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E-Professionalism and Online Reputation: Promoting a Professional Career Identity and Maintaining Personal Privacy

Randy Basham
The University of Texas at Arlington

Abstract

Developing an online professional identity, a professional photograph, online portfolio, online professional social network, a cumulative professional history, professional email name, and video demonstrations as interviews, instructional lectures, training vignettes, and professional service announcements (PSA's) and are essential to career development, hiring success, and professional service promotion, especially among highly visible and often politically appointed, public service, social work and various social science professionals and social service delivery professionals. Maintaining some level of privacy, personal and professional boundaries, private life, personal time, and sustained positive reputation, or repairing damage from unguarded or unwise posts and interactions that occurred prior to the professional career are difficult to achieve. Increasingly employers are supplementing the identity verification, employee background check, reference check, and candidate stress or situational interview, with contractual relationships with corporations specializing in online reputation investigations. Career social service providers must develop online persona that reflects professional integrity and career values.

Developing Your Professional Online Identity

Professional (peer reviewed), professional education, and career development journals exhibit a dearth of career devoted research on identifying, best practice, or model standards for conveying an entirely professional persona online. There appears to be little online content relative to curriculum that demonstrates that the concept is incorporated into current professional socialization and training models. Recent survey data from the PEW Research Centers Internet and American Life Project Data, suggest that both the phase of life associated with academic development toward a career and both career entry and late career phases of career life are time when loss of job or employment opportunities are more likely due to online or internet usage.

Introduction

To the degree possible and especially for those working with people, or in the social or educational service delivery professions, one's online presentation should reflect, or be consistent with one's profession, or the profession that one aspires to. An online reputation should be respected and respectful to others and tend to demonstrate professional integrity. Further, the values and ethics of the profession should be incorporated into the online professional reputation. However, this concept may not be well understood by those who have not considered their professional career direction, or among students in need of career development orientation and training and among career novices. Of course, human beings

are also fallible and may at times present less than their best. Learning to recover and reestablish a professionally responsible online persona, and retain personal privacy, is also an essential skill for maintaining career success.

Literature Review

Career Development and Internet Reputation

Young people, in early career development, are often unaware of the longer term implications of their social networking and online activities prior to entering professional education. Schools may wish to provide a socialization component for emerging professionals, emphasizing the impact often negative to the aspiring professionals who have reputation damaging content posted, archived, or available online. Online background searches are commonly performed these days by potential relational partners, professional education programs and of course employers (Van Ouytsel, Walrave, & Ponnet, 2014). In addition, such instances as child adoptions for families, financial considerations as contractual business partners, or vulnerability to scams or victimization may also be associated with online persona issues that indirectly affect ones career through reputational damage other than employment. There are also a number of techniques and third party venders that provide services to manage or recover online reputational damage (Bolten, K., 2013).

From the employer's perspective, the concept of background checking is also known as cyber vetting of perspective employees and appointed professionals. The concept is viewed as risk management to the hiring organization and as protection to vulnerable customers, or groups. The online reputation check is a task seen as due diligence, for professional organizations (Berkelaar, & Buzzanell, 2014). In addition may employment applications and screening procedures require that detailed questions be responded to about the employees past conduct, which if later found untrue, as the result of posted online content could lead due job loss and missed employment opportunities elsewhere. Being truthful on applications is a requirement of most employers. Discrepancies identified online may end a professional career, or limit upward mobility. The National Career Development Association: http://www.ncda.org/aws/NCDA/pt/sp/resources provides a number of appropriate online resources for those wishing to use the internet to develop professional careers, along with a number of suggestions on safeguarding professional reputation.

To be sure, the internet has a memory that never forgets. Nothing is removed from the internet. The internet is archival and searchable. The internet has no social consciousness. The internet and its audience, is unforgiving. The internet has exceptional gossip and dissemination capacities. The internet does not give second chances.

Each person in pursuit of professional accomplishments has the right to falter, to make mistakes, to practice, and to improve as a developing professional, however the internet and the consumer may favor the negative information posted by or about the aspiring professional and thereby limit capacity to fully develop. In his popular text, The Future of Reputation: Gossip, Rumor, and Privacy on the Internet, Daniel J. Solove adeptly points out the permanency of reputational mistakes archived in cyberspace (Solove, 2007). For more information, please see the, YouTube Video: (2013). Introduction to; The Dos & Don'ts of Social Media Etiquette. Hootsuite University:

Introduction to the Dos and Don'ts of Social Media Etiquette

Theories on Career Development Success

There are a number of established theories on career development that pertain to the employees, or professional are capacity to gain acceptance over time, fit into a professional role or organizational context, and remain in favor with colleagues and clients, within a practice, discipline or organizational context. Several relate to professional identity development. The need for personal privacy is not necessarily include in these, but is inferred.

Career development—life-span perspectives, includes the theory that work has moved beyond providing for basic human needs and has become related to ones persona. That is that work or career aspirations may evolve from the environment, or ones family values and community standing. This approach to career development means that the person seeking a career, as a priority, effects their behavior and goals beyond the workplace, inclusive of rewards sought and identity achieved (Vondracek,1998).

Developing a professional identity and maintaining privacy online would require the career aspirant to communicate preferred values and norms of family and community through their online communication and memberships and to reflect professional development online consistent with their professional role. The career aspirant would seek to assimilate the core values of the profession and externally reflect these online.
Career development would require approximating the ideals of the sought role in online presentation.

Person–environment fit and Holland's theory includes the notion that there are essentially six work oriented personality types for our current culture. These are; Realistic, Investigative, Artistic, Social, Enterprising, and Conventional, known commonly a Holland Codes or RIASEC. Those people of the similar personality types working together in a job tend to create a work environment that fits their type. The six basic types of work environments, as mentioned are: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Career developers, search for environments where they can use their skills and abilities and express their values and attitudes. An environment fit would mean that artistic persons would seek artistic work environments and that investigative interest persons would seek investigative environments for careers or employment. Those who choose to work in environments, or careers similar to their own personality type are more likely to be contented and effective. How people act and feel at work depends to a large extent on the workplace environment (Career Key, Inc., 2015).

The Holland Code: Personality and Career

Achieving person in environment fit relative to career development would require some efforts toward privacy online relative to behaviors or communication that differed with the organizational or environmental role of the profession. Conformance to expectation for ones profession in online professional or promotional content would be preferred. Professional identity would need to be seamlessly maintained over the span of one's career.

Workplace justice is another theory relating to career or professional development. Workplace justice includes aspects of authority figures with greater power sanctioning or progressively disciplining, to limit opportunities, as a result of perceived wrongdoing of the employee by an authority. Those perceived correctly or incorrectly those fit into the environment, or profession, and are model citizens are more greatly rewarded by the authority. However, this may be based heavily upon conjecture, institutional

information sources (gossip) and perhaps the bias of the authority figure, or reference group (Edwards, 2015). Sanctioning, or passing over for opportunities, or promotion, of professionals and employees who violate industry norms or expectations online would be a possible outcome of non-discreet or reputationally inappropriate content in social media or professional content areas.

The Effects of Social Media on Employment, Professional Reputation, and Privacy

University career advising services are increasingly providing socialization to aspiring professional students about the risks associated with using social media and the internet upon hiring and professional development. Public and state organization may request access, or through third parties gain access to social media networks and sites. There are a number of online screening and background checking organizations that screen perspective hires. Further, there is ample research to demonstrate that potential employers are affected in hiring decisions by online postings, and social media.

Social media can heavily influence being hired or fired.

