COUNCIL OF EUROPE

CONSEIL DE L'EUROPE

DGII/EDU/AI(2023)03
English – Or. English
Strasbourg, 17 March 2023

ARTIFICIAL INTELLIGENCE AND EDUCATION: A CRITICAL VIEW THROUGH THE LENS OF HUMAN RIGHTS, DEMOCRACY AND THE RULE OF LAW

POST-CONFERENCE SUMMARY

Working Conference

Strasbourg, 18 – 19 October 2022

Directorate General of Democracy and Human Dignity
Directorate of Democratic Participation

Education Department
Digital Transformation and E-Learning Unit

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1 EXECUTIVE SUMMARY

The Education Department of the Council of Europe organised a two-day working conference on 18-19 October 2023. The aims of the conference were to:

- bring together a wide range of stakeholders and inform them about the Council of Europe's approach to Artificial Intelligence and Education;
- present the Report "*Artificial intelligence and Education: A critical view through the lens of human rights, democracy and the rule of law*",[1] and the preliminary findings of the Survey "State of artificial intelligence and education in Council of Europe member states";
- discuss the application and teaching of artificial intelligence in education considering the core values of the Council of Europe;
- put forward recommendations for action.

Around 40 persons participated in the conference (32 in person and 8+ online). The participants included academics, representatives of other international organisations including UNESCO, EU, OECD, members of the Steering Committee for Education and representatives of civil society and representatives associations.

Keynote speakers included Dr Emilija Stojmenova Duh, Minister for Digital Transformation, Slovenia; two keynote speakers Professor Dr Dagmar Monet, Professor of Computer Science Berlin School of Economics and Law, and Dr Ben Williamson, Chancellor's Fellow at the Centre for Research in Digital Education and the University of Edinburgh Futures Institute, as well as senior members of the Council of Europe secretariat and the Committee on Artificial Intelligence (CAI).[2]

Members of the Council of Europe AI&ED Expert Group presented a summary of the report, and interim key findings from a survey of member states on the state of AI and education. In line with the report, conference participants were invited to take a critical view through the lens of human rights, democracy and the rule of law, and to contribute their own views framed by each of the Council of Europe's core values. Working groups of conference participants considered and presented their discussions on both days, on AI and education in relation to each of the three core values of the Council of Europe, building on two case studies presented by members of the AI&ED Expert Group. The working groups considered and raised issues centred on the impact of the application of AI in teaching with and through AI including discussion of digital literacy and teaching about AI for digital citizenship.

Building on the report's preliminary needs assessment, speakers also mentioned the work needed to develop curriculum that addresses both the human and technology dimensions of the sector, the need to collect more evidence of the impact of AI and education, and the importance of preparing our children "for a future that is already here".

Overall, the start of the work towards developing a legal instrument was welcomed by participants, who collectively were keen to contribute by means of multi-disciplinary and intersectional involvement.

1. Holmes, W., Persson, J., Chounta, I-A, Wasson, B. & Dimitrova, V. (2022), *Artificial Intelligence and Education. A critical view through the lens of human rights, democracy and the rule of law*, Council of Europe Publishing, Strasbourg, available at https://rm.coe.int/1680a956e3.
2. Committee on Artificial Intelligence www.coe.int/en/web/artificial-intelligence/cai.

2 KEYNOTE HIGHLIGHTS

2.1 Keynote 1: Digital transformation: Political challenges and opportunities for citizens

Dr Emilija Stojmenova Duh, Minister for Digital Transformation, Slovenia

The Minister spoke about the approach in Slovenia where they are starting with the basics of affordable broadband (Slovenia has such plans by 2030 for all rural areas to be 5G enabled) in a policy underpinned by fundamental principles for technology to be inclusive, affordable, and safe, and upholding the principles of privacy, security, and safety by design. Slovenia aims to be seen as a trendsetter with its digital maturity and its approach to open data.

The Minister also mentioned that the gender divide is underrepresented in the debate: digital skills matter and we should recognise that in this area, especially in education, women are "active agents of change". Slovenia has a curriculum with digital skills for all. Children require a voice and critical thinking, problem solving skills, and understanding job market implications. The key takeaway that we heard repeated in the working group discussions as the day progressed was that no matter what the starting point, "Trust is a must."

2.2 Keynote 2: AI and education: The myth, the challenges and the path forward

Professor Dr Dagmar Monett, Professor of the Computer Science Berlin School of Economics and Law

Monett started by demythologising the Hollywood stereotypes of what AI is. She described the history of AI from the 1921 work in psychology aiming to define intelligence, to today. The current push is related to a number of factors: the availability of big data, improved algorithms, and increased computer power. However, she cautioned against interpreting better computing and speed as intelligence. While we have moved from the prediction of behaviour to the computation of behaviour, we are no closer to understanding intelligence.

AI literacy doesn't mean everyone in society being able to code, but we do need everyone to be able to cope. We do not need everyone to be an expert on AI, but to understand enough not to be exploited by it. For example, we need to be aware that algorithms depend on a great deal of human work behind the scenes: cleaning, tagging, and classifying data to be used in training datasets. At the same time, much of what is sold as AI is actually just if-then-else tables. The talk also covered a broad range of issues that stem from the adoption of AI in education from interoperability to infrastructure, and data. For example, when it comes to AI literacy, train-the-trainer style strategies of content delivery may be one way to scale the delivery of education. A key to the path forward is wide inclusion and democratic decision making in how and why technology is adopted, and for what purposes.

2.3 Keynote 3: Critical perspectives on AI in education: Political economy, discrimination, commercialisation, governance and ethics

Dr Ben Williamson, Chancellor's Fellow at the Centre for Research in Digital Education and the University of Edinburgh Futures Institute

Williamson set out to present a joined-up view of how AI in education comes with context in social, political, and economic conditions: It comes with commercial ambitions. It comes with policy aims. He asked participants to assess the effects and consequences of the introduction of AI in education, and while acknowledging its potential, suggested that we remain critical of hype and remain laser-focused on the potential harms. A recurring theme is how we do and should talk about AI and how it affects discourse. Williamson noted that the Centre of Privacy and Technology at Georgetown has recommended moving away from the language used around AI and Machine Learning, and instead use words that are specific to how it actually works, that identifies obstacles and failures of corporate or government transparency, and that

attributes agency to the human actors who are building and using the technology, not to the tech itself. In particular, he argued, the current hype is a “legend”, a rhetorical tool for policy making that is overstating reality. AI is not a set of clear technical processes. It is “imagined” and packaged, and can create extraordinary impact on people and policy and processes.

