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Poor literacy and math skills leave teenagers ill-equipped

A fifth of teenagers leave school so illiterate and innumerate they are incapable of dealing with the challenges of everyday life, a study has found.

Some 22% of 16- to 19-year-olds in England are functionally innumerate – meaning their math skills are limited to little more than basic arithmetic, researchers from Sheffield University discovered. This means their numeracy levels are at or below an 11-year-old's.

This is a higher rate of innumeracy than many other industrialized countries, the study of literacy and numeracy rates over the past 60 years found.

Meanwhile, 17% of 16- to 19-year-olds are functionally illiterate – meaning they cannot handle much more than straightforward questions. It is unlikely, or even impossible, that they will understand allusion and irony, the researchers found. Their reading standard is at or below an 11-year-old's.

Greg Brookes, professor of education at Sheffield and one of the study's authors, told the Times Educational Supplement that school-leavers in these categories lacked the skills "to deal confidently with many of the mathematical challenges of contemporary life" and had a lower standard of literacy than is "needed to partake fully in employment, family life, citizenship and to enjoy reading for its own sake". The government-funded study of the levels of attainment in literacy and numeracy of 13- to 19-year-olds in England, from 1948 to 2009 found rates of innumeracy and illiteracy had remained at the same level for at least 20 years.

The researchers found teenagers' average reading scores had risen between 1948 and 1960 and remained "remarkably constant" between 1960 and 1988. Between 1997 and 2004, scores had "gently" risen and then plateaued. But, they discovered little improvement in teenagers' writing between 1979 and 2004.

Exam scores show teenagers' writing has improved between 1998 and 2009. The math GCSE pass rate has risen substantially between 1989 and 2005.

The National Union of Teachers (NUT) said the study was proof of a "long tail in underachievement". John Bangs, the NUT's head of education, said: "There are no magic solutions, but one-to-one tuition, support for parents, family learning and a quality professional development strategy for teachers all help. The message to government is that they deconstruct what is already there at their peril." The study comes after a survey last month revealed that many children are starting school having never been read a story.

More than half of primary teachers have seen a least one child begin education with no experience of being told stories at home. Teachers said stories pupils did know often seemed to come from watching Disney cartoons.

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