Per google public media resources (Kennedy, 2014): http://www.cbsnews.com/news/this-info-can-kill-your-chances-of-getting-hired/, a survey from the job search site Career Builder of approximately 2,100 hiring managers and human resource professionals and approximately 3000 workers found that over half of employers who research job candidates on social media found content that led them not to hire the candidate. The same resource found that about 43% of employers are using social media sites to collect additional information about job candidates. The number of employers doing so is increasing. The article linked above contains a listing of those findings common to social media pages that led to them not hiring the candidate. At times though, the findings on social media pages have been beneficial to the job candidate,

See also (DiGangi, 2014): http://www.foxbusiness.com/personal-finance/2014/10/27/is-facebook-killing-your-chances-getting-job/. These same public media sources indicate that vast majority of recruiters and HR professionals (about 93%) review their candidates' social media profiles before making a hiring decision. Maintaining an online identity or persona consistent with one's career objectives is then critically important, or more so if on the job market. For more information, please see the, YouTube video: Using improper social media etiquette can affect your job: https://www.youtube.com/watch?v=DIKnS_q3L_Q.

Using Improper Social Media Can Affect Your Job

Though, according to (BestColleges.Com 2014) employers searches indicate:
http://www.bestcolleges.com/resources/manage-your-online-reputation/ a report from the Jobvite, recruiting platform, surveys more than 1,800 recruiters and human resource workers about their hiring tendencies focused on the impact of social media on attracting and vetting talent. This survey explains the three self-reported big faults employers found in social media and the most search media.

These were:

1. Other peoples content- especially evaluative comments about you,
2. Delayed deletions- content that is on the page too long, and
3. Not distinguishing one-self professionally.

Social media affect this is especially true for students or recent graduates who don't have much in the way of job history to recommend them. 84% of recruiters think that online reputations will impact future hiring procedures all or most of the time during the next five years. Unfortunately, very few applicants take their social media seriously – in fact only 7% of applicants in the U.S. think that their online reputation factors into their rejections at all. More than three fourths of employment recruiters hired from sources such as; LinkedIn, Facebook, or Twitter.

Managing Professional Reputation Online

The more frequent of recommendations to manage online reputation if negative personal history exists are 1. Search yourself, 2. Buy your domain name, 3. Put all of your content in one place, 4. Join social networks; optimize your presence on these sites, and 6. Keep private things private, while assuming that nothing is truly private (Forbes, 2013) http://www.forbes.com/sites/susanadams/2013/03/14/6-steps-to-managing-your-online-reputation/. For more information, please see the, YouTube Michael Fertik, CEO, Reputation.com "How Social Media Affects Your Ability to Get (and Keep) a Job," Kaplan University. http://www.cnn.com/2012/10/09/living/real-simple-social-media-job/index.html.

Methods

Hypothesis

Based upon the trends evident in the substantive and theoretical literature, and online media, certainly age and level of education relative to internet use appear related to reputational damage and employment or opportunity loss, level of income may also be an indicator based open access to the internet or current level of occupational success. Differences between frequencies of expected and observed job or opportunity loss relative to age, income or educational level seem likely. To evaluate this possibility a Pew research Center dataset was utilized for Chi Square secondary analysis with histogram charts for graphical representation of results.

Data

The PEW Research Centers Internet and American Life Project Data, from the July 2013 Omnibus Anonymous Internet usage survey of 1,002 adults living in the continental United States explored, level of education and level of income to the likelihood of loss of a job or educational opportunity as the result of internet or online activities. Both income and education are indicators of success and professional development. A simple crosstabs evaluation of education level and income utilizing chi square of the frequency and percentage of observed survey responses compared to expected frequencies and a Phi and Cramer's V test of nominal categories was reported as output from evaluating the survey data items in SPSS statistical software. Due to the length of the crosstabs output only the chi square tests and symmetry tests and accompanying bar charts of the categories are reported here. The case processing summaries are not included. Some categories have less than 5 expected observations in the category, but nonetheless provide some insights into the risk areas of level of education or income where careers may be affected due to internet usage and loss of job or opportunity. The survey was conducted by Princeton Survey Research associates international (PSRAI).

Results

Table 1 and the following charts present evaluative findings for the effects of age, income and educational level on internet usage and loss of job or employment opportunity.

The evaluation identifies that those with high school diplomas or equivalent are more likely to lose job or career opportunities from online or internet activities, though those involved in the educational process as adults also remain at risk during their professional development years.

The evaluation further identifies that those surveyed in the mid to upper middle class and entry level professional salary ranges are also at increases risk of losing job or employment opportunities related to online or internet activities.

Relative to age evaluation of the survey data suggest that risk of job or employment opportunities substantially increase near completion of high school and remain elevated throughout adult careers with greater risk periods in the early 30's and at about 50 years of age. These correspond to the approximate age for professional career entry and for those who began their professional career entry in the late 1990's as online and internet activity in adult careers became more common.

Discussion

E- professionalism and internet usage, is an emerging construct in effective career development and employment effectiveness., in an emerging information revolution likely to eclipse the effects of the earlier industrial revolution upon individual and collective life trajectories. Age, education level and income act as elements of risk or success in developing and effective online personal and professional persona. Professional students and those wishing to advance in professions will need to develop skills in personal information and reputation management in addition to skills required for success along traditional dimension for ones life's work.

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YouTube (2015): Using improper social media etiquette can affect your job: https://www.youtube.com/watch?v=DIKnS_q3L_Q. Retrieved; 2015-05-02.

Table 1:

Observed vs Expected Frequencies for education, Internet use and lost job opportunity

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	81.708[a]	16	.000
Likelihood Ratio	66.410	16	.000
Linear-by-Linear Association	.281	1	.596
N of Valid Cases	2759		

a. 12 cells (44.4%) have expected count less than 5. The minimum expected count is .04.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.172	.000
	Cramer's V	.122	.000
N of Valid Cases		2759	

Table 2:

Observed vs Expected Frequencies for income, Internet use and lost job opportunity

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	94.930[a]	18	.000
Likelihood Ratio	94.452	18	.000
Linear-by-Linear Association	.281	1	.596
N of Valid Cases	2756		

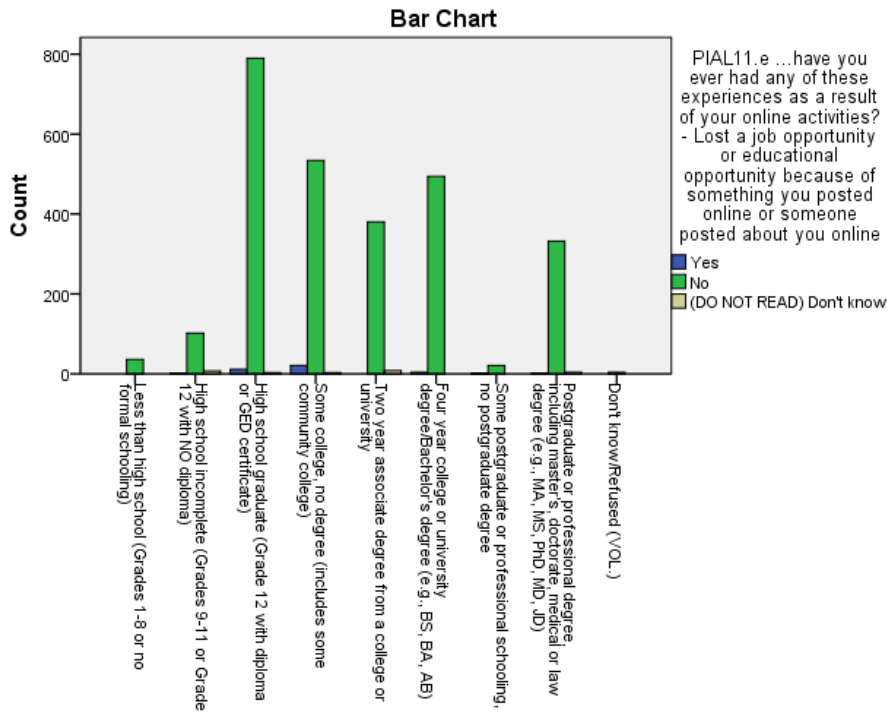
a. 19 cells (63.3%) have expected count less than 5. The minimum expected count is 1.57.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.186	.000
	Cramer's V	.131	.000
N of Valid Cases		2756	

