PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (http://bmjopen.bmj.com/site/about/resources/checklist.pdf) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

<table>
<thead>
<tr>
<th>TITLE (PROVISIONAL)</th>
<th>Tablet technology in medical education in South Africa: a mixed methods study</th>
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<tr>
<td>AUTHORS</td>
<td>Lazarus, Lelika; Sookrajh, Reshma; Satyapal, Kapil</td>
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VERSION 1 - REVIEW

<table>
<thead>
<tr>
<th>REVIEWER</th>
<th>Henneberg, Maciej</th>
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<tr>
<td>REVIEW RETURNED</td>
<td>24-Aug-2016</td>
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GENERAL COMMENTS

This paper clearly justifies the use of modern technology in medical education. It is indisputable that use of internet can enhance the availability of information for students. I fully agree with conclusions of this study. The study has been conducted on a representative sample of students and explored reasonably all aspects of their learning of anatomy. While the general quality of written expression, and the clarity of presentation are good, as can be expected of South African English (better than British and American versions) I have a few (minor) comments that could improve the quality of presentation of the results of this useful study to the international audience.

1. in the Introduction, p. 5, lines 44-45 a vague expression "selected University" is used while in following pages references are made to a "selected Institution" or "Institution". It would be much clearer to state the name of the university where the study was conducted. It is a good university drawing on experiences of the Universities of Durban-Westville and Natal whose reputation has been established. In some circles, especially those using American English, the word “institution” may have a pejorative meaning as in “mental health institution”. I recommend to replace it with “our University” or UKZN.

2. I strongly object to the use of the word "race" in this manuscript. Use of this word and its related concept caused enormous suffering in South Africa and other parts of the world. There is no denying that people describing themselves as Black, White, Indian and Coloured South Africans have specific histories, cultural customs, and physical attributes. But these specifics are a result of particular events and practices peculiar to South Africa, not generalised "racial" characteristics. I do sincerely hope these characteristics will be converging in the future so as to erase previous divisions. I strongly recommend to erase the word "race" from the manuscript and replace it with a "group", "category" or similar term that has no relationship to racism.

3. The degree that students in this work are studying for (MBChB) is peculiar to some schools in the British Commonwealth, while other degrees giving the same professional qualification (of a physician) are labelled MBBS or LRCP,LRCS, or MD or Lek.med. etc. Therefore it would be better to replace the MBChB acronym with
words indicating a study for a "medical degree: or "medical practitioner qualification" or, as it is in the vernacular English "medical doctor".

4. minor deficiencies of English expression include the use of word "data" as a singular (which in actual fact is "datum"), "utilised" when something is simply used rather than having its use altered, and Chi-square when no city square is named "Chi" while the Chi value is squared, that is raised to the second power.

I commend authors for undertaking a study of such obvious application to the learning of a medical science subject of the methods currently available. I support their conclusions and the need to incorporate present-day technology into the repertoire of teaching methods.

<table>
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<tr>
<th>REVIEWER</th>
<th>Dr Colin J Lumsden</th>
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<td>University of Manchester</td>
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<td>United Kingdom</td>
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GENERAL COMMENTS

The paper is interesting from an ethnographic perspective. There are several published papers on student use of tablet devices and what they are used for. Examples include UCIrvine in the US, Manchester in the UK and WSU in Sydney who have all published papers in this area. There is nothing particularly new here other than in the setting.

There is no description of how many students were in the class so it is unclear what the response rate is.

The theoretical approach is interesting but I can find no data gathered to support this within the questionnaire itself i.e. nothing about situated learning, application of learning or socialist constructivism.

The qualitative analysis is poorly described. How was it coded? Who agreed the coding? The quotes are unattributed to participants. 62% of respondents is described as overwhelming which I do not agree with.

"It was also shown that females tend to access their tablets twice a week (16.8%) to obtain anatomy related content when compared to males (7.8%)" I am not sure what this means.

I am not sure how accessing lecture notes is related to "online lectures"

"This study’s findings (‘…since the tablet is portable, I am able to view lecture slides more frequently’) support the literature” I cannot agree that one quote is translated into support of the literature.

