

Teaching osteopathic students technique;
using research to
identify good teaching
practice.



Simon Browning DO MA Cert Ed
head of technique faculty
British School of Osteopathy



Cooperation in osteopathic education
Vienna, 28-29.11.2009

The British School of Osteopathy

academic building



separate purpose built ground floor clinic



Cooperation in osteopathic education
Vienna, 28-29.11.2009

**technique knowledge is derived from declarative
knowledge with many practices being described
and passed on from generation to generation
with little reference to empirical research**

Morgan and Lucas (2005)



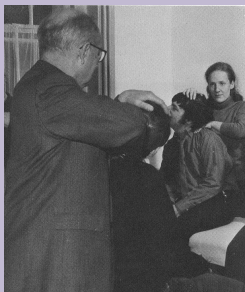
Cooperation in osteopathic education
Vienna, 28-29.11.2009

the technique class is seen as a 'coaching' session where
the teacher is expected to introduce, explain, contextualise
and demonstrate a particular technique to the whole class
Wallace (2008)

the class adheres to the craft model of
education; the master demonstrates the
technique and the students copy until they
have gained a sufficient degree of proficiency
Gevitz (2006)



Cooperation in osteopathic education
Vienna, 28-29.11.2009



teaching osteopathic
technique at the BSO
circa 1969



Cooperation in osteopathic education
Vienna, 28-29.11.2009

teaching osteopathic technique in Britain circa 2009



Cooperation in osteopathic education
Vienna, 28-29.11.2009

Osteopathy; the profession has clung to outdated models, theories and practices
Fryer (2008)

Chiropractic; the courses on motion palpation and manipulation do not apply motor learning theories
Pringle (2004)

Physiotherapy; how practical skills are taught are not based on best practices identified in research
Jones and Sheppard (2008)



Cooperation in osteopathic education
Vienna, 28-29.11.2009

views

theories of learning that seem to be relevant

Vygotsky's theory of
Zone of Proximal Development (ZPD)

Fitts and Posner's three stage theory
of motor skill acquisition

Lave and Wenger's theory of community of practice

Delbos and Jonon's intent participation



Cooperation in osteopathic education
Vienna, 28-29.11.2009

manual therapists; motor skill sets

control of self and patient

manual joint examination
manual gross characteristics of the
upper and lower extremity

bilateral hand-eye coordination

manual patient management

Sizer et al (2007)



Cooperation in osteopathic education
Vienna, 28-29.11.2009



learning motor skills

*Cohen et al
(2005)*

*Wolf & Shea
(2002)*

*Pear
(1927)*

capoeira dance



ballet

MRI 1 and 2



Cooperation in osteopathic education
Vienna, 28-29.11.2009



practise

blocked/random

feedback

inherent
kinematic

augmented
kinetic



Cooperation in osteopathic education
Vienna, 28-29.11.2009

manual therapists; fine sensorimotor skill *palpation [a perception a feeling]*

the information gained is
pre-verbal requires
translation into words/
ideas can be misinterpreted

Comeaux (2005)



Cooperation in osteopathic education
Vienna, 28-29.11.2009

learning fine sensorimotor skill

comprehensive reviews all drew the same conclusion: motion palpation is not a reliable (reproducible) procedure.

Cooperstein and Gleberzon (2004)

one of the most curious issues surrounding motion palpation is its continuing popularity in chiropractic, osteopathy, and physical therapy, despite a rather unflattering track record in the majority of interexaminer reliability experiments.

Brown (2001)



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009

interexaminer reliability of passive assessment of segmental intervertebral motion in the cervical and lumbar spine by manual practitioners was low

van Trijfel et al (2005)

there is good intrasubject consistency
but poor intersubject consistency

van Zoest et al (2007)



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009

the future; motor skills

modifications to current system

Ebbets (2002)

peer assisted learning

Bould et al (2001) Burke et al (2005) Dollman (2005)

self-directed learning

Lee and White (1990)



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009

the future; sensorimotor skill

consensus training improved the interexaminer
reliability improved from poor - fail reliability
range to the moderate range

Degenhardt et al (2005)



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009

Ohio University College of Osteopathic Medicine Grosvenor Hall Athens, Ohio 45701 USA



haptic technology



the virtual back: different skin textures and bones can
be reproduced and repeatedly palpated

Howell et al(2008)



