



© 1997–2004, Millennium Mathematics Project, University of Cambridge.

Permission is granted to print and copy this page on paper for non-commercial use. For other uses, including electronic redistribution, please contact us.

May 1998
Staff room

A request: Teaching maths through sport?



Teaching maths through contextualised material. Have you given it a sporting chance?

A request from Garrod Musto who is currently a maths teacher at Kingswood School in Bath.

For many years educationalists have talked about "Relevancy of the Curriculum", and "maths in context", with a view to preparing pupils for everyday life, and thus the importance of "real world applications".

But what constitutes an "ideal" context? Well, it seems that in the past the workplace and everyday activities such as going shopping, have both been perceived by educationalists as ideal, as they provide opportunities for pupils to use their mathematical skills in a practical sense. However I wonder how many of the pupils actually perceive this material to be "ideal"? After all they are the consumers, so shouldn't they have some say in what "ideal" means? Personally I think that the reason why we contextualise material is misdirected. We shouldn't prepare pupils for what we think they need, but provide them with the mathematics in such a way that it is perceived as both interesting and relevant to them within their personal frame of reference.

Thus I feel that contextualisation has lost its way as too often "relevancy" comes from educationalists talking in hindsight about what pupils need. I think that context should and can be used in the classroom to engender motivation, provided the context is perceived to be ideal by the pupils.

So the key issue is what do pupils perceive as an ideal context? In discussion with a cross-section of pupils and staff at several schools, and also a few educationalists, a context that seems to be favorable to a large proportion of pupils is sport. Sport seems to appeal to many, as it daily receives a wide coverage in many differing media, such as newspapers and television, with many events receiving global coverage. It also has a diversity that has an attraction. I.e. a range of sports could attract individuals from a widely differing population. Also as sporting personalities become world renowned, some pupils could see them as role models and thus would see the opportunities to relate their favourite stars to maths (or indeed any other subject) as a positive experience. For example Michael Jordan, Tiger Woods, or indeed Ryan Giggs.

I therefore put forward a theory of pupil learning based around tasks that are initially within sporting contexts they understand. Then when the pupils have understood the tasks, the theory could be explained in a more abstract manner. Hopefully this use of sport will enhance the level of motivation in the classroom and aid the learning of subject matter, which sometimes can be perceived as quite dry and monotonous.

A request: Teaching maths through sport?

To help develop a theory of how pupils learn using sporting contexts, I need to examine what pupils consider to be a "good or bad" context.

So if you have tried any tasks in class which are sport based, I would appreciate hearing from you. Please note I would equally like to hear about negative and positive experiences, as I am trying to gauge what constitutes an effective context, and then develop tasks based on the findings.

My e-mail address is g.musto@ex.ac.uk.



Plus is part of the family of activities in the Millennium Mathematics Project, which also includes the NRICH and MOTIVATE sites.