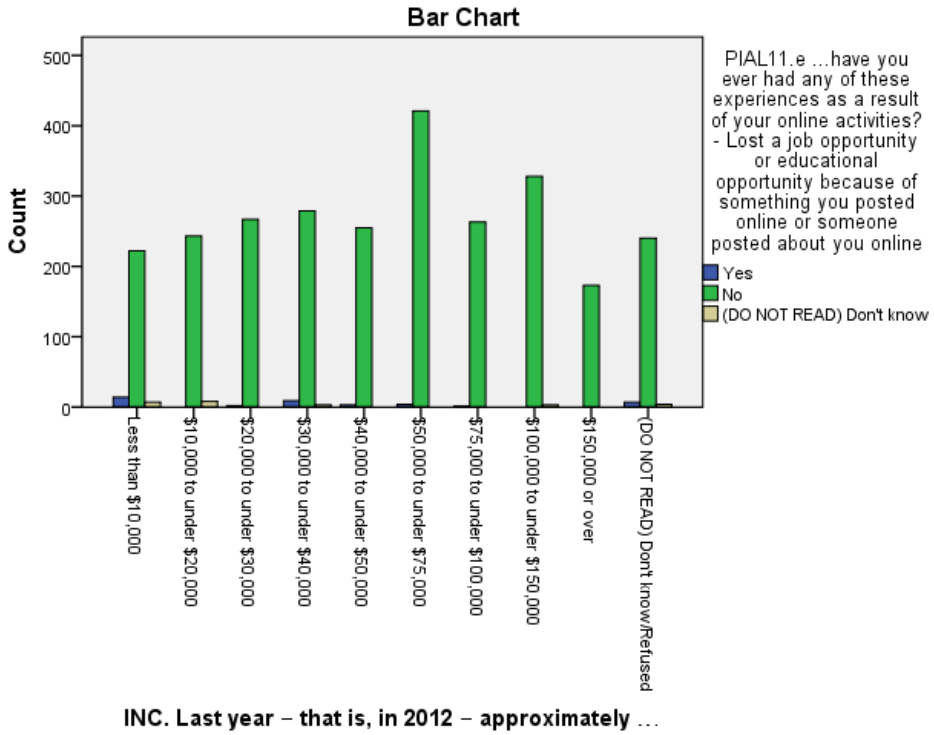
Figure 1:

Histogram of education vs frequency of internet use and lost job opportunity



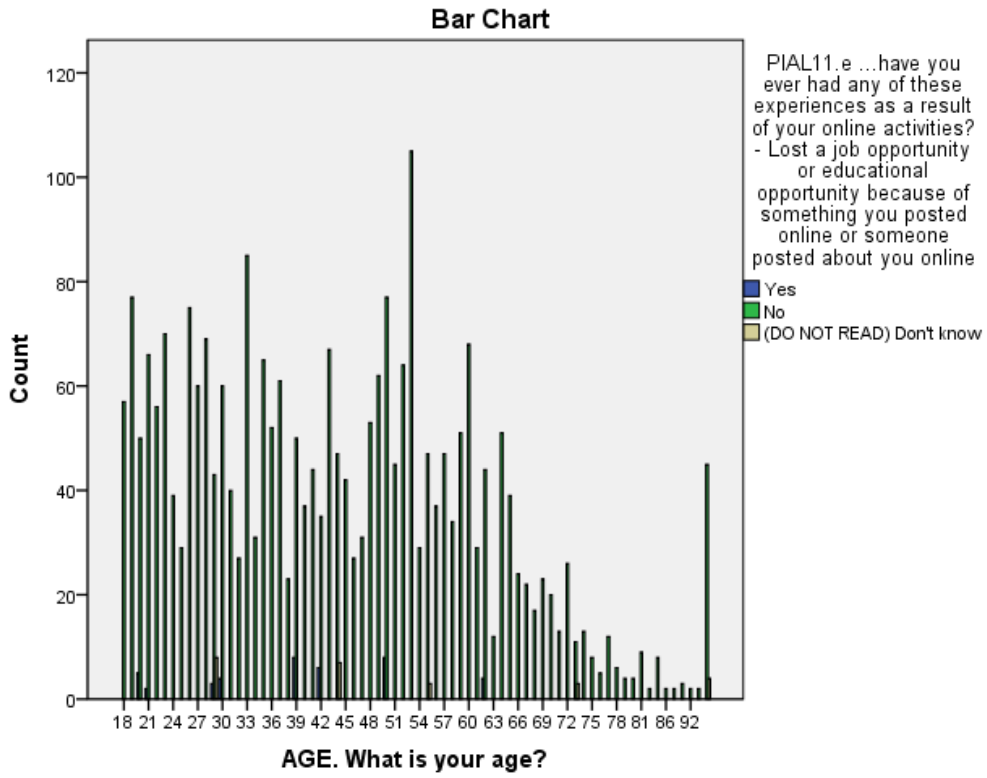
Source: Pew Research Center's Internet & American Life Project Omnibus Survey, conducted July 11-14, 2013, on landline and cell phones. N=792 for internet users and smartphone owners. Interviews were conducted in English on landline and cell phones. The margin of error on the sample is +/- 3.8 percentage points

Figure 2:
Histogram of income vs frequency of internet use and lost job opportunity



Source: Pew Research Center's Internet & American Life Project Omnibus Survey, conducted July 11-14, 2013, on landline and cell phones. N=792 for internet users and smartphone owners. Interviews were conducted in English on landline and cell phones. The margin of error on the sample is +/- 3.8 percentage points.

Figure 3:
Histogram of age vs frequency of internet use and lost job opportunity



Source: Pew Research Center's Internet & American Life Project Omnibus Survey, conducted July 11-14, 2013, on landline and cell phones. N=792 for internet users and smartphone owners. Interviews were conducted in English on landline and cell phones. The margin of error on the sample is +/- 3.8 percentage points

Research-Based Online Resources to Flip your Social Science Classroom

Greg Levitt
Steven Grubaugh
Allen Deever
University of Nevada, Las Vegas

Gabe Gonzales
Nevada Virtual Academy

"The way we were taught is not necessarily the way
we should be teaching students."
Stacey Roshan, Bullis School

Introduction

The digitally enabled "Flipped Classroom" model is becoming more and more popular as a valuable and transformative educational tool for teachers (Bergmann & Sams, 2014; Hamdan, et al., 2013). And social science content comprises some of the most foundational, yet also some of the most dynamic and rapidly changing academic subjects vital to students' world knowledge base. The flipped classroom, and flipped learning, provides a vital new way to deliver well-taught Common Core social science lessons to keep learning interesting, engaging, and current.

In this article, the authors briefly address traditional flipped learning for both teachers and students in the social sciences. Then, the research examines the problems that are associated with embracing the screencast approach of flipping a classroom, which can intimidate and discourage most social science teachers from making a transition to the out-of-class flipped learning approach (Sams & Bergmann, 2013). Finally, a collection of the best online resources are hot-linked to capture the defining spirit of the flipped learning teaching method using online resources.