On funding, Williamson highlighted the role of the actors involved, including businesses and social enterprise; actors who fund EdTech and AI, who are “funding the future of education into being.” Private investment in EdTech doesn’t come without political consequences. There is a great deal of lobbying, such as conservative right-wing UK think tank that proposed markets of teachers, from whom pupils could pick their own in state education. On discrimination, Williamson used described e-Proctoring systems that do not actually do what they claim to do but do discriminate. On commercialisation, Williamson identified that BigTech (such as Google) is moving into the education market. With many describing themselves as “platforms”, there is a move to replacing one-time software services with subscription models. This turns educational institutions into rent-based tenants. BigTech underpins much of the EdTech market (i.e. Amazon Web Services). Meanwhile, education data is increasingly being joined up with other data and exploited for other reasons, often for law enforcement, migration policing and enforcement, and pre-crime “prediction”. The surveillance of school pupils increasingly strays into securitisation by the “state”. Data that may be meaningless out of context not designed for other purposes. Finally, on the ethics and regulation of AIED, Williamson concluded regulatory enforcement and ethical intent, while perhaps critical, may be hard to realise.

Audience questions/comments

- Child development impact needs more focus (how children learn in social as well as on research implications for “the brain”). How can we do that?
- How will AI impact the art of teaching? How will teaching be delivered?
- How do we make our language in such a conference interoperable in wider discussion beyond these walls?
- Commercial confidentiality vs working in the open, monopolies limiting SME access to markets, and shaping the sovereignty of schools and national infrastructures.
- What happens when you introduce an AI into the classroom is under researched?
- Affective teaching / behavioural nudge / behavioural change / the “chilling effect”.
- The importance of language.
- Plurality of provision and competition in procurement
- The need for inter-disciplinary and intersectional work.
- The involvement of teaching unions.
- The lack of commonality of AI definitions across sectors.

3 CONTRIBUTIONS BY THE COUNCIL OF EUROPE

Senior members of the Council of Europe secretariat and the Committee on Artificial Intelligence (CAI) set the event in context on Day One.

3.1 Protecting human rights, democracy and the rule of law in the digital environment in the Council of Europe Digital Agenda 2022-2025

Matjaz Gruden, Director of Democratic Participation

For priority in the delivery of quality education there is a need for critical debate and to analyse the implications of emerging technologies, before being rolled out in the educational context. In addition, *"teachers should be empowered not overpowered"* through teacher training and *"future practices should be for the common good."* Gruden challenged participants to consider who is targeted and who are the beneficiaries. He also reflected on the need to work towards robust regulations addressing human rights and ethical dimensions of AI in education, the need to develop curriculum that addresses human and technology dimensions of AI literacy, and the need to support it with educational resources and platforms underpinned by learner-centred pedagogy not technology or business interests.

Gruden drew out three characteristics of the report launched at this meeting, compared with others: (i) It explores both the application and teaching of AI in education, (ii) its approach through the Council of Europe's three core values, and (iii) the deliberately critical approach to AI and education considering both opportunities and risks, benefits and challenges. Above all, he focused on the human and the technology dimensions together, reminding attendees of the framing from Gerfried Stocker, Director of ARS Electronica, that AI is not in fact about technology *versus* humans, or even the relationship between technology and humans. Despite the visions of AI sometimes portrayed in the media, this is not an epic battle. Technology is a product of human ingenuity and creativity, and is always about the relationships between humans and *humans* mediated through and with the tools of AI, about human power relations executed through machines, not about the technology itself.

He encouraged participants to view digital literacy as a tool in the fight for democracy because ignorance allows fears to grow: fears of loss of agency over our own lives, fears of the unknown, and fears for the future. Such fears, he said, can be exploited, drive populism, and be used to undermine democracy. He also recognised that a world in which technology is democratically controlled does not operate in a vacuum. He acknowledged the current Covid push and pulls. In education this means we need investment in people, education and training, and capacity and capability. Successful digital transformation, he concluded, requires investment in people, as much as technology, to recognise the importance of preparing our children "*for a future that is already here*" prepared to respond to global societal challenges, and that education is key.

3.2 The work of the Council of Europe's Committee on Artificial Intelligence (CAI)

Thomas Schneider, CAI Chair

Schneider welcomed the work of the report and expert group, and its place within the larger picture of the Council of Europe on AI. He acknowledged the limitations of his knowledge about education beyond his own personal experience, like many who work in the technology sector. He also mentioned how growing up in Swiss society, which is rich in multiculturalism and where people are taught about participatory democracy, led him to recognise how important it is for education to be based on human rights values and the rule of law.

Before setting out how the work of the CAI has built on the CAHAI work since 2019, including work on human rights, specifically mentioning the right to freedom of expression, freedom of association and to privacy, he talked about the recent work that addressed algorithmic systems, the *Recommendation CM/Rec(2020)1 of the Committee of Ministers to member*

States on the human rights impacts of algorithmic systems developed under his chairmanship and adopted in 2020. The CAHAI and CAI proposed a combination of binding and non-binding instruments to complement each other. A framework convention should set out general principles applied to AI using a risk-based approach compatible with international law and standards. The CAI has been tasked with elaborating upon an "appropriate" legal instrument, with transversal issues, and "conducive to innovation", by November 15, 2023. The relevant policy areas should also develop their own that are sector specific.

The CAI is tasked with facilitating this work across the Council of Europe committees. By 2024, the CAI also aims to determine a model for Human Rights Impact Assessment that can be used for industry standards and context specific. Schneider also proposed that AI must be a force for good, a servant of humanity and *"we must not allow the rule of law to be replaced by the rule of algorithms."* Second, technology is neither inherently good or bad with lots of opportunity and promise, but over reliance on the infallibility of technology and unchecked surveillance together with facial or emotion recognition may not only undermine human rights, but the very fabric of democracy itself. This cannot be left to industry self-regulation. Instead, he urged the importance of including industry, the technical and academic community as well as civil society and governments in broad, multi-stakeholder dialogue for the development of something that is practical and will be possible.

"The world needs a global instrument," Schneider concluded. The Council of Europe has a history of being able to bring people together and create a broad inclusive reach (such as the work of the Budapest Convention on Cybercrime[3]), ensuring the benefits of technology can be enjoyed across the world through cooperation.

3.3 Where AI fits into the current Education for Democracy programme

Villano Qiriazi, Head of the Education Department

Qiriazi seconded Mr Gruden's comment on successful digital transformation requiring investment in people, as much as technology, highlighted the importance of competences for democratic culture in this regard. The *Reference Framework for Competencies for Democratic Culture*[4] is a set of materials that can be used by education systems to equip young people with all of the competences that are needed to take action to defend and promote human rights, democracy and the rule of law, to participate effectively in a culture of democracy, and to live peacefully together with others in culturally diverse societies.

