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Creation Nets Model

as a Technique for Teaching Innovation in Journalism Schools: Lessons from the Innovation Incubator Project

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Disruptive innovations in media technology are reshaping journalism and mass communications forcing many schools to rethink the way they train future journalists. Some schools have gone beyond teaching multimedia skills to creating innovation centers for new media technologies. This study reports on a project that brought together students from seven journalism schools to create cutting edge innovations to help media organizations re-engage their audience. The process used the creation nets model that is popular in the business world but is rarely used in journalism. The paper teases out important lessons from the project that can be used in teaching innovation in journalism schools.

Introduction

The integration of new media technologies into the news business has led journalism schools to re-invent their curriculum to prepare students to work in converged media environments (Deuze, 2001). Mass communication educators embracing media convergence have been urged to be willing to reinvent journalism education and experiment with "practices that are congruent with the imputed properties of cyberspace (Huesca, 2000). Journalism educators should be "flexible, creative, and open-minded experimenters who are not wedded to given conventions of journalism (Huesca, 2000). Today multi media training and students projects such as Web-based stories that offer multiple perspectives and different narrative paths are standard staple in media convergence classes (Kraeplin and Criado, 2005).

But journalism schools have often tended to be reactive in relation to changing technologies. Students are rarely the ones inventing the technology and the innovations that are re-shaping the news business. This paper reports on a unique project that challenged journalism students to come up with cutting edge innovations to help media organizations re-engage their audiences. The paper provides a theoretical framework, documents the innovation process that used the creation nets model that is popular in the business world but is hardly used in journalism, and provides important lessons from the project that can add new

knowledge to the pedagogy of teaching journalism. The study is especially timely because the disruptive changes brought by innovations in information technologies have forced some journalism schools to embrace innovation as part of their curriculum. The New York Times reports an emerging trend where some journalism schools have gone beyond teaching media convergence classes and are now in the process of creating innovation centers or introducing innovation and entrepreneurship in their curriculum (Stelter, 2010). This study offers a template that can guide such teaching and learning efforts.

Literature Review: Journalism Education and Experiential Learning

While a survey of literature failed to turn up any instances where the creation nets model has been used in journalism, this analysis and the innovation process falls within the pedagogical ambit of experiential learning. The ideology of experiential learning was first introduced to the American educational system through the writings of John Dewey who emphasized the role of experience and reflection in education (Dewey, 1933). Experiential learning provides students the opportunity to acquire real life experiences through fieldwork, workshops, or internships (Mckeachie, 1994). For the last two decades, journalism education has encouraged journalism schools to use a hands-on approach to learning (Dickson, 2000). Other scholars have recommended that students should gain work experience in laboratories or workshops, which provide for experimentation with purposeful challenging of media content and forms (Blanchard and Christ, 1993). Experiential learning can also manifest itself in form of service learning-----learning that combines public service with related academic work (Cohen and Kinsey, 1994) Some scholars see service learning as a way of teaching citizenship values which is seen as the most important responsibility of schools and colleges (Newman, 1985). *The National Community Service Act of 1990* says good service learning must meet the following four criteria (Reus and Becker, 1993):

"1. Under which students learn and develop through active participation in thoughtfully organized service experiences that meet actual community needs and that are coordinated in collaboration with the school and community;

"2.That is integrated into the student's academic curriculum or provides structured time for a student to think, talk, or write about what the student did and saw during the actual service activity;

"3.That provides students with opportunities to use newly acquired skills and knowledge in real life situations in their own communities; and

"4.That enhances what is taught in school by extending student learning beyond the classroom and into the community and helps to foster the development of a sense of caring for others."

And yet despite the seemingly important role of experiential learning in education, it appears to be a neglected area in media scholarship. Rhodes and Roessner note that in the last two decades since *Journalism & Mass Communication Educator* became a refereed journal, only four articles have been published addressing experiential learning (Rhodes and Roessner, 2009). The philosophical difference between service learning and other forms of learning is that service learning has an element of public service built into it (Cohen and Kinsey, 1994). The public service element of this project was to create a new tool for civic engagement.