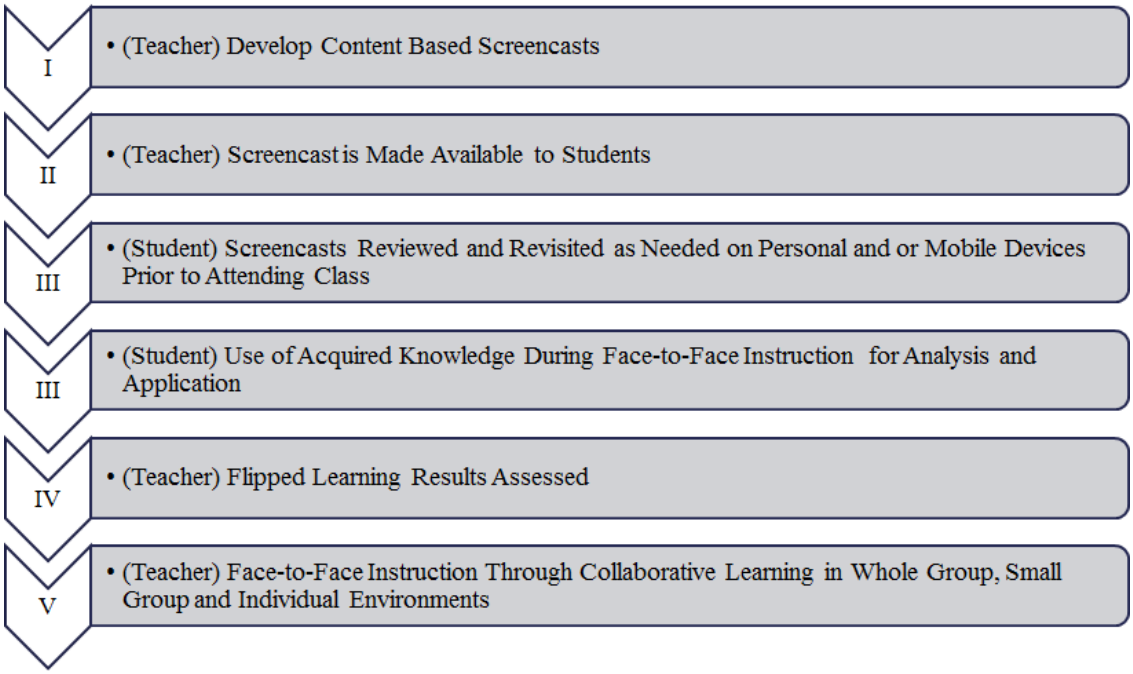
I Flip, You Flip, We All Flip: Setting Up A Flipped Classroom

Flipped Learning, Briefly

With traditional flipped learning, the teacher flips the classroom by developing instructional video content lectures through screencasts allowing students to digitally access and learn material at home rather than receiving direct instruction and preparatory material in the classroom. This works to inform students of the lesson content and ensure learners are prepared for face-to-face teacher and/or peer interaction with the newly-acquired content knowledge once they return to the classroom (Larcara, 2014).

Teaching for Tomorrow: Flipped Learning

Flipped Learning with Teacher-made Screencast



Several Examples and Models of Flipped Learning in Action

The Flipped Class: What A Good One Looks Like
The Flipped Class: What It Is and What It Is Not
Teachers"Doing the Flip" to Help Students Become Learners:
The Flipped Classroom Guide for Teachers
Flipped Learning Community
The Flipped Classroom Model: A full Picture

Problems Teachers Have Initiating Flipped Learning

Some teachers have the time, the technology, and the tenacity to prepare their own screencasts to send to students for flipped learning assignments. But many don't for various reasons. As an example, making and editing a screencast can consume precious teacher preparation time, and here we have listed additional barriers that stand in the way of most teachers flipping their lessons:

- Making a major change in instructional techniques, like flipping, is very time-consuming and challenging to implement.

- Teachers face a definite learning curve when attempting to transition their instruction to a digital platform often requiring a significant amount of professional development.
- Some teachers may feel uncomfortable with their teaching voice as recorded for sharing online.
- Similarly, teachers may feel uncomfortable with their image projected online.
- Teachers may not feel qualified to design and produce quality recorded lessons without fear of mistakes and redundancy.
- Making high-quality screencasts requires teacher commitment to developing screencasting skills to adequately produce lessons using available online platforms and video programs.
- There is a clear challenge when it comes to helping teachers "flip" and cross over the philosophical divide of becoming facilitators of knowledge rather than disseminators.
- Once an educator is able to create screencasts that are ready for use with students it can require additional research to seek out further valuable and useful materials with which to develop further quality lessons.

The above-mentioned problems can deter a teacher from flipping their classroom. In the sections that follow, solutions are presented that resolve these concerns. Moreover, not only will those fears be assuaged, but educators will find that the solutions offered here will actually save an inordinate amount of work and time, while adding greatly to the efficacy of the learning experience of their students. In applying the strategies discussed throughout this article, teachers will have the information needed to employ high quality instruction without the need to develop their own screencasts for each individual lesson since one of the key factors of modern-day flipping is quick access to excellent online resources Largent, (2013).

The Flipped Classroom: Potential Problems

Advantages of Implementing the Flipped Learning Model With Pre-made Online Social Science Content

For teachers who choose to take full advantage of, or supplement, their flipped learning screencast lessons with preexisting standards-based lessons, we recommend the many web-based resources which have been evaluated for quality application to ensure excellence, ease of implementation or application. These resources will enable teachers to quickly assign students online lessons including video, infographic, text, and interactive lesson materials. Thus, teachers are able to craft fast, effective flipped lessons with assessments for their students. When sent to students, these digital resources can be viewed, read or interacted with on a tablet, a phone, or a computer of the student's choice.

Online social science content can be extremely rich and interesting providing a wealth of ready-made lessons. Since online content evolves both in quality and scope each year, resources for flipped learning can and should become a significant part of the range of best practices every teacher employs. Online social science content can significantly build teacher's professional content knowledge as well as inform their teaching with interesting and well-presented content.

Resulting Benefits of Flipped Learning with Online Content

When students are held accountable for completing their flipped learning lessons, they can then be encouraged to apply their new knowledge in cognitively challenging activities that await them back in class. The advantages of well-developed, well-resourced flipped learning lessons are numerous and can effectively motivate students, whereby achievement and content mastery is increased (Dill, 2012). The digital-assisted learning helps differentiate instruction for a wide variety of diverse learners. The following describe significant instructional advantages to incorporating pre-developed social science online resources within flipped lessons:

- The teacher can add 5 to 15 minutes per day of instructional time by having students interact with highly motivating videos and other online teaching and learning materials before class as "homework".
- Teachers can increase student motivation and independent learning through providing high quality, engaging and well-researched videos.
- Teachers can then maximize in-class time to help reinforce key concepts and enrich learning through structured group work and other activities back in class.
- Students have "wall's down" 24/7 access to online learning material, assignments, and assessments.
- Teachers can use pre-developed instructional resources, which saves preparation time that can be devoted to assessment and instruction.
- Each student has the ability to access online materials conveniently through any handheld device, tablet, or computer.
- Online video instruction provides students the opportunity to revisit and review materials until they achieve the desired level of subject matter understanding.
- The teacher has the ability to quickly assess students' knowledge, then to provide additional small group and individualized help in class.
- Teachers can employ digitally enhanced flipped lessons to differentiate instruction for ELL students by incorporating visuals, virtual manipulatives, and audio components.
- Teachers using flipped learning can take advantage of easily accessible text-to-speech software to help students with literacy deficits and with English language learners who struggle to read on grade level.
- Teachers can use online lessons, which can often be assigned in the student's first language and be especially helpful to English language learners. Online translation services for most written content is also available.
- Flipped learning can further individualize and enhance learning by showing students how to find top-quality content related to the social science concepts under study. Students can share their specialized learning by generating their own flipped learning presentation for in class and out-of-class assignment.

Teachers can inform and energize their own teaching by learning new and interesting content in an expert and engaging manner observed in the videos and other instructional media resources available. Flipping is a fabulous source of interesting content which can rekindle a teacher's passion for their subject matter as well as become a new method for engaging students and fostering life long learners.