Qiriazi mentioned that in Higher Education there is in addition through the Lisbon Recognition convention[5], work towards fostering inclusion, and specifically integration into education and the job market via the European Qualification Passport for Refugees[6]. To foster trust, integrity, transparency and ethics, there is further work in addressing digital teaching and learning, qualifications and accreditation, to assure "freedom from corruption and fraud" with the rise of essay mills, plagiarism, and more challenging unethical activities as a result of emerging technologies. He added that the impact of AI therefore cuts across these areas and further has implications for teacher competencies and training.

Qiriazi informed the participants about the Council of Europe's new education strategy, through 2030, which is organised around three main pillars: the renewal of civic mission based of education, the enhancement of social responsibility and responsiveness of education systems, and the third, the development of a human rights based digital transformation in education with five intervention areas including governance. He proposed a project that will have synergies with UNESCO's work on AI and the ongoing EU AI work, but that will bring the perspective of

3. The Council of Europe Budapest Convention https://www.coe.int/en/web/cybercrime/the-budapest-convention.
4. www.coe.int/en/web/reference-framework-of-competences-for-democratic-culture.
5. Recognition of qualifications is one of the Council of Europe main activities in the field of higher education and research. www.coe.int/en/web/higher-education-and-research/lisbon-recognition-convention.
6. The European Qualifications Passport for Refugees is a standardised document issued in a project carried out by the Council of Europe and partners www.coe.int/en/web/education/recognition-of-refugees-qualifications.

the Council of Europe values. This work going forwards will be presented at the Ministerial Session 28-29 September 2023, to develop a specific work program for all member states on AI and education.

3.4 Key findings from the Survey

Vania Dimitrova, Professor of Human-Centred Artificial Intelligence at Leeds University, presented key preliminary findings from the ongoing survey of member states on AI and education, on behalf of the AI&ED expert group.

In summary, gathering quality information about the subject is challenging. Dimitrova stressed their preliminary nature and that some interpretation and consolidation has been necessary to assess the open text responses (26 responses had been received at the time of the conference but some countries submitted more than once, and not every respondent replied to every question). The questions were presented through groupings focussed on AI and Education around Learning with AI, Learning about AI, and Preparing for living with AI and included a broad range of educational modes and settings as in scope, including migrants' access and adult education. These initial findings suggest that (with the caveat of limited response rate):

- General AI policies and strategies exist, but those covering AI and education are limited or non-existent.
- In terms of teaching about AI, the theme of preparing to live with AI appeared to still be something that is mainly talked about only in computing studies.
- AI literacy is predominantly considered in Higher Education.
- Council of Europe values may be included in general policies but not for this context.
- Governance of AI in education policies and strategies are few and limited. Monitoring and evaluation seem especially weak (one out of the 26 responses suggested some sort of relevant policy).
- Budgets for implementation and the evaluation of such policies are limited.

Conference participants welcomed that the survey contained definitions, that may have been used as a pedagogical result from the survey itself while the AI&ED expert group was alert to the risks of prompting suggestions that a lack of applied AI in education should suggest lack of 'innovation' or hold any values judgement and create a 'fear of missing out'. Once the survey has closed in mid-November a further analysis will be undertaken. Published findings will not identify individual member states in order to try to encourage fuller participation. A reminder and a short time extension will be sent after the event.

3.5 Highlights from the Report

Wayne Holmes, Associate Professor at University College London, presented a summary of the report "*Artificial Intelligence and Education. A Critical View Through the Lens of Human Rights, Democracy and the Rule of Law*".

The report is not attempting to be a definitive "all-time report on AI and education" but a discussion starter. It raises challenges and questions to ask around AI and education. To begin with, the connections between AI and education are broader than the tools being used to support students, teachers or administration. AI literacy and the teaching of AI focus on the technical aspects and the technology itself, but this is insufficient. It should also involve the human dimension.

Many commercial products have been critiqued for undermining student agency. Monitoring, as experienced by learners, can quickly become surveillance, while tools such as e-proctoring further embed poor pedagogy. Many of the commercial tools already being adopted have a lack of evidence for their claims to be "time saving", "efficiency" or offering a "personalised" learning experience. What is the cognitive impact on learners, especially the developing child?

We just don't know yet. Academic evaluations usually compare the use of AI in classrooms versus business as usual (i.e. classrooms with textbooks), such that the outcomes rarely give useful information about the particular tool being evaluated.

Who is involved and who is missing in the design and deployment of AI and education? There is an imbalance in where tools are developed and by whom, and whom they are applied to, and where in the world. Issues of AIED colonisation are only just beginning to emerge. Few discussions address the question of supply chain ethics such as child labour in the Global South, mining to make the materials for digital devices, and or for the Global North to use. Or questions of the imposition of the English language. In addition, the ethics of education can get lost in the ethics of AI debate.

On human rights, how do contemporary examples of AI in education address challenges to human rights, including how to hear children's voices, how to avoid economic exploitation, and how to seek redress. In addition, parental rights need to be taken into consideration which makes education different from other sectors. There is a lot that makes AI and education different: even aside from the known concerns about discrimination bias and building future policy using historic data: collaboration, individualism, personalisation, explainability and transparency. How are these things reflected in practice and how might AI in education be used to uphold or affect democratic values? In conclusion, Holmes asked: if we need an instrument to protect learners from harm from AI in education, what would it look like? The needs analysis that comes at the end of the report are open for suggestions and change and contributions are welcome. An online form will be created to capture feedback on the report.

4 WORKSHOPS

4.1 Workshop I: The teaching of AI in education and AI literacy

4.1.1 Overview

Led by **Irene-Angelica Chounta**, Junior Professor in Computational Methods in Modeling and Analysis of Learning Processes at the Department of Computer Science and Applied Cognitive Science at the University of Duisburg-Essen in Germany.

For this case study, we focused on the case of teaching of AI in Education and *AI Literacy*.[7] To support the activity, we introduced a hypothetical scenario (a description follows), and divided participants in three groups to reflect on the teaching of AI through the lens of Human Rights, Democracy and the Rule of Law. Online participants formed a fourth group that focused on challenges and pitfalls as well as on measures and actions for promoting fair, accountable, transparent and ethical (FATE) AI in education. Each group presented their discussion at the end of the workshop.

