Anatomy Education for the YouTube Generation

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INTRODUCTION

Anatomy remains a cornerstone of medical education despite challenges that have seen a significant reduction in contact hours over recent decades; however, the rise of the YouTube generation, or Generation Content (Gen C), offers new possibilities for anatomy education. Gen C, which consists of 80% Millennials, actively interact with social media and integrate it into their education experience. Most are willing to merge their online presence with their degree programs by engaging with course materials and sharing their knowledge freely using these platforms. This integration of social media into undergraduate learning, and the attitudes and mindset of Gen C is altering traditional learning approaches and the student / academic relationship. To understand this in the context of anatomy education, we surveyed second year undergraduate medical and radiation therapy students (n = 93) regarding their use of online social media in relation to anatomy learning and their awareness of the ethical issues associated with viewing cadaveric material online and those of copyright.

The vast majority of students surveyed had employed web based platforms to locate anatomy based information with 78% using YouTube as their primary source of anatomy-related video clips. These findings suggest that the academic community may find value in the integration of social media into blended learning approaches in anatomy programs. This will ensure continued connection with the YouTube generation of students while also allowing for academic and ethical oversight regarding the use of online video clips whose provenance may not otherwise be known.

OBJECTIVES

- To determine the attitudes of anatomy students to the use of social media, in the context of blended learning approaches in anatomy.
- To identify which online platforms are used by students to supplement their anatomy learning and to determine the perceived benefits of using these platforms.
- To understand student awareness of issues of copyright and ethical issues associated with viewing human cadaveric tissues online.

METHODS

- 75 second year medical students and 23 radiation therapy students were invited to complete an anonymized survey.
- Surveys were distributed, and collected, by hand.
- The response rate was 97%.
- Demographic questions were designed to determine the gender, age range and region of origin of participants.
- Survey questions were designed to determine:
  1. the methods students used to resolve issues in their anatomy learning
  2. the frequency of anatomy video clip usage
  3. The source and usefulness of these video clips
  4. the method used to approach an academic
  5. the time a student was prepared to wait to resolve an anatomy issue from academic resources
  6. student awareness of disclaimers, copyright and ethical issues associated with viewing human tissue online

1. Demographics

2. Student use of online resources

3. Student viewing of anatomy videos and academic contact

4. Student awareness of copyright or ethical issues

DISCUSSION

Anatomy students integrate multimedia into their education experience (Hall et al., 2013) and prioritize YouTube as a source of anatomy information. However, the clinical and practical applications of anatomy are best delivered via a combination of dissection / prosecution, small group instruction and lectures (Older, 2004). The availability of Facebook and YouTube has changed the landscape of lecturer-student interactions and offer instant (though not always accurate) insights into anatomical structures using a range of teaching technologies, and may ultimately erode the relationship between staff and student.

Online tools hold potential for anatomy educators in engaging students as the use of social media may empower education interactions with students outside scheduled contact hours, particularly if they are provided in clear context to learning outcomes through academic oversight.

There is a vast library of anatomy video clips available online, an increasing proportion is of human tissue (entering ‘anatomy’ and ‘cadaver’ into the YouTube search engine yielded 7,000 individual clips). The provenance of such video clips or whether the subject had given permission for online broadcasting, as opposed to teaching and research within the narrower confines of university institutions, is mainly undocumented. Many students seem largely unaware of issues regarding copyright and ethics. An increasing commentary by academics, while using this type of resource with students is warranted. Ideally, video tutorials involving cadaveric materials or models and delivered by anatomy staff would supplement the students learning and ensure accuracy of content.

CONCLUSIONS

Social media and YouTube in particular are becoming increasing prevalent as student learning aids in anatomy education. We suggest that a change in the anatomy academic’s perceptions may be needed regarding the use of social media given that a significant portion of students consult online resources, without regard for ethics or copyright issues, rather than ask the educator to answer a question.

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