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Annotated Bibliography

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Annotated Bibliography

Ashburn, E., & Floden, R. E. (2006). *Meaningful learning using technology: what educators need to know and do*. New York: Teachers College Columbia University.

By providing a comprehensive look at the teacher of the 21st century, the new teacher or the veteran teacher can gauge their level of technology knowledge and how they can use it in the classroom. The author of the book provides many useful content ideas and how to implement them. Additionally, the book provides ideas into professional development that could be used at the administration level to include all teachers. The book encompasses many different types of curriculum to provide a full illustration of the value and diversity of technology in the classroom. The book provides valuable strategies that I can use to cross-reference other practices against the book's claim of success in the classroom. Specifically, chapter 2 entitled, Teaching for Meaningful Learning with New Technologies was most helpful. Although the book was published five years prior to my thesis, the way that the author presents the technology implementation strategy is helpful in today's technology.

Basham, J. D., Meyer, H., & Perry, E. (2010). The design and application of the digital backpack. *Journal Of Research On Technology In Education*, 42(4), 339-359. Retrieved from

http://www.sharedwork.org/17618/files/17124/9900/Digital+Backpacks.pdf

The research presented in the article obtained through ISTE is a valuable resource in understanding how to organize the multimedia applications for effective

student use. The research suggests implementing a "digital backpack" capable of organizing student material in terms of applications and other types of digital files. By providing students and teachers with this portable digital backpack, districts can now obtain a low cost organization method that allows the student to carry their files wherever they have Internet connection. The value of the article and its research will provide my thesis an additional avenue that districts can implement a low cost alternative to connecting students with their work and therefore connecting them to an interactive management system of files.

Brunyé, T. T., Taylor, H. A., Rapp, D. N., & Spiro, A. B. (2006). Learning procedures: the role of working memory in multimedia learning experiences. *Applied Cognitive Psychology*, 20(7), 917-940. doi:10.1002/acp.1236

Much of the instruction that I conduct involves some form of tutorial using technology. The delivery of that material varies from topic to topic and course to course. The research conducted by the authors suggests the best forms of multimedia instruction. Additionally, the research provides detailed accounts of undergraduate students level of perception on various topics to create step-by-step products. The research provided would greatly support my literature review and research due to the similarity of the type of instruction I present on a daily basis. By comparing the different types of interactive multimedia deliveries, I can provide the reader a multitude of teaching strategies to compare and contrast based on the findings of the authors' research.

Bucy, E., & Tao, C. (2007). The mediated moderation model of interactivity. *Media Psychology*, *9*(3), 647-72. doi:10.1080/15213260701283269

Much of the research conducted on the topic of interactive multimedia education is conducted in the classroom that samples students and their perceived measure of comprehension. The research presented by the authors suggests a deeper study of why there is comprehension. Using more of a psychological approach to their research, the authors test subjects as to why they comprehending material and why some forms of interaction work better than other forms of interactive strategies. I feel that presenting research conducted with a psychological approach will allow me to delve deeper into the "why" of the results rather than simply if it worked.

Cakir, H., Delialioglu, O., Dennis, A., & Duffy, T. (2009). Technology enhanced learning environments for closing the gap in student achievement between regions. *AACEJ: Association for the Advancement of Computing in Education Journal,* 17(4), 201-315. Retrieved from http://www.editlib.org/d/29511

The gaps between rural, suburban and city school districts achievement is growing farther with each new onset of standardized testing. Many factors play into the reasoning from budgetary to teacher incentive but this article looks at the gap from a technological standpoint. The research does show a strong potential for technology to help bridge the gap between city and suburban test scores. By using technology resources that our low-cost and effective, city schools can now have access to similar or identical resources as their suburban counterparts. By creating learning environments that are tech heavy, districts have an opportunity to engage their students and staff in ways that direct instruction cannot master. The research provided by the authors will help my thesis in providing valuable

data on urban school districts that I will not have direct access to carry out my

research. I feel it is important to include all types of school districts to obtain the

best non-biased results as possible.