To facilitate the discussion, participants were asked to consider the following questions:

1. What role does AI literacy play for whom in which parts of the process, from procurement to company product development?
2. What gaps are demonstrable in competencies, and how could these be addressed to champion the values of the Council of Europe within the scope of AI literacy?
3. What human rights are engaged for whom and how is this addressed?
4. Does this case study demonstrate participation in a culture of democracy?
5. Which aspects of law may be relevant?

7. Touretzky, D., Gardner-McCune, C., Martin, F., & Seehorn, D. (2019, July). Envisioning AI for K-12: What should every child know about AI?. In Proceedings of the AAAI conference on artificial intelligence (Vol. 33, No. 01, pp. 9795-9799).

6. What are the biggest fears and hopes of participants regarding AI Literacy?

Hypothetical scenario

A leading global provider of AI solutions has approached a school for children aged 10-18 to deploy an AI-assisted system that records multimodal data about students while they engage with digital learning activities that the AI system provides and that take place both inside and outside the classroom. The AI-assisted system aims to offer real-time insight into the progress of students and to provide adaptive support employing various features such as:

- Feature A (Chat-Bot): An AI-assisted chatbot that simulates a learning companion for engaging students in conceptual discussions;
- Feature B (Insta-Grade): An AI-assisted real-time assessment tool that grades student reports in real-time;
- Feature C (Perso-Reco): An AI-assisted recommender system that provides learning materials and learning activities to students based on their interaction with the system's homework activities.

The school board is keen to adopt these AI-assisted systems in order to support teachers who deal with overloaded schedules but also to improve the overall learning experience of the students and to introduce them to AI-assisted technologies. After two months of usage, the following incidents are reported to the school board:

- Incident 1: A young student (11 years old) who was engaging with the AI chatbot companion did not realize that they were interacting with a chatbot but instead thought that they were communicating with a fellow classmate.
- Incident 2: An older student (16 years old) whose work was being graded by the automated grading system. The student did not agree with the system's assessments, arguing that they were unfair and not justified. The student reached out to their teachers for support but the teachers were not able to explain how these assessments were generated and responded that "this is just how the system works".
- Incident 3: A student (13 years old) with limited access to digital infrastructure (personal computer, smart phone and internet connection) at home, was supported by the AI-assisted recommender system. However, as these recommendations were based on homework and this particular student had limited access to the system from home, the recommendations were not accurate. Accordingly, the student was not progressing as the other students.

4.1.2 Summary of the discussions

Human rights group

Rapporteur: **Paulo Nuno Vicente,** an Assistant Professor of Digital Media at the Faculty of Social Sciences and Humanities, NOVA University of Lisbon (Portugal).

One takeaway from these discussions was the concept that AI literacy is many things, but never only what you think it is. The question was asked: **Whose problem is this?**

Participants began by discussing the potential framing made possible by the Universal Declaration of Human Rights, reflecting on the relevance of explicitly including, in a possible legal instrument, the protection against violations generated by algorithmic systems and Artificial Intelligence (AI). The participants considered that the adoption of AI systems in educational contexts challenges the human right to choose the type of education desired, by imposing a predetermined socio-technical system whose inspection is often unfeasible (black box effect). In a moment prior to its adoption, policy makers and educational decision-makers

should clearly and explicitly answer the question: "What is the added value of this AI system for the teaching/learning process?".

It was highlighted that the adaptation to which learners are conditioned in front of so-called "intelligent" assistants conditions the possibility of full freedom of expression, considering the fact that these systems are more developed in English language, excluding or "**neo-colonizing**" minority languages and indigenous communities. Thus, the participants concluded that adoption and teaching based on AI tools needs to incorporate attention to broader cultural contexts, preserving them, and not subjecting users to externally formulated "value bubbles".

The right to **personal self-determination** was highlighted, in particular, given the frequent opaque technology policies and potential failure to observe informed consent in matters such as interaction design and the collection and processing of users' digital data. In turn, the adoption of AI in education suggests the risk of **exacerbating multiple digital divides** in matters of access, use, and pedagogical appropriation. In addition, participants considered the imperative **need to match impact assessment and algorithmic auditing** throughout the "life cycle" of these systems and what is these systems are designed to "change" over time to get to know the user—how can risk assessment or procurement standards at a pre-adoption point-in-time be of value and what would need to trigger reassessment and how often would be reasonable?

Issues related to **algorithmic discrimination** were also raised, and an upcoming regulatory framework should pay particular attention to its origins, effects and consequences, even if unintended —but effective—often related with the mathematical models and data sets used to train machine learning / deep learning algorithms, in cases such as facial recognition and predictive analytics (risk analysis, rating prediction). In general, participants are concerned about the processes of quantification of the educational process, paired with the implicit reduction of the teacher's role by **technological determination**.

Participants discussed what role AI Literacy plays and for whom, in which parts of the process, from procurement to company development? They stressed that the difficulty of effectively communicating a commonly accepted notion of *AI undermines the development of AI Literacy* by its ambiguous nature. It should go beyond the mere consideration of "Data Literacy" or "Algorithmic Literacy", and extend its scope to issues of **environmental sustainability**, considering the large consumption of resources (e.g. energy). Participants identify teachers' **low digital knowledge** and/or poor understanding of AI systems as a barrier to the professional development of AI literacy. In turn, their role is critical at the time of conception and design of these solutions; participants stressed the centrality of piloting educational resources supported by AI systems, accurately gauging the resulting benefits and harms.

Participants highlighted the need for the definition of procurement policies specifically geared towards the contracting of AI products for education, based on a process of **prior certification** of contracted companies and audit routines. Workshop participants compared the imperative of adopting these mechanisms to those in place in areas such as Healthcare or Commercial Aviation.

What were participants' biggest fears?

- The normalisation and accepted level of interference by technological companies
- Ceding decision-making to machines
- The infrastructural control by large technological companies, whose means are unequalled by nation states
- The development of future generations whose education has taken place in a culture of social datafication
- Automating poor pedagogic practices and choices.

- The depersonalisation of the educational process, of schools, of the classroom
- Negative impact on language and minority rights (non-English)

What were participants' greatest hopes?

- The still timely possibility of adopting regulatory frameworks and auditing practices
- The development of benchmarks that make benchmarking of AI systems possible
- Routes for remedy and redress may be designed and made actionable.

Democracy group

Rapporteur: **Lidija Kralj**, teacher and Member of National Council for Education in the Croatian Parliament, Ministry of Education.

