

## **Team Heat Presentation Outline: Digital Textbooks**

### General Overview of Digital Textbooks

#### I. Introduction

##### a. Definition

- i. Traditional printed text in a digital format; recreated, retrieved and used on a digital device including mobile and tablets

1. Page-fidelity text formatting
2. Reflowable text formatting
3. Publishing company-specific software programs
4. Academic digital platforms

##### b. Historical development

- i. 1990s to 2000s, or the slow-start up stage
  1. Problems of accessibility and overall usability
- ii. 2010s to present, or the quickly compounding time of growth

1. Aided by the general increase in technology usage

##### c. Current ventures and anticipated vectors

- i. Provided by the major textbook publishing companies
- ii. Overview of new opportunities per Reynolds's 2011 research

##### d. General Advantages

- i. Potential of lower costs to companies and consumers long term, but more than likely a shift of cost in reality

- ii. With proper support and anticipating difficulties in the transition, up-to-date resources are available instantaneously
- iii. Appealing and applicable nature of technology to students
- iv. Ability to customize the student learning experience
- v. Tablets as significantly lighter in weight than traditional textbooks

e. General Disadvantages

- i. Initial higher costs to companies and consumers
- ii. Cost of sustaining and supporting the technology
- iii. Reliance on unstable factors such as Internet bandwidth
- iv. Lack of research-supported best practices due to the relative newness of the area of study
- v. Physical maladies including eye strain and other muscle strain
- vi. Possibility of device theft and damage issues

II. Current Research

a. Supporters' view summary

- i. Insignificant academic performance differences between students who use traditional textbooks and digital counterparts according to the majority of published research
- ii. Growing body of research demonstrating that students using digital textbooks will out-perform those with using printed ones
- iii. Current desire and growing skill of students with technology as well as more compatible with globalization

b. Skeptics' view summary

- i. Expressed and research-supported preference among students for traditional textbooks for various reasons,

however this statistic is rapidly dropping and particularly in the last year

- ii. Felt and demonstrated student temptation to multitask on devices such as Apple iPads and Amazon Kindles, thus creating a distraction that educators must address via instruction methodology and that designers must address via various interface options
  - iii. Continuation of monopolistic practices by the major textbook publishing companies into the digital domain
- c. Meurant findings (2010)
- i. Apple iPads and their multi-beneficial functions in a Korean English-as-a-Foreign-Language classroom
  - ii. Proven ease of digital textbook updating when using tablet-supported instruction
- d. Murray and Pérez findings (2011)
- i. No significant difference in academic performance whether students used traditional textbooks or digital editions
  - ii. Students' stated preference for traditional textbooks
- e. Nelson, Jensen and Van Horn findings (2011)
- i. Indiana school district's successful implementation of a digital platform in lieu of adequate traditional textbook choices
- f. Bouck and Meyer findings (2012)
- i. Use of eText to assist visually-impaired students
  - ii. Implications for aiding students with other disabilities
- g. Daniel and Woody findings (2012)
- i. No significant difference in academic performance whether students used traditional textbooks or digital editions
  - ii. Students' stated preference for traditional textbooks

- h. Gilmore and Rush findings (2013)
  - i. No significant difference in academic performance whether students used traditional textbooks or digital editions
  - ii. Technological confidence demonstrated as a non-factor in academic achievement when digital textbooks use is required
- i. Rockinson- Szapkiw, Courduff, Carter, and Bennett findings (2013)
  - i. No significant difference in academic performance whether students used traditional textbooks or digital editions
  - ii. Enjoyment and growing preference of students in using digital textbook options noted
- j. Stone and Baker-Eveleth findings (2013)
  - i. Perceived usefulness and overall satisfaction as driving factors in the choice and continued use of digital textbooks by students
- k. West Virginia's adoption process (2013)
  - i. State's decision and efforts to implement digital platforms and textbooks across its schools
- l. Personal opinion
  - i. Thomas
    1. Concurring with acceptance and use of digital textbooks
    2. Issue is one of how it is used, not in simply its nature
    3. Usage, thus, should be dictated by research-based instruction methods rather than tenants of consumerism

4. Example from Wood's article on bridging print and digital literacy through such methods and strategies

- ii. Smith

1. Great tool for the educator's and student's toolbox
2. Requires further research, revision and training
3. Needs wise practice training for educators as soon as possible so as to prevent the volume of traumas that occur in the wake of any disruptive, impulsive marketing

### III. Biblical Integration

- i. Christian educators need to be players in the emerging field as ambassadors of God who are to be salt and light in this sin-devastated world; thus, they should get involved as soon as possible in order to influence as it develops
- ii. Communication as a major tenant of the Christian faith, and the use of digital textbooks as a global tool for fulfilling the "teaching" aspect of the Great Commission
- iii. Use of the technology to aid students in honoring educational endeavors rather than for the mere sake of use or for abuse-focused opportunities
- iv. As indicated by the Korean-based project, lines between the Web and digital textbooks blur quickly, thus creating a security concern for students and educators alike in the classroom
- v. Awareness of the inequalities between poorer and richer school districts, and how such will affect the ability to implement the digital adoption process
- vi. The responsibility of stewardship of the natural and financial resources given to us can be expressed through the use of digital textbooks

vii. Health and rest as an important though overlooked aspect of the use of various kinds of technology; thus, wisdom is needed for both educators and students regarding guidelines for appropriate and productive practices with digital textbook technology