"The majority of students accessed their tablets on campus; therefore it can be concluded that the use of these mobile devices encourages sharing and collaboration among students" This statement goes way beyond what data was collected. Using a tablet on campus does not equate to collaboration. There is simply no supplied data to support this.

There are several other instances where the discussion and conclusions are not supported but the data.
### GENERAL COMMENTS

This is a worthwhile and important paper. However, I do have a number of reservations and comments that I feel would be worth considering to enhance the quality of the manuscript.

This paper describes an exploratory study to establish the use of mobile devices by second year medical students in one medical school undertaking an anatomy course.

**Abstract:**

1. This should include your theoretical approach and method of analysis.
2. It would be useful to have the 'n' and % of females to give the reader an idea of proportional gender representation.

**Strengths and limitation of the study:**

These should be reflective of research design. As it stands two of the bullet point’s look to incorporate some of the findings (e.g. the last bullet point ‘it is recommended that university administrators ensure that provisions are made for technological support to students’).

**Introduction:**

The introduction discusses a broad view of mobile learning and the changing context of mobile technology acquisition of educators in higher education. You also move on to discuss the opportunity of this technology to provide learning to those out of the classroom.

However, I feel that it would be worthwhile to include something about learners being recognised as being digital natives and how educational practices are changing in response to learner needs.

You talk about the availability of apps, it would be useful to provide the audience with an idea of the landscape and to have some specific information about the number of medical apps available specifically.

Also how technology fits with learning theories, specifically in a medical education environment. You may find this paper useful in providing such an overview:

See also research from Rachel Ellaway (e.g. Ellaway (2014) The informal and hidden curricula of mobile device use in medical education).

**Materials and methods:**

Page 8, line 53 ‘findings’ should be changed to ‘approaches’

There no information telling the reader the duration or frequency of the anatomy course. This is important to provide more of a temporal context for your results.

**Results**

You report that n=179 students registered to participate in the study. Was this the entire second year cohort? It would be useful for the reader to have a clearer idea of the take up from an eligible population.

You present your results clearly and provide some good comparisons.

However, it appears highly female laden. You report for instance that just over a third (35.8%) of females utilized the tablet for both academic and personal reasons, but no comparative proportional statistics are presented for males. This is something that features elsewhere.

It is important for the audience to have a clear idea of activity within gender groups. Differences in learning and educational engagement by gender is something that features strongly within the literature.

You mention significant differences but do not talk about the direction of the difference.

I am a little uneasy about the claim that ‘students indicated that provision of the tablet did not affect their attendance’ since this only accounts for 57.5%, this is by no means a majority and leads one to consider that very nearly half are saying that it does affect their attendance – this then puts a very different slant on it.

**Qualitative results.**

You have attempted to outline and present your themes clearly. However, while percentages are presented there are no figures to tell the reader the number of occurrences relating to each theme. So for instance, we do not know the overall occurrences for each reference or how many separate participants these references are taken from.

Quotes do not include a participant ‘id’ so we are unable to tell whether quotes are from different individuals or the same, or whether they are all female or male or both. To ensure the quality of data reporting for qualitative analysis I feel this is an important
consideration to attend to.

Furthermore, by doing this you will be in a better position to talk comparatively about both sets of data in relation to the key issues of gender and learning needs.

**Discussion**

You give good consideration to gender differences here, however I struggle with how some of the results speak to this. Please see above.

I also have reservations over how far you can say that the qualitative analysis supports your other statistical findings since your analysis does not appear to clearly identify origins of reference.

I find little evidence of how you locate discussion of your findings in relation to you guiding theory for analysis as mentioned under your section ‘Theoretical Approaches’.

Personal organisation of use and access to learning through use of the tablet is largely evident.

However, I find the social constructionist element here difficult to accept since there were no questions included within your survey instrument asking individuals how they used the learning tools. So for instance, did they access lecture notes or apps amongst peers and discuss information. Did they generate learning communities?

I wonder whether you would be better to reframe your theoretical appraisal, as present I feel you do not have evidence to look at the ‘collaborative social process involving the co-construction of knowledge among a community of learners’ (page 8, line 6).

