

Tomorrow's Medical History: A Discussion Of The Teaching Of Medical History To "Generation Me" Students

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Abstract

Recent research has attempted to characterise students born after 1980 as "Generation me". This paper uses that research to make general recommendations to educators involved in the planning, delivery, or assessment to such students. It also uses the specific example of medical history teaching in Britain to highlight these recommendations.

INTRODUCTION

Hippocrates suggested "The physician should know what the physician before him has known if he does not want to deprive himself and others".¹ Since the mid-nineteenth century there has been a debate regarding the merits of medical history in the medical undergraduate curriculum.¹⁻²⁰ Ultimately, it was the General Medical Council (GMC) publication *Tomorrow's Doctors*²¹⁻²³ and the expansion of Medical Education that did much to bring change to the British medical school curriculum and with it the medical humanities. Medical teaching has changed, but so have the students. A recent paper based on several meta-analyses of students' responses to psychological questionnaires has characterised the students' changes.²⁴ It proposes that those particularly born after 1980 be known as "Generation Me".²⁴ This paper will make recommendations for how to deliver medical history Student Selected Components (SSC) to these students.

PLANNING

"Generation Me" students have been taught to "aim for the stars".²⁴ Studies have shown they are highly optimistic, self-confident, and ambitious.²⁴ This has been advantageous in balancing gender applications to higher education as well as by increasing numbers of students from lower socio-economic hat aim for professional careers.²⁴ Moreover, this has been disadvantageous for some.²⁴ Stress and anxiety have long been high in medical students but a described perfectionism has seen mental health problems rise in this current generation of students.²⁴⁻²⁵ Twenge mentions that the students are either "crispiers", burned out from too much

work and perfectionism, or "teacups", perfect on the outside but easily broken if rattled.²⁴

A study led by this author recently revealed that summative essays and presentations were the most common method of assessment in history of medicine SSCs in the UK (see Table 1).²⁶ These develop research and presentation skills but can be time-consuming and place too much emphasis on student progression. No formative assessments are used.²⁶ As "assessment drives the curriculum",²⁷ medical history providers are encouraged to develop strengths as formative assessors (see Appendices 1-2) and to use them (see Table 2).²⁸ Formative assessments have helped reduce demotivation in students who had been high achievers at didactic teaching environments at secondary school but who then struggled at tertiary level.²⁸ This is likely to be primarily from feedback which allows students to feel more confident to discuss their difficulties. It can also aid teachers to identify students in difficulty.²⁸ Furthermore, some of these assessment tools could be used within a possible student's "portfolio". Importantly, portfolios can assess what a student "does". This is the highest level of Miller's pyramid (see Figure 1) for the assessment of clinical competence and preferred by medical educationalists.²⁹⁻³⁰

Figure 1

Table 1. Assessment methods in history of medicine SSC in UK (January 2010)

Method of assessment	Percentage of medical history SSCs (%) N= 12
Summative Group presentation	91.7
Summative Essay	83.3
Summative Individual presentation	66.7
Attendance and level of student interest	8.33
Formative assessment	0

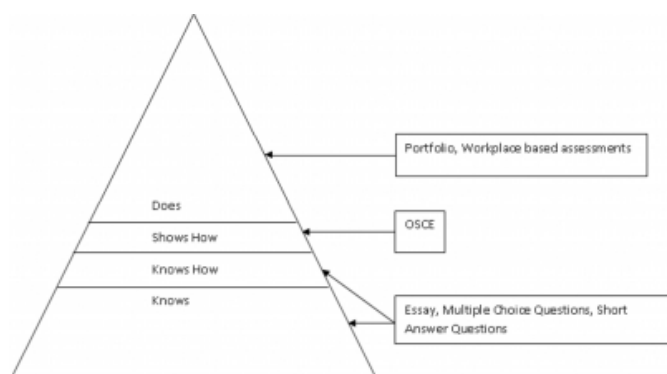
Figure 2

Table 2. Examples of possible formative assessment in medical history SSCs that could also form part of a portfolio

