, teachers returning to university have offered me valuable insight into classroom management, among other things.
- I think this specific one I am very happy with. I do think we should foster more collaboration and share more knowledge between people. This is something I already try and do in my professional activity, but I notice how little knowledge is actually being shared. I do think we need a wider community to ensure initiatives do not just die out with one school, but get extended and everyone can benefit from new practices.

- Need to include influences from policy and legislation and how this may influence the educational stakeholders perspective.

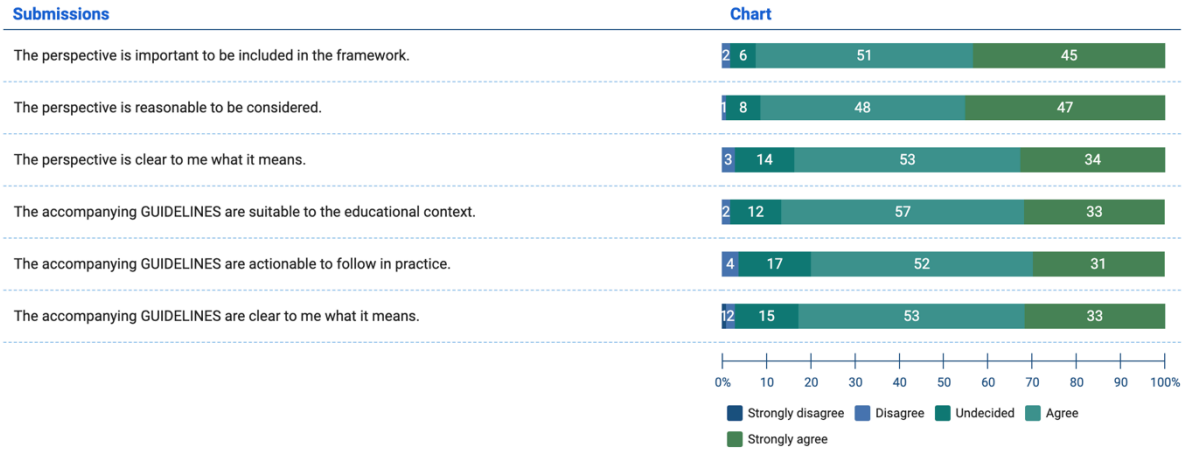
2A.(7) The Technology perspective and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- This perspective is important to be included in the framework. (Important_Framework)
- This perspective is reasonable to be considered. (Reasonable_Framework)
- The perspective is clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Technology Perspective

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	2	5	4.34	.677
Reasonable_Framework	104	2	5	4.36	.667
Clear_Framework	104	2	5	4.13	.751
Suitable_Guidelines	104	2	5	4.16	.698
Actionable_Guidelines	104	2	5	4.06	.786
Clear_Guidelines	104	1	5	4.11	.787
Valid N (listwise)	104				



2A.(8) Provide your thoughts about the Technology perspectives and guidelines (e.g., what is missing, how to improve, etc.).

- The use of technology and the copyright of creators is an issue
- This is important in terms of data protection. I wonder if something about artificial intelligence will need to be incorporated as this is a rapidly developing field likely to become applicable to this area
- There should be some kind of a lesson and warning about the dangers in Technology. That are my two cents.

- Develop interactive learning materials, such as case studies, simulations, and multimedia resources, to engage students in exploring real-world ethical dilemmas and decision-making processes related to technology use.
- These guidelines provide a comprehensive framework for ensuring responsible and ethical use of technology in educational activities. I have some thoughts about improvements. There could be further emphasis on cybersecurity measures to protect sensitive data from unauthorized access. Given the increasing use of AI in educational technologies, the guidelines could address considerations for ethical AI and mitigating algorithmic bias. Also, they could include provisions for promoting digital literacy and digital citizenship among students.
- There is enough coverage of data collection and storage issues but I would appreciate a guideline for use of data for generative purposes.
- There may be limitations as to the technologies that schools/colleges can provide due to budget restrictions and company policies. This is the case where I work, as I am never able to have the software I would like to have for my lessons.
- Maybe having a guideline about privacy and how to use technology safely and also about online dangers such as bullying etc.
- I would add- Ensure time and effort for familiarization and acquisition of technological and digital literacy skills for the users - And considering accessibility in technology (eg. assistive technologies).
- The guidlines seem thorough but I would like to see something about AI and perhaps coding as this seems very relevant to the future.
- The guideline briefly touches upon the efficiency of technologies in terms of energy and resource use, but there could be more emphasis on promoting sustainable practices in technology procurement, usage, and disposal within educational institutions. This could involve guidelines for selecting energy-efficient devices, reducing electronic waste, and promoting awareness of the environmental impact of technology use.
- Yes, the environmental concerns need addressing and support given on how to make this area more sustainable.
- Data is valuable so it is a great idea to focus on the safe collection of data, in accordance with GDPR requirements, to inform future teaching and learning. This could be enhanced with guidance on how to record this to do so safely and how to make it measurable across different settings, to provide continuity.
- Provide neurodivergent students with the appropriate facilitations to be able to keep up with the education level expected.
- This is where there is room for error as we have pupils who are vulnerable and must have no digital footprint whatsoever. How can we ensure this?
- I think Flexibility and Playfulness should be missing. Providing students with flexibility in modalities and playfulness in technologies and tools used in DT learning activities is essential for fostering their creativity and engagement. Also, Respect for User Rights and Privacy, which includes providing clear explanations of how data will be collected, stored, and used, as well as offering users the option to opt out or control their data preferences.
- Providing training to use the technology and showcasing what the technology can do for design thinking is missing.

- I appreciate the focus on privacy and the aspect of 'data ownership'. It´s easy to misuse data that you already have for different purposes than what it was collected for in the first place. How data of school students can truly be anonymised is a very interesting subject.
- Sustainability is a word which is often being used to try to narrow what people can and cannot do, so being open about what sustainability really means is important so that children do not get the wrong idea.
- This is fine as long as there is an endless supply of money to enable technology to fully be provided and be of a suitable standard and quality to ensure it does what it needs to do in education all of the time.
- The classroom is not the place for data collection on children unless it is directly applicable to them.
- In my opinion, incorporating technology can yield a lot of benefits but at times it can also be a hindrance when the focus shifts from the subject matter to the technology itself. This is why we need very well-thought out guidelines on how to use it.
- Maybe the "democratisation" aspect might be underlined, also how the technology might be a factor to minimize the unequalities between students, etc.
- Could incorporate more use of AI to ensure that learners are developing the most up to date skills in the industry.
- This is a thoughout guideline that takes into account not only Data recollection, usage and rights, but also the ecological impact of increased dependency on technology.

