

Numeracy Developments in Europe

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Agenda

- Numeracy for adults
- Project *Numeracy in Practice*
- Policies around numeracy; what can we learn from other countries
- Future



Adult numeracy

- Accessing, using, and reasoning critically with mathematical content, information and ideas represented in multiple ways in order to engage in and manage the mathematical demands of a range of situations in adult life (In PIAAC Cycle 2)
- Crucial for personal empowerment, health, economic participation, and engagement in society; it underlies informed decision-making.

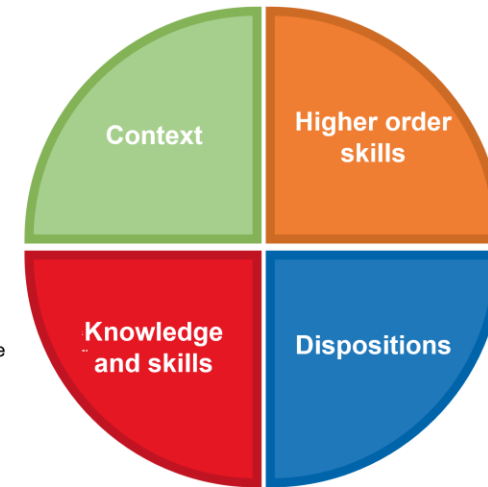
Aspects of numerate behaviour

Context

Everyday life
Work-related
Citizenship
Further learning
Finances
Health and care
Recreation

Knowledge and skills

Quantity and number
Dimensions and shape
Patterns, relationships and change
Data and chance
Using a calculator
Using spreadsheets
Using digital skills

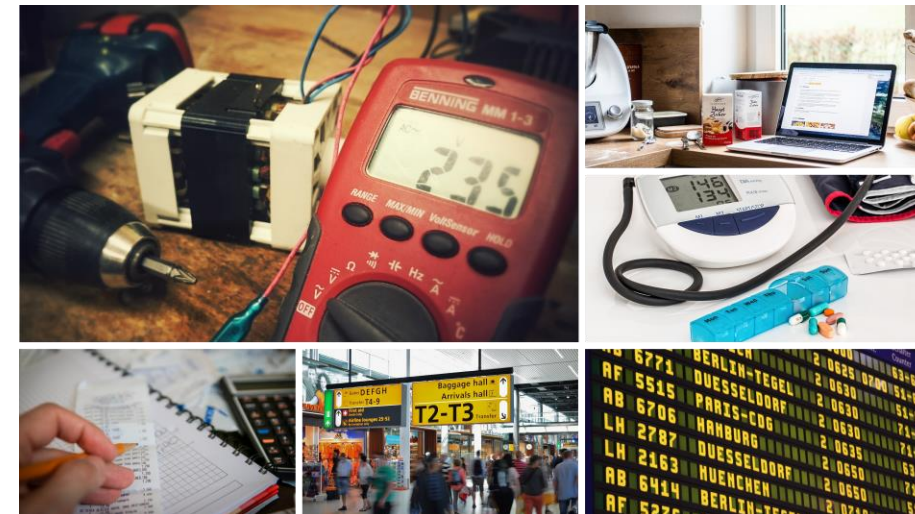
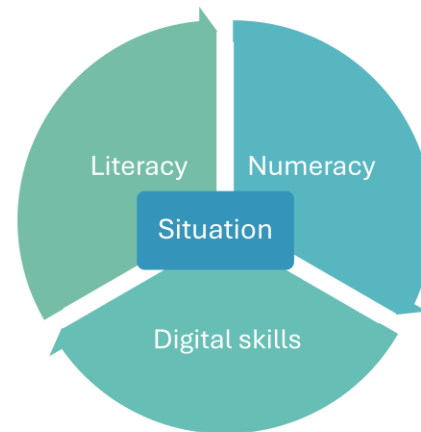


Higher order skills

Managing situations
Analysing situations
Processing information
Mathematising
Problem solving
Critical thinking

Dispositions

Self-confidence
Motivation
Beliefs
Collaborations
Flexibility
Math anxiety



Numeracy in Practice project

How to close the gap between policy – practice – public opinion



Awareness

- Posters, flyer, stickers at cenf.eu

Tasks and textbooks

- See 80 examples at www.cenf.eu translated in 10 languages

Professional development of math / numeracy teachers

- See background resources at www.cenf.eu translated in 10 languages

Policies

- More consistency between policy – practice – common opinion

Curriculum development

- Proper definition and description of numeracy?
- Or is a “numeracy approach” more important?