<ul style="list-style-type: none"> • Analysis of an article (e.g. Watson JD, Crick FHC. A Structure for Deoxyribose Nucleic Acid. <i>Nature</i> 1953; 171: 737-738) at a Journal club session • Pieces of small writing demonstrating accurate use of different referencing systems • Literature review of the discovery of anthrax (as part of student's essay) • Log-book of learning activities undertaken • On line task using History of Medicine On-line Database (<i>Histline</i>) • Participation in small group discussion on "Factors on nineteenth century surgical development" • Reflection on the use of primary resources in medical history • Reflection on the use of studying medical history as a medical student • Three hundred and sixty degree review of performance and attitudes (could include archivist, librarian, fellow students, supervisor etc.)
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Figure 3

Figure 1. Miller's pyramid of clinical competence



DELIVERY OF COURSE

"Generation Me" students prefer experiential learning.

²⁴They like to do rather than sit and listen to a lecture. This can include using several media technologies at once, both in timetabled and non-timetabled learning environments. Many "Generation Me" students have utilised computers since their early childhood and some of the pre-clinical undergraduates today may not be able to remember a world pre-internet. Fewer read books than in previous generations, which Twenge suggests has reduced the skill of reading long passages of text.²⁴

The method of delivering the teaching needs attention. Medical history is an ideal subject for experiential learning. This is because it could be done at an archive, historical society, museum, relevant archaeological or historical site. At these potential learning centres, if careful handling, showing, and discussing relevant historical artefacts and documents were to be permitted then the student can visually and physically encounter their chosen subject. This would be preferable to allow such learning when compared with the age-old standard lecture hall at the university campus. In addition, interactive sessions using people who have experienced past treatments, notable historical figures, National Health Service (NHS) and indeed pre-NHS, could be used. Why not learn from such people at their home, General Practice surgery, community centre, hospital ward, or pharmacy? This is all because research has shown that knowledge is gained most effectively when it is learnt in the context in which is to be applied.³¹

Information technology also aids interactive learning. If lectures are being used, the maximum attention span of students is, on average, between 10 and 15 minutes, after which learning drops off significantly.³²⁻³⁴ Consequently, to interact with students and help the retention of information from short-term into long-term memory,³⁵ lectures can be broken up using video, audio, and internet material. E-learning and e-teaching are described elsewhere³⁶ but it is important that future SSC providers consider using such technology and resources that are favoured by students. For some, and that includes myself, learning such methods of teaching could form part of a professional development need and be piloted and evaluated.

ASSESSMENT

Narcissism is higher in "Generation me" students than in previous cohorts.²⁴ One of the facets of this is that more

students feel entitled to higher marks for "trying" or "working hard".²⁴ Such marks and not necessarily for actual performance.²⁴ This was supported by a study that found a third of undergraduates believed they deserved a 'B' merely for attendance.³⁷ This entitlement has caused more students to argue over their marks.²⁴ This has been postulated to be due to students obtaining higher marks in secondary education for proportionally less work than their predecessors.²⁴ In the UK, this may also be due to this generation now having to pay tuition fees compared with their predecessors who did not.

So how should medical history deal with narcissism and entitlement? In reality, it should do the same as other parts of the undergraduate course by ensuring that academic standards do not drop. Standards for marks in the subject should parallel other components of the undergraduate programme. Constructive alignment, when the curriculum is designed so that the learning activities and assessment tasks are aligned with the learning outcomes that are intended in the course, should be attempted.³⁴ In turn, this allows the educational system to be consistent.³⁴ Written information, available via intranet, WebPages, or course booklets, should document grade criteria. These strategies would allow linked feedback to students and help counter the aforementioned possible difficulties.