Participants considered a hypothetical learning companion, *Instagrade,* that grades students' work instead of teachers, finding it not democratic because it is a completely automated process and the teacher doesn't have the option to intervene - although they also acknowledged that grading in real life, without AI, is not very democratic too. Participants found it very problematic that students did not get feedback and an explanation of why they received a certain grade, while teachers are obligated to explain their grade and give feedback to the students. Not understanding why one fails, makes people weak and disables improvement. A similar, existing scenario was mentioned – companies using AI for screening CVs. Potential employees don't get any feedback which means they don't have the opportunity to improve or get better in the process of job seeking.

The *Instagrade* tool could be improved by creating an algorithm that gives feedback and an explanation why such a grade - that could also increase democracy. Participants discussed if it was possible to automate personal feedback responses, as every student's development is individual, and it is complex to take all factors into account while making an algorithm. They also mentioned that digital technology is good for formative assessment, giving quick feedback on smaller tasks. AI could be useful for pointing out frequent mistakes and diagnosing where in the process of learning (task solving) mistakes happen. Democracy is the right to ask questions and get answers, or in this case to get a proper explanation of the grade and the option to intervene. Democracy is about dialogue and transparency. Furthermore,

- Definitions of democracy included "being able to put your hand up and be treated fairly' (Digital right to protest, Data Right to object).
- The ability to access information and access public services
- Participatory involvement in shaping "good decisions".

The next hypothetical example was the *Perso-reco* tool that claims to provide personalised recommendations based on homework, what resources to learn to become better. Participants suggested that such a system could be a good solution for some areas that don't have enough teachers, it could benefit inclusiveness and give students wider opportunities. But it could also make the digital gap between rural and urban students even bigger, as it emphasises students' problem of not having adequate resources at home. Further data should be collected and researched to make the *Perso-reco* system better.

The problem of the digital divide and inequality is not just an AI problem it is a general democracy issue. Participants also mentioned that the delivery of education by digital technology and AI is less expensive than the delivery of education with traditional resources.

When it came to the hypothetical *Chatbot tool,* discussants summarised that teachers are much more than a tool for learning, they are role models, they inspire, and convey their passion for learning, passion for the subject they teach, their way of teaching, and their attitudes and emotions. Students have a multifaceted relationship with teachers which cannot be realised with a chatbot. So, using only chatbots, without teachers, is taking away a piece of democracy

from learning. But a chatbot could be used alongside the teacher teaching process with students being aware that on the other side is a machine, not a human being.

Having trust in the machine doesn't exclude control, a challenge for democracy is to ensure more transparency and inclusion in the learning/teaching process. AI could give us some solutions (like navigating roads) but still gave us the option to choose. We don't want AI to choose instead of us without us knowing that. Democracy requires lots of trust, and the world is getting more and more complicated.

What were participants' biggest fears?

- people rely too much on AI and use AI as a walking stick
- not to use AI because of too many issues
- our brain will rust if we don't use it, we need a balance between using brains and AI
- people being powered by AI will stop using their brains and become controlled by AI
- that we'll have to follow the rules without an option to create rules
- objectivity, AI might be strict but not fair
- use AI to monitor students
- standardising everything
- AI literacy is not taken seriously
- Media literacy (as part of AI literacy) is not given enough attention
- The normalisation of interference to the teacher-pupil relationship
- FOMO missing out on full potential of tech through fear
- treated as cohorts not as children and individuals
- giving assessments of performance without meaningful feedback is not education
- stopping real engagement and critical thinking
- surveillance, lack of standards
- rules, subjectivity and "Living on the margins of the rules"

What were participants' greatest hopes?

- science, support and help for people with disabilities
- empowering society to be more inclusive
- language translation (speech-to-speech)
- people involved in the process of development – collective consciousness
- AI which learns and make better decisions with people still able to question those decisions
- AI that gives recommendations based on objectivity and people make the final decision
- use of AI for better learning, engaging students in solving problems and advanced knowledge
- encouraging young people to question everything
- the support of the need for interdisciplinary and intersectoral dialogue
- parallels to draw on form the legal / judicial systems

- design and delivery involvement
- improve equity/ accessibility
- potential for improvement better apps, better data, better practice

The standout takeaway was the remark that for many of the case study challenges, “This is just not education.” An unanswered question was how far parental choice could or should be left open. Can children or parents make choices in the type of education they receive Protocol 1 of the ECHR, Article 26 of the UDHR when it comes to AI?

Rule of law group

Rapporteur: **Juliette Norrmen-Smith**, Associate Project Officer on Education Policy at UNESCO.

The participants first considered:

- What role does AI literacy play for whom in which parts of the process – from procurement to company product development?
- What gaps are demonstrable in competencies, and how could these be addressed to champion the values of the Council of Europe within the scope of AI Literacy?

In discussing which aspect of law could be relevant, they believed that defining AI and AI literacy was new territory for all and that examples are needed. “There isn't one AI, there are hundreds.” They asked themselves, how they might categorise them so that we don't have multiple laws, or whether one size fits all?

- Difficulty to define AI literacy and related key terms for accountability
- “Law is long-lasting, tech may be fast changing, how can they be reconciled?”
- Large variety of types of law / guidelines / codes of conduct. Hard law is easier to get clarity from.
- Lawmakers should be more literate, avoiding statements such as, "algorithms are not allowed".
- New AI law should protect rights and improve understanding of AI how to protect one’s own rights. The law must not empower Global North even further / stronger / faster over Global South.
- The law is a hard border against which one can be held accountable and good for industry to have certainty therefore a legal instrument may be seen as desirable.

Participants considered the advantages of Technology-independent or technology-based law? Their Interim consensus result was technology-independent law for AI:

- The pace of law and technology don't match so there will always be friction
- Free-market economic outlook: everybody talks about block-chain but block-chain and AI will change; so it is difficult to make a technology-based law; the law will become obsolete if it's technology-based, and so it should be technology-independent

Regulation vs. strangling innovation:

- Requirement on the state side and risk management on the company side.
- Start-ups are often hit quite badly; increases the monopoly
- If you're fewer than 100 users or 5000 clients; once you mature, you must comply after you grow

Modular laws: **adaptation of laws** as technology and literacy transform:

- Generic principle behind "modular laws" -- this is the basis of the AI Act (4 sections) you can always update what belongs to 4 separate sections
- Some AI that is forbidden
- AI with high risks that has to abide by official regulations and external auditing
- Low risk
- Not harmful at all
- The definitions of these four sections are not the same (e.g. high risk section is a simple list of cases -- who has established that list? It could be seen as arbitrary. The definition can lead to many interpretations of the GDPR at the beginning).

