Fair Use and Appropriate Citation of Copyrighted Material in the Medical Education Setting: An Examination of Compliance in the Preclinical Classroom – Part II

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BACKGROUND

- Given the ever-expanding breadth and depth of the medical knowledge base and increasingly refined expectations of students, it is challenging to construct comprehensive and high-quality medical education teaching materials based on one's own collection of images, diagrams, and tables.
- Increasingly easy electronic access to a wealth of outstanding material from journal articles, textbooks, and web sites allows for the easy gathering of content to illustrate a specific concept.
  - All of these materials are copyrighted implicitly, and in some cases explicitly.
  - Nonetheless, "Fair Use" criteria incorporated into the United States Copyright Law should, with some limitations, guide and facilitate the utilization of copyrighted materials to which students often already have a license and/or "Fair Use" access rights in the medical education setting.
- We sought to evaluate the use of copyrighted materials by faculty members as part of formal lectures during the first year of medical school with respect to compliance with Fair Use and appropriate citation of the work of others.

METHODS

- Individual PowerPoint slides for lecture-based courses distributed to students during the first year of medical school during the 2016-2017 academic year or during Block 3 during the 2017-2018 academic year at the Brody School of Medicine by the learning management system Blackboard at East Carolina University's Brody School of Medicine were examined.
- **Fair Use Determination:**
  - Content was assessed with respect to the United States 4 "fair use" criteria (Reference 1):
    - Character of Use: Use in an academic setting vs. commercial setting
    - Nature of Content: Material is factual rather than creative (poems, music)
    - Amount of Source Content Used: A small amount of content is used from a particular source vs. a full textbook
    - Effect on Market for Source: Use would not be expected to hurt sales of the originating book, journal, or Web site vs. hurt sales
- **Citation Assessment:**
  - Content derived from the work of the presenter and not cited was considered appropriate: e.g. photographs, tables, and diagrams.
  - Citations of content (images, diagrams, and tables) that appeared to be from copyrighted sources that were not created by the faculty member were classified as:
    - "Intentionally cited": clear reference to source of content is present, denoting that it is the work of someone else
    - "Incidentally Cited": partial or complete reference to source is included as part of or embedded in the content (i.e., watermark or other embedded citation)
    - "Not Cited": Content is determined to have been derived from a source other than the presenter and no citation is available on the actual slide (or in the "notes section" of the slide
  - Clarification of sources was made by evaluation of metadata associated with the content on the slide and by evaluation of cropped areas of content.
- **Details:** Details for each PowerPoint file were collected analyzed including
  - Course (e.g. Physiology, Pathology, Pharmacology)
  - Presenter
  - Presenter's academic rank

RESULTS

Summary: Lecture-Based Courses

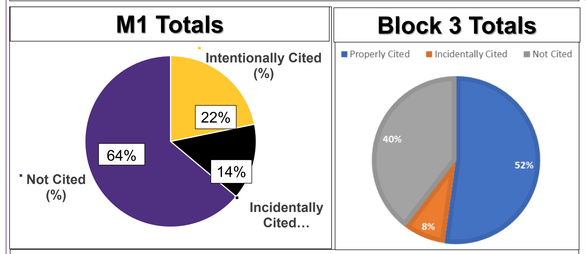
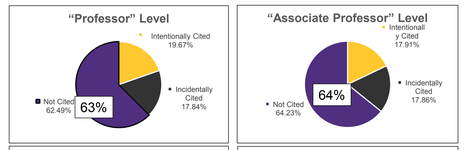


Figure 1. The frequency of citation for images, diagrams, and tables in PowerPoint files distributed in first year lecture based courses in 2016-2017 academic year and the Block 3 courses during the 2017-2018 academic year are shown.

Year 1: 2016-2017 Academic Year



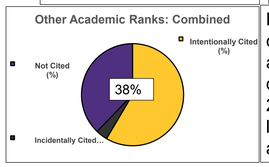
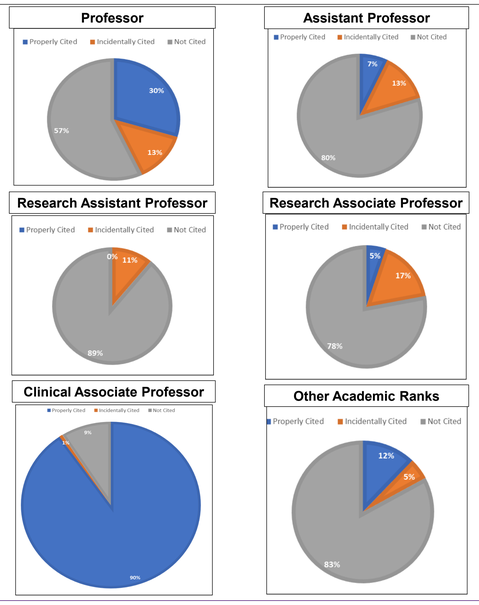


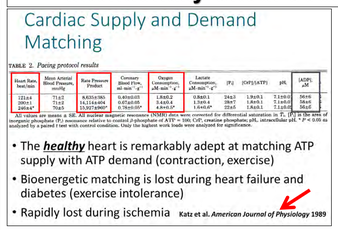
Figure 2. The frequency of citation of images, diagrams, and tables in PowerPoint files distributed in first year (2016-2017) and Block 3 (2017-2018) lecture-based courses by academic rank.