Section 2B: Review of components

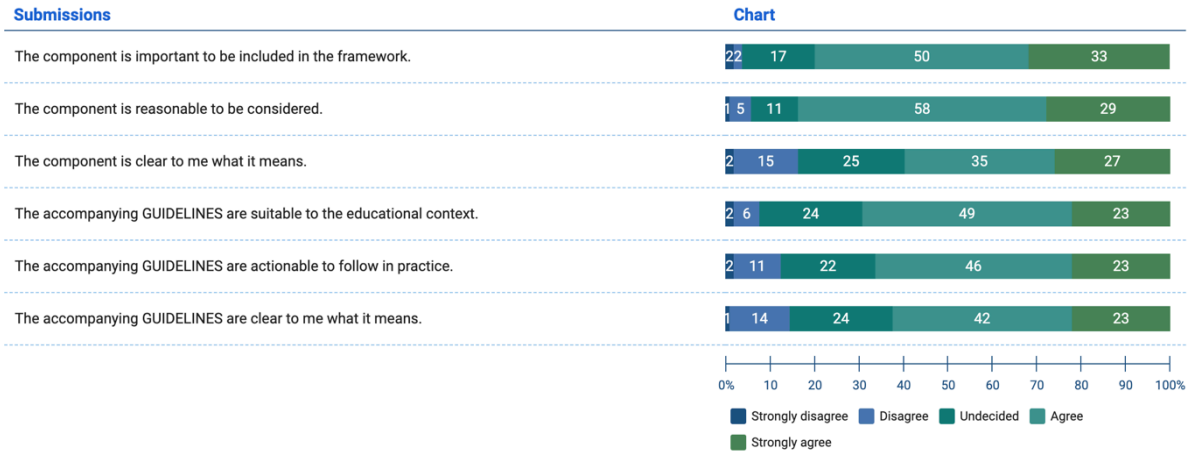
2B.(1) The Actor component and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- This component is important to be included in the framework. (Important_Framework)
- This component is reasonable to be considered. (Reasonable_Framework)
- The component is clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Actors

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	1	5	4.06	.857
Reasonable_Framework	104	1	5	4.05	.817
Clear_Framework	104	1	5	3.67	1.074
Suitable_Guidelines	104	1	5	3.82	.911
Actionable_Guidelines	104	1	5	3.74	.985
Clear_Guidelines	104	1	5	3.69	.996
Valid N (listwise)	104				



2B.(2) Provide your thoughts about the Actor component and guidelines (e.g., what is missing, how to improve, etc.).

- Clearly articulate the roles and expectations of each actor involved in the DT with ET process. This could involve creating role-specific guides or handbooks that outline the responsibilities, tasks, and contributions expected from each actor, as well as any specific skills or expertise required for their role.
- These guidelines provide a solid foundation for ensuring the active involvement and meaningful engagement of stakeholders, although they can be improved. They could be more explicit on diversity and inclusivity and could emphasize the importance of empathy and understanding when considering the needs and expectations of actors. The guidelines could include provisions for capacity building among actors to ensure their effective participation in DT activities with ET. Also, they could encourage ongoing feedback and reflection among actors to continuously improve DT activities with ET.
- it is a very important role: competence, reliability, ability to adapt to the different actors in the process
- One potential improvement could be to include strategies for managing conflicts or disagreements among actors, as navigating diverse perspectives and interests may sometimes pose challenges in collaborative endeavors.
- Could focus more on individual agency
- Don't see why not. Reminds of value co-creation, which is generally beneficial.
- This seems quite complete. It is useful to assess where the actors are prior and the intended outcomes, in order to best implement the steps to achieve the outcomes.
- The actor's role is very detailed and I could understand what it means and how it fits into the design thinking. I do not think that there is anything missing from the component and guidelines as long as it covers who they are, what role they will have and what tasks they will participate in.
- I think this concept is quite difficult. We already had teachers and learners, so who is this 'actor' supposed to be. The school administration? Parents? The guidelines make it clear that actors are supposed to employ design thinking and bear responsibility for the outcomes - that seems to be the teachers themselves, right?

- I think this is where it's important how to figure out the use of technology in order to facilitate closer ties between all actors involved. In that sense, it's important that the joint modes of communication and information exchange are accessible to everyone and intuitive to use.
- I think it important to identify all actors, together with their roles and needs, and to facilitate communication and coordination among them. Again, it is clearly explained, but more on the abstract side.

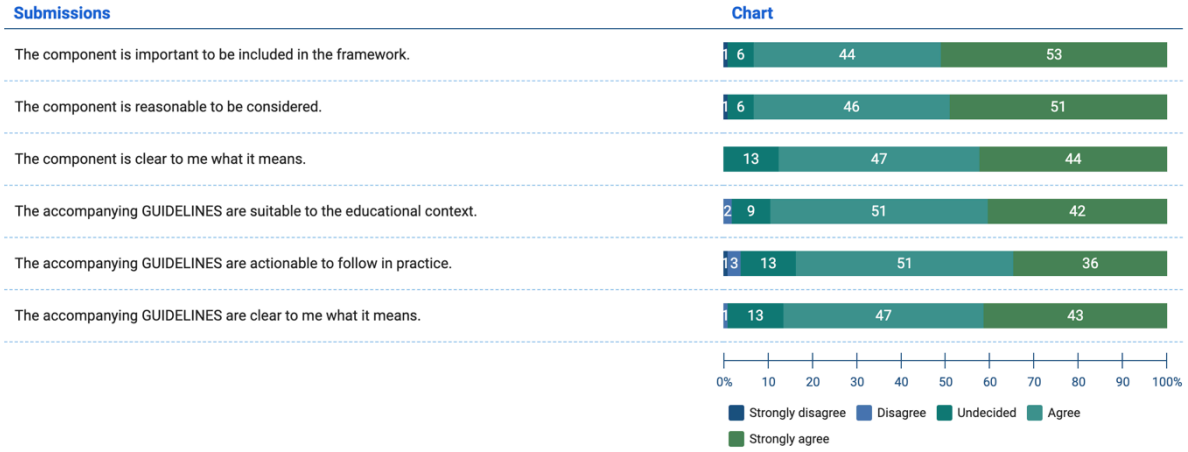
2B.(3) The Learning Environment component and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- This component is important to be included in the framework. (Important_Framework)
- This component is reasonable to be considered. (Reasonable_Framework)
- The component is clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Learning Environment

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	1	5	4.42	.692
Reasonable_Framework	104	1	5	4.40	.690
Clear_Framework	104	3	5	4.30	.681
Suitable_Guidelines	104	2	5	4.28	.703
Actionable_Guidelines	104	1	5	4.13	.813
Clear_Guidelines	104	2	5	4.27	.714
Valid N (listwise)	104				



2B.(4) Provide your thoughts about the Learning Environment component and guidelines (e.g., what is missing, how to improve, etc.).

- Ensure "time out" from technology sessions to relax and refocus regularly.

- How this can be established in learning environments where some of the fundamental resources are missing - check on infrastructure - a back up plan if things can’t proceed
- It may need to consider the barriers of these environments - are there certain places that these things are harder to carry out tasks in?
- Consider the learning environment preferences of students. Some may learn better in certain situations.
- I am missing some guidelines for situations with mixed abilities learning (classrooms with students with various learning abilities).
- Consider the context of the class and what the students need in regards to special needs etc.
- maybe something about non educational environments and spaces - home learners, neets, LAC's?
- It would be useful to take into account in the guidelines the time needed to get familiarized with the Learning Environment, perhaps devoting some time to testing it beforehand.
- Ensure that all children are not disadvantaged if they do not have the appropriate technology to use independently of the learning environment
- It could be useful to have more guidance about how to use this in a virtual classroom or how to adapt it to different levels and abilities.
- It could include a quiet, noise-free environment where there is accessibility to books and technology.
- These guidelines are reasonable. They could provide information on how the different settings could affect the delivery of DT and the achievements possible. For example, can blended or online/remote methods be as successful as in person? How do you distribute resources if things are remote.
- Ensure that all the digital and traditional means of education be accessible by all students in different categories (learning disabilities, neurotypical-neurodivergent, physical impairment issues).
- Should be improved lack of Consideration of Different Situations and Accessibility and Adaptability (Ensuring that both physical and virtual learning environments are accessible and adaptable is essential for promoting inclusivity and accommodating diverse learner needs).
- I would include some guidance about how this could be used in a home-education setting.
- It is crucial that the correct environment is provided for all learners and realistically this is not always the case so this need to be carefully considered.
- This can be a big challenge as a lot of classrooms do not necessarily inspire learning. It is important to experiment with different set ups and think about how comfort can lead to better teaching outcomes as well as making sure that everyone involved in the learning process feels like they are seen in the learning space.
- Crucial, but I think this is missing cultural context more specifically. Ensuring learning environment is diverse and equal to people from various backgrounds.
- SEND children easily excluded using anything other than face to face teaching. Unable to read emotions or grasp tone when not face to face. Unable to concentrate etc. Home environment not suitable for learning. Blended learning breaks routine.