Chung, D. S. (2008). Interactive features of online newspapers: Identifying patterns and

predicting use of engaged readers. *Journal of Computer-Meditated*

Communication, 13(2008), 658-679. doi:10.1111/j.1083-6101.2008.00414.x

While not specifically sampling my direct sample, the research conducted

throughout the article is an integral part of how we use the Internet and the

interactive portions of specific news websites. The research categories and tests

each element of websites that contain news including: submitting photos,

customizing page look for weather and news, interactive live chat and audio and

video. Since technology is a constantly evolving and changing topic, websites

provide current improvements and news to engage today's 21st century learner.

By focusing on specific elements of engaging interactive multimedia presented in

the authors' research, I feel I can provide supplemental ideas and research that

will support my findings and theories on engaging multimedia education.

Cohen, D. J. & Rosenzweig, R. (2006). *Digital history: A guide to gathering, preserving,*

and presenting the past on the web. Philadelphia: University of Pennsylvania

Press.

The book provides useful and relevant information and ideas on how to add media

to the web. Throughout the book, authors paint a vivid picture of how to plan a

project that captivates the digital learner while presenting the information in a

multimedia format. Used in my professional career, the book provides useful

research in supporting my ideas of captivating the audience. By presenting the

information to students learning how to engage their audience, the book holds a

backstage approach to how the 21st century learns and perceives content in a

multimedia and at times interactive format. While I did not read the entire book, I

do find that all of the chapters offered some degree of logical and worthwhile

information advantageous to my thesis.

Crews, T. (2007). How professional organizations can help meet the professional

development needs of middle school business and technology educators. *Delta Pi*

Epsilon Journal, *49*(2), 140-6. Retrieved from

http://libproxy.gmc.edu:2186/hww/results/getResults.jhtml?_DARGS=/hww/resul

ts/results_common.jhtml.35

Staying current with technology is an integral portion of a professional in the field

of education. Additionally, business and technology teachers must obtain a degree

of training on new concepts in hardware and software updates to continue to

provide relevant and engaging curriculum to students. Professional organizations

often offer training at a minimal cost to the district or professional allowing

teachers to stay current on technology updates, allow collaboration and receive

valuable research into successful programs. The research conducted in this article

finds that a resounding majority want their specific state and national business

organizations to provide conferences, workshops or lesson plans that will further

their technology integration. By using the research, I feel I can use past and

present materials provided by professional organizations to determine if the

technology being implemented is engaging or interactive enough to provide

students with the best possible outcomes of success.

D'Silva, J. L., Kumar, N., & Rose, R. C. (2008). Teachers' readiness to use technology in

the classroom: An empirical study. *European Journal of Scientific Research*,

21(4), 603-616. Retrieved from

http://www.eurojournals.com/ejsr_21_4_04Naresh.pdf

Technology for some is a blessing while other educators fear the tools available to

them simply due to a lack of knowledge. With all of the perceived "great" and

"engaging" elements of multimedia presented throughout my study, I feel it is

important to include other elements of why some teachers are unwilling to adapt

to the needs of their 21st century learners. The researchers compared the actual

usage of technology against the perceived acceptance of secondary students in

Malaysia. Living in a global society and preparing students for an age of

globalization, the information is relevant due to the varying conformity of nations

to use technology in the classroom.

Ellis, R. S., & Okpala, C. O. (2004). Evaluation of digital technology and software use

among business education teachers. *Journal Of Instructional Psychology*, 31(1),

53-59. Retrieved from

http://libproxy.gmc.edu:2186/hww/results/getResults.jhtml?_DARGS=/hww/resul

ts/results_common.jhtml.35

There is an immense magnitude of different hardware and software tools available

for use in the 21st century. However, limited amounts of those are used in school

systems because of compatibility, lack of administration support and budgetary

reasons. For the purpose of business education teachers, the list of software is diverse but is still limited. The research conducted by the authors provides reviews on popular programs and packages. The surveys conducted poll business teachers on how often they are used and how they determine their effectiveness in the classroom. The research will support my thesis by providing results on programs that I plan or am using in the classroom. I can compare and contrast the information in the research to other facets of my sources such as the psychological process of using the programs and qualitative data.