**Limitations and implications for future research.**

I would suggest that this section should be looked again as some of the suggestions would perhaps have a better fit within the discussion section (e.g. suggestions made at page 18 line 52 and page 19 line 4).

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**VERSION 1 – AUTHOR RESPONSE**

Reviewer: 1
Reviewer Name: Maciej Henneberg
Institution and Country: The University of Adelaide, Australia

Lines 1-9
The authors acknowledge these positive comments and are grateful to the Reviewer for the constructive criticisms regarding the use of modern technology in medical education.

Point 1: Lines 10-17
The authors are grateful to the Reviewer for the constractive criticism regarding the use of the word “Institution” and as suggested, these have been amended (highlighted in red) accordingly throughout the manuscript to read as “our university.” The authors have opted not to include the name of the Institution, as BMJ-Open Journal requirements state “Generalise: don’t use the name of a specific centre, but give geographical location if important.” Thus, the authors chose to state that this study was conducted at a medical school in South Africa. We trust that this is satisfactory and defer to the recommendation of the Editor in this regard.

Point 2: Lines 18-27
The authors acknowledge this constructive criticism of the Reviewer and as suggested have accordingly removed the word “race” from the paper and replaced it with the words “population groups.” We trust that this is acceptable.

Point 3: Lines 28-33
The authors concur with the recommendation of the Reviewer and have accordingly removed the MBChB acronym and replaced it with “medical degree” in the following areas:

Strengths and limitations of this study
“Sampling was purposive and research was limited to a single cohort of second year medical degree students.”

Limitations and implications for future research
“Thirdly, students in graduate programs such as those registered for medical degrees are expected to be self-directed learners who have the ability to locate resources to supplement their learning.”

Point 4: Lines 34-37
As suggested by the Reviewer, the minor deficiencies of English expression have been corrected. The word “utilized” has been replaced with “use” and the correct form of the Chi-squared test is represented below as follows (highlighted in red in the text):
“Quantitative data for comparison of categorical variables was tested using the Pearson’s Chi-squared test (X2) to compute frequency tables and descriptive statistics. A p value of <0.05 was considered to be statistically significant.”
The authors, however, respectfully have not changed the word “data” in the manuscript as we have used it throughout in its plural format.

Lines 38-41
The authors are grateful for the positive comments of the Reviewer.

Reviewer: 2
Reviewer Name: Dr Collin J Lumsden
Institution and Country: University of Manchester, United Kingdom

Lines 1-5
The authors gratefully acknowledge the constructive comments of the Reviewer.

Lines 6-7
As suggested by the Reviewer, the number of students in the class and the response rate has been
indicated in the text as follows:

“The study sought to explore how learners at a selected medical school use their mobile devices. The second year class was comprised of a total of 257 medical students registered for the Anatomy course. Of these only 179 students (60 male; 119 female) chose to participate in this study (69.6% response rate). Teaching sessions are comprised of lectures in various anatomical structural themes (x 5 per annum), for example, Cardiovascular System. Each of these themes are conducted over an 8-week period comprising approximately 11 one-hour lecture and 29 two-hour practical sessions per theme.”

Lines 8-10

The authors are grateful to the Reviewer regarding the constructive criticism of the theoretical approach used in this paper and as suggested, has been changed to incorporate the theory of informal learning. These have been elaborated upon in the Discussion section of the manuscript and is highlighted in red.

Lines 11-12

The authors acknowledge the constructive criticism of the Reviewer. As suggested by the Reviewer, the qualitative analysis has been elaborated upon and the quotes are now attributed to participants.

Lines 13-16

Point 1: The authors acknowledge the constructive criticism of the Reviewer. The sentence has been reworded to read as follows:

“A total of 62% of female students reported that they accessed the tablets for lecture notes; these students also indicated that they accessed their tablets whilst on campus (36.3%).”

Point 2: The authors acknowledge the constructive criticism of the Reviewer. The sentence has been reworded to read as follows:

“Overall, females tended to access their tablets for anatomy related content more often when compared to their male counterparts (Table 2) which yielded a statistically significant p value (p<0.017).”