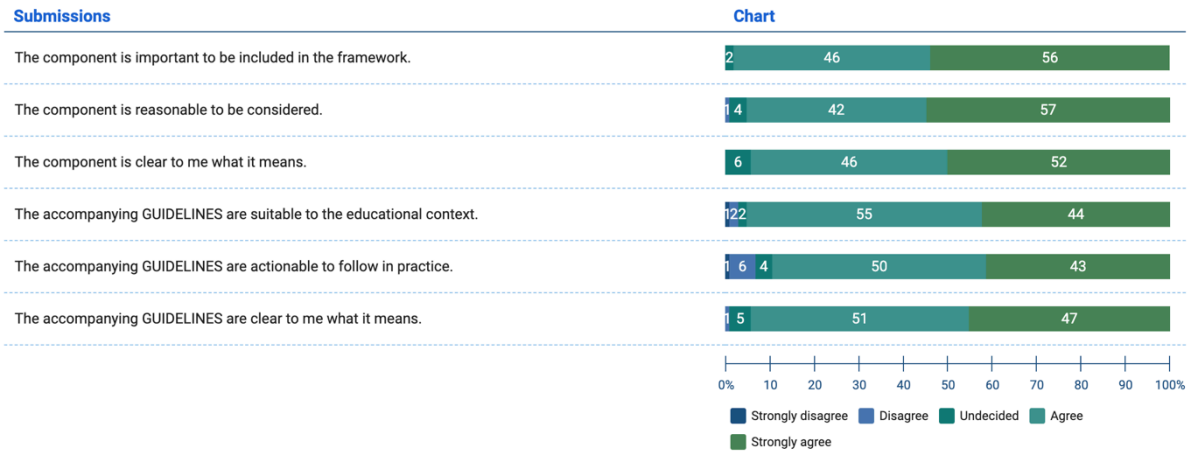
2B.(5) The Materials & Resources component and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- This component is important to be included in the framework. (Important_Framework)
- This component is reasonable to be considered. (Reasonable_Framework)
- The component is clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Materials & Resources

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	3	5	4.52	.539
Reasonable_Framework	104	2	5	4.49	.623
Clear_Framework	104	3	5	4.44	.605
Suitable_Guidelines	104	1	5	4.34	.705
Actionable_Guidelines	104	1	5	4.23	.850
Clear_Guidelines	104	2	5	4.38	.628
Valid N (listwise)	104				



2B.(6) Provide your thoughts about the Materials & Resources component and guidelines (e.g., what is missing, how to improve, etc.).

- Materials, budget and resources are key to positive learning outcomes. Greater resources and budget lead to success.
- Create a centralized repository where educators can access a wide variety of teaching and learning materials relevant to their subject areas, grade levels, and instructional needs.
- The use of synonyms for "consider" is confusing. It suggests that each action of considering is different. What\s the difference between take into account and consider? I don't think there is one in this context. Several of the "consider" guidelines don't give any more information about what is expected in performing this

action. e.g. "consider online supporting materials" - just think about them? Or consider using them? I think more action verbs are required to make this section clear.

- One thing I would add would be the guidelines on the use of AI-generated materials and the ethics issues accompanying it.
- Incorporating feedback and insights from educators with experience in implementing such activities could enrich the guidelines and make them more actionable.
- Ensure that all materials and resources use proper language that abides by any laws concerning ethics and moral principalities.
- In my opinion, alignment with curricula/educational objectives it's crucial to ensure that teaching and learning materials align with curricular standards and educational objectives to promote meaningful learning outcomes. Also, the guidelines appropriately emphasize the importance of handling materials related to religious and cultural beliefs with sensitivity and ensuring that resources are appropriate for different age groups, however, providing specific strategies or resources for incorporating diverse perspectives and cultural content into teaching materials would support educators in promoting cultural competence and inclusivity in their classrooms.
- If what is proposed in those guidelines is implemented like that, then I agree with them. But it should be added that teachers should be paid for the time that they spend preparing classes and materials outside the classroom. And groups should be small, no more than 10 students, probably less, maybe 8 or 6. That means more teachers should be hired, and the funding should come from the state and not the parents.
- Along with multimedia and other more classical materials/methods, emerging tools like AI (agents) and their potential role may need to be highlighted: not only how to use/work with them, but also potential pitfalls etc.
- The first point seems unnecessary. Teacher training materials should not be included here, but in the guidelines for the professional development & learning. While still respected and handled tactfully, religion should not be part of the curriculum (only from a historical and cultural point of view, not as a subject or part of the general curriculum).

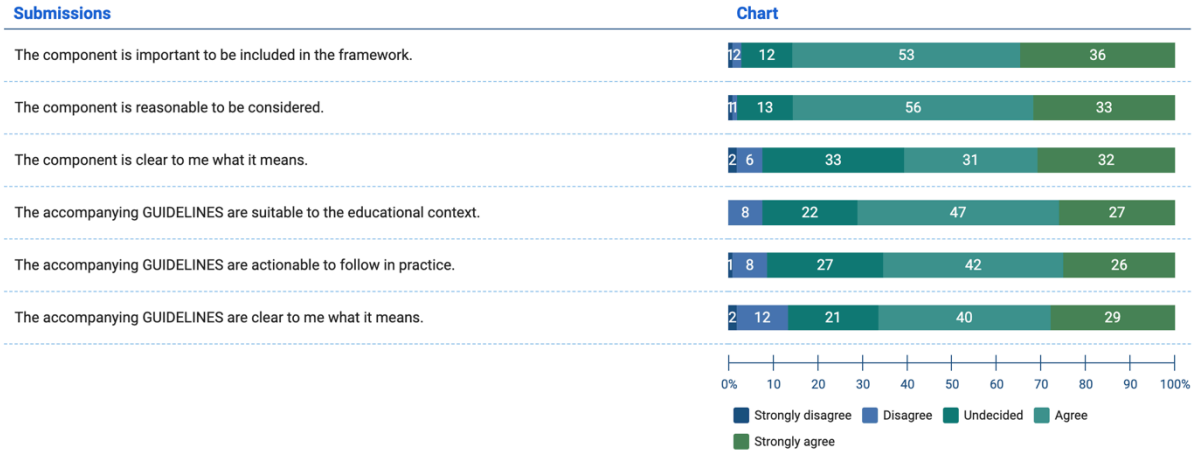
2B.(7). The Platform & Infrastructure component and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- This component is important to be included in the framework. (Important_Framework)
- This component is reasonable to be considered. (Reasonable_Framework)
- The component is clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Platform & Infrastructure

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	1	5	4.16	.777
Reasonable_Framework	104	1	5	4.14	.743
Clear_Framework	104	1	5	3.82	1.003
Suitable_Guidelines	104	2	5	3.89	.880
Actionable_Guidelines	104	1	5	3.81	.936
Clear_Guidelines	104	1	5	3.79	1.040
Valid N (listwise)	104				



2B.(8) Provide your thoughts about the Platform & Infrastructure component and guidelines (e.g., what is missing, how to improve, etc.).