Media and Civic Engagement

Sociologist James Coleman, who wrote widely on public issues involving schools and families, is credited for laying the theoretical foundations for the civic engagement movement. His writings helped bridge the gap between the individualistic market-oriented thinking of economists and the sociologists' concerns with social networks, values and norms (Coleman, 1988). He used the term "social capital" to show ways in which social ties and shared values and norms can help people become better educated, amass economic wealth, make careers and raise well-socialized children. He argued that economists should pay attention to social ties and culture (Coleman, 1990).

Political scientist Robert Putnam borrowed some of Coleman's ideas on social capital in his seminal book, *Making Democracy Work*, to explain effective democratic governance in Italy. Putnam found that regional governments in Italy, which looked very similar on paper, worked very differently depending on which region had a rich array of voluntary social groups (Putnam, 1993). In a follow-up book, *Bowling Alone*, Putnam used social statistics to argue that the United States has experienced a decline in social capital in the late twentieth century, and Americans are increasingly leading isolated lives instead of joining groups such as churches, bowling alleys or civic organizations. Putnam argued that the problems facing US democracy and governance could actually be traced to the decline in social connections (Putnam, 1995).

Putnam's research has inspired other scholarly works and discussions on social and political change including studies on social capital that pay tribute to such networks as significant in development of a democratic culture and participation of citizens. The Center for Information and Research on Civic Learning and Engagement (CIRCLE) has compiled a comprehensive list of indicators of civic engagement which include: voting in national elections, joining a political party, being a candidate for local office and civic activism such as writing letters to a newspaper about social or political concerns, collecting signatures for a petition, collecting money for a social cause and boycotting products or services because of social concerns (CIRCLE, 2003).

For citizens to be engaged in civic life, they must be equipped with certain skills such as knowledge and understanding of community issues, values that

support a civic culture, a willingness to act to advance the public good and the skills and ability to imagine a better society and direct social change (Pratte, 1988). Political communication research has demonstrated that news media consumption and interpersonal political discussion play important roles in civic participation (McLeod *et al*., 1996; Shah *et al.,* 2001). News media provide a resource for political discussions and create opportunities for exposure to conflicting viewpoints, encouraging political talk that might not otherwise occur (Mutz and Martin, 2001; Mutz, 2002). In turn, political discussion raises awareness about collective problems, highlights opportunities for involvement, and thereby promotes civic participation (McLeod et al., 1999; Kwak *et al.,* 2005)

The Creation Nets Model

Corporate technological innovations have traditionally been conducted in-house by the Research and Development departments, which develop new innovations for use by the parent company. But this model is becoming obsolete in an age of mobile scientific workers, innovative high-tech startups and a growing trend of collaborations between corporations and university labs (Chesbrough, 2005).

Technology companies such as Cisco, Lucent, Intel and Microsoft do little of their own basic research and have instead pioneered a new model of "open innovation," in which companies import ideas from outside. Open innovation in this case is broadly defined as a paradigm that assumes that firms can and should use external ideas as they look to advance their technologies and processes. The Creation nets model refers to one form of open innovation designed to harness the potential of innovation pursued by a group of participants with roles distributed across the group (Hagel and Brown, 2006). Creation networks are often put together by an organizer who serves as a gatekeeper and defines the participation protocols and how results will be measured. Creation nets have a single goal: to create new knowledge, products and services. As a result, the group tends to be aggressive and energetic in its adoption of new knowledge and new approaches, reducing internal frictions, opportunism, and hold-ups that stymies less focused collaborations. But by their very nature, creation nets are adept at continuously innovating the process and roles to deliver the required performance and results and collaborate to create new knowledge, to learn from one another, and to appropriate and build on one another's work. By leveraging the creativity of other participants, creation nets are a good way to generate superior results and successful innovations. While this method of innovation has been perfected by companies such as Procter and Gamble, Cisco and Eli Lily, it is not limited to for-profit corporations and Wikipedia is perhaps a good example of a loose creation net as are other examples where amateur astronomers pool together hundreds of telescopes online to track celestial events. Creation nets can be formed to achieve short term or long-term objectives. In 2000 for example, P&G, after realizing that the products coming from their own in-house innovation team were failing to meet financial expectations and share prices had fallen by more than 50 percent, decided to turn to outside help including consultants and loyal customers through a creation net that leveraged the creativity of participants. Creation nets can range from small groups to hundreds or even thousands of participants in the pursuit of distributed, collaborative and cumulative innovation.

