How Do Learners Perceive and Evaluate Their Digital Skills?

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ABSTRACT

Self-assessment is commonly used in educational research (PISA, ICILS, etc.) and in real-life situations (advertisement for a post on labour market, etc.). Research studies demonstrate that in mathematics some people either over- or underestimate their competence. A similar situation can be expected in self-assessment of ICT skills. The authors of this article introduce pilot research carried out among Bachelors student teachers aimed at identifying key factors (economic, cultural, social, and personal) that may influence how young people perceive their digital literacy and knowledge.

KEYWORDS

Anchoring Vignettes Method, Bachelor Student Teacher, Digital Literacy, ICT, Over-Claiming Technique, Self-Assessment

INTRODUCTION

In today’s global job market, young people are required to be proficient in digital literacy in order to compete. However, research suggests that young people are not considered to be functional in our digital society and ready for the 90% of jobs that, in the near future, are expected to require ICT skills of some level (Kluzer, 2015, p. 3). There are a number of ways to determine levels of digital literacy achievement: a certificated exam (e.g. I/ECDL), a university diploma (e.g. in computer science, IT), digital products (e-portfolio), on-line tests with practical tasks in IT (task-based assessment) or (on-line) self-assessment questionnaires in which respondents are asked to assess their own digital skills and knowledge and to grade how well they perform representative skills or tasks which, in turn, enable data to be gathered, based either on people’s own perceptions or estimations of their computer skills.

In some countries, experts are working on questions as to how to measure and to assess ICT skills and knowledge that are assumed to be crucial for economy development. Employers demand for workers experienced in the usage of digital technology at specified levels. Basically, there are different categories of tools and methods relating to how to examine ICT skills (see Chinien & Boutin, 2011, p. 58): (1) test-based digital literacy indicators (ETS test, I/ECDL, tests of practical skills, etc.), (2) digital literacy indicators based on self-reports (EdTechAssess, etc.), (3) qualitative assessments of digital literacy (Internet and Computing Core Certification - IC² 2005, Standard – Computing, etc.), or (4) an e-portfolio.

Self-assessment of digital literacy is commonly used in educational research and in real-life situations. Its main advantage is the low cost in terms of time and expenditure. Self-assessments may, however, depend not only on the objective situation (actual digital skills) but also on the reporting

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style, which may bring about misleading conclusions about the actual digital literacy of respondents. In everyday life, we can see that in self-assessment some people tend to overvalue their ICT skills; others tend to undervalue their skills. It may, thus, be concluded that in self-assessment people use the same scale differently.

The authors are involved in a nationally-funded research project aimed at identifying key (economic, cultural, social, and personal) factors that may influence how young people perceive their digital literacy and knowledge. Data collected in the research from upper-secondary school students will help to identify which factors appear to influence respondents’ self-assessment of respondent’s digital skills. The authors will focus not only on traditional, demographical factors (gender, age, educational background, rural/urban split), socio-economic background (parental background - education, occupation, etc.), conditions for ICT use at school, parameters of life with technology (years of computer experiences, number of hours spent on computer at home/school), but also on new ones (language at home, free-time activities with ICT, number of books at home etc.).

In this article the authors introduce a pilot study carried out among Bachelor student teachers in which research tools and techniques aimed at self-assessment of ICT skills were designed and tested within nationally-funded research project.

LITERATURE REVIEW: RESEARCH FOCUSED ON SELF-ASSESSMENT OF ICT SKILLS

Self-assessments of ICT skills may focus on confidence in ICT literacy activities (e.g. How confident are you in your ability to do this activity?), or on the frequency of ICT literacy activities (e.g. How often have you done the activity over the past three years?), or on general skills (e.g. How familiar were you already with the application for editing video?) (Katz & Macklin, 2007, p. 54). Shrauger & Osberg, (1981) suggest that, “It is probably unwise to assume that most people can accurately assess their own skills and abilities. … Self-assessments are imperfect mainly because of two indisputable facts: people are unaware of some of the most important things about themselves, and they tend to present themselves in socially desirable way.” (in Powers, 2002, p. 1). However, “self-assessment of various sorts (self-report, checklists, self-testing, mutual peer assessment, diaries, log books, behaviourally-anchored questionnaires, global proficiency scales, and ‘can-do’ statements) have proven valid in a variety of low-stakes contexts (especially in the assessment of language skills)” (Oscaron, 1989, 1997 in Powers, 2002, p. 1).

In connection with ICT or digital literacy and self-assessment there were surveys carried out, for example, in Australia among students of Years 6 - 10 (see Fraillon et al., 2015). In Japan, researchers asked Bachelor-students to self-assess their digital proficiency, the responses on questions like How would you rate your …? (using a scale Low –Below Average – Average – Above Average – High) that “revealed profoundly low appraisals. Very few students perceived their skills as being ‘above average’ or ‘high’ for each question” (Cote & Milliner, 2016, p. 128). “Almost all students had very low self-assessments of their digital skills, and respondents returned very poor results in the digital literacy test.” (Cote & Milliner, 2016, p. 130) In Norway, “852 ninth-grade students from 38 schools answered a 26 item multiple-choice digital competence test and a self-report questionnaire about family background, motivation, and previous grades … to test a model of the hypothesised relationship between family background, mastery orientation, previous achievements, and digital competence.” (Hatlevik et al., 2015, p. 123) Other researchers focused on using self-reports to measure Internet skills based on usage of “the Likert-type format to allow participants from the NL and UK flexibility (response items ‘Not at all true of me’, ‘Not very true of me’, ‘Neither true nor untrue of me’, ‘Mostly true of me’, and ‘Very true of me’), including ‘I don’t know’ option” or ‘I do not understand what you mean by that’ (van Deursen et al., 2016). One additional piece of research carried out in USA (Keengwe, 2007) was focused on undergraduate public university students’ self-reported computer proficiency for instructional activities; students did self-rating of computer proficiency using a scale 1 (not at all competent), 2 (somewhat competent), and 3 (very competent).
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