

Data from and for research and educational systems: tools for research and teaching 17th 19th October 2024 Rome - INVALSI

4. What are the key ethical considerations and challenges regarding data privacy and security in cross-border educational data sharing? (Andrea S.)

Interrogating the voices of dissent about the work of INVALSI one hears critiques such as reduction of educational complexity to standardized tests, "teaching to the test", stigmatization of territorial disparities, limited impact on improving the educational system, ethical and privacy issues, data used for ranking rather than improvement and disconnection from the school reality. Since AI is part of the discussion I reveal that the above comes straight from ChatGPT.

Coming to more structured analysis of the available material one finds in the blog ROARS a list of questions pointedly addressed to INVALSI (ROARS, 2024) about: Digital student portfolio, accessible by whom? Again teaching to the test / Campbell's law? The fact that test contents are not public, and that external companies are contracted for grading possibly using AI. The right to verify individual results (non-appealability, [a known theme in sociology of quantification e.g. (McQuillan, 2022)], the labelling of "fragile" students [stigma?], the integration of results into the student's CV, and again "an algorithmic approach based on supervised machine learning to identify students at risk of school failure" [How about protected attributes in ML?]; how about the INVALSI's plans to measurement of soft skills and experimentation with "baby tests" (again in the ROARS's list)

In my view more than ethical the problem is political; numbers are produced by organizations to purchase legitimacy and power

that is often subtracted to other policy actors (Porter, 1994, 1995). E.g. OECD PISA has become for some a super ministry of education at the planetary scale. What role for INVALSI in the Italian case? The ethico-political issue comes with important cultural connotations. In the new lingo [inspired by New Public Management culture embraced by left and right alike] Creativity becomes entrepreneurship, Equity becomes standardization, responsibility becomes evaluation and improvement becomes competition, while the term 'dispersion' may veil the underlying 'class differentials' (Latempa, 2023).

My own view is that the problem is with focusing on ethics/privacy. This is only part of the issue and not the most important at that. When AI and algorithms enter the scene, the damage is done in that you do not teach ethics to algorithms – they teach it to you, as algorithms create a new world where new ethics apply (Amoore, 2020).

As noted by a rich and blooming literature in the field of sociology of quantification (Di Fiore et al., 2022; Mennicken & Espeland, 2019; Mennicken & Salais, 2022; Popp Berman & Hirschman, 2018), an inconsiderate use of numbers and scores anesthetizes political debate and weakens democratic agency. For some, in the case of the Italian systems, the risk is an educational technocracy where political choices are delegates to unsupervised technical actors (Latempa, 2023). Again, the risk is increased by artificial intelligence, now perceived by some as a threat to democratic agency (Brauneis & Goodman, 2018; Han, 2017, 2022; McQuillan, 2022; Mennicken & Salais, 2022; Salais, 2022; Zuboff, 2019). Even former techno-optimists as (Harari, 2016) are now worried (Harari, 2024).

This is the vast topic of rule by numbers (Supiot, 2015). The best-selling book *Weapons of Math destruction* starts with a chapter of educational statistics gone wrong (O'Neil, 2016). There

are educational examples even in the Tyranny of Metrics of Muller (Muller, 2018), another best seller, not to mention the large scholarship on the damage done to higher education by international rankings, see e.g. (Mittelman, 2017).

Galileo was not always right. He was wrong about comets, wrong about a crater on the Moon, and possibly not to be taken verbatim when asking to make measurable what is not. I say this in relation to INVALSI's use of his suggestion in its communication. The book of nature is possibly not written in the language of mathematics as Galileo famously suggested (Lakoff & Núñez, 2001). Not all what is unmeasured must be forced into a measurement. Although this is a disappointing option for us academicians and number crunchers hungry for data, a saner alternative that **may** be taken is to consider not to quantify (Muller, 2018).

In my opinion INVALSI's objective to sell the tests as a medicine against fragility is problematic. As discussed by the French school of sociology of quantification e.g. (Desrosières, 1998; Mennicken & Salais, 2022) the act of building a measure should be kept separate from the moment where the measure is used to orient policy, to avoid that evidence based policy becomes policy based evidence – or governance driven quantification in the words of the French sociologists who define this a distortion (literally: a reversal of the statistical pyramid (Salais, 2022)). In conclusion, if we do not want to throw away the baby of a functioning statistical system for education with the dirty water of political expediency, a bolder communication is in order (engage more with those in the classroom, as noted by the EC speaker this morning), as well as not following in the footsteps of the OECD. Note that this activity cannot be entrusted **entirely to researchers** themselves as they are pushed (by the same New Public Management ideology) to publish (or perish) in high

impact factors journals, more than to leave the world a better place (this speaker not excepted).