While creation nets have been popularized by modern communication technologies, the first recorded creation nets are traced back to the Italian Renaissance in Piedmont and Tuscany that produced rapid innovations in techniques for producing cotton

and fabrics (Hagel and Brown, 2006). Creation nets tend to organize their activities into modular processes, which leaves a lot of freedom to participants to innovate their approaches in delivering the expected performance. Such process innovation is often in contrast to the established organizational approach. But in spite of such a "free" innovation process, creation nets are remarkably focused in developing their action points where participants must come together and deliver outputs. Among the rewarding experiences of working in creation nets is the ability to get better faster by working with others in networks rather than working alone.

Project Overview

Participants in the Knight Foundation Innovation Incubator project were: Michigan State University, Kansas State University, Kansas University, Ithaca College, University of Nevada-Las Vegas, Western Kentucky, and St. Michael's College. The project was funded through a $230,000 grant from the Knight Foundation following a successful grant application that the seven schools jointly submitted to the News Challenge Initiative, an annual competition organized by the Knight Foundation that seeks to identify and fund innovative ideas using digital experiments to transform community news. The schools proposed to create a national network of incubators through which college students would design, develop, and work with professional newsrooms to distribute new and original (digital) applications of community news. Using the creation nets model, the project would create a contemporary Petri dish that was collaborative, participatory, and dynamic, to develop original solutions to the challenges facing journalism in a digital age to help newsrooms re-engage communities. The project commenced in Spring 2007 and the first phase of testing the final innovation was completed in September 2010. About 35 students and faculty from seven journalism schools participated in the project. Incentives included travel, course credit, networking possibilities and the challenge to make a difference in the news industry and the communities they serve.

From the outset the project established a few rules and guidelines to govern the process. Each university recruited five students who would work under a faculty mentor to create new media innovations that could help engage communities in new ways. The students were primarily undergraduates although there were three graduate students. To ensure that the project lived up to its premise of leveraging the creative and intellectual capital of the young generation, faculty mentors would not be allowed to generate any ideas, they could serve as a sounding board for students. But the origination and vetting of new ideas was solely the responsibility of students, who were prohibited from quitting the project once it began. Each university was at liberty to decide how to reward the students for participation, for example, some awarded credit or a stipend. Students were selected on their willingness to abide by the rules and, more importantly, it was an honor to be selected because this project would thrust them at the cutting edge of the media innovation process and they had an opportunity to create the next big innovation in new media.

Disagreements about ideas and process had to be resolved amicably, either by the students themselves or with the help of the faculty mentor. All students had to start the process by reading, *Creation Nets: Harnessing the Potential of Open Innovation* by John Hagel III and John Seely Brown to understand how the creation nets process works. All the teams met at Ithaca College in New York for an orientation retreat where the principal grant writers explained the type of innovations that they were looking for. For an idea to be considered a winner, it had to be new, digital, and one that could be tested easily and affordably by media organizations, and have the potential to significantly engage citizens in a given geographic location. The teams were shown examples of recent innovations that fit the mold. One faculty mentor who had previously worked in a similar innovation process with two of her students shared her experiences to help provide a context for understanding the innovation process. Other issues covered during the retreat included a discussion of the creation nets process, innovation trends in the field of information and communication, the mentoring process, conflict resolution, as well as informational resources to help the teams monitor new media innovation trends.

Students also spent time in the lab visiting select websites identified by faculty as examples of the latest media technology and learned how to research their ideas. Students had about two months to work on their projects before traveling back to Ithaca College in Summer 2007 where they presented their best ideas before the other teams. The top idea would be developed further and presented at the annual Online News Association conference in November 2007 where it would be pitched to the media industry for possible adoption. The grant would cover any initial costs that the media companies would incur if they decided to adopt the new innovation.