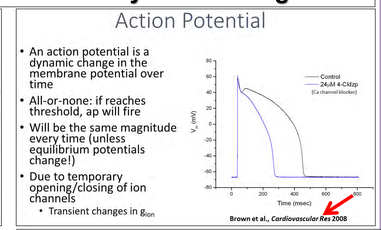
Block 3: 2017-2018 Academic Year

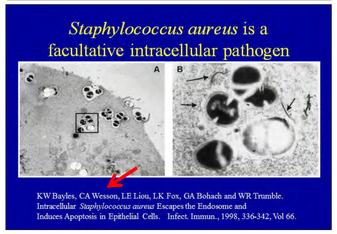


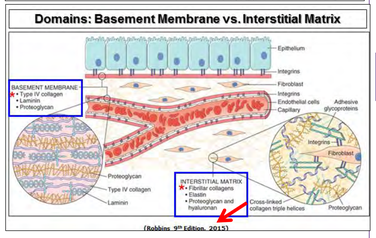
Examples of Classification of Citations

Intentionally Cited: Source Formally Acknowledged

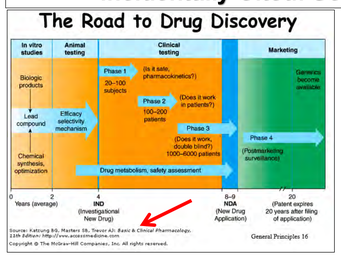


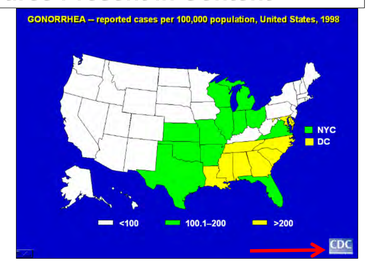




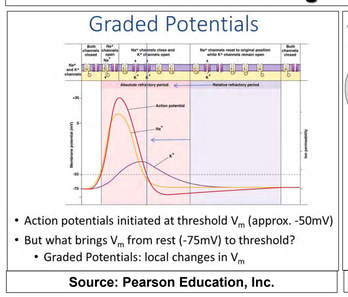


Incidentally Cited: Source Present in Content

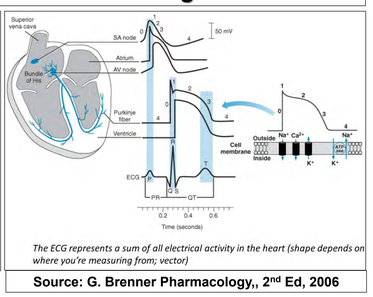




Not Cited: Origin Not Acknowledged

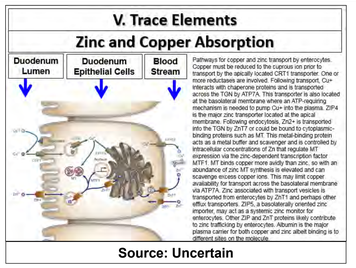


Source: Pearson Education, Inc.



Source: G. Brenner Pharmacology,, 2nd Ed, 2006

Figure 3. Table and diagrams from various sources to illustrate range of citations, or lack thereof, from a single faculty member. Some content was appropriately cited with respect to its origin. Some content was incidentally cited as the source was part of the image or added as a watermark. Other content was not cited with , in two cases, watermarked source excised by cropping..



Source: Uncertain

RESULTS (Continued)

- All content was judged to meet "fair use" and/or licensing guidelines in that it was used in an academic setting, the material is factual, small amounts were used, and the use would not be expected to hurt sales of the originating book, journal, or Web site.
- However, 64% and 52% of content from M1 and Block 3 course PowerPoint files, respectively, lacked appropriate citation of its source.
- For theM1 course, of the total number of images, diagrams, and tables used (n=7,073), 21.79% were "intentionally cited", 14.34% were "incidentally cited", and 63.88% were "not cited" (Fig. 1).
- For the M1 course, Presenters holding the academic rank of Teaching Assistant Professor cited more images, diagrams, and tables than Professor, Associate Professor, Assistant Professor, and Other academic ranks (see Figure 2). Data for other academic ranks were combined in order to maintain anonymity of presenters. A similar trend was noted for Block 3 course faculty.

CONCLUSIONS

- This study documents a serious and problematic lack of acknowledgement of the work of others in PowerPoint files used to instruct first year medical students, pervasive among all courses.
- Appropriate Citations:
  - Early in our education we are all taught explicitly how to cite the words of others using footnotes, bibliographies, and references.
  - In contrast, we are not taught how and when to cite the source of non-textual work of others used in our academic products.
- The "Fair Use" guidelines of the United States Copyright Law and licensing rights allow the use of tables, diagrams, and photographs produced by others in academic work such as PowerPoint presentations.
- Ethical and professional considerations should guide the acknowledgement of the use of the work of others in academic work: were it the faculty's work she or he would want and expect her / his contribution to be acknowledged.
- Educators need to be aware of the legal and ethical implications, within copyright law and within the confines of licensing rights and academia, of both
  - the primary use of content
  - the electronic distribution of such content (e.g. in a Word document or PowerPoint file)
- Were a student to use the work of others uncited, he or she would be accused of plagiarism and a breach of professional standards; face serious academic consequences could follow.
- Faculty members can and must do a better job of citing the work of others and , in so doing, modeling appropriate citation to students.
- Unacknowledged use by faculty members, as for students, amounts to infringement on copyright, plagiarism, and a breach of professional standards.
- Future directions of this study include analyzing 2nd year PowerPoint files from the Brody School of Medicine and documents distributed at a second medical school, as well as statistical correlation of citations by academic rank.

REFERENCE

1. United States Government, Copyright Law of the United States (Title 17) Web site, updated December 2016, copyright.gov/title17 (accessed 03/20/2018)