Definition of **AI literacies**:

- Literacies have to be understandable and connect individuals, experts and society, training should be provided for AI literacy required by law
- Missing role for understanding AI, e.g. by the mass media
- Law should also require transparency and reporting activities by the providers to users (others than manuals and terms that nobody is reading), there different actors with different roles and tasks
- Violation punished not by lump sum but a percentage (affordable also by start-ups)
- Law should be easily understandable by citizens and start-ups
- Topics for reporting: safety, data privacy, data protection, fair, efficacy, transparency
- EdSAFE Alliance example: S: Safety -- how is safety for your tool defined? You as an intermediary need to tell how it's safe. A: accountability; F: fairness (how is your algorithm addressing systemic bias); E: efficacy -- as a parent, I want to know what those 3 categories are and how you took care of it?

Trust: It's not only about technology, it's about trust -- how do you create trust in an emerging market?

- This comes because it's developed from multiple parties. What can we learn from the medical market? How big is your fear vs. how low is your trust?
- Delegation to existing associations for achieving trust through a network of experts
- Trust is only growing with multi-stakeholder approach
- Annual reporting which data are collected and for which purpose
- Where can we learn from in other domains? Interplay of interests may conflict so who decides?

What were participants' greatest hopes?

- The outcomes now that policy makers have woken up that we need legal regulation
- Annual reporting requirement to create "networks of trust" with "tools for trust".
- We are seeing some EdTech companies that are willing to change their behaviours.
- AI literacy is beyond individuals, community and all of society so these kinds of instruments that are transitional may be the way forward
- Implementation of AI literacy could lead to better understanding; training should lead to more reasonable questioning
- possible measures for standards, safety, efficacy, privacy and transparency

- “disrupt inequity” (while acknowledging today is entrenching it).
- In the world of rights, developing an understanding of digital rights as human rights is actually moving comparatively and impressively quickly; it took centuries to develop the concept of human rights.

Online group

Moderator: **Ahmet Murat Kılıç**

Participants considered the questions:

- What can we do to move forward from criticism to recommendations?
- Are you hopeful or pessimistic about regulations?
- Are there work or sustainable routes for value or wealth generation that can also be compatible with other values, such as private versus public values (for example those three of the Council of Europe)?

Participants noted that in the U.S. there is regulation that includes “school surveillance”, but the concept is not strong in the EU (yet?). Legal expertise on AI is lacking here, by comparison with the U.S., and lacking generally on AI in education. One participant proposed: The marketplace needs something collective, overarching, and beyond geographical boundaries. One collective in the Netherlands creates “value hierarchies” for? humanity, justice.

4.2 Workshop II: The application of AI in education

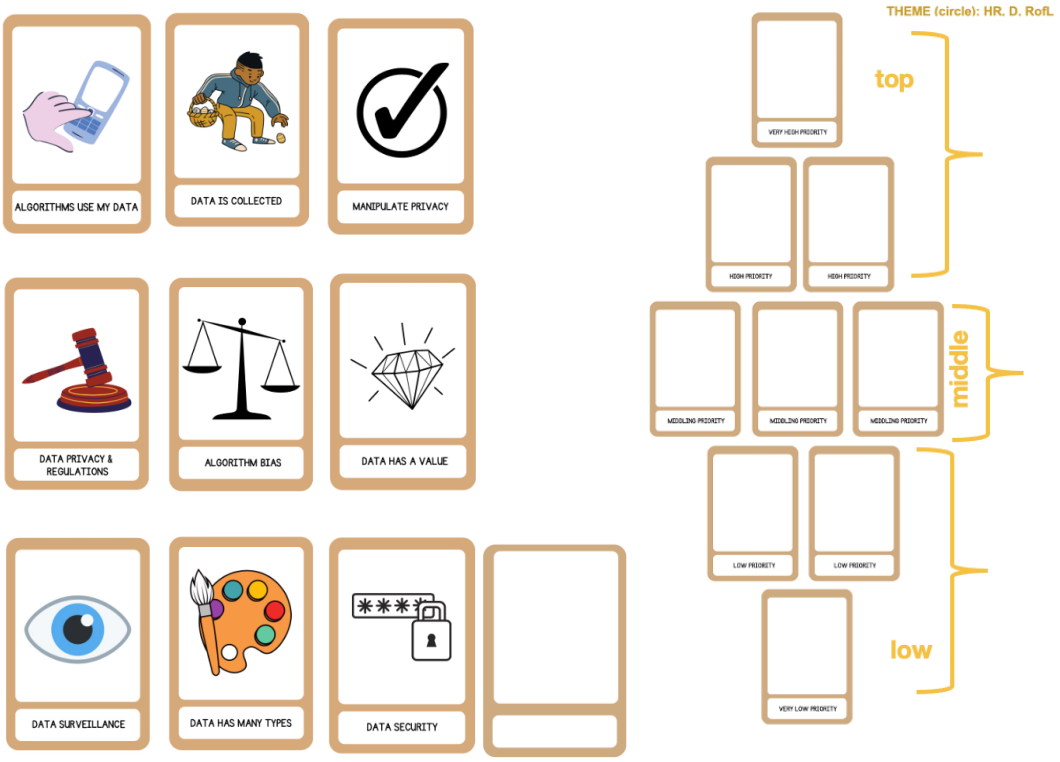
4.2.1 Overview

Led by **Barbara Wasson**, Professor & Director of the Centre for The Science of Learning and Technology (SLATE), University of Bergen, Norway.

This workshop began with a presentation of a futuristic scenario for a school of the future where there was ample use of data collection, AI, and learning analytics. The scenario was adapted from an IEEE scenario[8] on the use of Adaptive Instructional Systems (adding more sensors, AI and LA systems), which is used for ethics discussions. Wasson's visualisation of the futuristic school can be found in Appendix A. Then, the workshop moved to a diamond ranking exercise where cards representing issues related to data and AI literacy (see left in figure below) are arranged in a diamond format of top, middle and low priorities. The exercise was motivated with the following questions:

- What are the issues – from a human rights, democracy, and rule of law perspective – that will arise in such a future school?
- What are the most important issues?

To facilitate the discussion, participants were given the deck of cards representing the 9 issues related to data and AI literacy, a blank card where they could identify an issue of their own, and a diamond on which they would place the cards (see right in figure below).



Eight groups were asked to choose the perspective from which they would tackle the issues of data and AI literacy (6 groups chose HR, 1 D, and 1 the RoL), before discussing and placing the 9 cards (+ the option of creating one concept of their own) on a diamond from very high priority (top), to very low priority (bottom). The pictures below show two groups at work.

8. Due to copyright the scenario cannot be share, but it is adapted from: Adaptive Instructional Systems (C/LT/AIS) P2247.4 (IEEE) https://sagroups.ieee.org/2247-4/ethics-discussions/(original).