- Establish mechanisms for users to provide feedback on their experiences with the platform and suggest improvements or enhancements. This could include surveys, feedback forms, and user focus groups to gather input on usability, functionality, and overall user satisfaction.
- Dedicate time for training others on how to handle the platform (other than the dedicated person). Ensure all of the information on platform support is easily accessible and searchable.
- Support and advice on how to use the platforms is required. Ongoing training would be required.
- This part can really make a difference, and it should be designed just before the former point (Materials & resources).
- Ensure that the platform as well as all the accompanying infrastructure is accessible by all to its full extent of use, no limitations included
- How can a small school have the capacity to build all this? I can see how a high school or college could, but for a 34 place school this component is unachievable on many levels.
- Use of learning analytics and secure technical infrastructure: Ensuring the security and privacy of data is paramount when implementing digital platforms and infrastructure in educational settings.
- I found this section very difficult to understand. There seem to be a lot of 'buzzwords' and technical language that make very little sense to me eg. 'explanatory visualisation support' - what does this mean?! Another example - 'interoperability'-

I've never heard of this word before. It doesn't seem to be written for the average person's experience with technology systems.

- integrate assistive technologies, like grammar checkers, text to speech, speech to text, etc.
- Unclear why and how this is different to technology perspective. But it does include more aspects as well as overlapping ones. Think there may be inconsistencies with some of the data privacy issues elsewhere.
- All the digital platforms should be easy to use and accessible to every student or parent. I would also add that they need to be designed in a way that students find them appealing enough to use regularly and that they can gain some kind of gratification from it. This might pose a challenge though.
- Maybe distinguishing between "in-house" vs other platforms and infrastructure might be useful, so that the guidelines between these two can be drastically different

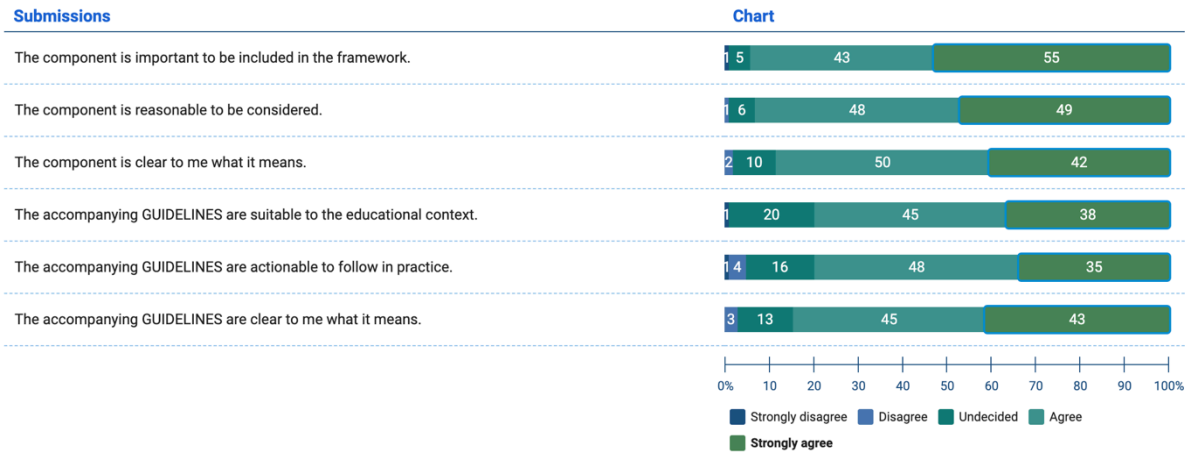
2B.(9) The Professional Development & Learning component and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- This component is important to be included in the framework. (Important_Framework)
- This component is reasonable to be considered. (Reasonable_Framework)
- The component is clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Professional Development & Learning

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	1	5	4.45	.681
Reasonable_Framework	104	2	5	4.39	.645
Clear_Framework	104	2	5	4.27	.714
Suitable_Guidelines	104	1	5	4.14	.793
Actionable_Guidelines	104	1	5	4.08	.856
Clear_Guidelines	104	2	5	4.23	.779
Valid N (listwise)	104				



2B.(10) Provide your thoughts about the Professional Development & Learning component and guidelines (e.g., what is missing, how to improve, etc.).

- Encourage peer to peer teaching and also vertical grouping using pupils from different key stages to interact and work with one another.
- Students should give feedback at the end of the learning period. This can be done by creating anonymous surveys and students report how demanding or effective was the learning process from a particular teacher. This helps a teacher improve in an area he/she has a weakness.
- Facilitate regular meetings and check-ins between mentors and mentees to discuss progress, challenges, and strategies for implementing DT and ET in their teaching practices.
- More consideration about the teachers' starting point. Some teachers will have more baseline knowledge and so training for some will need to be more in depth.
- how the personal wellbeing of the teacher is with workload etc.
- Have you included recognition of the current skill set of the practitioner involved and an awareness to grow these skills and support expression of self etc?
- 'Teacher Professional Development' is different and individual to each school so using it as an umbrella term doesn't work, CPD would be better
- This is pointless, since this is not what teachers need. They need a political and societal recognition of their task and to be funded accordingly.
- Continual professional development is needed to ensure teachers are proficient and able to support students.
- This is very useful and thorough. Further guidance could include specific guidance on assessing staff readiness/knowledge and the frequency of training.
- Allow teachers and students to joint participate in workshops and state their opinions about the new lesson structure.
- Does this take into account staff who know less than the students? How is this cost effect for only 45mins per week slot on the timetable? Our setting does not formally have to teach IT. How is CPD tailored to pupils with SEN, or those that may never pass formal qualifications?
- There should be something that deals with the mental health of teachers.

- The guidelines for Professional Development & Learning focus on equipping educators with the skills and mindset necessary for effective implementation of Design Thinking and technology integration. To enhance them, incorporating ongoing support mechanisms, such as communities of practice or mentorship programs, could foster continuous growth and collaboration. Additionally, emphasizing the importance of addressing diverse learning needs and cultural competencies in professional development would enrich the guidelines. Lastly, promoting self-directed learning opportunities could empower educators to personalize their development journey.
- Maybe practicalities particulars on the (expected) professional development and learning might be added, for example, what percentage of a teacher's working-hour time (in a regular week) should be ideally dedicated to these aspects.