The Flipped Classroom: Overcoming Common Hurdles

Quality Online Social Science Content for Flipped Learning

The links below represent a condensed, yet top-quality sampling of resources that can be utilized to help educators transition painlessly into a flipped classroom environment. These resources can be utilized by teachers or students in, or out of the classroom and every teacher will need to survey the links to find the exact materials suitable for his or her students. The links are fully operational at the time of publication. Please note that the authors have worked diligently to assemble these resources, but as always, the teacher and other school personnel should review the resources to ensure they address their state's particular standards and meets the school guidelines of media content in their district. The topics covered below are based on INACOL standards and promising research-based practices that utilize cutting-edge technology, as well as traditional and digital learning theories and methods ensuring students become active and empowered 21st Century learners.

Online Social Science Resources

Economics For Teachers And Students

- Economics : 11 Crash Course videos
- TED Talks: Economics Over 100 videos
- How equal do we want the world to be? You'd be surprised
- Council for Economic Education Resource: Classroom Resources
- Study,com Resources: Videos
- We the Economy': 20 Short Films Teaching Economics 101
- Playeconomics: Game for Teaching Economics
- Cha-Ching: Saving For Success: 16 Videos
- What is Economics? Defintions for key terms
- Freakonomics Author Steven Levitt: Talks about the economics everyday life
- Study.com Economics 12 courses

Geography For Teachers And Students

- What can you do with Geography? FEMA video
- Ted TALKS: Geography 86 videos
  - How food shapes our cities
  - The other inconvenient truth
- TED-Ed Lessons Worth Sharing: Samples
- Crash Course Kids – Kids teaching kids science and geography. 30 videos.
  - A change of Scenery: Crash Course video
  - Weather and Climate: Crash Course video
  - Our World: What is weather? Crash Course video
  - Severe Weather: Crash Course video
  - Land Forms Crash Course video
- Destructive Weather: Documentary about severe weather around the world

- Weather of the World: Documentary about weather around the world
- Documentary Galaxy HD: Dive Deep into the world of science and geography
    - Amazing Earth: Documentary
- Geography for Kids 9 videos: Videos for young kids
- Vids4kids.tv Learn about maps: Videos for young kids
- Geography for Kids: 7 Continents: Videos for young kids
- Our World - Geography for Kids Videos for young kids
- National Geographic Videos:
- Crash Course Kids - mostly Science with some geography
- BBC Documentary: Planet Earth: Over 400 videos
- Animal Planet Videos
- The Seven Wonders of the World
- Natural Wonders of the World
- Discovery Channel Videos
- Study.com Geography 15 courses

Government For Teachers And Students

- Crash Course Government and Politics:
- TED-Ed Lessons Worth Sharing: Samples
- TED TALKS – Democracy 11 videos
    - The1s and 0s behind cyber warfare
    - How fear drives American politics
- The Constitution, The Articles, and Federalism
- Separation of Powers and Checks and Balances
- Keith Hughes: Political Ideology
- Keith Hughes The Constitution for Dummies
- Keith Hughes: The Bill of Rights for Dummies
- Keith Hughes: Current Events
- Politics and Economy Documentaries
    - Current Politics of the Middle East: The role of ISIS.
- Study.com Political Science 15 courses

Psychology For Teachers And Students

- Crash Course Psychology
- TED-Ed Lessons Worth Sharing: Samples
- TED Talks on Psychology: Over 100 videos
    - 10 myths about psychology: Debunked
    - Phillip Zimbardo: The psychology of evil
    - Your Body Language Shapes Who You Are: Amy Cuddy
    - The Skill of Self Confidence: Dr. Ivan Joseph
    - How to stop screwing yourself over: Mel Robbins
- Absolute Motivation: Videos
- The Brain and the Mind: 9 videos
- Human Behavior: 5 videos
- The Stanford Prison Experiment – BBC documentary
- Study.com Psychology 14 courses (pay site)

Sociology For Teachers And Students

- Crash Course - What is Sociology? and Part 2
- Sociology: 11 videos – samples
- TED Talks Sociology: 44 videos
  - Cameron Russell: Looks aren't everything, Believe me, I'm a Model
  - Shane Koyczan: "To This Day" … for the bullied and beautiful.
  - Nicholas Christakis: The hidden influence of social networks
  - Mike Rowe: Learning from dirty jobs
  - Steven Levitt: The freakonomics of McDonalds vs. drugs
- Study.com Resources

Us History Content For Teachers And Students

- Crash Course US History: 48 Videos
- Keith Hughes US History
- TED TALKS: US History 79 Videos
  - George Takei: Why I love a country that once betrayed me
  - Lessons from past Presidents
- TED-Ed Lessons Worth Sharing:
- National Geographic Videos: America before Columbus
- Study.com US History 83 Courses

World History For Teachers And Students

- Crash Course in World History with John Green on Khan Academy - 42 videos
- Crash Course Course World History with John Green
- Civilization: World History 201 with John Green
- TED TALKS World History 29 videos
  - David Christian: The history of the world in 18 minutes
  - Neil MacGregor: 2600 years of history in one object
- TED-Ed Lessons Worth Sharing: Samples
  - History vs. Vladimir Lenin (TED-Ed)
- History Channel Documentary Channel
- History of the Middle East: 5 videos
- BBC documentaries: world history videos
  - BBC Military Films
  - BBC Documentaries
  - BBC Documentary Films
  - BBC History HD
  - History Documentary 2015
- World History Video Playlist: 60 videos
- Study.com World History 83 courses

Conclusion

The potential of flipped learning extends beyond traditional limits with the continued growth of online tools and resources; yet barriers remain. It's true that some teachers have the expertise to prepare and record screencasts of their course lessons. But teachers who are less

technologically inclined can leverage vetted standards-based educational video resources online presented in this article.

Using the videos in class as direct instruction and then transitioning students to the flipped model over several days will allow students to "test drive" a few flipped online assignments back and forth between the classroom and home. This enables the teacher to troubleshoot flipped learning assignments and gradually improves the flipped learning process for students to become independent online learners. Thus, students will benefit from the many traditional and 21st century skills and strategies required in the flipped learning experience by using researched and vetted online instructional videos and other materials recommended through the social science content links listed in this article.

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Mathematics Rubrics and Assessments Aligned to Common Core Standards

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The Common Core State Standards (CCSS) have been adopted by 45 of the 50 states. Washington State's Office of the Superintendent of Public Instruction (OSPI) is preparing for full implementation of the CCSS in the 2014-2015 academic year. Teachers are quickly developing assessments related to these new standards in the areas of mathematics and language arts. The focus of this article is on the mathematics Core Competencies, specifically rubrics designed to evaluate student proficiency in fifth grade mathematics along with a representative assessment prepared in accordance with one of the rubrics. An example assessment written to match "Rubric 3 Number and Operations-Fractions: Use equivalent fractions as a strategy to add and subtract fractions 5.NF.1" is highlighted along with a detailed analysis of two students' completion of the assessment. The rubric with the accompanying assessment offers classroom teachers a template to more accurately and effectively evaluate students' work based directly on the CCSS.

Twenty- six rubrics were developed, each representing a targeted skill from the fifth grade CCSS in mathematics. For the purposes of this article, only three rubrics are presented. These rubrics provide criteria assigned to a point scale of 0.0-4.0, allowing teachers to effectively assess students and assign them a score based on their proficiency for each skill. As explained, one assessment worksheet accompanies "Rubric 3" (Table 3) along with a detailed justification of student scoring based directly on the rubric.

"In the assessment world today, the term rubric usually applies to a description of knowledge or skill for a specific topic" (Marzano, 2010, p. 42). A rubric is "a scoring tool used to evaluate a performance in a given outcome area based on a list of criteria describing the characteristics of products or performances at varying levels of accomplishment" (Wolf & Stevens, 2007, p. 4). Rubrics should improve teaching, provide feedback to students, serve as a basis for creating appropriate assessments, and are an invaluable source of information for sufficient improvement. Rubrics should also define the learning goals of instruction, assess student learning, and give students an understanding of the quality necessary for each score level (Arter & McTighe, 2001).