The figure below shows results of one group who worked from the Human Rights perspective on the right (see Appendix B for all 8 resulting diamonds).

Interestingly, and perhaps not surprisingly, none of the diamonds looked alike; not even though they chose the same theme. One group chose to be more precise “To promote human rights” and there was a discussion if the diamond would be upside down if it was chosen “To defend human rights”. Four groups chose “Data has many types” as the lowest priority, while three groups had “Data privacy & regulations” as very high priority. “Algorithms have bias” was generally placed on the higher priority spots. The groups were very active and there were lively discussions. This is what is most important about this exercise, to hear others’ opinions and have to take a stand, which leads to discussion of concrete issues and why one issue is more important than another. Several participants commented in particular how well the ranking exercise method worked, as it generated a rich and challenging round of small group discussions.

5 WHAT COMES NEXT?

Wayne Holmes led a whole conference discussion before the close of Day Two on what comes next. Participants appeared to be pleased to have the opportunity to contribute ideas and questions freely, and proposed having access to shared space to share content / interact further and to be able to watch the talks again. Issues mentioned by participants included the research needed on efficacy, effects on teaching, and curriculum from a teacher's perspective. There was also an extended discussion of what counts as evidence, scientific vs pragmatic and policy evidence, and how it is measured by whom, when children in public education today are often guinea-pigs in real-world live education settings testing commercial products. A participant raised the question of the potential inherent conflict of interests for young people in the deployment of AI where systems are demanding for resources and effects on the climate.

There were further challenging issues that were mentioned such as the conflict of value versus cost. From different perspectives (e.g. a child, parent, school, state government, individual institution, national and internationally) the same things do not have the same value. Taking Google for Education as an example, governments get free infrastructure, free teacher training, free services for children at home. However, there is no cost-benefit analysis done by the state of who shapes the platform design, what the long-term effects might be, and what cannot be most easily delivered for homework or classroom activity. No risk assessment of costs changes or potential lock-in, and the fragility of entire education systems relying on Google; and the same is true for AI platforms and applications. The pandemic has shown us what can happen when education is dependent on a single method / tool / system, and when there are inconsistencies across purposes of the same tools.

There are still many gaps to be considered:

- There is duality of how systems can be used — a significant area of identity management is immigration enforcement. There could be conflicts of interests in defining "the common good" or "the public interest" in such overlapping applications in the education sector, such as facial detection and recognition.
- Adaptive assessment systems. What is the common good approach, is it fair to not offer every child the same opportunity to answer every question in the same assessment?
- Conflicts in systems across user groups — dual use: for one child eye-tracking is surveillance and another it is the only way the child with disability has screen access.
- Inconsistency across legal instruments in and beyond the Council of Europe such as the EU AI Act.
- Definitions on AI literacy and AI at all are inconsistent across stakeholders.
- We should also ask ourselves, who is here at this conference and who is missing?
- Although more were invited, too few civil society organisations participated and there was limited representation by industry. GAFAM companies are owned by Silicon Valley billionaires. Some places are looking for alternatives (such as Barcelona's DD free, open access systems) that act as a gateway for enabling external systems to be accessed through them, and child centric (but not a datafied child) where it leaves the systems but stays focussed within the local educational setting.[9]
- What does it mean for the children that don't look like them or us? Who is in the company and who is in the room when decisions are made? Across civil society and technology experts there is consensus that we are not as good at discussing issues that we may not

9. X-Net seeks to defend the sovereignty of children's, teachers' and families' data, and believes they should be held on servers controlled locally, managed with auditable, open tools. At the same time, they prefer "a free and democratic Internet to the version of the Internet offered by big tech corporations". https://xnet-x.net/en/introducing-dd-tool-democratic-digitalisation-education/.

ourselves experience; racism, classism, ableism. How will we make sure our next actions and any events realise these issues and fix them within our own remit as far as possible?

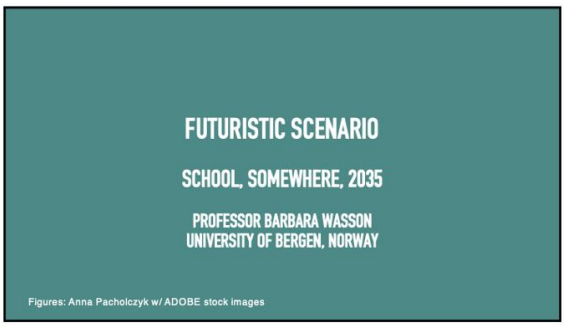
- What is next? What do we develop — principles, versus guidelines etc. — something like the UNCRC and the development of the General Comment no 25 on Children's Rights in the Digital Environment? Can it bring the changes it seeks without being enforceable? A legally binding instrument carries the greatest effect and therefore may benefit children the most.
- The European Court of Human Rights is a place of last resort, but it is real and enforceable and it is this which underpins the work at the Council of Europe. In order to address their human rights and support them in seeking any challenge or in seeking redress where their rights have been infringed, children must also be supported towards a full and free development and flourishing into adulthood in the holistic context of their lives; measures for child justice, and addressing the digital divide and child poverty.

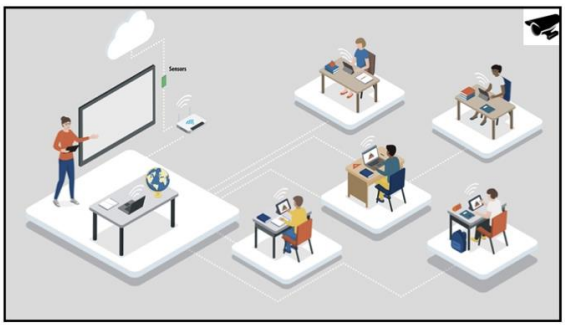
We now have the opportunity through this programme of work to create something that can concretely empower children and learners' rights, backed by enforcement, and can enable them to stand up for human rights, can stand up for democracy, and stand up to power to restore the imbalance we have today.