Research on policies in Europe

Numeracy vs. literacy

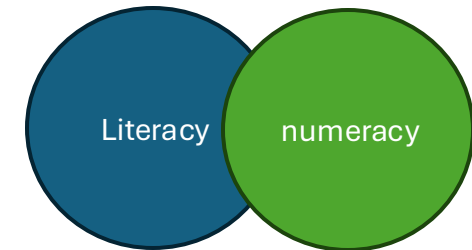
- **Literacy was held in much higher regard than numeracy** (n=10).
- **A lack of clarity** around the term numeracy and what exactly it entailed.
- **A change in discourse:**
 - Complementary (Crowther Report, 1959; Dutch Government letter, 2023)
 - Subcomponent of literacy (UNESCO, 2004), NL's Multi-Year Plan for Literacy (Engelshoven et al., 2019)
 - Good news: The goal is to increasingly discuss the strengthening of **foundational skills** (literacy, numeracy, citizenship, and digital skills). It is more positive to talk about foundational skills, and it clarifies that it **involves more than just sufficient language proficiency**.

"In the field of adult education, literacy has consistently prevailed over numeracy"

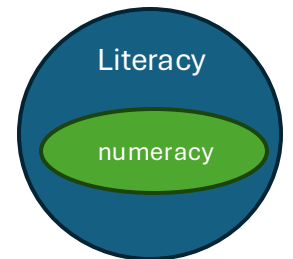
(Carpentieri et al. 2010, p. 9).



Numeracy complementary to literacy



Numeracy as a subcomponent of literacy



Sources: [Kamerbrief](#) over voortgang en tussenevaluatie vervolgaanpak laaggeletterdheid 2020-2024. Juli 2023.

O'Meara, 'Sullivan, & Hoogland. challenges facing adult numeracy education across Europe. www.cenf.eu/research

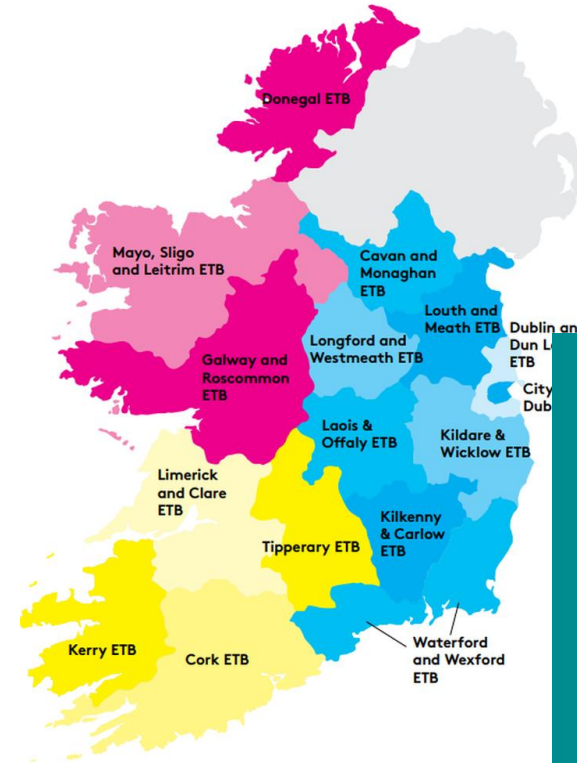
Ireland: prioritizes numeracy

The 10-Year Strategy for Adult Literacy, Numeracy, and Digital Literacy (SOLAS, 2021).

- Aspirations for numeracy: “Reducing the number of adults in Ireland with unmet numeracy needs from 25% to 12%” (SOLAS, 2021, p. 13).
- Increasing numeracy provision and expanding existing programs and guidelines (Goos et al., 2021).

Evaluation study (Goos et al., 2021)

- In 78.6% of Irish education regions, the numeracy provision was sufficient. All regions offered accredited numeracy courses.
- The offerings attracted a diverse group of participants, with mostly more women than men.
- Approximately 71% completed the course, and 70% continued their studies in other adult education programs.