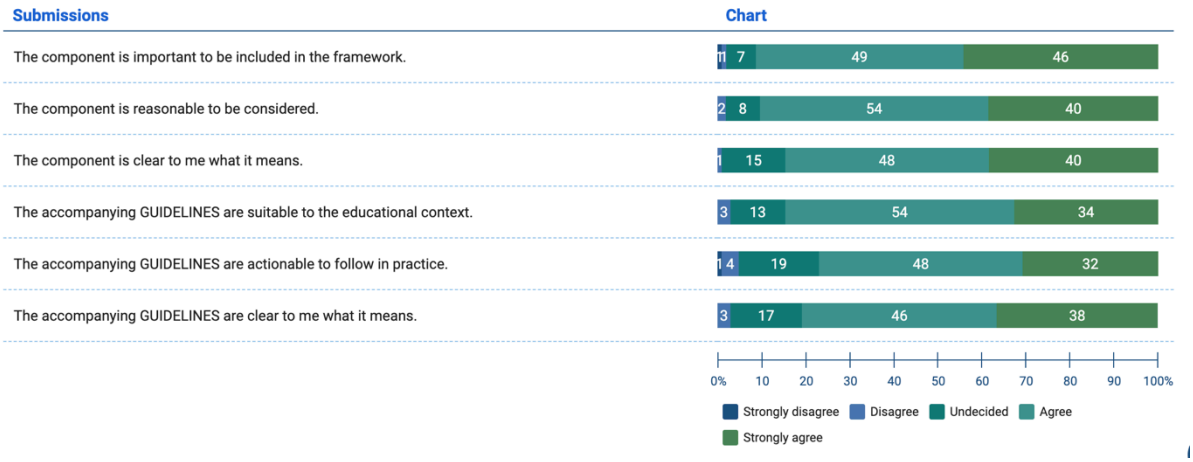
2B.(11) The Evaluation component and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- This component is important to be included in the framework. (Important_Framework)
- This component is reasonable to be considered. (Reasonable_Framework)
- The component is clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Evaluation

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	1	5	4.33	.730
Reasonable_Framework	104	2	5	4.27	.686
Clear_Framework	104	2	5	4.22	.723
Suitable_Guidelines	104	2	5	4.14	.743
Actionable_Guidelines	104	1	5	4.02	.859
Clear_Guidelines	104	2	5	4.14	.793
Valid N (listwise)	104				



2B.(12) Provide your thoughts about the Evaluation component and guidelines (e.g., what is missing, how to improve, etc.).

- Find a way to evaluate student's differently (e.g. students with learning difficulties) without causing any harm to them or inspiring the feeling of unfairness among the peers.
- In my opinion, it should be added: instead of rating on a scale, consider descriptive assessment of students and teachers.
- As in all learning reflective practice is vital. Evaluation of what we are doing and how we can improve it and lead to even better outcomes next time.
- Evaluation would have to consider whether or not it links in with the abilities of students - for example, students who have ADHD struggle with tasks with lots of organisation components and may need additional help with continuous assessment.
- assessment criteria needs to be clarified
- Good if vague. For example, what does it mean to collect data 'from multiple sources? Could this be specified. Do you mean from a mix of in-class, formative, summative assessment etc.
- About this guidelines, there could be more about adopting a comprehensive assessment approach. Educators should consider incorporating various assessment methods, such as formative and summative assessments, performance tasks, portfolios, and self-assessments, to capture the multifaceted nature of DT learning with ET. Also, the guidelines should explicitly define and communicate learning goals to stakeholders to guide assessment practices effectively.
- Collecting data from multiple sources relevant to the evaluation is crucial for obtaining a comprehensive understanding of the impact of DT with ET activities. The guidelines could provide recommendations for triangulating data from various sources, such as student performance assessments, teacher surveys, classroom observations, and stakeholder interviews, to inform evaluation findings.
- These are all very good, as long as they do not add a substantial amount to an already heavy workload.
- Further support is needed on how best to evaluate students abilities.
- Specific information on how to assess and judge this, across settings/year groups/topics would be useful.
- Evaluate the readiness of teachers concering ET, and build a realistic approach for them to reach the desirel level of digital literacy.
- Also include a section about giving the learner a chance to self-evaluate their learning.
- The Evaluation component offers comprehensive guidelines for assessing the effectiveness of Design Thinking learning with Emerging Technologies. To enhance it, incorporating strategies for longitudinal evaluation to track progress over time could provide deeper insights into the impact of interventions. Additionally, emphasizing the importance of triangulating data from various sources, such as student performance, teacher feedback, and platform usage analytics, would strengthen the evaluation process. Lastly, promoting participatory evaluation approaches involving stakeholders could enhance relevance and buy-in.
- The Evaluation component and guidelines offer valuable direction for assessing the effectiveness and impact of Design Thinking (DT) activities with Emerging Technologies (ET). However, to enhance their effectiveness, it could be beneficial to

emphasize the importance of incorporating diverse perspectives and considering the broader societal impacts of DT with ET activities in the evaluation process. This could involve expanding the evaluation criteria to include measures of equity, inclusion, and ethical considerations, ensuring that all students have equitable access and opportunities to participate and succeed in DT activities. Additionally, promoting transparency and accountability in the evaluation process, such as through involving stakeholders in the evaluation design and decision-making, would further strengthen the framework. Moreover, providing guidance on how to utilize evaluation data to inform continuous improvement and decision-making processes regarding DT with ET implementation would enrich the framework's effectiveness.

- Evaluation between actors might be highlighted as a two-way (or multi-way) dialogue, such that if a teacher has to evaluate the student, I believe student should also evaluate the teacher (obviously in different contexts etc.). Maybe more emphasis might needed beyond measurement?

Section 2C: Review of Competencies

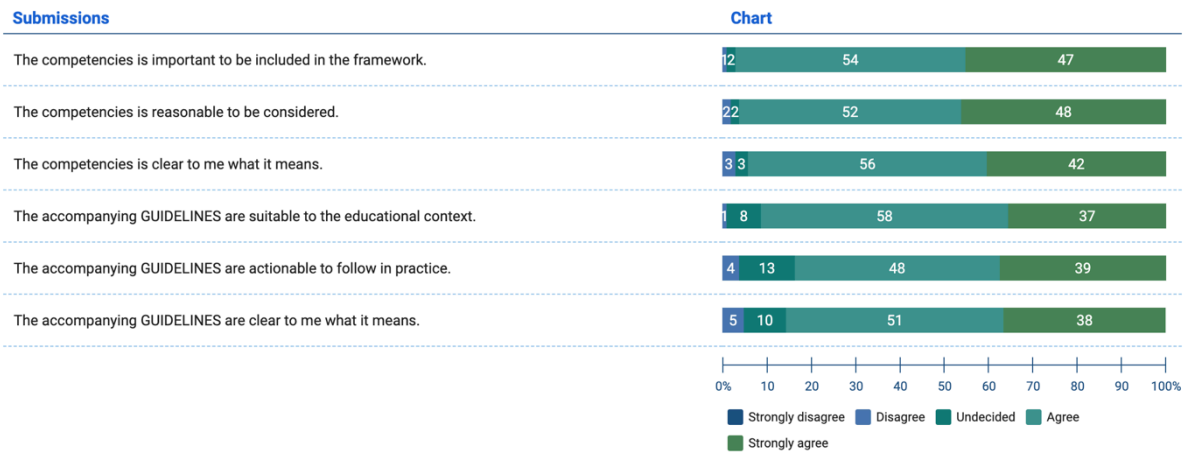
2C.(1) The Digital competencies and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- The competencies are important to be included in the framework. (Important_Framework)
- The competencies are reasonable to be considered. (Reasonable_Framework)
- The competencies are clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Digital Competencies

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	2	5	4.41	.585
Reasonable_Framework	104	2	5	4.40	.631
Clear_Framework	104	2	5	4.32	.672
Suitable_Guidelines	104	2	5	4.26	.638
Actionable_Guidelines	104	2	5	4.17	.794
Clear_Guidelines	104	2	5	4.17	.794
Valid N (listwise)	104				



2C.(2) Provide your thoughts about the Digital competencies and guidelines (e.g., what is missing, how to improve, etc.).

