

Numeracy \neq Mathematics: Numeracy and the General Public

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Although we may intuitively know what *mathematics* is, you may be surprised to learn that there is no agreed upon definition. The Oxford dictionary definition appeals to me:

The abstract science of number, quantity, and space, either as abstract concepts (pure mathematics), or as applied to other disciplines such as physics and engineering (applied mathematics). (Lexico, 2022)

Numeracy is something quite different. Within the Australian Curriculum, numeracy is one of seven general capabilities and is defined as follows:

Numeracy encompasses the knowledge, skills, behaviours and dispositions that students need to use mathematics in a wide range of situations. It involves students recognising and understanding the role of mathematics in the world and having the dispositions and capacities to use mathematical knowledge and skills purposefully. (Australian Curriculum, Assessment and Reporting Authority, n.d.)

Unfortunately, the terms mathematics and numeracy are all too often used interchangeably in everyday conversation, within Australian schools (particularly at the primary level), as well as amongst some of our own mathematics education colleagues.

In order to have an informed citizenry, I contend that numeracy is an essential pre-requisite. Yet, in my view, the Australian education system appears to have failed in appropriately equipping citizens with basic numeracy capabilities and the capacity to judge whether information they encounter is realistic or can be substantiated.

In recent times, the general public has been bombarded with statistical and other mathematical information with respect to the COVID-19 pandemic, climate change, and a range of other social, economic, political, and geographical issues. Regrettably, journalists, media commentators, and some politicians also appear to have limited statistical and mathematical skills to interpret data accurately, resulting in confusion or misleading information (whether intentionally or not), and fuelling conspiracy theories.

At this round table session, my aim will be to elicit participants' views on aspects of citizenry for which numeracy capabilities are needed. I will be particularly interested in gaining views on how the general public's numeracy capabilities might be researched, and which aspects of contemporary and future societal issues and concerns should be the focus. Participants' insights will be sought on what the findings of such research endeavours might be, what implications there would be for the educational system, what actions might be needed, and how mathematics education and mathematics educators might contribute to challenging the status quo.

References

- Australian Curriculum, Assessment and Reporting Authority. (n.d.). *Numeracy*. <https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/numeracy/>
- Lexico. (2022). *Meaning of mathematics in English*. <https://www.lexico.com/definition/mathematics>