<https://www.nala.ie/publications/good-practice-in-integrated-and-standalone-numeracy-provision-at-levels-1-3/>



National Adult Literacy Agency [NALA]. (2013). Integrating literacy: Guidelines for further education and training centres (Revised ed.). <https://www.nala.ie/publications/guidelines-for-integrated-literacy/>

UK: gaining confidence and qualified skills

The charity National Numeracy (est. 2012) has been involved in the Skills for Life Strategy (2001) - a government initiative to improve adults' basic skills in England. NN's mission:

- Empower children and adults to gain confidence in everyday mathematics.
- Help individuals realize their potential at work, home, and school.

Initiatives:

- The Essentials of Numeracy: A New Approach to Making the UK Numerate (National Numeracy, 2017).
- The National Numeracy Challenge.
- Campaigns like National Numeracy Day.

nationalnumeracy.org.uk

The Essentials of Numeracy

KPMG

National Numeracy Challenge
Improve your everyday maths with the National Numeracy Challenge

National Numeracy
Getting on with numbers

NATIONAL NUMERACY DAY
WEDNESDAY 17 MAY 2023

JOIN US on the website

ALL DAY on social

#BigNumberNatter

9.30am
National Numeracy Day LIVE

12.15pm
Making Maths Work for Women and Girls

2.30pm, Scottish schools only
Scotland's Assembly

Celebrities and experts share their number stories including:
Hannah Fry, Peter James, Will Hardie, Stage Door Johnny, Fifi Garfield, Anna Williamson, Shuffle T, Ching He Huang, Tom Rocks Maths, Dr Xand, Dr Linda Papadopoulos

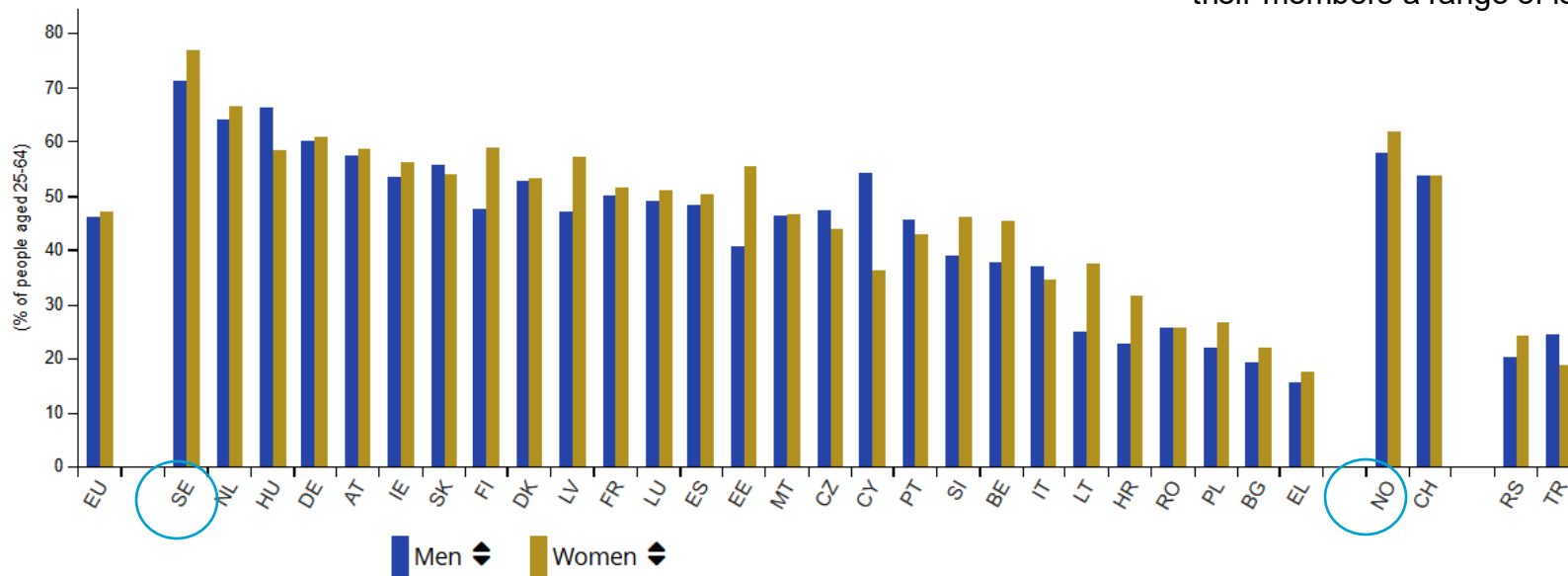
AND MANY MORE!