Gorder, L. (2007). Creating classrooms of the future: connecting classrooms with one-to-one computing. *Delta Kappa Gamma Bulletin*, 73(4), 19-38. Retrieved from http://libproxy.gmc.edu:2186/hww/results/getResults.jhtml?_DARGS=/hww/results/results_common.jhtml.35

While the use of multimedia devices has grown since the 2007 study was released, computers are still the most sought after tool in the classroom. The limits of a computer a far surpassed by the limits of other types of multimedia devices. The article provides interesting psychological benefits students can receive from working with a computer. In the addition to the possibility of increased productivity, computers can also benefit all students by differentiating the instruction in many different media forms including taped lectures to self-study strategies using the Internet. The findings presented in the article will support my thesis for interactive multimedia by mentioning the less thought about benefits such as student psychological implications and possibility of differentiation.

Gorm Hansen, I., & Shlesinger, M. (2007). The silver lining: Technology and self-study

in the interpreting classroom. *Interpreting: International Journal Of Research &*

Practice In Interpreting, 9(1), 95-118. doi:10.1075/intp.9.1.06gor

While lengthy, the research provides useful concepts in terms of the presentation

using videos. Videos are a widely used for of supplement to presentations but the

authors present numerous ideas concerning instruction through only videos.

Popular in programs like virtual high school and websites such as Lynda.com,

videos have proven engaging and meaningful in the 21st century classroom.

However, the research does point out limitations of the video course and the

downfall on multimedia overload. The findings in this research are primarily used

in higher education but the video research is relevant in many facets of secondary

education.

Hannewald, R. (2008). What, how and why web 2.0? *Australian Council for Computers*

in Education, 23(2), 3-6. Retrieved from

http://www.deakin.edu.au/dro/view/DU:30024056

Although the study was conducted in Australia, the Web 2.0 applications have

reached a global audience in a staggering short amount of time. Web 2.0 is about

the social media and user created sites that drive our research bound students as

well as the 21st century learner. Allowing students the opportunity to contribute to

research and material on the web makes the learning tangible. The article gives

numerous examples of collaboration tools and easy to use audio and visual sites.

Interactive multimedia is often carried out not only through the instructional

portion of learning but as the checking for understanding. My thesis will focus on

both the learning and the doing of education. Providing web 2.0 skills and ides to the readers and my research will allow me to use various global tools to prove interactive multimedia does indeed posses a stronghold in education.

Hurd, S. (2009). Why has computer assisted learning made so little impact in secondary education? Lessons from an economics and business subject case-study. *Curriculum Journal*, 20(2), 139-159. doi:10.1080/09585170902948780

The study is conducted over a span of 20 years in the United Kingdom and attempts to find correlation as to why the learning has not increased with the level of technology in classrooms. The study takes a historical approach to find a reason why there has been limited amount of success in much anticipated solution to the 21st century learners' differentiation needs. While not supportive of my research, having an antithesis can prove valuable in including all facets of a diverse field challenging the reader to assume that little has been left unexplored in my research.

International Society for Technology in Education. (2011). ISTE membership, nets standards, books, journals, and professional development for teachers. Retrieved from http://www.iste.org

The International Society for Technology in Education provides a wealth of information for integrating technology in the classroom. In addition to an online website, ITSE also publishes three separate journals providing teachers in all areas of curriculum ideas on best practices in the realm of integrating technology into the classroom. Additionally, ITSE also sets standards of education that many district have adopted and incorporated in their state standards. The information

obtained throughout the website will allow me further access to practicing

teachers and their experience in the challenges and successes of integrating

multimedia and interactive education into classrooms.