6. EXTRA 2: How do we make sure to listen of the voices of those who are measured as to methods employed, uses of their data, and users rights policy? (Andrea S.)

If INVALSI, has become a “symbol for the hostility of the whole educational community – students, teachers and unions – towards the neoliberal reforms” (Bandini, 2024) the least one can say is that INVALSI has work to do in connecting with the ‘measured’, as suggested for example by the French movement of stactivist, a point of contemporary sociology of quantification (Bruno, Didier, & Prévieux, 2014; Bruno, Didier, & Vitale, 2014), see also some of my own works (Saltelli, 2020; Saltelli et al., 2021; Saltelli & Di Fiore, 2020).

Part of the ethico-political problems confronted by INVALSI is the possibility that teachers perceive they own agency as challenged. This is a serious problem: regimenting teachers may appear as a necessary enterprise in a logic of New Public Management, but only and exclusively within this specific logic.

My impression is that identifying schools in need (in relatively poorer neighbourhoods / cities/ regions) can be done even without these tests. In this case, the obsession with metrics may have the characteristics of an operation to move a problem from political to technical, which presents the decision-maker in a positive light (caring) in the act of gathering data but doesn't change the overall situation where lack of resources prevent meaningful / substantial interventions. This conveys the impression that the focus on metrics is be more about appearances than addressing the real issues ((Rayner, 2012) concept of ‘displacement’).

“Inglese informatica e impresa” (English, Computer Science and Enterprise) are out of sync with the present post – truth age (Saltelli & Sarewitz, 2022), where the wrong use of science for policy (in a justificatory and exculpatory fashion, as e.g. during the pandemic) has already generated an important drop in confidence of expertise and a diminished trust in science itself (Saltelli et al., 2023). **Thus, with trust in expertise at an all-time low it is not surprising that INVALSI’s quest for legitimacy and epistemic authority are contested.**

The neo-liberal agenda (Bandini, 2024) and its New Public Management orientation is transparent in the declaration of various ministers of education and initiatives such as Eduscopio, as well as in what appears to me the **hypocrisy of meritocracy** (Sandel, 2020); (Bourdieu, 1984): in the existing narratives, the antidote to inequality is not a fairer distribution of wealth, but meritocracy, a proposition I find audacious. Next, the idea that profiling students is in their best interest – notwithstanding the obscurities and non appealability of the process – could be seen as a case of politicians engaging in **fact signalling** – “a practice where the stylistic tropes of logical thinking, scientific research, or data analysis is worn like a costume to bolster a sense of moral righteousness and certitude” (Hong, 2023, 2024). It appears problematic to separate INVALSI statistical work, rightly considered precious by students of comparative education and other academicians, from these associated and invasive policy narratives. **Maybe if politicians would sell INVALSI less INVALSI would sell better.**

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Experience with OECD-PISA and the letter to the Guardian

(Araujo et al., 2017) In May 2014 case 80 academicians signed to halt the 2015 run of PISA. At the time some of these academicians disagreed that one could link PISA points to GDP points as done by supporters of PISA (Araujo et al., 2017). Some objected to evidence based policy turning into its opposite (Strassheim & Kettunen, 2014) – see also (Saltelli & Giampietro, 2017), other objected to the 'PISA worldview':

- (1) the notion of knowledge as “Bildung” or emancipation is defeated by the economic logic of PISA; the goal of education becomes the preparing of young men and women for gainful employment;
- (2) with PISA, the OECD has acquired enormous political power which serves the organization's neoliberal framings; this power is usurped from more democratic arrangements and organizations;
- (3) to implement PISA and provide a host of follow-up services, the OECD has embraced “public-private partnerships” and entered into alliances with multinational for-profit companies, which stand to gain financially from any weaknesses in education systems – real or perceived – identified by PISA;
- (4) relevant school subjects and areas of scholarship have been excluded by PISA;
- (5) PISA harms or increases stress on school pupils and their teachers; and
- (6) PISA fosters short-termism in education policy.

(7) OECD becoming more and more like a global super-ministry of education

Other more radical scholars such as Diane Ravitch (Ravitch, 2016) are adamantly opposed to the concept of “added value” and to any measure of achievement, arguing that it is impossible to evaluate a school’s effectiveness using student achievement as the outcome measure, a concern shared by (Heckman et al., 2015). There is some overlap of these themes with the critiques addressed to INVALSI.

An INVALSI question to 10y old students reported by (Latempa, 2023) reads

- A. I will achieve the degree I want
- B. I will always have enough money to live
- C. In life, I will be able to do what I desire
- D. I will be able to buy the things I want
- E. I will find a good job

As to avoid rhetorical questions I will not put them, but a comment that in this optic the school is not an healthy antidote to the burnout society (Han, 2015) but a training ground for it. I suspect the people in active citizenship might agree with me on this.

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