JOIN IN! Search: 'National Numeracy Day'
Visit: nationalnumeracy.org.uk/numeracyday
#NationalNumeracyDay #BigNumberNatter

Scandinavian countries: prioritize removing barriers to education

- One of the lowest levels of adults with limited numeracy skills. (Piaac 2023)
- Policy vision - Anglo-Saxon countries prioritize adult education policies aligned with *economic* growth and skills development, while Scandinavian countries focus on integrating basic skills into social *equality and inclusivity* efforts.

Participation rate in education and training by sex, 2022



Countries are ranked by overall participation rate.

Source: Eurostat (online data code: trng_aes_100)

Broader range of policy measures aimed at addressing barriers:

- family policy on government support for childcare → helps free up time for adults to participate in education, particularly for women (i.e., addressing family-related barriers).
 - subsidizing participation for those in greatest need by eliminating tuition fees,
 - providing targeted support,
 - funding outreach activities,
 - ensuring educational spaces,
 - reducing credit restrictions.
- Negotiations between the state, employers, and trade unions to offer their members a range of learning opportunities (Green, 2013).

Data from the [adult education survey \(AES\)](#) & EU [labour force survey \(EU-LFS\)](#)
EU-level targets:

- by 2025, at least 47 % of adults should have participated in learning during the last 12 months ([European Education Area](#))
- by 2030, at least 60 % of all adults should be participating in training **every year** ([European pillar of social rights](#)).

Future of Numeracy in Europe

- 1) Needed: suitable Numeracy assessment for adult learners
- 2) More focus on specific groups: prison populations, families from low socio-economic backgrounds, ...
- 3) More countries are developing adult numeracy policies. To be done: more implementation, better access, monitoring, targets, follow up on targets.
- 4) Numeracy not as part of literacy → risk of disappearing from the view.
- 5) Focus on groups between level 1 and 2 → correlated with better health, more stable employment, and higher income.

Call for action: **looking for partners in vocational education**

Brand

- MIELE (8)
- PHILIPS (9)
- DYSON (6)
- ROWENTA (21)
- SAMSUNG (3)

Maximum noise level

- Luid | (71 t/m 75 dB) (2)
- Normaal | (61 t/m 70 dB) (1)
- Stil | (t/m 60 dB) (2)
- Zeer luid | (vanaf 76 dB) (17)

Maximum battery life

- 05 min to 10 min (2)
- 10 min to 15 min (5)
- 15 min to 20 min (3)
- 20 min to 30 min (2)
- 30 min to 45 min (9)

Price

Vanaf 1 € Tot 949 €

Reviews

Our recommendation
KOENIC KVC 71521 Zwart

Dierenharenborstel
Nee

Filtertype
HEPA H14

Actieradius
8.3 m

Soort apparaat
Sledestofzuiger

★★★★★¹

Vergelijk

Our advise
OK. OVC 81522 B VACUUM CLEANER

Dierenharenborstel
Nee

Filtertype
HEPA-allergiefilter

Actieradius
6.5 m

Geluidsniveau
78 dB(A)

★★★★★⁰

Vergelijk

OK. OVC 81822 B VACUUM CLEANER

Dierenharenborstel
Nee

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Acting professor

Mathematical and Analytical Competence of Professionals

For information, collaboration, and comments, please, contact me



In memoriam

1961 – 2025

We already miss him so much

You can leave a message, photo, remembrance,
or light a candle for Kees and his wife

<https://memori.nl/kees-hoogland>

19 juni 2025



Lonneke Boels – waarnemend lector

Lectoraat Wiskundig en Analytisch
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HIER KOMT ALLES SAMEN