

Brainstorming on a Numeracy Framework into the 21st century

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In a recently started Erasmus+ project four countries are working together to design a Common European Numeracy Framework (CENF). Considering numeracy as a social practice seems to be the most promising way forward to battle low numeracy and empower adults with a broad and effective repertoire of numerate behaviour to cope with situations in work and daily life. Therefore, a numeracy framework should contain much more than only content descriptions. Incorporating dispositions, attitudes, higher order skills, and affective aspects is as important. Such an elaborated framework can inform more multifaceted decisions on educational arrangements for adults who want to improve their numeracy behaviour repertoire to better cope with the quantitative problems in work and private life or to more fully and critically participate in the democratic processes in society. In the workshop we will brainstorm, discuss, and design elements of a “numeracy-as-a-social-practice” framework.

Introduction

In a recently started Erasmus+ project four countries - The Netherlands, Austria, Spain, and Ireland - are working together to design a Common European Numeracy Framework (CENF) and a set of professional development modules (PDM) for teachers and volunteers who work with groups of adults to improve, enrich and facilitate their numerate behaviours in situations they encounter in their daily life.

The driving force behind this endeavour is that too many European citizens lack the necessary numeracy competencies to participate autonomously and effectively in our technologized and number-drenched society. Consequently many citizens are overlooked for certain jobs and have problems in their daily life, dealing with the abundance of number-related circumstances (see Hoogland, 2018). The results of the last PIAAC survey (OECD, 2012; OECD, 2016) show that for almost all participating countries in PIAAC 10% of the (potential) working population have numeracy levels below level 2 of a 6-point scale. These results on numeracy give rise to serious cause for concern for the future economic development of Europe. This is an even more pressing issue since the amount of numerical data that needs to be interpreted and used is rapidly rising due to technological developments and the prevalence of (big) data.

Theoretical background

The design of the framework and the modules is rigorously grounded in literature reviews, Europe-broad surveys, and professional development trials, to build upon the vast experiences of people in the field, the conceptual developments in adult numeracy education as they have been blossoming for the last 25 years, and the societal demands of the 21st century (Schwab, 2016; Voogt & Pareja Roblin, 2012). Furthermore the PIAAC Numeracy Assessment Framework (Tout et al., 2017) is used as a source of inspiration.

Considering numeracy as a social practice seems to be the most promising way forward to battle low numeracy and empower adults with a broad and effective repertoire of numerate behaviour to cope with situations in work and daily life. We cite Oughton (2013) : “A social practice view of numeracy not only takes into account the different contexts in which numeracy is practised, such as school, college, work and home, but also how people’s life and histories, goals, values and attitudes will influence the way they carry out numeracy (p16). An even richer collection of ideas on this approach can be found in Yasukawa, Rogers, Jackson, and Street (2018).

Among researchers and practitioners there is a growing consensus that a numeracy framework which describes numerate behaviour and numeracy practices should contain much more than only content descriptions. As important are dispositions, attitudes, higher order skills, and aspects of agency, and self-efficacy.

It is quite a challenge how to incorporate all these elements in a consistent and workable framework, which can inform decisions on educational arrangements for adults who want to improve their numeracy repertoire to better cope with the quantitative problems in work and private life or to more fully and critically participate in the democratic processes in society.

Method

The workshop is an elaboration of the backgrounds and ideas presented in the plenary talk “Adult numeracy practices in the 21st century: imperative implications for education”. In the workshop we will brainstorm and discuss the choices that can be made in the design of a “numeracy-as-a-social-practice” framework. But more important, we will also collaboratively design concrete descriptions of numeracy behaviour that can substantiate the more general ideas of the developing framework. We will dwell upon the expertise gathered at ALM to make the next steps in the development of a CENF.

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