Authentically implementing and embedding the advocacy from statisticians and statistical educators

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Much has been written over the years by professional statisticians and statistics educators about the need for authentic student-centred learning of statistical thinking as practised in real problem-solving by professional statisticians. Because such problem-solving is usually in collaboration with other disciplines, or at least motivated by real problems in other disciplines, it is not surprising that such advocacy is as germane to educating future clients as to future statisticians. But it is also relevant to educating future researchers in statistics, postgraduates in other disciplines and in school curricula and pedagogy. However, despite the extent and persistence of such advocacy, implementation is clearly challenging, and there appears to be something about statistics which hampers genuine realisation and also seems to breed back-sliding into teacher-centred and/or rule-based approaches. In considering the advocacy commonalities, challenges and impediments, this paper also mentions some ISI work and history, and discusses opportunities and strategies for authentic implementation in a variety of educational settings.

Keywords: statistical thinking; statistical practice; student-centred.