Line 17

The authors acknowledge the constructive criticism of the Reviewer. The word “online” has been removed and the sentence has been corrected to read as follows:

“These lectures define a range of content available for Web access, ranging from text files to audio or video-enhanced presentations to captured video lectures.”

Lines 18-20

The authors concur with the constructive criticism of the Reviewer. As suggested by the Reviewer’s inference, the number of counts of each quote in the qualitative section of the Results have been incorporated into the manuscript.

Lines 21-25

The authors acknowledge the constructive criticism of the Reviewer. As suggested by the Reviewer, the authors have attempted to use the approach of informal learning to elucidate the results obtained in this study. This has been incorporated into the Discussion section of the manuscript (highlighted in red).

Lines 26-27

The authors acknowledge the constructive criticism of the Reviewer. As suggested by the Reviewer, the authors have attempted to reconcile the Results, Discussion and Conclusion sections (highlighted
in red in the manuscript).

Reviewer: 3
Reviewer Name: Katie Webb
Institution and Country: Cardiff University, Wales, UK

Lines 1-3
The authors are grateful for the constructive comments of the Reviewer.

Response to Separate Reviewer Comments

PAGE 1

Lines 1-2
The authors are grateful for the positive comments of the Reviewer.

ABSTRACT

Line 4: Point 1: Theoretical approach & method of analysis
As suggested by the Reviewer, a theoretical approach involving informal learning has been included in the Conclusion section and the method of analysis under the Design section have been elaborated upon as follows:

Conclusions
“The uses of technology outlined in this paper are related to Eraut’s intentions of informal learning.”

Design
“A mixed methodology research design was chosen to guide our enquiry. A questionnaire comprising both open and close ended questions was analysed from 179 (60 male; 119 female) second year medical students registered for the Anatomy course. Open ended questions were analysed by using a thematic approach to identify emergent ideas and concepts expressed by participants. Close ended questions were statistically analysed using the SPSS version 21.0 (SPSS Inc., Chicago, Illinois, USA).”

Lines 5-6: Point 2: As suggested by the Reviewer, the number of males and females have been included to give the reader an idea of proportional gender representation. Please see Point 1 above for the quotation of the Design section of the abstract.

STRENGTHS AND LIMITATIONS OF THE STUDY
Lines 7-10
The authors are grateful for the constructive criticisms of the Reviewer. As suggested, additional points have been included to be reflective of the research design of the study as follows:

• The findings add to the literature that students engage with tablets as a learning tool as well as for miscellaneous use unrelated to the discipline
• Sampling was purposive and research was limited to a single cohort of second year medical degree students. However, we cannot exclude an element of response bias as a large part of the sample was comprised of female respondents. Additional research is necessary to isolate disciplinary strengths and weaknesses.
• Further quantitative and qualitative studies are required to determine if tablets have an impact on academic performance and whether they encourage self-directed learning.
• It is recommended that university administrators ensure that provisions are made for technological support to students.

INTRODUCTION
Lines 11-14
The authors are grateful for the positive comments of the Reviewer.

Lines 15-16
The authors are grateful for the constructive criticisms of the Reviewer. As suggested by the Reviewer, a paragraph has been included to incorporate the idea that learners are recognised as being digital natives. The paragraph reads as follows:

“The nature of anatomical education has transformed substantially over the past decade due to both a new generation of students who learn differently from those of the past and the explosion of advances in anatomical imaging and programing. Medical students of today are products of the "interactive generation". Millennial generation learners (sometimes referred to as digital natives) are defined as individuals whose development has been infused with technology and these individuals possess extensive experience with digital exploration, gaming and communication and are claimed to be adept with user-friendly digital devices.”

Lines 17-19
The authors are grateful for the constructive criticisms of the Reviewer. As suggested by the Reviewer, the authors have attempted to answer the question regarding the availability of medical applications as follows (highlighted in red in the text).

“There are hundreds and thousands of applications, some free and some requiring paid subscriptions. These applications are available in a wide range of categories and are tailored for specific medical disciplines such as Medscape, Medical Tools, Gray’s Anatomy-Atlas, Medical Abbreviations, Harrison’s Manual of Medicine, Anatomy Learning-3D Atlas, MediApp, Resuscitation, iGyno and O&G App.”