Kotrlik, J., & Redmann, D. (2009). Analysis of teachers' adoption of technology for use

in instruction in seven career and technical education programs. *Career and*

Technical Education Research, *34*(1), 47-77. Retrieved from

http://libproxy.gmc.edu:2186/hww/results/getResults.jhtml?_DARGS=/hww/resul

ts/results_common.jhtml.35

A major roadblock in developing teaching strategies with technology is the

element of constant changing and improvement of software and hardware.

Additionally, instructors lack the time, funding and knowledge on where to learn

about new concepts and technologies. The research conducted in the article

provides a study on secondary education teachers and how they collaborate, revise

curriculum and implement new technologies in their classroom. By understanding

the sources for improvement, I feel that this can aid my research in finding new

technologies more efficiently. Additionally, by collaborating with teachers who

have already implemented the technology, I will better understand the common

pitfalls and successes of the technology.

Mayer, R., & Moreno, R. (2003). Nine Ways to Reduce Cognitive Load in Multimedia

Learning. *Educational Psychologist*, *38*(1), 43-52.

doi:10.1207/S15326985EP3801_6

While dated, the article provides numerous relevant ideals about the possible

overload of multimedia. Supporting the idea that humans can only process so

much, the research provides a unique look into how the brain processes multimedia. The research suggests that by limiting the unnecessary cognitive load that random outside "noise" can attract will benefit the learner by only allowing useful information to process through the mind. The psychological approach of the study will strengthen my argument in scientifically researched practices are effective and not just simply a new form of technology is attracting the learner.

Mbarika, V., Bagarukayo, E., Shipps, B. P., Hingorani, V., Stokes, S., Kourouma, M., & Sankar, C. S. (2010). A multi-experimental study on the use of multimedia instructional materials to teach technical subjects. *Journal Of STEM Education: Innovations & Research*, Special Edition(2010), 24-37. Retrieved from http://jstem.org/ojs/index.php?journal=JSTEM&page=article&op=view&path%5B%5D=1514&path%5B%5D=1285

The research conducted by the authors presents data sampled from specific disciplines that have a technical nature. Engineering and business present the most optimal positions to present multimedia. However, there is little research to compare if it does in fact increase the cognitive skills that are attempting to be taught. While not directly sampling students from my sample, the research is conducted on undergraduate students focusing on business or engineering concepts. Similar to courses taught at the high school level, the results mimic a possible correlation between my expected findings and the results obtained by the authors. The eventual findings of the research indicate that past traditional instructional delivery is not sufficient in providing students with varying backgrounds full comprehension.

McGrail, E. (2006). "It's a double-edged sword, this technology business": Secondary

    english teachers' perspectives on a schoolwide laptop technology initiative.

    Teachers *College Record*, *108*(6), 1055-79. doi:10.1111/j.14679620.2006.00685.x

    Originally I felt that the research and ideas presented in this article would contain

    little use to my research. However, after further reading, I sense that

    encompassing all facets of the opinions on technology is important. The English

    classroom is not a typical source of interactive multimedia. However, with the

    advent of laptop programs available to all subjects, the possibility to provide

    technology in all subjects is now a reality. The research provided by the authors

    will provide another side to my argument of interactive and multimedia teaching

    strategies by countering some of my advantages. I feel it is an important element

    to include other subject curriculum to allow numerous facets of the benefits and

    failures of technology.

McGrail, E., Sachs, G., Many, J., Myrick, C., & Sackor, S. (2011). Technology use in

    middle-grades teacher preparation programs. *Action* in Teacher *Education*, *33*(1),

    63-80. doi:10.1080/01626620.2011.559443

    Throughout my course of study, I found it important to clearly understand how

    the teachers are receiving their technology instruction. By going straight to the

    source of instruction, I feel I can understand how some of the secondary education

    teachers are forming their teaching strategies and opinions on technology

    instruction. The researchers of this article provide useful studies of nine higher

    education institutions and how their teacher preparatory programs use technology

    and approach the education of future teachers on the effective use of technology.