- I think more should be made of this and how digital competencies are being developed/supported.
- Changing people's attitude towards 21st Century Skills and Digital Technologies.
- Implement authentic assessment methods that evaluate students' and teachers' digital competencies in the context of DT activities.
- Mostly clear but "focus on" isn't a clear enough instruction. What does it mean in practice?
- The guidelines cover various aspects of digital competencies but there could be a more comprehensive approach. Educators should also consider incorporating other important digital competencies such as critical thinking, problem-solving, collaboration, and adaptability. Also, there could be more focus on integrating digital competencies into the broader curriculum across different subject areas and grade levels. The guidelines mention providing opportunities for teachers to acquire digital competencies, but there could expand about ongoing professional development and support.
- Emphasise the importance to senior management that teachers are given opportunity to update their skills
- Incorporating ethical considerations into digital competencies is essential in today's digital landscape. Students and teachers should be encouraged to explore topics such as digital ethics, online etiquette, and responsible digital citizenship.
- It is vital that basic skills should be taught in school to a national standard for all as too many pupils come up from primary school and have not been taught correctly how to use certain digital equipment and they have got into bad habits which makes it a bigger challenge for them.
- It is important for teachers to understand at least the basics of these digital competencies, particularly when it comes to safeguarding.

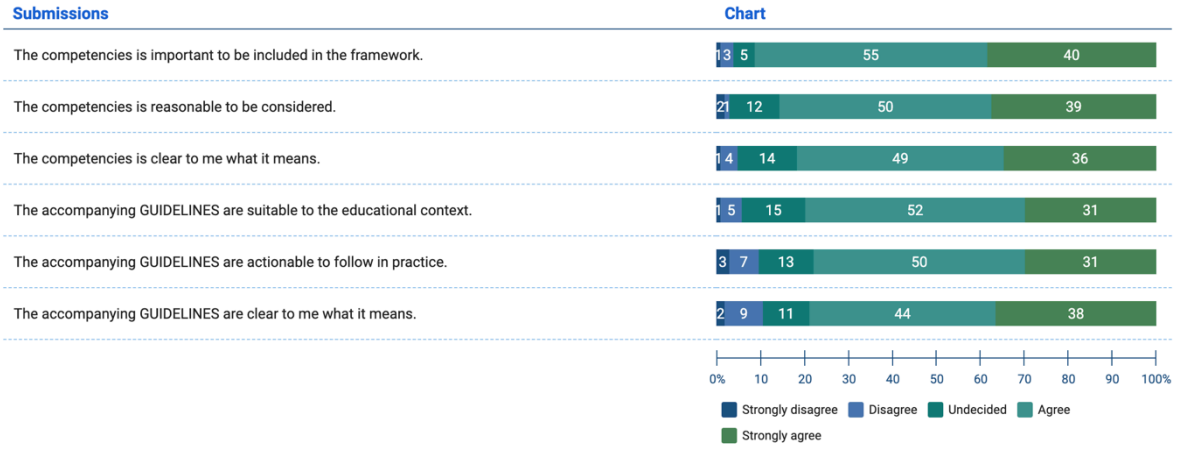
2C.(3) The Personal-Ethical competencies and guidelines

We asked the respondents to rate how much they agreed with the statements below (“1” as “strongly disagree” while “5” as “strongly agree”).

- The competencies are important to be included in the framework. (Important_Framework)
- The competencies are reasonable to be considered. (Reasonable_Framework)
- The competencies are clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Personal-Ethical Competencies

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	1	5	4.25	.760
Reasonable_Framework	104	1	5	4.18	.822
Clear_Framework	104	1	5	4.11	.847
Suitable_Guidelines	104	1	5	4.03	.853
Actionable_Guidelines	104	1	5	3.95	.979
Clear_Guidelines	104	1	5	4.03	1.000
Valid N (listwise)	104				



2C.(4) Provide your thoughts about the Personal-Ethical competencies and guidelines (e.g., what is missing, how to improve, etc.).

- I'd put a strong emphasis on the fact that words have consequences, and although it could be a part of the first bullet point it's such an important matter that I'd separate it and make its own thing. Online bullying is a huge issue nowadays and should be addressed separately.
- Foster a supportive learning environment where students and teachers feel comfortable discussing personal challenges, ethical concerns, and emotional reactions to the DT process.
- Ethical issues are always more sensitive but must be present and treated in a coherent and correct manner before everyone
- The guidelines cover various aspects of personal-ethical competencies there could be a more comprehensive approach. Educators should also consider incorporating other

important personal and ethical competencies such as empathy, integrity, cultural competence, and social responsibility. Also, there could be more emphasis on critical reflection and ethical decision-making and providing support for mental health and well-being.

- How is resilience built in to engage learners who may have been excluded or are at risk of exclusion and are disengaged from the education system? Their window of tolerance is very small
- ethical use of when to use technologies to assist with learning, for example, not relying on it when independent learning is required and preferred.
- This can be tricky as both students and often their parents (if they are children or teens) may have different ethical values. It is therefore important that most of these competencies are focused on everyone's safety and well-being in the learning environment which by extension may include some of the more global issues (tolerance, respect for otherness etc.)

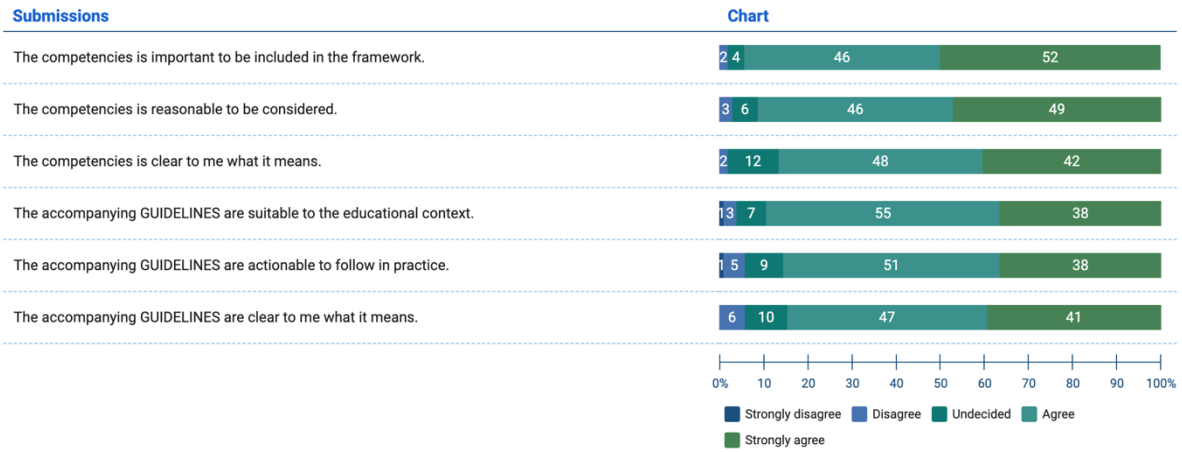
2C.(5) The Professional competencies and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- The competencies are important to be included in the framework. (Important_Framework)
- The competencies are reasonable to be considered. (Reasonable_Framework)
- The competencies are clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Professional Competencies

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	2	5	4.42	.664
Reasonable_Framework	104	2	5	4.36	.723
Clear_Framework	104	2	5	4.25	.734
Suitable_Guidelines	104	1	5	4.21	.772
Actionable_Guidelines	104	1	5	4.15	.845
Clear_Guidelines	104	2	5	4.18	.833
Valid N (listwise)	104				



2C.(6) Provide your thoughts about the Professional competencies and guidelines (e.g., what is missing, how to improve, etc.)

