Technology Use in Missouri High School English Classrooms

Missouri Association for Colleges of Teacher Education
Fall 2015 Conference

Ozarks Educational Research Initiative (OERI)

- Aurora
- Bolivar
- Branson
- Fair Grove
- Greenwood Lab School
- Hollister
- Joplin
- Lebanon
- Logan-Rogersville
- Marshfield
- Monett
- Neosho
- Nixa
- Reeds Spring
- Republic
- Springfield
- West Plains
- Willard
- Missouri State University

- Organized in 2006 with 10 original school members
- Currently OERI has 18 school district members, plus Greenwood Laboratory Schools at Missouri State University
- OERI is a partnership of educational researchers and educators interested in improving, promoting and disseminating educational research by conducting studies and program evaluations
- Partners pay a membership fee to fund research projects

Past OERI Research Projects

- 1:1 Technology
- Use of e-texts in classrooms
- Professional learning and teacher efficacy
- Software applications and their use in classrooms

2014-2015 Research Project

- The collaborative of 18 school district superintendents worked together to define the focus of the OERI research project
- By late November the focus was narrowed to Technology Implementation in English II classrooms

2014-2015 Research Questions

- What is the level of technology integration occurring in English II classrooms in the OERI school districts?
- What is the level of self-efficacy regarding technology for teachers in English II classrooms in OERI school districts?

Participant outcomes for this presentation?

- A deeper knowledge of actual use of technology within Missouri English II classrooms
- A deeper understand of English teachers' feelings of efficacy, in relation to the use of technology.
- An introduction to one method of evaluating technology use in classrooms (ISTE ICOT instrument)

Introduction to Topic

- “Technology is now considered by most educators and parents as an integral part of providing a high-quality education” (United States Department of Education, 2003, p. 3).
- U. S. public schools now provide electronic devices for one in every five students and spend over $3 billion annually on digital content (Herold, 2015).

Local Context

- Integration of computers into classrooms in a local phenomenon that is highly influenced by local context (Hadley & Sheingold, 1993).
- OERI member schools have a strong interest in technology and technology integration. Over half of the membership have 1:1 technology at least in one school. Non 1:1 schools still strongly focused on exploring technology.

Local Context

- OERI leadership perspective supports research findings:
  - “despite increases in computer access and technology training, technology is not being used to support the kinds of instruction believed to be most powerful” (Ertmer & Ottenbreit-Leftwich, 2010, p. 255).
  - “the student-centered, hands-on, personalized instruction envisioned by ed-tech proponents remains the exception to the rule” (Herold, 2015, p. 8).

Context for this conference

- There has been no empirical or longitudinal research to support the common presumption that a younger generation of teaching, that grew up with computers, will more easily integrate technology into their classrooms (Straub, 2009).

Brief Review of Literature

- A report commissioned by the Nellie Mae Education Foundation in 2011, found that only 8% of teachers fully integrate technology in their classrooms and only 23% of teachers feel they could integrate technology in their classroom (Moeller & Reitzes, 2011).
- Other than in the area of assessment, technology plays little role in learning (Fullan, 2013).

Primary Perception of Technology Benefits in Classrooms Today

- Often new technology simply focuses how new technology is better than older technology (Straub, 2009).
- Often focuses on how technology will make a teachers job easier (Straub, 2009).
- Often teachers see technology as a valuable tool for teachers rather than students (Herold, 2015).

Perception of Technology

- In general, both teachers and students want to protect the “general nature of conventional classroom learning” (Hennessy, Ruthven, & Brindley, 2005).
- Teachers have a malleable perception of technology (Straub, 2009).
- Teachers need to be convinced of the value of technology to supplement and improve classroom practice (Wozney, Venkatesh, & Abrami, 2006).

Special Challenge in English/Language Arts Classrooms

- English/Language Arts teachers are “book people”.
- Computers and technology are typically easier to adopt on the domains of Math, science and business (Culley, 1988).
- “Book dominated culture of English…is undoubtedly a factor in the resistance of English teacher to new technologies (Andrews, 2000, p. 23).