Once they had understood the creation nets process, each group set its own mode of operation. Some groups set up blogs where they would post their ideas and discuss and vet them. Others such as the five students from Kansas State University decided they would meet once a week to discuss their ideas. The Kansas State University students challenged each other to come up with five brand new ideas. They had the unenviable task of researching and crawling the Web to make sure that whatever ideas they came up with were not already out on the Web. While the students researched possible ideas, their mentor scoured sites that discussed media and information technology trends. Any information that could spark an idea in the students was promptly shared with the group. In their second meeting, each Kansas State University student presented five ideas. The students then whittled down the initial 25 ideas to the top five. For an idea to be included, it had to be brand new, easy to implement, usable and result in new ways of engaging the community or a section of the community. Because of the intensive nature of the process, students became heavily invested and developed a sense of ownership of the ideas they developed. Therefore there were heated discussions leading up to the selection of the top five ideas because each student felt their ideas were the best. The role of the faculty mentor became critical in making sure the selection process was as fair as possible and that disagreements did not undermine the critical need to keep the group together. The final five top ideas from Kansas State University were carefully discussed and vetted by the group. In the end the Kansas State University group chose to present an intuitive user centric college news site that

would combine the same interactive features common among social networking sites. They called it Novus.

All the participating schools presented their projects in Ithaca, New York and voted on the project that was the most innovative, cutting edge and easy to replicate. While the initial idea was to pick just one top idea for presentation at the ONA conference, faculty mentors felt that due to the intensive nature of the process, there was need to reward more than one group. Therefore three top ideas were selected. Unfortunately, Novus was not among those selected as the participants felt that the project would require a significant amount of money to implement and newsrooms might not be willing to invest so heavily on a new idea.

The team from Kansas State University joined the project presented by Kansas University and the faculty mentor from Kansas State University served as the mentor of the combined team. Kansas University had a simple idea that was easy to execute. Their project, known as Better Letter, was designed as an online application that could be embedded in online news stories to help the public contact public officials regarding public issues raised in news stories. The officials would respond to such letters and their responses would be delivered to the user and also be displayed on the news site. The program was tweaked to include a mapping feature so that public officials were able to identify the nature of issues coming from a particular zip code. The three final projects were presented at the ONA Conference in Toronto Canada in November 2007 where several media outlets expressed an interest in testing them on their sites.

The Kansas team partnered with the local Mercury newspaper in Manhattan, Kansas, to test the idea. The team hired the services of a professional programmer to embed the program to the site and incorporate mapping features. The name of the project was changed from Better Letter to VoxPop to capture its intent of giving the public a voice on issues of public concern. In Spring 2008, the VoxPop project team invited local leaders from the Manhattan City Commission, county leaders and state representatives to an official launch of the project. Following the launch, the newspaper devoted promotional space on its website to publicize the project. The first phase of testing the project ended in September 2010.

Voxpop was used 596 times during the period of testing. This is about three times the normal traffic of users who react to stories on the news site for a similar period of time and is therefore a remarkable number for a new innovation. The use of VoxPop as a tool for community engagement has tended to pick up more traffic during periods of intense local political activity such as elections. For example, the program was extensively used during the recent local election coverage when the newspaper allowed readers to respond to the full text of the candidates' answers to local issues. The Mercury has recently switched to a subscription-based model that now limits access to site content to paid customers thus affecting traffic to VoxPop on a regular basis as originally intended. But according to the editor, the newspaper intends to continue using VoxPop on future interactive campaign coverage.

Role of the Faculty Mentor

Despite all the efforts made to prepare the faculty and the students at the beginning of the project, the innovation process is a journey of discovery that is full of unknowns. There is no syllabus, no single definition of what an engaging digital innovation looks like and there is no blue print on how you create a new media innovation. This can be frustrating for students who are used to a structured learning environment where everything is well defined. The students wanted more specificity, better parameters and detailed instructions similar to what they were used to in class. The faculty mentors therefore spent a considerable amount of time addressing these issues and it took the students time to re-orient themselves to a process that deliberately avoids specificity and overbearing details in order to encourage free-thinking, creativity, and innovation. One way of helping them understand the process was by researching and sharing with them the stories behind the latest innovations, their creators and the vision behind them. Other methods included using examples of new digital innovations as beacons of reference of what was in vogue. And even after they had understood the process, they felt under pressure to produce a winning innovation. As products of an education system that rewards success and punishes failure, they dreaded the prospect of being unable to come up with a winning project. One primary role of the faculty mentors therefore was helping teams to re-orient their thinking and understand that taking part in such a project was a lifetime opportunity that would thrust them at the cutting edge of media technology, and that alone, made them winners.