Regrettably, the authors cannot provide specific information regarding the number of medical apps available, as in our setting, the University did not provide access to apps that required paid subscription. Some of the apps that students download require internet access – not all students have access to this in their learning spaces- given the socio-economic conditions of the country.

Lines 20-25
The authors are grateful for the constructive criticisms of the Reviewer. As suggested by the Reviewer, the two suggested readings of Bullock and Webb (2015) and Ellaway (2014) have been incorporated into the manuscript under the Introduction and Discussion sections. These additions have been highlighted in red.

MATERIALS AND METHODS

Lines 26-27
As suggested by the Reviewer, the word “findings” has been changed to “approaches” and the sentence reads as follows (Page 9 of text):

“A mixed methodology research design integrating both quantitative and qualitative approaches was chosen to guide our enquiry to generate the data required to meet the aims of this study.”

Lines 28-29
The authors are grateful for the constructive criticisms of the Reviewer. As suggested by the Reviewer, the duration and frequency of the anatomy course has been included in the Materials and Methods section of the manuscript as follows:

“Teaching sessions are comprised of lectures in various anatomical structural themes (x 5 per
annum), for example, Cardiovascular System. Each of these themes are conducted over an 8-week period comprising approximately 11 one-hour lecture and 29 two-hour practical sessions per theme.”

RESULTS

The authors are grateful for the constructive criticisms of the Reviewer. As suggested by the Reviewer, the number of students registered for the course have been included under the Materials and Methods section and the sentence reads as follows:

“The second year class was comprised of a total of 257 medical students registered for the Anatomy course. Of these only 179 students (60 male; 119 female) chose to participate in this study (69.6% response rate).”

The authors are grateful for the positive comments of the Reviewer.

The authors are grateful for the constructive criticisms of the Reviewer. As suggested by the Reviewer, statistics for males have been included in the text (highlighted in red in the manuscript):

“A total of 35.8% of female students indicated that they used the tablet for both academic and personal reasons compared to 21.2% of male students.”

The authors are grateful for the constructive criticisms of the Reviewer. As suggested by the Reviewer, Table 3 has been drawn up and included in the manuscript (highlighted in red) illustrating gender incidences in user engagement.

The authors are grateful for the constructive criticisms of the Reviewer. As suggested by the reviewer, the quantitative results have been reworded to account for the direction of significant differences. The sentence reads as follows:

“Statistically significant results were obtained between the sexes (p<0.020) when gender was compared to students having prior access to a tablet. Comparisons for the different population groups (p<0.000) and socio-economic status (p<0.000) also yielded statistically significant results when this parameter was compared to students having prior access to a tablet. The majority (43.6%) of Black students were not aware of the Visual Learning Project and a statistically significant result (p<0.024) was obtained when population groups were compared with the level of student awareness of the Visual Learning Project.”

The authors are grateful for the constructive criticisms of the Reviewer. As requested by the Reviewer, the number of occurrences relating to each theme are indicated in brackets after each quotation. These have been highlighted in red in the text.
The authors are grateful for the constructive criticisms of the Reviewer. As requested by the Reviewer, the participant “IDs” have been included in the qualitative analysis. These have been highlighted in red in the text.

DISCUSSION

Lines 27-31
The authors are grateful for the constructive criticisms of the Reviewer. As requested by the Reviewer, participant “IDs,” including their gender have been included in the quotes (highlighted in red in the Results section).

Lines 32-33
The authors are grateful for the constructive criticisms of the Reviewer. As suggested by the Reviewer, the authors have used informal learning as a theoretic approach to discuss findings. These are highlighted in red in the Discussion section of the manuscript.

Line 34
The authors are grateful for the positive comments of the Reviewer.

Lines 35-36 and Page 3, Lines 1-5
The authors are grateful for the constructive criticisms of the Reviewer. As requested by the Reviewer, the theoretical appraisal using social constructivism has been changed to incorporate informal learning. This has been included in the Discussion as follows: “The educational practice of technology can be associated with learning theories. The various uses of mobile learning can be associated with the different stages in Kolb’s learning cycle. For example, accessing the tablet for related lecture notes in the dissecting hall provides an opportunity to practice skills, social media (such as YouTube videos and Wikipedia) can assist in maintaining learners’ reflections on experiences and apps can offer access to knowledge which can assist abstract conceptualization.