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009

any questions comments

simonb@bso.ac.uk

275 Borough High Street London SE1 1JE



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009

references

- ADAMS J., 1987. *Psychological Bulletin* 101 (1) pp. 41-74
- BURKE J., FAYAZ S., GRAHAM K., MATTHEW R., FIELD M., 2007. Peer-assisted learning in the acquisition of clinical skills: a supplementary approach to musculoskeletal training *Medical Teacher* 29 pp. 577-582
- BOYD J., 2004. Virtual Reality Program to Teach Doctors, Therapists about Human Back Problems
<http://news.research.ohiou.edu/news/index.php?item=137&page=87>
- BROWN J., 2001. Why motion palpation is so confounding
http://findarticles.com/p/articles/mi_qa3841/is_200110/ai_n8954898?tag=artBody:col1
- CALVO-MERINO B., GLASER D., PASSINGHAM R., HAGGARD P., 2004. action observation and acquired motor skills: an MRI study with expert dancers *Cerebral Cortex* 15 pp.1243-1249
- COHEN D., PASCUAL-LEONE A., PRESS D., ROBERTSON, E., 2005. Off-line learning of motor skill memory: A double dissociation of goal and movement *Proceedings of the National Academy of Sciences of the United States of America* 102 (50) pp. 18237-18241
- COMEAUX Z., 2005. Zen awareness in the teaching of palpation: An osteopathic perspective *Journal of Bodywork and Movement Therapies* 9 pp. 318-326



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009

- COOPERSTEIN R., GLEBERZON B., 2004. *Technique Systems in Chiropractic*, Churchill Livingstone, London
- DEGENHARDT B., SNIDER K., SNIDER E., JOHNSON J., 2005. Interobserver reliability of osteopathic palpatory diagnostic tests of the lumbar spine: improvements from consensus training *Journal of the American Osteopathic Association* 105 (10) pp. 465-473
- DOLLMAN J., 2005. A new peer instruction method for teaching practical skills in health sciences: an evaluation of the 'learner trail' *Advances in Health Sciences Education* 10 pp.125-132
- EBBETS J., 2002. First-Trimester Chiropractic Students' Reactions to a Multistation Teaching Format for Learning Adjustive Psychomotor Skills *The Journal of Chiropractic Education* 16 (2) pp.107-112
- FITTS P, POSNER M, *Human performance*. Belmont, CA: Brooks Cole; 1967
- FRYER G., 2008. Teaching critical thinking in osteopathy- Integrating craft knowledge and evidence-informed approaches *IJOM* 11 pp. 56-61
- GEVITZ N., 2006. Center or Periphery/ the future of osteopathic principles and practices *Journal of the American Osteopathic Association* editorial 106 (3) pp121-129



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009

- HYSLOP-MARGISON E., STROBEL J., 2008. Constructivism and education: misunderstandings and pedagogical implications *The Teacher Educator* 43 pp. 72-86
- HOWELL J., CONATSER R., WILLIAMS II R., BURNS J., ELAND D., 2008. palpation diagnosis training on the Virtual Haptic Back: performance improvement and user evaluations. *Journal of the American Osteopathic Association* vol 108 No1 pp29-36
- JONES A., SHEPPARD L., 2008. Physiotherapy education: A proposed evidence based model *Advances in physiotherapy* 10 pp. 9-1
- LEE T., WHITE M., 1990. Influence of an unskilled model's practice schedule on observational motor learning *Human Movement Science* 9 pp. 349-367
- MORGAN R, LUCAS N, 2005 Editorial *IJOM*; 8:1.
- PRINGLE K., 2004. Guidance hypothesis with verbal feedback in learning a palpation skill *Journal of manipulative and physiological therapeutics* 27 (1) pp. 36-42
- SIZER P., FELSTEHAUSEN V., SAWYER S., DORNIER L., MATTHEWS P., COOK C., 2007. Eight critical skills sets required for manual therapy competency: a Delphi study and factor analysis of physical therapy educators of manual therapy. *Journal of Allied Health*, 36 (1) pp. 30-40



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009

- van TRIJFFEL E., ANDEREGG Q., BOSSUYT P., LUCAS C., 2005. Inter-examiner reliability of passive assessment of intervertebral motion in the cervical and lumbar spine: A systematic review. *Manual Therapy* 10 (4) pp. 256-269
- van ZOEST G., STAES F., STAPPAERTS K., 2007. Three dimensional manual contact force evaluation of graded perpendicular push force delivery by second-year physiotherapy students during simple feedback training *Journal of Manipulative and Physiological Therapeutics* 30 (6) pp. 438-449
- WALLACE S., 2008. Criticality, research, scholarship and teaching: Osteopaths as educators-what makes a good teacher? *IJOM* 11 pp. 52-55
- WULF G., SHEA C., 2002. Principles derived from the study of simple skills do not generalize to complex skill learning *Psychonomic Bulletin & Review* 9 (2) pp. 185-211



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009



THE BRITISH SCHOOL
OF OSTEOPATHY

Cooperation in osteopathic education
Vienna, 28-29.11.2009