Each team set the participation protocols of its members. The Kansas State University team, for example, set deadlines when each student needed to come up with their initial five ideas. And after they had whittled the 25 ideas to five, they set deadlines when they needed to pick the top idea and the role that each person needed to play in the process. Other groups measured participation of group members based on their input and contributions on the team blog where they posted and discussed their ideas. Faculty would follow up with students who were not participating as often as expected.

The faculty mentors also spent time managing differences that would emerge from time to time among team members. There were personality differences as well as creative tensions that would sometimes crop up when a team member would come up with what they thought were brilliant ideas only to have the same shot down by their teammates because such an innovation already existed or it would be too expensive to implement. Some students took such rejections personally and the faculty mentor would therefore spend time ironing such differences and keeping the team focused and thinking creatively on the best ways to leverage digital technologies to drive reader connections to local news.

The faculty mentors created their own support system through a blog where they exchanged information on what was going on in their groups, mentoring strategies that worked well as well as sharing resources on any new innovation trends that they had discovered. Any useful information related to

media innovation was shared with students to help inspire new ideas. The faculty mentors also served as the liaison between the grant writers, in this case the directors and deans of the seven journalism schools, and the student teams. Any administrative issues and questions that needed to be communicated to the students and vice versa were communicated this way. This ensured that each team was getting the same message through their faculty mentor.

While the grant from the Knight Foundation made it possible for students to travel to Ithaca and Canada, the innovation process can be tried in a classroom setting, and it may even be an added advantage to do it that way as a semester long undertaking to allow for more time to really understand the process. Each school nominated a faculty member as a mentor based on the individual's research interests or their willingness to participate in the project. There was no course release but the grant offered a small stipend as an incentive. In hindsight, any faculty member interested in undertaking a similar innovation project outside class should consider asking for a course release due to the amount of time involved in the process. The fact that the students had to understand the innovation process, research new ideas and come up with sketches of new innovations all in two months made the project a time consuming effort. Trying a similar project in a regular classroom would afford the students more time to master the process and it can certainly be done with minimal resources to cover the cost of developing a prototype or testing the innovation.

As more journalism schools become innovation incubators for community news, it would be helpful for such faculty mentors to consider the skill sets that participating students would bring to the project. While students were selected based on their willingness to commit and participate in the project, their curiosity, creativity, and a correct assumption that today's students are digital natives who understand new media trends, their technical know-how was never important. In order to bridge the gap between concept and practice, future projects could place a greater emphasis on the skills that participants must possess or consider pairing up journalism students with computer science students in a similar process. While this project got around that hurdle by hiring a programmer, it would be interesting to find out if including computer science students from project concept to execution would yield different results. As digital platforms continue to become the main venue for content creation and delivery, it may have implications in terms of the way we train future journalists and the skills they may need in the work environment.

Lessons for Journalism Education

There are several lessons for journalism education that can be learned from the experiences of this project. First, the project represents a model of teaching innovation and entrepreneurship in journalism schools. The new approach is to combine traditional journalism values with Web classes and an entrepreneurial spirit. Combining entrepreneurship with journalism training would help students spot and develop trends and opportunities that can be turned into new media

products. This is a critical skill because it is becoming increasingly hard to find jobs. It also gives journalism students the opportunity to be at the forefront of the changes shaping their field. Well-known journalism schools that are trying to instill an ethos of innovation through a revamped curriculum include the Walter Cronkite School of Journalism and Mass Communication at Arizona State University, University of Nebraska, University of Maryland, as well as North Western University, among others, while Columbia University and the City University of New York are creating centers for new media innovation. This analysis presents a model of teaching innovation by turning journalism schools into innovation incubators using the creation nets model.

Additionally, the project has the potential to provide journalism schools with a new and efficient way to increase their relevancy – both to students and to the industry. For decades, the academy's professional organizations, including the Association for Education in Journalism and Mass Communication have tested a variety of strategies for reaching out to news organizations and making academic research relevant; the Knight Foundation is among the philanthropic organizations that have invested in those efforts. But all of those projects have been less than successful, in large part (we would argue) because the research did not address the industry's key issues and concerns. The Innovation Project was designed specifically to do just that – not just in this single iteration or moment in time, but as a model of an effective system of innovation that can continue to produce new ideas and new models as technologies, consumer habits, and distribution options continue to evolve.