Bullock and Webb (2015) further cite the impact of technology on Eraut’s theory of informal learning in the work-place as being either implicit, reactive or deliberative. In this study, the so called work-place refers to the University environment. Learning from social media is regarded as being implicit learning; reactive learning is opportunistic, often occurring in the middle of an action such as accessing the tablet “to view content and determine anatomical positions realistically (Participant 3; female).” Deliberate learning is regarded as having a goal and a set time (Eraut, 2004) where the learner clearly thinks about their actions such as accessing lecture notes for study purposes.”

PAGE 3
LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH
Lines 6-9
The authors are grateful for the constructive criticisms of the Reviewer. As requested by the Reviewer, the last two points of the “Limitations and Implications for Future Research” sections have been incorporated into the Discussion section (highlighted in red).

VERSION 2 – REVIEW

<table>
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<th>REVIEWER</th>
<th>Maciej Henneberg</th>
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<td>The University of Adelaide</td>
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| REVIEW RETURNED | 26-Nov-2016 |

| GENERAL COMMENTS | This is a useful paper presenting a well-balanced consideration of the topic. It has useful conclusions. |
My comments are of entirely minor editorial nature. Here they are:

The “racial” and "gender" issues are of great concern to various community groups. Therefore please consider use of those terms carefully. When individuals are asked to declare whether they are male or female, they usually declare their biological SEX rather than their social preference for masculine or feminine GENDER roles. In the 21st century of increasing bigotry the use of word "sex" has been socially forced to be limited when discussing male and female demographic information and then "gender" is incorrectly used to denote "sex". Unless you asked in your questionnaires "what is your preferred social role: masculine or feminine", you have asked about your respondend's' biological sex and you should use this disgusting word (sex) instead of misleading (gender) in your paper. The "race" issue, especially in South Africa, is very painful. The term 'population group' is more factual. Please use it consistently. Readers from outside of South Africa may not be familiar with (painful) historical classification of South African population groups, so please explain the meaning of "Coloured".

When explaining the curriculum, please clarify the number of "themes" and "lectures" using, if possible, just simply total numbers of hours of lectures and practicals.

Anatomical terminology is not just "Latin". Lots of anatomical terms are derived from Greek, and some from Arabic, too. Thus it is better to say something like "ancient languages" than "lalin". There were a few plural/singular mismatches between verbs and nouns in certain sentences. Please correct those.

Congratulations on moving anatomy teaching into the 21st century.

REVIEWER  
Katie Webb  
Cardiff University

REVIEW RETURNED  
14-Dec-2016

GENERAL COMMENTS  
I congratulate the authors on considering the comments from reviewers. Responses to these comments are comprehensive. I think the manuscript as now presented gives greater clarity to the utility of mobile devices by medical students.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Maciej Henneberg
Institution and Country: The University of Adelaide, Australia

Lines 1-3
The authors gratefully acknowledge the positive comments of the Reviewer.

Lines 4-10
The authors gratefully acknowledge the comments of the Reviewer. The authors concur with the proposition of the Reviewer regarding the words “gender” and "sex." Subsequently, the word “gender” has been replaced with “sex” throughout the manuscript.

Lines 10-12
The authors gratefully acknowledge the comments of the Reviewer. As suggested by the Reviewer,
the word “race” has been replaced with “population group” throughout the manuscript.

Lines 12-13
The authors gratefully acknowledge the comments of the Reviewer. As suggested by the Reviewer, the term “Coloured” has been explained in the text as follows (highlighted in red under the Results section):
[The term “Coloured” is an historical throwback from the apartheid racial classification which remains in the post-1994 democratic era to assist the current government in seeking restitution for various disadvantaged groupings. The term “Coloured” refers to a group of heterogeneous people, who may be more or less accurately described as ‘mixed-race’ (https://welections.wordpress.com; Accessed 24 January 2017)].

