College of Medicine & Health

Dentistry

Module:

The student-staff pairing from Dentistry focused on an undergraduate module on dental morphology. This module covers the anatomical features of the teeth, their anatomical variations and helps the students learn the identifying features of each tooth.

Learning Outcomes:

The learning outcomes for this module included the following:

- *Identify anatomical structures in the orofacial region.*
- *Describe the components of teeth and oral tissues at histological level.*
- *Identify native teeth and radiographs of teeth including age changes.*
- *Outline growth mechanisms, role of bone remodelling and selected developmental abnormalities in the orofacial region.*

Current Assessment Design:

A combination of graded **formative assessment**, in the form of an in-class test, **summative assessment**, in the form of a written examination, and **authentic assessment** in the form of a practical examination on tooth morphology.

Associated risk of GenAI:

There is a potential for academic misconduct in both summative and formative assessment. Students may use GenAI to generate complete or partially plagiarised responses for exams, papers, or projects.

Mitigation:

The risk of GenAI in **authentic assessments,** such as the practical examination mentioned above, is almost non-existent. Examining students on the practical, real work applications of their leaning is an excellent way to bypass the risk of academic misconduct through the use of GenAI.

Assignment Task:

The student-staff pairing decided to look at the tooth variations seen in each tooth type (incisors, canines, premolars, and molars).

Both short-answer questions and essays were assigned to the students. They were provided with recommended textbooks, lecture notes, and online resources to conduct research on the given topic. Following this, the student utilised ChatGPT to further explore the subject. The aim was for students to consider if both learning approaches are equally beneficial in achieving their educational objectives.

Breakdown of Process:

The student initially utilised the recommended textbook, lecture notes, and online resources to delve into the topic. Subsequently, the student turned to ChatGPT for assistance.

At first, the student employed broad and general prompts when interacting with ChatGPT, resulting in general information. However, as she fine-tuned her prompts, she received more precise and succinct information from ChatGPT. It was suggested to the student that she should maintain a record of her prompts and the corresponding information provided by ChatGPT.

The student's feedback indicated that ChatGPT did provide information but in a superficial manner, lacking detailed anatomical insights. The information given often included redundant content.

In essence, the student considered ChatGPT a valuable supplementary tool for achieving learning objectives but not a replacement for textbooks and lecture notes. Additionally, the student expressed concerns about the ethical implications, reliability of information from ChatGPT, and the absence of proper references.

Given the highly specialised nature of the task, focusing on tooth morphology and its variations, the student discovered that ChatGPT fell short in delivering the necessary information to meet the learning objectives. The recommended textbooks and lecture notes, on the other hand, contained more comprehensive and detailed information regarding the subject matter.

Observations:

The student had no prior experience using ChatGPT and felt that a tutorial or workshop would be beneficial.

Following some assistance, the student found that ChatGPT could tailor the answer according to their specific needs. It provided information in an easy-to-read manner and language, yet still lacked the depth required for this level of study.

Integration:

ChatGPT proved a great tool to the student as a study aid. Its ability to simplify and summarise complex blocks of text is highly beneficial, speeding up the study process.