CONCLUSION

"Generation Me" students have been described to be over-confident, entitled, mentally fragile, and enjoy experiential learning.²⁴ This is a generalisation but there are differences in students of different generations. Furthermore, "Generation Me" students have been described using samples from the USA so how translatable is such research to other countries? The trend probably applies to other Western countries due to similarity of educational methods and cultural experiences, though this cannot be certain. However, if providers ensure that high standards are maintained, consider incorporating formative assessment and portfolios, embrace some teaching strategies outlined above, and incorporate evaluation that involves students, then "Generation me" students will enjoy and benefit from learning medical history. Perhaps Hippocrates's words can be used for medical educators as well as physicians: only through awareness of differences between the generations can medical educators of the present and future help students to learn efficiently.

GLOSSARY

Formative assessment: provides feedback to learners about progress.²⁸

Summative assessment: measures the achievement of learning goals at the end of a course or programme of study.²⁸

APPENDICES

APPENDIX 1. CHARACTERISTICS OF HIGHLY COMPETENT TEACHERS THAT AFFECT THE QUALITY OF FORMATIVE ASSESSMENT

Characteristic - Effect on formative assessment

Knowledge - Greater knowledge base and understanding of the subject matter than students

Attitude to teaching- Empathy with students, ability to communicate educational goals, desire to help students improve, concern for the integrity of their own judgements

Skill in constructing assessments- Use of varied assessment tools to develop different skills in students

Knowledge of assessment criteria - Awareness of standards and appropriate expectations

And appropriate standards- of students' performance at a certain level within the curriculum based on learning outcomes and previous experience of student achievement

Evaluative skills- Ability to make qualitative judgements informed by experience as assessors

Expertise in giving feedback- Identification of strengths and weaknesses, evaluative comments in relation to criteria, suggestions for alternative learning methods, examples of different ways to achieve the goals