- Teach and focus on mutual respect, often times teachers see students as inferior due to their position, different power dynamics, age, education levels, and students see teachers as a figure, not a human being with feelings and purpose.
- 5 x focus on students and only 2 on teachers. I think we need to focus more on teacher commitment and motivation (give him and marinating his/her motivation)
- About these guidelines, educators should also consider incorporating other important competencies such as critical thinking, problem-solving, adaptability, and creativity. These competencies are essential for preparing students to navigate complex challenges, innovate, and thrive in a rapidly changing world. Also, there could be more focus on integrating these skills throughout the curriculum and learning experiences.
- Reflective practice is essential for teachers to continuously improve their instructional practices and professional growth. While the guidelines mention reflective practice, there could be more emphasis on providing structured opportunities for teachers to engage in reflection, such as through journaling, peer observation, or professional learning communities.
- Very important to make sure the work life balance for teachers is balanced to ensure they maintain the positivity towards DT in ET
- The guidelines for Professional Competencies emphasize the importance of both teachers' and students' abilities in communication, collaboration, and reflective practice. To enhance them, incorporating opportunities for students to develop leadership skills and adaptability in diverse team settings could broaden their professional capabilities. Additionally, promoting a culture of lifelong learning and innovation among teachers through ongoing professional development opportunities would further enrich the guidelines. Lastly, fostering a supportive environment that encourages risk-taking and experimentation could empower both teachers and students to excel professionally.
- I would just add that we also need to be focused on communication and understanding of others' and their behaviour. This is crucial for teachers but could also be helpful for students if they understand their teachers' or colleagues' behaviour in the learning environment.

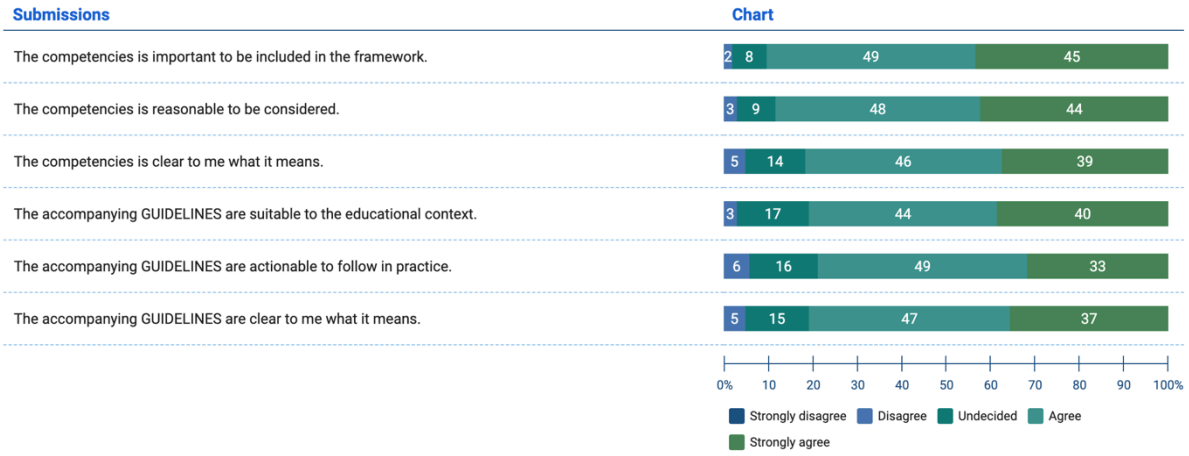
2C.(7) The Pedagogical competencies and guidelines

We asked the respondents to rate how much they agreed with the statements below ("1" as "strongly disagree" while "5" as "strongly agree").

- The competencies are important to be included in the framework. (Important_Framework)
- The competencies are reasonable to be considered. (Reasonable_Framework)
- The competencies are clear to me what it means. (Clear_Framework)
- The accompanying GUIDELINES are suitable to the educational context. (Suitable_Guidelines)
- The accompanying GUIDELINE are actionable to follow in practice. (Actionable_Guidelines)
- The accompanying GUIDELINE are clear to me what it means. (Clear_Guidelines)

Descriptive Statistics: Pedagogical Competencies

	N	Minimum	Maximum	Mean	Std. Deviation
Important_Framework	104	2	5	4.32	.700
Reasonable_Framework	104	2	5	4.28	.743
Clear_Framework	104	2	5	4.14	.829
Suitable_Guidelines	104	2	5	4.16	.802
Actionable_Guidelines	104	2	5	4.05	.840
Clear_Guidelines	104	2	5	4.12	.828
Valid N (listwise)	104	2	5	4.16	.698
Important_Framework	104				



2C.(8) Provide your thoughts about the Pedagogical competencies and guidelines (e.g., what is missing, how to improve, etc.).

- I'd add something about giving them skills to manage their emotions and feelings. Being a teacher is extremely challenging, stressful, and often times it tests your patience and your beliefs; students can be infuriating. So that's something that should be addressed.
- We must criticize the limited time that teachers have to develop our subjects, which means that we must reinforce our unpaid tutoring work and results in a lack of knowledge of the subject on many occasions on the part of the students.
- Teachers must be familiar with pedagogical processes and use a wide variety of teaching tools, resources and methods to get the best learning outcomes.

- Provide follow-up support and resources to teachers based on the feedback received during peer observations.
- The guidelines mention focusing on teachers' content knowledge, but there could be more emphasis on ensuring a comprehensive understanding of the subject matter or discipline being taught. Also, there could be more emphasis on incorporating diverse pedagogical approaches to meet the needs of diverse learners.
- often pedagogical approaches are missed or left out of educational CPD etc so it's good to see it included, maybe expand more on this?
- The guidelines are important. It should help teachers to make their lessons more effective and enjoyable.
- While the guidelines mention focusing on teachers' content knowledge, there could be more emphasis on the integration of PCK
- Align the previous curriculum with the assets provived by the ET.
- I would just change 'teachers' to 'educators', as it doesn't include other education roles (this applies to all sections, not just this one).