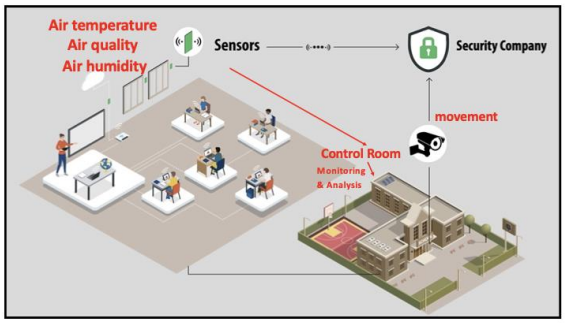
6 CONCLUSION

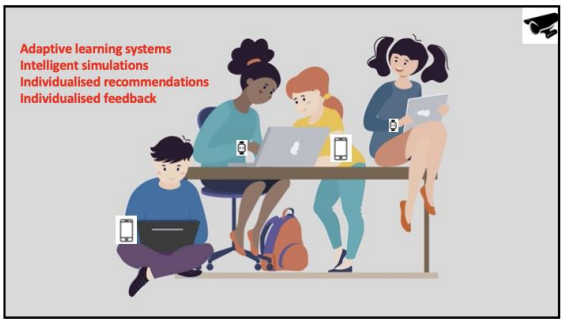
The conference concluded with a summary of the two days by **Jen Persson**, Director of the UK NGO Defenddigitalme, which formed the basis of this summary document.

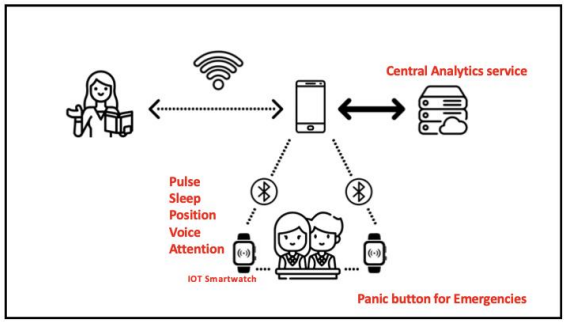
APPENDIX A: FUTURISTIC SCENARIO

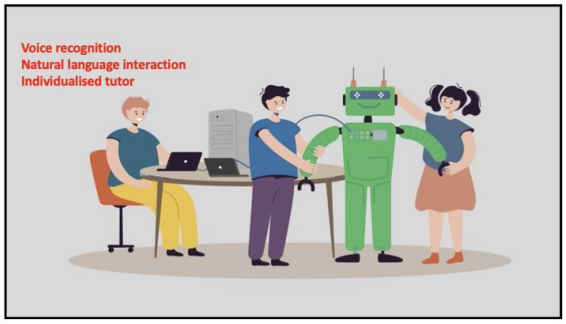


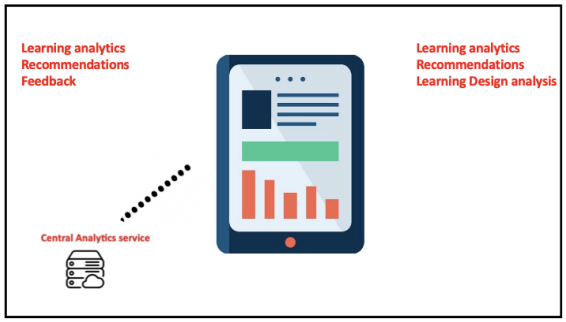


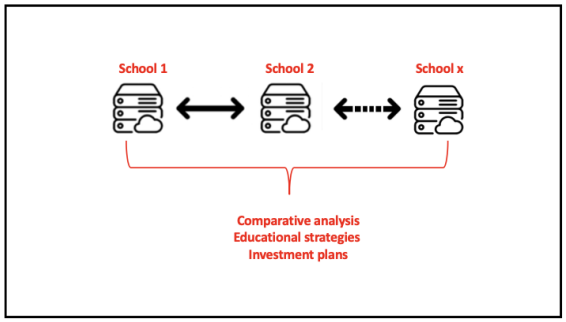








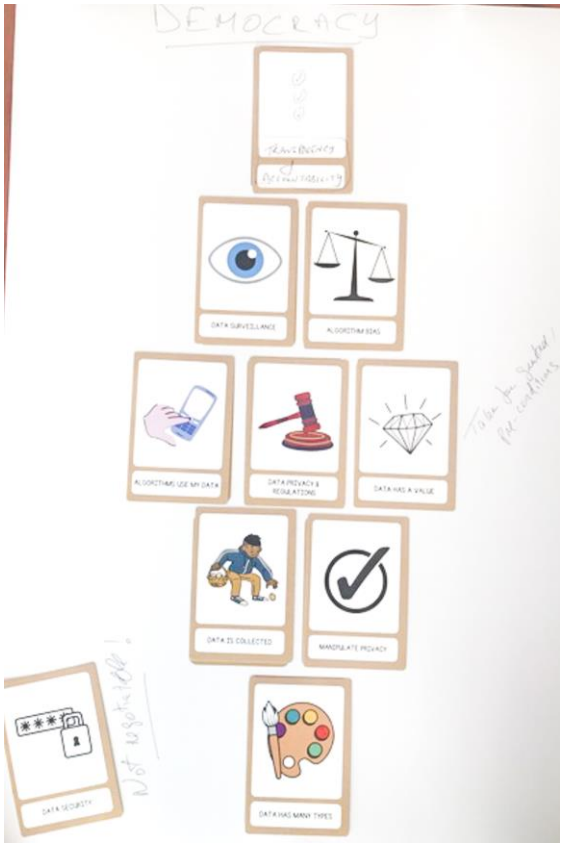




APPENDIX B: RESULTING DIAMONDS

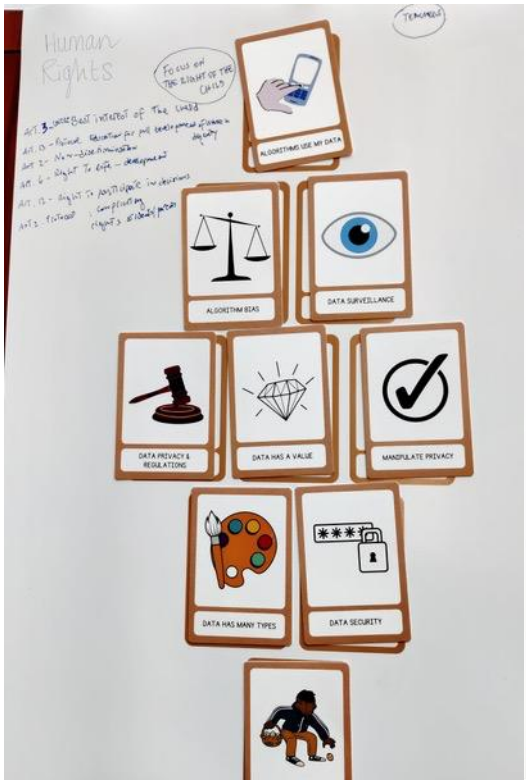
HUMAN RIGHTS

DEMOCRACY



DEMOCRACY

PROMOTING HUMAN RIGHTS



HUMAN RIGHTS

HUMAN RIGHTS

HUMAN RIGHTS

RULE OF LAW