Second, the project demonstrates the need to cross the traditional disciplinary boundaries to meet new challenges facing journalism. The creation nets model is widely used for innovation in industries but can successfully be adopted as a teaching tool in journalism schools. The model, as used in the project, assumes that young minds are more likely to think outside the box and when you combine such thinking with their creativity and superb understanding of technology, you inspire new ideas and transformative innovations. This is a model widely used at technology companies such as Google and AOL. By its very nature, the project thrust students into the depths of the Internet where they spent countless hours scouring the Web, researching and vetting their ideas, and studying the latest models of information and platforms for delivering such information. They were therefore on top of the latest innovations. Classes in media convergence in most schools tend to focus on giving students the competency and understanding to produce and distribute content across the various media platforms. By going a step further and studying the latest models of convergence, they could anticipate trends and create innovations that capitalize on those trends. While the project assumed that college students are "digital natives" the students developed a mastery of the digital land that they would not otherwise acquire in a normal convergence class. Some of them have gone on to work in online media industries, no doubt helped by that experience.

Third, the project linked Kansas students with students nationwide in a process that allowed them to learn from each other through the critical feedback that they received or gave to the other groups either in person or through social

media. Online tools such as Facebook, Twitter and blogs can easily be incorporated into innovation projects to create an avenue that links students in innovation incubators in various colleges and universities to exchange information that would feed their creative juices. Such networking among students across colleges as well as the opportunity to pitch their innovations among industry professionals at ONA afforded the students more opportunities for learning and growth beyond what they would get in a classroom setting. From this pilot project of seven sites, it is possible that the model could engage a critical mass journalism programs in a national collaboration, resulting in an extraordinary infusion of creative capital from the academy to the community.

Fourth, technology has today found a permanent place as an indispensable teaching tool in classrooms. The innovation incubator project takes this continuing trend to a new level and forces both the instructor and the students to immerse themselves into the deep universe of information technology and to rise above what exists and emerge with new innovations. Very few journalism students currently have the opportunity to develop such knowledge depth or to invent something that has the potential to shape the field of journalism. This opportunity to be a part of journalism history is a great motivating factor and creates a level of enthusiasm that positively impacts the learning process. The intensive research and immersion required by the innovation process also introduces instructors to new and emerging tools that have not yet made it to the mainstream but which can be used in the classroom to enhance their teaching and student engagement.

Fifth, the creation nets process provides a powerful teaching and learning model that places students at the center of the learning process and allows them to take control of their own learning, with the instructor playing the role of a guide and sounding board. This reversal of roles means that the instructor is no longer the sage on stage but a valued and trusted partner in the learning process. It also demonstrates that when students are motivated and inspired by a good challenge, they have the capacity not only to learn and absorb great information in a short time but also the ability to shape the future of their field of study. The process also exposed the students to a new way of learning that is different from the structured classroom environment and introduced them to a "free" and unstructured learning environment where creativity, teamwork and innovation were prized.

Finally, the creation nets process adds an interesting layer to the perennial debate in journalism of whether journalism schools should teach skills or teach theory by demonstrating that both can be welded together to produce the type of journalism student who is not just able to produce stories but is at the forefront of responding to changes in the field of journalism through a conceptual and practical understanding of the field.

Limitations and Challenges of the Study

First, the creation nets model is relatively new to the field of journalism although it has been widely used in the business world. While this project found the model extremely useful in teaching innovation, there is need for similar journalism projects in order to develop a greater body of work and knowledge regarding creation nets as a model for teaching innovation in journalism and mass communication schools.

Second, due to the intensity of the process, it is important to maintain group harmony. It is critical to pick a group that can work well together as a dysfunctional group will undermine the process. The organizer who puts the creation network together needs to earn the trust of the participants in order to be a neutral arbiter when disagreements arise. Students develop a sense of ownership of the ideas that they have painstakingly developed and sometimes discussions can be intense and stubborn. But such discussions can also be very useful and offer a great teaching and learning opportunity if well managed.

Third, the innovation process can initially be unnerving both to the students and their mentor. While it is a great way to thrust all involved at the cutting edge of technology, the process is fraught with uncertainty because it lacks the structure and predictability of a regular class. And yet that is supposed to be the very nature of the innovation process.