Additionally, the research includes a useful chart explaining the type of

technology, the technology that is used and its use in a secondary education

classroom.

National Business Education Association. (2010). National Business Education

Association. Retrieved from http://www.nbea.org

In addition to the NBEA standards, the NBEA website provides valuable

resources to practicing teachers. The forum section of the website provides

teachers from across the United States to provide valuable ideas and teaching

strategies dealing with business and computer education. Many opportunities exist

to use this website throughout my thesis to provide my readers with access to

ideas and concepts directly from the largest professional organization available to

teachers.

National standards for business education: *What america's students should know and be*

able to do in business. (2007). Chicago, IL: National Business Education

Association.

The standards created by the National Business Education Association is a

necessity all Business and Computer teachers aligning standards to daily

objectives in Business and Technology Education. Although state standards for

Business Education is in the process of approval and adoption, Pennsylvania does

not have state standards for curriculum in Business and Computer education.

Many districts have adopted the use of the national standards throughout their

curriculum. By using the standards, I feel I can align my research of effective

teaching strategies to the national standards. This will allow me to convey both

my knowledge of the desired standards of education and that the teaching

strategies in effective use of multimedia education is aligned to the overall vision

of business education at the national level.

Obringer, S., & Coffey, K. (2007). Cell phones in american high schools: A national

survey. *Journal Of Technology Studies*, 33(1/2), 41-47. Retrieved from

http://libproxy.gmc.edu:2186/hww/results/getResults.jhtml?_DARGS=/hww/resul

ts/results_common.jhtml.35

Cell phones are present in high school classrooms, teenager's lives and teacher's

lives. However, many district have numerous policies in place to block the usage

of cellphones. Additionally with the advent of the smartphone, cellphones can

now play an integral role in multimedia instruction. The article will provide useful

documentation of research into why administration blocks cell phones and the

overall opinion of students, teachers and administrators about the role they play in

the classroom.

Redmann, D., & Kotrlik, J. (2008). A trend study: Technology adoption in the teaching-

learning process by secondary business teachers - 2002 and 2007. *Delta Pi

Epsilon Journal*, *50*(2), 77-89. Retrieved from http://mariaesposito.org/disseration

docs/Technology Intergration/Redmann.pdf

The research conducted in this article boldly states that Business teacher use

technology more than any other content area. While researching the concept, the

authors based their study on a prior research conducted in 2002. The article uses

the 2002 study as a benchmark to address the concept of if technology

implementation in the classroom is following the growth of technology. The

initial adoption of technology in the classroom followed the tech boom of the late

nineties into the early 21st century. However, since the 2002 study was conducted,

technology today looks remarkably different. The idea of interactive multimedia

in the classroom is taking a substantial hold over the initial technology upgrades

received in most classrooms. This article will be an integral resource for my study

to provide a historical benchmark study.

Remus, W., Lim, K., & O'Connor, M. (2008). The effect of presentation media and

animation on learning a complex decision. *International Journal* of *Instructional*

Media, *35*(3), 283-93. Retrieved from

http://libproxy.gmc.edu:2186/hww/results/getResults.jhtml?_DARGS=/hww/resul

ts/results_common.jhtml.35

The research conducted in this study provides a thorough scientifically and

quantitatively based approach. By using quantitative practices, the researchers are

able to conclude that animation and multimedia is an integral portion of the

learning process. The research is primarily conducted for the purpose of testing a

hypothesis concerning the use of computer-based instruction. However, the use of

animation and multimedia throughout the computer-based instruction models

develop a degree of user control. I feel that this article will support my research

by providing valuable quantitative data. Unlike most of my other sources, the

quantitative data provided by the authors' research will allow my reader another

level of data used in a statistical fashion.