

# Real-time Learning and Becoming Paper “LESS”

*Key's I Have Used to Become Paper “less”*

1. My classroom technology
  - a. Insight 360 Formative Instruction System  
<http://www.einstruction.com/products/insight-360-formative-instruction-system>
  - b. Available mobile computer labs containing 25 MacBook computers all with Internet Access and standard software suites.
  - c. Video projector with surround sound hooked into a VCR/DVD combo player.
  - d. Detached laboratory room with video projector, surround sound, and VCR/DVD combo player.
  - e. Classroom Jeopardy system for review of material day before tests.
  - f. Teacher computer loaded with many different types of useful software. I mostly use ExamView, Insight 360 Director, Microsoft Office, and Internet access.
2. Learning management system
  - a. 1:1 School: Angel, Moodle, BlackBoard or similar software system.
  - b. Non 1:1 school: eInstruction Clickers (or similar system)
3. Video projector/computer.
  - a. Internet connection
  - b. PowerPoint/Keynote
  - c. Surround sound speaker system
4. How I apply the technology
  - a. PowerPoint used to deliver highly visual presentations of the curriculum.
    - i. Incorporate as many video clips as possible.
    - ii. YouTube as a reliable resource: [www.keepvid.com](http://www.keepvid.com)
    - iii. Google image search used to replace mediocre artwork of some books.
  - b. Integrate assessment questions.
    - i. Within the PowerPoint, I embed test and quiz questions or similar questions.
    - ii. Using the Insight 360 instruction system by eInstruction, I can get instant feedback on topics I am teaching from ALL students.
    - iii. If all is good, I can move on. If many miss, I can back up a slide and reteach.
  - c. Homework
    - i. Homework is done in class using the Clickers.
    - ii. Homework is done and discretely graded.
    - iii. I had to get creative and remake the worksheets (with help from student aide).

1. All tests, quizzes, and worksheet have been converted over using ExamView.
  2. ExamView allow quick import into Angel, Blackboard, or Moodle.
  3. ExamView creates a great layout and is used to quickly create multiple assessments.
  4. 5 years of use has created a rich question bank that continues to grow.
5. Challenges
- a. I still use a lot of paper for students:
    - i. "Guided" notes sheets.
    - ii. Lab data sheets.
    - iii. Individual copies of paper for pre/post test.
      1. These are shared between sections and could be used year-to-year if stored.
  - b. Computer access still is limited to some students, which hinders us becoming paperless.
6. Advantages
- a. Significantly less time is spent shuffling/grading papers.
  - b. Classroom is more organized with less clutter.
  - c. Environmentally friendly.
  - d. Results are instantaneously. Evaluations can be given, reviewed with the students, and in the grade book before students leave class.
  - e. Less cheating – if the homework is done in the room, students are not in the halls before class passing last night's worksheet around.
  - f. Better data on individual student progress – Begins to eliminate the "my kid does so well on homework, but bombs the test. I don't understand".
  - g. Great bridge to the "Flipped" classroom.

If you have any questions or would like to sit in on a class where you can see this in action, please email [jcecrle@esu9.org](mailto:jcecrle@esu9.org) . If you have any ideas to share, I would also love to hear them.

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