

York Trials Unit Briefing Note

Educational trials show payment to improve adult literacy class attendance and use of computer software for literacy learning have no benefit

Financial incentives have been put forward as a means to promote attendance at adult literacy classes. Another intervention of interest is the use of information and communication technology (ICT), i.e. computer software, to boost literacy learning. Two educational trials, undertaken by researchers at the University of York (David Torgerson, York Trials Unit Director) in collaboration with the University of Sheffield and RAND Organisation, investigated the impact of these interventions.

Incentives for Adult Literacy Class Trial

The trial used a cluster-randomised design to randomise 29 adult literacy classes in the UK into two groups; those in the intervention group received £5 for each class attended. The teachers involved were not aware they were taking part in the trial, thereby reducing the potential for bias. Results showed that learners who received the payment actually attended 1.5 fewer sessions (statistically significant) than the control group who received no payment. In addition, reading scores were lower for those who received the incentive (although not statistically significant). Payments to encourage attendance at adult literacy classes were therefore shown to have no impact on attainment and a negative effect on attendance rates, contrary to expectations.

Computer Software for Literacy Learning Trial

This trial included 155 pupils aged 11-12 in the North of England, taking a pragmatic approach. Pupils were randomised to receive 10 hours of literacy learning for spelling and reading using laptop computers (ICT group) or to act as controls (i.e. did not receive ICT intervention). Both groups received normal classroom teaching, which included usual ICT and English lessons, and were given tests in spelling and literacy, before and after the ICT package. Results showed a slight increase in spelling scores for the ICT group (which were not statistically significant), whereas reading scores were lower (statistically significant). Therefore the computer program for literacy learning generated small benefits in terms of spelling outcomes, but did not increase reading skills.

Policy Lessons & Future Research

Few randomised trials have evaluated the use of such ICT packages and attendance incentives; therefore the results of the two trials are of key interest to policy makers. However, in light of the trial findings, both interventions would need to be evaluated further. In particular, more rigorous, larger-scale trials are recommended.

[See adjacent for references.](#)

The York Trials Unit

The York Trials Unit is based in the **Department of Health Sciences, University of York**, and is dedicated to undertaking and supporting high quality randomised controlled trials (RCTs).

The RCT is the best study design for assessing the effectiveness and efficiency of health care interventions, and rigorous trials are needed to inform best clinical practice and policy. Methodological reviews of RCTs have indicated that many trials have been designed and conducted with insufficient rigour to make their results entirely reliable. It is imperative, therefore, that clinical practice be informed by the results of high quality trials.

Our aims are:

- to conduct rigorous trials
- to provide support for trials external to the Unit
- To provide academic leadership for rigorous trial design.

For further details on the educational trials see:

Brooks G, Miles JNV, Torgerson CJ, **Torgerson DJ**. Is an intervention using computer software effective in literacy learning? A randomised controlled trial. *Educational Studies* 2006; 32: 133-143.

Brooks G, Burton M, Cole P, Miles J, Torgerson C, **Torgerson D**. Randomised controlled trial of incentives to improve attendance at adult literacy classes. *Oxford Review of Education* 2008; 34: 493-504.

Recent Unit Publications

Ainsworth H, Torgerson DJ, Kang'ombe AR. Conceptual, design and statistical complications associated with participant preference. *The Annals of the American Academy of Political and Social Science* 2010; 628(1): 176-188

Bojke C, Philips Z, Sculpher M, Campion P, Chrystyn H, Coulton S, **Cross B, Morton V, Richmond SJ**, Farrin A, Hill G, Hilton A, Miles J, Russell I, Wong I, RESPECT Trial team. Cost-effectiveness of shared pharmaceutical care for older patients: RESPECT trial findings. *British Journal of General Practice* 2010; 60(570): 20-27

Cockayne S. The EVERT (effective verruca treatments) trial protocol: a randomised controlled trial to evaluate cryotherapy versus salicylic acid for the treatment of verrucae. *Trials* 2010

Cox H, Tilbrook H, Aplin J, Semlyen A, **Torgerson DJ**, Trehwela A, Watt I. A randomised controlled trial of yoga for the treatment of chronic low back pain: Results of a pilot study. *Complementary Therapies in Clinical Practice* 2010

Dennis LA, Dumville JC, Cullum N, Bland JM. Value of a modified clinical signs and symptoms of infection checklist for leg ulcer management. *Br J Surg* 2010; 97(5): 644-670

Dyson L, Green J, Renfrew MJ, McMillan B, Woolridge M. Factors influencing the infant feeding decision of socioeconomically deprived pregnant teenagers: The Moral Dimension. *Birth* 2010; 37(2): 141-147

Gomes M, Soares M, **Dumville JC**, Lewis SC, **Torgerson DJ**, Bodenham A, Gough M, Warlow C, and the GALA Collaborative Group. Cost-effectiveness analysis of general anaesthesia versus local anaesthesia for carotid surgery (GALA Trial). *British Journal of Surgery* 2010

Goulding L, Furze G, **Birks YF**. Randomised controlled trials of interventions to change maladaptive illness beliefs in people with coronary heart disease: systematic review. *Journal of Advanced Nursing* 2010; 66(5): 946-961

Hall J, Peat M, **Birks YF**, Golder S, on behalf of the PIPS Group, Entwistle VA, Gilbody SM, Mansell P, McCaughan D, Sheldon TA, Watt I, Williams B, Wright J. Effectiveness of interventions designed to promote patient involvement to enhance safety: a systematic review. *Qual Saf Health Care* 2010

Handoll HHG, **Brealey S**, Rangan A, on behalf of the ProFHER Trial Team. Proximal fractures of the humerus: the ProFHER trial. *Osteoporosis Review* 2010; 18(1): 19-21

Hunt K, **Adamson J**, Ebrahim S, Mutrie N. Exercise and the Onset of Disability in Later Life. *J Aging Health* 2010

MacPherson H, Bland JM, Bloor K, **Cox H**, Geddes D, **Kang'ombe AR**, Reynolds J, **Stamuli E**, Stuardi T, **Tilbrook H, Torgerson DJ**, Whorwell P. Acupuncture for irritable bowel syndrome: A protocol for a pragmatic randomised controlled trial. *BMC Gastroenterol* 2010; 10(1)

The York Trials Unit

Services provided by the Unit either as stand alone services or as part of a comprehensive package to external collaborators:

- Telephone & online randomisation
- Study design
- Trial co-ordination
- Data management
- Statistical support
- Economic evaluation
- Measurement of quality of life

As well as randomised clinical trials we undertake trials in the social sciences (education, criminal justice etc) epidemiological surveys and Unit members also conduct systematic reviews.

Current trials include:

- evaluations of treatments and screening for fractures
- interventions for depression, patient safety, IBS, urinary incontinence and chronic obstructive pulmonary disease
- study of smoking cessation for people with severe mental illness

Unit trials are funded from a range of sources including the Medical Research Council, NIHR HTA, charities and pharmaceutical companies.

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