An Introduction to Rubrics

According to Marzano (2010), the best approach to rubric implementation is for a district or school to provide instructors with rubrics for use over an entire school year for a specific subject area. If rubrics are not provided to teachers, they must develop their own. The first thing that a teacher must do in creating a rubric is to determine observable and measurable criteria that define the performance expectations, or as Marzano (2010) explains, it should be to "identify one or more specific learning goals that will be the

target of instruction" (p. 42). These learning goals can be in the form of standards or in this case, Common Core State Standards. With learning goals created, a teacher can design a rubric or scale.

In developing a rubric, as stated by Marzano (2010), it is best to begin with a 3.0 score. This score is the level at which a student demonstrates proficiency and should represent the target learning goal. A score of 2.0 represents competence at simpler content, and a score of 4.0 represents competence at more complex levels. Scores of 1.0 and 0.5 indicate that students are not able to demonstrate any of the content on their own.

Developed by a fifth grade teacher as part of a master's project (Sherman, 2013), the rubrics presented in this article are based on Marzano's (2010) principles of rubric design as outlined above. There are a total of 26 Core Competency Standards under five Domains for fifth grade mathematics. One rubric has been developed for each of these 26 standards. The complete set of rubrics is available at graduate22@comcast.net. As previously noted, for the purposes of this article, only three rubrics are presented, one from each of the first three Domains: 1) Operations and Algebraic Thinking, 2) Number and Operations in Base Ten, and 3) Number and Operations-Fractions.

Marzano: Designing and Assessing Educational Objectives

The following is an assessment worksheet specifically developed to determine fifth grade students' mastery of the criteria described in the Core Competency 5.NF.1 "Use equivalent fractions as a strategy to add and subtract fractions" (Table 3). Questions 1 through 5 each represent a part of the overall desired Competency, representing scores of 2.0, 3.0, and 4.0 from "Rubric 3" as detailed in Table 3.

Each question in *Figure 1* asks students to demonstrate skills as listed in "Rubric 3" (Table 3) specific to a section of the fifth grade mathematics Core Competency. Successfully answering questions 1 and 2 would earn a score of at least 2.0, while successfully answering questions 3 and 4 would earn a score of at least 3.0. Successfully answering question 5 would result in a score of 4.0. No correct responses would warrant a 0.0.

Two fifth grade students completed the example assessment. Student One earned a score of 2.0, passing a portion of the overall fifth grade competency 5.NF.1 as listed in "Rubric 3" (Table 3). Student Two demonstrated more knowledge, earning a score of 4.0. Both students successfully answered questions 1 and 2, however Student One was unable to correctly answer questions 3, 4, and 5. Student One did not demonstrate the knowledge necessary to change unlike fractions to common denominators to then add or subtract accurately. Student One was also unable to go beyond the scope of the first questions to successfully answer question 5, a story problem requiring a series of steps, none of which had yet been taught in the classroom. Student Two was able to correctly answer questions 1, 2, 3, 4, and 5, having demonstrated the full range of skills listed in "Rubric 3" (Table 3).

Completing the 26 rubrics representing the CCSS for fifth grade mathematics (three of which appear in this article) is a first step. All of the standards in both mathematics and language arts need rubrics to help teachers identify criteria students must accomplish to be proficient in each standard. The example assessment (Figure 1) provides teachers with an example of how students' work can be graded using rubrics directly related to current state standards.

Additionally, the rubrics in this article are written for teachers but should be rewritten in student-friendly language to be used by students in the classroom (Marzano, 2010). Students can be introduced to the learning targets or standards (CCSS), the score values for the rubrics, and the content at each value so that they can better understand what is expected of them as they complete specific grade level academics. Each question on example assessment (Figure 1) could be labeled to match the corresponding rubric score for the students to see. Students would then know and understand their own scores as numbers 2.0-4.0

with scores below 2.0 indicating assistance from the teacher. Having assessments marked in this way and introducing students to "student friendly" rubrics would be considered a source of "Student Voice" on the Elementary Mathematics Teacher Performance Assessment (edTPA) (Teacher Performance Assessment Consortium, 2012), an important new teaching strategy in which students are able to take a more active role in their own learning.

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Table 1.
Rubric 1. Operations and Algebraic Thinking: Write & interpret numerical expressions 5.OA.1.

Domain: Operations and Algebraic Thinking	
Standard: Write and interpret numerical expressions 5.OA.1	
Grade 5	
Score 4.0	**In addition to score 3.0 performance, the student demonstrates in-depth inferences and application that go beyond what was taught**
Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	**The student:** • Evaluates expressions with parentheses, brackets and/or braces **No major errors or omissions regarding the score 3.0 content**
Score 2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
Score 2.0	**The student:** • Recognizes and recalls specific vocabulary such as: brackets, division, multiplication, order of operations, parentheses • States the rules for evaluating expressions with parentheses, brackets, and/or braces **No major errors or omissions regarding the score 2.0 content**
Score 1.5	Partial success at score 2.0 content, but major errors or omissions regarding score 3.0 content
Score 1.0	**With help, partial success at score 2.0 content and score 3.0 content**
Score 0.5	With help, partial success at score 2.0 content, but not at score 3.0 content
Score 0.0	**Even with help, no success**

Table 2.

Rubric 2. Number and Operations in Base Ten: Understand the Place Value System 5.NBT.2

Domain: Number and Operations in Base Ten	
Standard: Understand the Place Value System 5.NBT.2	
Grade 5	
Score 4.0	**In addition to score 3.0 performance, the student demonstrates in-depth inferences and application that go beyond what was taught**
Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	**The student:** • Explains patterns in the number of zeroes and the decimal point when multiplying or dividing by a power of 10 • Uses whole-number exponents to denote powers of 10 **No major errors or omissions regarding the score 3.0 content**
Score 2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
Score 2.0	**The student:** • Recognizes or recalls specific vocabulary such as: base-ten numeral, decimal, digit, divide, multiply, pattern, powers of 10, thousandth, whole number **No major errors or omissions regarding the score 2.0 content**
Score 1.5	Partial success at score 2.0 content, but major errors or omissions regarding score 3.0 content
Score 1.0	**With help, partial success at score 2.0 content and score 3.0 content**
Score 0.5	With help, partial success at score 2.0 content, but not at score 3.0 content
Score 0.0	**Even with help, no success**

Table 3.

Rubric 3. Number and Operations-Fractions: Use equivalent fractions as a strategy to add and subtract fractions 5.NF.1

Domain: Number and Operations-Fractions	
Standard: Use equivalent fractions as a strategy to add and subtract fractions 5.NF.1	
Grade 5	
Score 4.0	**In addition to score 3.0 performance, the student demonstrates in-depth inferences and application that go beyond what was taught**
Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	**The student:** • Solves addition and subtraction of fraction problems with unlike denominators including mixed numbers by using multiplication and division to find equivalent fractions with like denominators **No major errors or omissions regarding the score 3.0 content**
Score 2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
Score 2.0	**The student:** • Recognizes or recalls specific vocabulary such as: addition, division, equivalent, fraction, like denominators, mixed number, multiplication, subtraction, unlike denominators • Student finds equivalent fractions for those that stand alone **No major errors or omissions regarding the score 2.0 content**
Score 1.5	Partial success at score 2.0 content, but major errors or omissions regarding score 3.0 content
Score 1.0	**With help, partial success at score 2.0 content and score 3.0 content**
Score 0.5	With help, partial success at score 2.0 content, but not at score 3.0 content
Score 0.0	**Even with help, no success**

Figure 1. Example assessment worksheet appropriate to the fifth grade mathematics Core Competency 5.NF.1 Number and Operations-Fractions: Use equivalent fractions as a strategy to add and subtract fractions.

