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Getting real statistics into all curriculum subject areas: can technology make this a reality?

Technol. Innov. Stat. Educ. 7, No. 2, 16 p., electronic only (2013).

Summary: Technology has revolutionised society and it has revolutionised the way in which statistics, as a professional discipline, is done. The collection of data is growing exponentially both in relation to the quantity of data assembled on any particular measure and also in relation to the range of topics, and the measures, on which data is collected. Accessing data has become much simpler, and tools for exploring, manipulating and representing that data visually have multiplied, both in commercially available software and open-source freeware. However, the curriculum in schools in the UK is constrained by important factors which restrict the use of technology in assessment. The statistics curriculum is largely dull and does not address the core issues of most relevance in statistics today. Here, we explore ways in which technology can enhance the teaching of subjects in which statistics are used, and also the teaching of statistics within mathematics.

Classification: K10 U70 D30 M10

Keywords: statistics education; research; curriculum; information technology; computer as educational medium; problem analysis; data collection; data presentation; data analysis; data visualisation; multivariate data; statistics within social sciences; statistics within social physical sciences; statistics within mathematics; teaching; simulations; internet; student activities; regression and correlation; central limit theorem; *t*-distribution

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