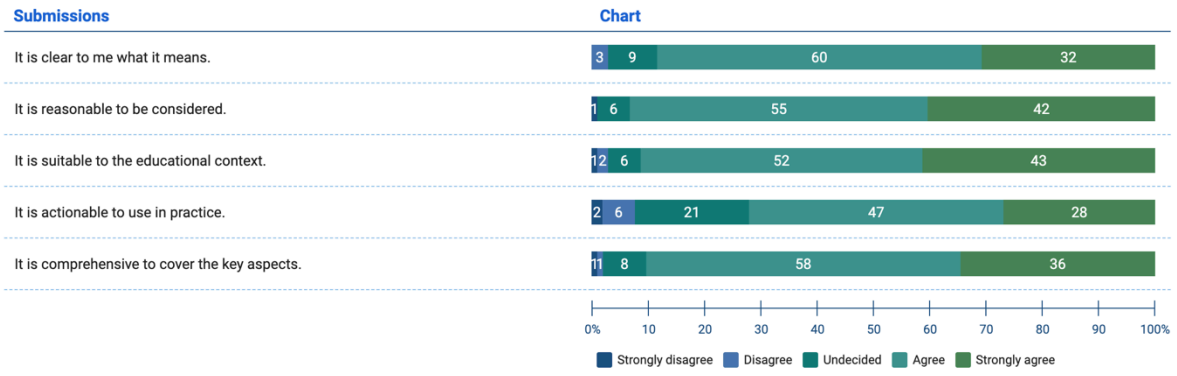
Section 3: Review of the overall framework

3.1 The OVERALL framework

Our results indicated that, on average, the respondents found the overall framework has a high clarity (M= 4.16, SD= .698), high reasonableness (M=4.32, SD=.672), high suitability (M=4.29, SD=.746), high comprehensiveness (M=4.22, SD=.710) and moderately high actionability (M=3.89, SD=.934)

Descriptive Statistics: The Overall Framework

	N	Minimum	Maximum	Mean	Std. Deviation
Clear_Framework	104	2	5	4.16	.698
Reasonable_Framework	104	1	5	4.32	.672
Suitable_Framework	104	1	5	4.29	.746
Actionable_Framework	104	1	5	3.89	.934
Comprehensive_Framework	104	1	5	4.22	.710
Valid N (listwise)	104				



3.2 Provide your thoughts about the OVERALL framework (e.g., what is missing, how to improve, etc.).

Comments regarding the **perceived promises** of the framework are related to:

- It is a well-presented and detailed framework covering comprehensive aspects

- It is clear and relevant to the educational setting, which gives a good overview of a variety of needs
- The metaphor in the framework effectively illustrates the relevant elements

Comments regarding the **potential improvement** in the framework are related to:

- Take into account the financial constraint
- Provide guidelines on how to meet the competencies and identify components of the competencies
- Add more explicit guidance on integrating sustainability principles into DT projects
- Consider individualisation based on context (e.g., adaption to a special school with people with learning difficulties)
- Consider the requirements of the buy-in from all interested parties
- Use verbs with specific concrete meanings that can be translated into actions or explain why things should be considered or focused on
- Pay closer attention to the role AI may play
- Consider the workload for teachers to do
- Avoid using a lot of jargon and use a more human-like language could be used. Long bullet-pointed sections could be broken up with headings to make them clearer.
- Provide defined desirable outcomes, showing how each of the element's outcomes contribute to the implementation.
- Incorporating specific examples or case studies demonstrating the framework's application in real-world contexts would offer practical guidance for educators.
- Present a more focused approach to the well-being, health, rights and pay of teachers and teaching staff would greatly improve moral all around.

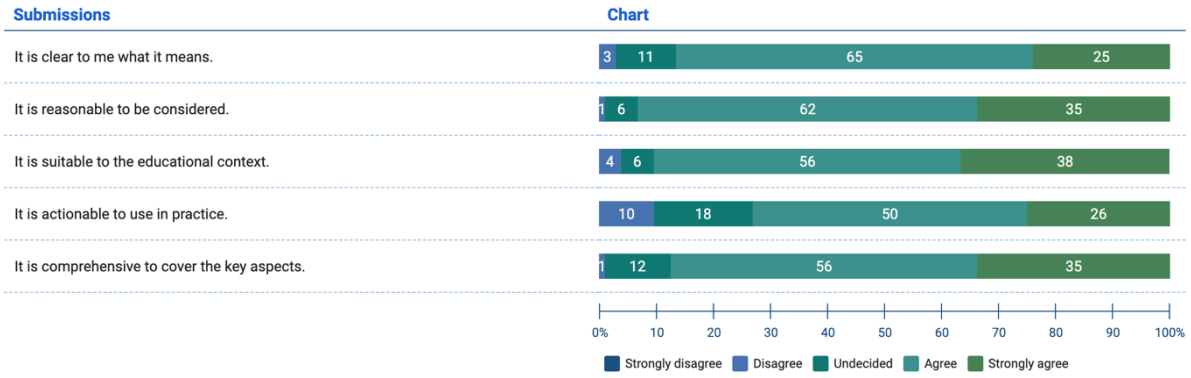
Section 4: General impression and thoughts on the guidelines

4.1 All the listed GUIDELINES in the previous sections

Our results indicated that, on average, the respondents found the overall guidelines have a high clarity (M= 4.08, SD= .678), high reasonableness (M=4.26, SD=.607), high suitability (M=4.23, SD=.727), high comprehensiveness (M=4.20, SD=.674) and moderately high actionability (M=3.88, SD=.896).

Descriptive Statistics: The Overall Guidelines

	N	Minimum	Maximum	Mean	Std. Deviation
Clear_Guidelines	104	2	5	4.08	.678
Reasonable_Guidelines	104	2	5	4.26	.607
Suitable_Guidelines	104	2	5	4.23	.727
Actionable_Guidelines	104	2	5	3.88	.896
Comprehensive_Guidelines	104	2	5	4.20	.674
Valid N (listwise)	104				



4.2 Provide your general thoughts about the listed GUIDELINES in the previous sections (e.g., what is missing, how to improve, etc.).

Comments regarding the **perceived promises** of the guidelines are related to:

- It helps to understand the urgency that the educational community must find itself due to the evolution of technology
- they provide a solid foundation for educators and stakeholders to integrate technology effectively into teaching and learning practices.
- It would give a valuable reference tool for all involved in programme delivery.
- The listed guidelines show a solid foundation for educators and stakeholders embarking on the journey of integrating DT with ET in education. Also, by incorporating clarity, inclusivity, flexibility, practicality, and a commitment to continuous improvement, the guidelines can support effective implementation and foster innovation and creativity in educational practices.
- Overall, it covers all aspects. Very interesting. It would work if it was covered from all levels rather than just giving teachers more to do. Demands on teachers are already incredibly high without the payoff.

Comments regarding **the potential improvement** in the guidelines are related to:

- It requires immense cooperation on many levels and implementing changes on every single level of education and how we perceive it
- it needs to be looked at for places that are more financially in trouble and staff have not the time to engage and develop
- to be tailored to each participating country due to differences in education and students
- Providing more concrete examples and case studies illustrating the implementation of DT with ET in educational contexts would help educators better understand how to apply the guidelines in practice. Real-world examples can inspire creativity and provide practical insights into effective strategies and approaches.
- There should be mention of what the other school/college staff should do rather than just focus on teachers. The teachers will not be able to put this in place without the support of their senior management and admin staff. I would also include local employers as they are key stakeholders.
- While assessment and evaluation are mentioned in several guidelines, there could be more emphasis on promoting formative assessment practices, as well as utilizing data-driven decision-making to inform instructional strategies and support student learning outcomes.

- to be able to incorporate ET with the least possible turbulence that may arise from the traditional educational system.
- Lack of awareness of staff being resistant to change and own personal knowledge of IT, not tailored to SEN pupils or those that are disengaged. It relies on a large amount of time and money being invested, which smaller schools and settings may just not be able to do.
- needing to consider learners with extra needs.
- it's important not to overload teachers with extra work