Name:_____
5.NF.1

1. Write an equivalent fraction for 1/2.

2. Give an example of a **mixed number**.

3. Solve.
   1½ + ¼ =

4. Solve.
   2½ - 1¼ =

5. Solve.
   Cara bought a pizza for dinner at her sleep over. She ate 1/8 of the pizza, her friends ate a total of 1/4 of the pizza. How much pizza was left over after Cara and her friends all had pizza for dinner?

Techstorm 2030: Restructuring Future Society

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Introduction

The accelerating pace of technologies has given rise to authoritative voices urging caution and concern for the future of humanity. A massive tsunami of technology is approaching with only the silent ripples felt now. The increasing entrenchment of powerful supercomputers, automated systems, robotic systems and smart machines into the fabric of society may prove too daunting for human acclimation to these advances. The old fabric of society may have to be rewoven for the survival of humanity.

Wendell Wallach in his book *Dangerous Master: How to Keep Technology from Slipping Beyond Our Control* (2015) declares "The cumulative impact of new technologies expected to be available over the next few decades is difficult to imagine and likely to be unsettling. I refer to the incessant outpouring of groundbreaking discoveries and tools as a *techstorm* (p. 8). James Barrat's *Our Final Invention: Artificial Intelligence and The End of the Human Era* (2015) spares no words with "I've written this book to warn you that artificial intelligence could drive mankind into extinction, and explain how that catastrophic outcome is not just possible, but likely if we do not begin preparing very carefully now (p. 16). Perhaps it is simply too late as far as Marshall Brain is concerned. In his 2014 book *The Second Intelligent Species: How Humans Will Become as Irrelevant as Cockroaches*, the title succinctly declares the fate of humanity in the coming onslaught of artificial intelligence.

"A Dangerous Master" by Wendy Wallach

While smart machines continue to grow smarter there are more immediate concerns about the unseen dependence upon robotic systems already seamlessly threaded across all global society. Robotic systems grow faster and more powerful every year as do mainstream every day computers which when integrated into a global network metastasizes into every nook and cranny of every day human life. For now the machines serve humanity and in doing so take on more and more responsibility for creating, managing, and directing most of the global infrastructure for the health and wellbeing of humans. Computers maintain and control virtually all major manufacturing, communications, financial markets, energy resources (oil and gas pipelines, oil tankers, nuclear power plants, electrical power grids), transportation (railroads, air traffic, freeway traffic, shipping), military systems (drones, nuclear weapons), and human needs like medical services, food resources, and information resources. And all of these digital forces are instanteously integrated and accessible between computers via *the cloud.*

Calls for Premptive Action

Nicholas Carr made it quite clear in his 2015 book *The Glass Cage: How Our Computers Are Changing Us* with the following proposal: "To ensure society's well-being in the future, we may

need to place limits on automation. We may need to shift our view of progress, putting the emphasis on social and personal flourishing rather than technological advancement. We may even have to entertain an idea that's come to be considered unthinkable, at least in business circles: giving people precedence over machines" (p. 228).

For some technology futurists there is a prevailing sense that it may just be too late for counter actions to accelerating technologies. In the 2009 book, *Wired for War: The Robotics Revolution and Conflict in the 21st Century*, P. W. Singer's makes the point "There is just too much money to be made, and too many motivational factors, not just for military applications, but in everything from transportation and medicine to games and toys, to force robotics and AI research to stop anytime soon. We would have to repeal capitalism and every visage of economic competition to stop this progression" (Singer, 421).

"Wired for War": P.W. Singer on Democracy Now, 2/6/09

Technological Unemployment

Ironically it was many years ago during very hard times in America, the Great Depression, that an essay by John Maynard Keynes, "Economic Possibilities for our Grandchildren" foretold the consequences of the coming *techstorm*. Keynes said, "We are being afflicted with a new disease of which some readers may not yet have heard the name – namely, *technological unemployment.* This means unemployment due to our discovery of means of economizing the use of labor outrunning the pace at which we can find new uses for labor (p. 358).

In 2013 the Oxford Martin School's Programme on the Impacts of Future Technology conducted a very precise study entitled *The Future of Employment: How Susceptible Are Jobs to Computerization?* Authors of the study, Carl Benedikt Frey and Michael A. Osborne using powerful statistical models stated "According to our estimates, about 47 percent of total US employment is at risk" within the next decade or two (p. 38).

In *Rise of the Robots: Technology and The Threat of a Jobless Future* (2014), Martin Ford's most recent book, he states "the idea that technology might someday truly transform the job market and ultimately demand fundamental changes to both our economic system and social contract remains either completely unacknowledged or at the very fringes of public discourse" (60). Given the historical context in which humanity has made adjustments in response to the first machine age it is understandable that economists express skepticism about the prospect of the second machine age destroying jobs and creating long term unemployment.

However, prominent economists have taken notice of the ripples of the coming technological tsunami and begun a dialog that underlies serious consideration of the consequences for all humankind. In 2012 Massachusetts Institute of Technology's Erik Brynjolfesson (Director of the MIT Center for Digital Business) and Andrew McAfee (Principal Research Scientist at the MIT Center for Digital Business) published *Race Against the Machines* and in 2015 published *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies.* Both publications stress preparing for a reshaped future where creative business models and social policies can hopefully insure that people can maintain economic viability in the wake of overwhelming technologies. But they do warn, "Technological progress is going to leave behind some people, perhaps even a lot of people, as it races ahead (p. 11).

Social Restructuring

Some eighty years after Keynes' essay, Martin Ford in his 2009 book *The Lights in The Tunnel: Automation, Accelerating Technology and the Economy of the Future* asserted that at some point in the near future machines will take over most of the jobs now held by humans. "Not all of them, but a lot" (p. 10). The point that people replaced by machines will probably find new jobs is dubious as new jobs will probably be automated as soon as they area created. The result is a daunting paradox. If the free market economy is dependent on people making money to buy products and services, then what happens when those people have no jobs to make money, and only machines make stuff and render services? And, as Martin Ford points out, machines generally "do not participate in the market as consumers" (p. 25).

Smart talk with Martin Ford:
How Technology Will Affect Economy and Jobs

So here it is, America 2030. In 2015 the population of the United States was 320 million and now over the past fifteen years some 40 million more people have been added to the population for a grand total of 360 million Americans. A substantial number of Americans are technologically unemployed. The jobs they once had or could have had given their skill set are now automated and managed by robotic systems. Careers once taught to be protected professions requiring special skills and college educations are being supplemented by automated systems with varying degrees of artificial intelligence. There are still jobs for such professionals but they will be fewer and lower pay. Across all realms of "work" there will be a decreasing need for human labor. Earning a living in 2030 will require that one to manage several revenue streams or part-time jobs or one job with low pay and a life style to match.

For many years prior to 2015 a wave of outsourcing of manufacturing and services provided one source of unemployment for American workers. The workers abroad simply worked for lower wages than their American counterparts. However now, as in America, much of that cheap labor abroad is being replaced by robotic systems. So even cheap labor cannot compete with robotic labor that is as cheap as it can get. China, South Korea, Japan and Germany lead the world in transitioning from human labor to robotic labor (International Federation of Robotics). In a New York Times (June, 2015) article "China's Troubling Robotic Revolution," Martin Ford said, "China could well turn out to be ground zero for the economic and social disruption brought on by the rise of the robots. The country's relatively brittle authoritarian political system, together with its dependence on a sustained level of economic growth that would be considered extraordinary in any developed nation, suggest that China may face a staggering challenge as it attempts to adapt to the realities of a new age."

In time nations may adjust and survive but not without a high cost of economic turmoil if not economic chaos. While many forms of employment or jobs will be replaced by new, probably temporary, human-based work, they too, over time will disappear. The ultimate impact of technological unemployment could be dramatic leading to variations in social disintegration, civil unrest, and destabilized governments. Add to this scenario the reality of increasing population growth (Worldometer). The world population stands at about 7 and a half billion in 2015 and by 2030 it will be 8 and a half billion people.