Finally, the creation nets process is intensive and time consuming. This particular project required students to spend hours scouring the Internet to make sure any new idea was original. Researching ideas, developing them as well as testing them takes time and anyone who wants to try it in class needs to be aware of the time demands.

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References

Blanchard, R and Christ, W (1993) *Media Education and the Liberal Arts*. Hillsdale, N.J: Lawrence Erlbaum Associates.

Chesbrough, H (2005) *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston: Harvard Business Press.

CIRCLE, (2003) *The Civic Mission of Schools*. College Park, MD: The Carnegie Corporation of New York.

Cohen, J and Kinsey, D (1994) "'Doing Good and Scholarship: A Service-Learning Study." *Journalism & Mass Communication Educator* 48 (4): 4-14.

Coleman, J (1988) "Social Capital in the Creation of Human Capital."

American Journal of Sociology 94 (Supplement): S 95-S 120.

Coleman, J (1990) *Foundations of Social Theory*, Cambridge, Massachusetts:

Harvard University Press.

Deuze, M (2001) "Educating "New" Journalists: Challenges to the Curriculum." *Journalism & Mass Communication Educator* 56(1): 4-17.

Dewey, J (1933) *How we Think.* New York: Heath.

Dickson, T (2000) *Mass Media Education in Transition: Preparing for the 21st century.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Hagel, J and Brown, J (2006) "Creation Nets: Harnessing the Potential of Open Innovation." Available at: http://www.johnhagel.com/creationnets.pdf

Huesca, R (2000) "Reinventing Journalism Curricula for the Electronic Environment*." Journalism & Mass Communication Educator* 55(2): 4-15.

Kraeplin, C and Criado, C (2005) "Building a Case for Convergence Journalism Curriculum." *Journalism & Mass Communication Educator* 60 (1): 47-56.

Kwak, N., Williams, A., Wang, X and Lee, H (2005) "Talking Politics and Engaging Politics: An Examination of the Interactive Relationships Between Structural Features of Political Talk and Discussion Engagement." *Communication Research* (3): 87-111.

Mckeachie, W (1994) *Teaching Tips: Strategies, Research, and Theory for College and University Teachers* . Lexington, MA: DC. Heath and company.

McLeod, J., Daily, K., Zhongshi, G., Eveland, W., Bayer, J., Yang, S. and Wang, H. (1996) "Community Integration, Local Media Use and Democratic Processes." *Communication Research*, 23 (2):179-209.

McLeod, J., Scheufele, D. and Moy, P (1999) "Community, Communication, and Participation: The Role of Mass Media and Interpersonal Discussion in Local Political Participation, "*Political Communication* 16 (3): 315-336.

Mutz, D and Martin, Paul (2001)"Facilitating communication across lines of political difference: The role of mass media." *American Political Science Review* 95 (1): 97-114.

Mutz, D (2002). "Cross-cutting Social Networks: Testing Democratic Theory in Practice. *American Political Science Review*, 96 (1): 111-126.

Newman, F (1985) *Higher Education and the American Resurgence*, 31. Princeton: Carnegie Foundation for the Advancement of Teaching.

Pratte, R (1988) *The Civic Imperative*. New York: Teachers College Press.

Putnam, R (1993) *Making Democracy Work: Civic Traditions in Modern Italy.* Princeton: Princeton University Press.

Putnam, R (1995) "Bowling Alone: America's Declining Social Capital." *Journal of Democracy*, 6 (1): 65-78.

Reus, G and Becker, L (1993). "The European Community and Professional Journalism Training." *Journalism & Mass Communication Educator* 47 (4): 4-12.

Rhodes, L and Roessner, A (2009) "Teaching Magazine Publishing Through Experiential Learning." *Journalism & Mass Communication Educator* 63 (4) 304-316.

Shah, D., McLeod, J and Yoon, S (2001) "Communication, Context, and Community: An Exploration of Print, Broadcast and Internet influences," *Communication Research*, 28 (4): 464-506.

Stelter,B (2010) "J-Schools Play Catchup." Available at: http://www.nytimes.com/2009/04/19/education/edlife/journ-t.html