APPENDIX 2. CHARACTERISTICS OF FORMATIVE ASSESSMENT

General Informal

Ongoing and frequent

Dynamic

Non-judgemental

Part of the overall teaching and teaching process

Effects on students Allows detailed feedback

Promotes self-directed learning

Raises self-esteem

Engages students in the learning process

Encourages deep learning and understanding

Motivates learning

Identifies insecurities

Offers help with specific remediation

Effects on staff Allows detailed feedback

Promotes self-directed learning by the students

Fosters interactive teaching and learning methods

Encourages varied and challenging teaching methods

Identifies students in difficulty early in the curriculum

Develops teaching skills

Evaluation feeds into curriculum development

References

- Hunter D. History as a dimension of medicine. *The Middlesex Hospital Journal* 1968; 20-26.
- Aucken I. History of Science. *The Times* 17 Aug 1956.
- Cartwright FF. The place of medical history in undergraduate education. *Journal of the Proceedings of the Royal Society of Medicine* 1969;62:1053-60.
- Cassedy JH. History of medicine and related sciences in Europe: notes on teaching and study. *Bulletin of the History of Medicine* 1969;43:270-83.
- Clarke RJ. History of Science. *The Times* 20 Aug 1956.
- Comrie JD. A vindication of the section. *British Medical Journal* 1927;3474:205.
- Copeman WSC, Poynter FNL. Memorandum on the place of the history of medicine in medical education submitted by the Faculty of the History of Medicine and Pharmacy of the Worshipful Society of Apothecaries of London to the Committee on Medical Education of the General Medical Council, on 16th February 1965 (E/4/6/1/2/ Box 21, Royal Worshipful Society of Apothecaries Archive).
- Duffin J. Infiltrating the curriculum: an integrative approach to history for medical students. *The Journal of Medical Humanities* 1995;16:155-74.
- Galdstone I. On the utility of medical history. New York: International Universities Press, Inc, 1957.
- Henry A. Lectures on the history of medicine. *British Medical Journal* 1860;169:219-23.
- Joy RJT. Starting from scratch: installing a history of medicine program in a new medical school. In Bylebyl JJ (Ed.). *Teaching the history of medicine at a medical centre*. Baltimore and London: John Hopkins University Press, 1982.
- Lawrence C. Graduate education in the history of medicine: Great Britain. *Bulletin of the History of Medicine* 1987;61:247-52.
- Loewy EH. Teaching the history of medicine to medical students. *Journal of Medical Education* 1985;60:692-95.
- Poynter FNL. The history of medicine in Britain. *World Medical Journal* 1970;3:55-56.
- Prioreschi P. Does history of medicine teach useful lessons? *Perspectives in Biology and Medicine* 1991;35:97-104.
- Rosen G. The place of history in medical education. *Bulletin of the History of Medicine* 1948;22:594-627.
- Singer C. The teaching of medical history. *British Medical Journal* 1919;3058:141-42.
- Smith M. Medical students and history of medicine: shall the twain meet? *Journal of the Proceedings of the Royal Society of Medicine* 1996;89:530.
- The British National Committee for the History of Science, Medicine and Technology. Report on the teaching of science, medicine and technology in Universities and technical colleges in the United Kingdom 1971. London: The Royal Society, 1971.
- The Worshipful Society of Apothecaries of London (Faculty of the History of Medicine and Pharmacy). Third annual report and list of members 1971-72. Berkhamsted, Herts: Clunbury Press, 1972.
- General Medical Council. Recommendations on undergraduate medical education. *Tomorrow's doctors*. London: General Medical Council, 1993.
- General Medical Council. Recommendations on undergraduate medical education. *Tomorrow's doctors*. London: General Medical Council, 2003.
- General Medical Council. Recommendations on undergraduate medical education. *Tomorrow's doctors*. London: General Medical Council, 2009.
- Twenge JM. Generational changes and their impact in the classroom: teaching Generation Me. *Medical Education* 2009;43:398-405.
- Twenge JM. The age of anxiety? Birth cohort change in anxiety and neuroticism, 1952-1993. *Journal of Personality and Social Psychology* 2000;79:1007-21.
- Metcalfe NH, Brown AK. History of Medicine student selected components at UK medical schools: a questionnaire-based study. *Journal of the Royal Society of Medicine Short Reports* 2011; 2:77.
- Newble DI, Jaeger K. The effect of assessments and examinations on the learning of medical students. *Medical Education* 1983;17:165-71.
- Wood D. Formative assessment. London: Association for the Study of Medical Education, 2007.
- Miller GE. The assessment of clinical skills/competence/performance. *Academic Medicine*. 1990;65:S63-67.
- Chandratilake MN, Davis MH, Ponnampuruma G. Evaluating and designing assessments for medical education: the utility formula. *The Internet Journal of Medical Education* 2010;1:1.
- Simpson JG, Furnace J, Crosby J, Cumming AD, Evans PA, Friedman M, et al. The Scottish doctor: learning outcomes for the medical undergraduate in Scotland: a foundation for competent and reflective practitioners. *Medical Education* 2002;24:136-43.
- Cantillon P. ABC of learning and teaching in medicine: teaching large groups. *British Medical Journal* 2003;326:437-40.
- Bligh DA. What's the use of lectures? London: Jossey-Bass Higher and Adult Education, 2000.
- Biggs J. Enhancing learning through constructive alignment. *Higher Education* 1996;32:347-64.

35. Entwistle NJ. Teaching for understanding at university: Deep approaches and distinctive ways of thinking. Basingstoke: Palgrave, 2009.

36. Ellaway RH. "E-learning and e-teaching". In Dent JA, Harden RM (eds.). A practical guide for medical teachers.

Edinburgh: Churchill Livingstone, 2009.

37. Greenberger E, Lessard J, Chen C, Farruggia SP. Self-entitled college students: contributions of personality, parenting and motivational factors. Journal of Youth and Adolescence 2008;37:1193-204.

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