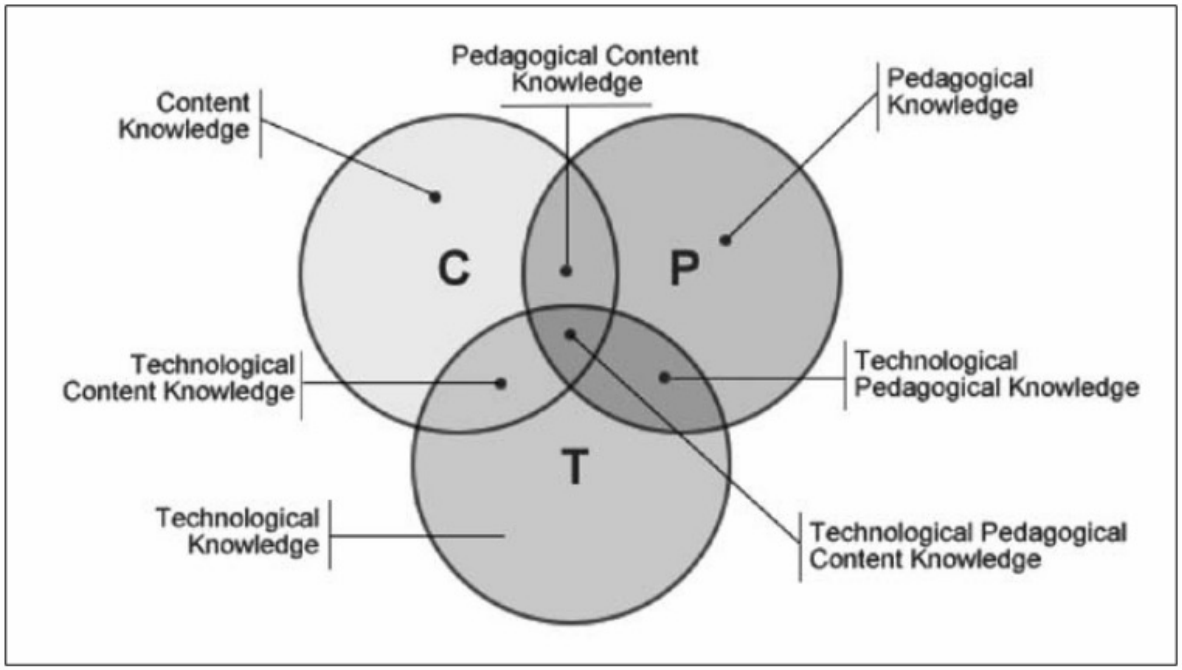

Figure 1: Technological Pedagogical Content Knowledge (TPCK) (Koehler & Mishra, 2008, p. 12)

Technological Pedagogical Content Knowledge (TPCK)

Measuring Technology Integration in Classrooms

- International Society for Technology in Education (ISTE). The premier technology in education organization in the world.
- ISTE developed tool to evaluate technology integration---ISTE Classroom Observation Tool (ICOT)

ICOT Instrument

- Minimum of two external observers who were trained by ISTE.
- Software monitors:
  - Variety of instructional tasks (from both the teacher and student perspective)
  - Setting of the class (whole group, individualized, small group, etc.)
  - Duration and frequency of technology use
  - Appropriateness of technology for lesson

OERI Study (Spring 2015)

- Visited 9- English II classrooms for full period of instruction
- 7 of those classrooms were visited twice, with at least two weeks between visits
- Visits were prearranged with teacher---not told purpose of the study---simply told to select a "typical instructional day in your classroom"
- Total of 16 classroom visits at 7 different high schools

Results of Classroom Observations

ICOT Teacher Roles Observed

30% of time spent in interactive direction role

19% of time in monitoring role

18% of time in academic coaching role

16% of time in lecturing

10% of time in logistics

7% in moderated discussion

Results of Classroom Observations

ICOT Student Groupings Observed

67% of time as whole class instruction

17% of time spent independent work

16% of time spent in pairs/small groups

Results of Classroom Observations

ICOT Technology Usage Observed by Time

Top 6

Technology	Teacher	Student
Computer	40%	26%
Interactive Whiteboard	10%	0%
Presentation System	32%	8%
Media Player	10%	9%
Presentation Software	38%	8%
Smartphone	0%	5%

Results of Classroom Observations

ICOT Learning Activities Observed (Student)

29% of time in content review & exploration

23% of time spent receiving presentation

18% of time creating presentations

8% of time in writing

5% of time in discussion

4% of time giving presentations

3% of time spent in Logistics

3% of time in research & info analysis

0% in synthesis & design

General Findings from Observations

- We observed very little use of technology in most English II classrooms
- All classrooms we visited had technology available (computers or tablet devices, projectors or whiteboard)
- Three classrooms we visited twice had complete sets of laptop computers for the classroom that we never observed in use

General Findings from Observations

- In two of the nine classrooms we observed students using technology to submit assignments
- In two of the nine classrooms we observed students using smartphones as reading devices
- While most teachers we observed used technology in their lessons, only two appeared to use technology as part of their natural classroom practice

General Findings from Observations

- In nearly all classrooms that we observed, instructional practice would have only changed minimally if technology had not been "working"
- Most commonly used websites we observed:
  - Kahoot!
  - YouTube
  - Google Search

General Findings from Observations

- We did not observe any examples of “collaborative learning” in any classrooms, however, we did observe a large amount of student discussion in some classrooms

Finding from Follow-Up Teacher Efficacy Survey

- Measure on 4 point Likert type scale (4= highest measure, 1= lowest measure)
- How much technology use exists in your high school? Mean response 3.125
- Are you confident about using technology as it is applied in your classroom? Mean response 3.375
- How often per day do you use technology related to academic or work-related activities? Mean response 3.5
- How do you rate your school in preparing students for use of technology? Mean response 3.25

Conclusions

- While we observed innovative teaching practices in a number of classrooms we visited, we did not observe strong technology based teaching practices in the large majority of classrooms we visited
- In all classrooms it appeared that technology was available for student and teacher use
- When technology usage was observed it was typically used to provide visual examples like pictures or video clips or to provide supports for note taking

For more information

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