Lines 14-15
The authors gratefully acknowledge the comments of the Reviewer. As suggested by the Reviewer, the number of hours of lectures and practicals have been included in the manuscript as follows:
“Teaching sessions are comprised of lectures in various anatomical structural themes (x 5 per annum), each of which are conducted over an 8-week period, comprising a total of 49 hours of lectures and 197 hours of practical sessions.”

Lines 16-17
The authors gratefully acknowledge and concur with the comments of the Reviewer. As suggested, the word “latin” has been replaced with the term “ancient languages.”

Line 17-18
As suggested by the Reviewer, the few singular/plural mismatches between verbs and nouns in certain sentences have been corrected.

Line 19
The authors gratefully acknowledge the positive comments of the Reviewer.

Reviewer: 3
Reviewer Name: Katie Webb
Institution and Country: Cardiff University, Wales, UK

Lines 1-3
The authors gratefully acknowledge the positive comments of the Reviewer.

VERSION 3 - REVIEW

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<table>
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<tr>
<th>GENERAL COMMENTS</th>
<th>The “Strength and limitations” section should not summarise the contents of the paper but highlight conclusions and specify limitations of the scope to which they pertain.</th>
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<td>in the Introduction “ancient languages” are mentioned in a sentence that reads awkwardly. It would be better to write a phrase like “ancient languages based terminology including ....” and omit words “and functions”.</td>
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<td>In “Design” the added text beginning “Teaching sessions .....” is</td>
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unclear, needs to be rewritten. Since this is an open review, I can help authors to rewrite this sentence if they so wish.

In "Quantitative Results" the sentence about "significance with sex" should specify which sex (male or female) achieves higher results.

VERSION 3 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Maciej Henneberg
Institution and Country: The University of Adelaide, Australia

Lines 1-2
The authors gratefully acknowledge the comments of the Reviewer. As suggested by the Reviewer, the Strengths and Limitations section of the manuscript has been reworded as follows:
• "This paper demonstrates the use of mobile technology, and describes how it created new opportunities to enable positive student learning experiences in a selected university classroom.
• The use of this software application was novel in the discipline of anatomy education and was designed to enhance creativity, critical thinking and promote increased interaction among students and faculty.
• The research sample was purposive and limited to a single cohort of second year medical degree students, which comprised largely of female students."

Lines 3-4
The authors gratefully acknowledge the comments of the Reviewer. As suggested by the Reviewer, this sentence has been reworded to read as follows:
"Anatomy requires students to learn a large volume of ancient languages based on terminology including muscle names, origins, insertions, joint, connective tissue and cellular, micro and gross anatomy."

Lines 5-6
The authors gratefully acknowledge the comments of the Reviewer. As suggested by the Reviewer, this sentence has been reworded to read as follows:
"The mode of anatomy instruction is comprised of both lectures and practical sessions in various regional anatomical themes. There are five such themes per annum, each of which is conducted over an 8-week period. There are a total of approximately 49 hours of lectures and 197 hours of practical sessions per theme."

Lines 7-8
The authors gratefully acknowledge the comments of the Reviewer. As suggested by the Reviewer, the sentence regarding the "significance with sex" has been elaborated upon and reads as follows:
"A majority of female students (46.4%) indicated that they had no prior access to a tablet device - these results are statistically significant (p<0.020) when this parameter was investigated in the sexes."
VERSION 4 – REVIEW

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</table>

| GENERAL COMMENTS  | Sex and gender are still interchangeably used instead of being consistent. Numbers in tables are centered in columns instead of being aligned on decimal positions as is the rule in basic mathematics. |

VERSION 4 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Maciej Henneberg
Institution and Country: The University of Adelaide, Australia

Line 1
The authors acknowledge the comments of the Reviewer. The word “gender” has already been replaced with “sex” throughout the manuscript, as suggested by the Reviewer in his previous review of the manuscript. There is consistency throughout the manuscript.

Lines 1-2
The authors acknowledge the comments of the Reviewer. As suggested by the Reviewer, the numbers in the tables have been aligned on decimal positions (as per Microsoft Excel).