In the 2014 study by Gary E. Marchant, Yvonne A. Stevens and James M. Hennessy, "Technology, Unemployment & Policy Options: Navigating the Transition to a Better World" a comprehensive range of policy interventions were suggested for social engineering a

new order for humanity:

- Protecting Employment
  - Place limits on Technological Advances
  - Mandating human Workers
  - Regulatory Restraint
  - Employment Impact Statement for Regulations and Legislation
- Sharing Work
  - Mandatory Retirement Age
  - Shorter Work Week
  - More Vacation Time
- Making New Work
  - Government Work Programs
  - National Service
  - Tax Credits
  - Greater Priority for Traditional Job –Creating Factors
- Redistribution
  - Minimum Guaranteed Income
  - Smart Social Programs
- Education
  - Lifelong Educational Policies
  - Updated Educational Curriculum
  - Greater Educational Experimentation
  - Mental Upgrading
- New Social Contracts
  - Health Care Not Tied to a Job
  - Alternative Valuation System

Marchant, Stevens, and Hennessy, stressed that "Not all six categories of interventions are likely to be equally desirable and effective and the optimal mix of categories is also likely to shift over time, with some types of policies more effective and feasible in the short term, while others more salient and necessary in the longer term."

These policy options suggest modifying the existing social order where the economic wellbeing of an individual, social status, and personal self-worth are inherent in having a job, being employed. "In the new culture of the future, flexibility will be paramount to allow individual workers to adapt to new technologies, industries and opportunities. Moreover, the concept of having a single job is increasingly outmoded for many people, who by choice or necessity cobble together their own portfolio of contractual tasks, part-time jobs, short-term jobs, freelance jobs, commissioned projects, entrepreneurial initiatives, and other income-earning opportunities to make their livelihood" (Marchant, Stevens, and Hennessy, 24).

In perhaps one of the more sober views of technological unemployment in the future is that of Massachusetts Institute of Technology economist David H. Autor. In his essay "Why are there Still So many Jobs? The History and Future of Workplace Automation" the point is made that for the foreseeable future some jobs will disappear but many mid-skill and low-skill many jobs will morph into jobs merging unique human skills with machine skills creating an entirely new kind of collaborative state of labor, perhaps even an enduring state of new-age labor. Autor emphasizes the human qualities of interpersonal interaction, flexibility, adaptability, "common sense" and problem solving will hold their own despite the advent of smart machines.

David H. Autor: Automation – Opportunities and Challenges

Conclusion

That technology will dominate our future society there is little debate. The impact of that dominating technology on society is the debate. The majority of studies agree there will be considerable technological unemployment. There is a consensus that further investments in education, training, and social and political actions will most likely prove little benefit in alleviating technological unemployment, at least most of it. "Our educational system is not adequately preparing us for work of the future, and our political and economic institutions are poorly equipped to handle these hard choices" (PEW). Wendell Wallach said, "Unfortunately, there is little evidence that we or our government have the will, intelligence or intention to make hard choices" (23) concerning the impact of accelerating technologies. Perhaps the most dismal appraisal of responding to the oncoming techstorm is Mark Ford's comment, "The political environment in the United States has become so toxic and divisive that agreement on even the most conventional economic policies seems virtually impossible" (p. 278).

In some cases even the most ardent techno-optimists hold out for a "happy ending" as robotic systems replace human labor. Pedro Domingos in his 2015 book *The Master Algorithm: How the Quest for the Ultimate Learning Machine Will Remake Our World*, believes "the transition will be tumultuous, but thanks to democracy, it will have a happy ending" with the massively unemployed ranks voting for generous lifetime unemployment benefits (278-279). Domingos further believes a "gift economy" will develop and "The need to earn a living will be a distant memory, another piece of humanity's barbaric past that we rose above" (279).

Pedro Domingos: The Master Algorithm

If humanity seemingly "slogs" through the techstorm over the next several decades there may not be a need for any resolution to technological unemployment. In his book *Superintelligence: Paths, Dangers, and Strategies*, Oxford professor Nick Bostrom proposed "human-level machine intelligence (HLMI) defined as one that can carry out most human professions at least as well as a typical human being is estimated to occur with a 90% chance by 2100" (19). Although Bostrom did say there are collective projections that put HLMI with a 90% chance between 2035 and 2050. Whenever HLMI does happen Bostrom proposes that "superhuman intelligences or machine intellects that greatly outperform the best human minds across many very general cognitive domains" would not be far behind (52). By then it may not matter, as the masses of humanity will be incapable of sensing they are embedded in *The Matrix* (Warner Bros.).

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1:1 Computing Initiative:
Collaboration between a University and a Middle School

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Is your middle school considering a 1:1 computing initiative? Are you collaborating with a local university to support your professional development as you move forward? Carver Middle School (CMS), located in South Carolina, hosts grades six through eight and is designated as a Science, Technology, Engineering, and Mathematics (STEM) school. What makes this middle school even more distinct is that it has completed one full-year of a 1:1 computing initiative. Each student has an issued MacBook Air laptop and each classroom teacher has both a MacBook Air laptop and an iPad. The entire campus is wireless, each classroom has an active board, LCD projector, document camera, and all computers have access to cloud-based software and content management systems.

The Association for Middle Level Education (2010) states that "Thriving now and in the future requires becoming a lifelong learner and demands more than a basic understanding of reading, writing, and mathematics", (p.4). Carver Middle School recognizes the importance of infusing technology into the curriculum to fully prepare its students to seamlessly transition to the high school and to institutions of higher education (Wash, 2014). According to the 2013 ECAR Study of Undergraduate Students and Information Technology, the results of a survey administered to 250 institutions of higher education with more than 112,000 student responses, 76% believe technology helps them achieve their academic outcomes and prepares them for future educational plans while 61% believe technology helps them prepare for the workplace. CMS is modeling how to successfully prepare its students to make these transitions.

1:1 Computer Initiative Background

Training, training, and more training! This is the determining factor of a successful 1:1 computing program. Each teacher at CMS participated in and continues to receive training in effective employment of the MacBook Air laptops in the classroom. Representatives from Apple initially provided a one-week training course prior to launch to introduce the IOS platform since the school moved from a Windows-based platform to an IOS platform. Following the week long training course, extension workshops were and continue to be provided throughout the school year on teacher work days and during faculty meeting times. Additionally, the school district partnered with a local university's College of Education Graduate Program to provide their teachers a three credit-hour graduate technology course. The course was provided to half the faculty in the fall and the remaining faculty in the spring semester. Tailored to focus on web 2.0 tools to augment instruction with the laptop initiative as well as embrace and incorporate the STEM focus, teachers in the course were introduced to various sets of tools and charged to design and employ STEM-focused instruction in their classrooms.

Classroom Tested Teaching Tools

So how do CMS teachers take full advantage of their available instructional technologies to develop and implement standards-based lessons? Below are brief overviews and recommendations of web accessible tools, as a result of the graduate course, employed successfully by CMS teachers in their

classrooms.

- **Content Management Tools**
  - Edmodo (https://www.edmodo.com/)
    - Edmodo serves as a content management system for the teachers at CMS. Assignments, announcements, study guides, web links, newsletters, and other communication and class related documentation are easily disseminated and shared with both students and parents.

Why Edmodo is so Useful

  - Padlet (https://padlet.com/)
    - Imagine a tool that allows you to simply drag and drop documents, URLs, pictures, videos, audio files, etc. for quick posting? Padlet is a versatile tool that allows teachers to customize the background and the layout format from *freeform* to *streaming* in appearance. Teachers and students can post and share files, images, links, or text. Students do not need an account to access shared Padlet walls making this the perfect medium for the K-12 learning community. Teachers simply share the private link through Edmodo or have students type it in through their Internet browser.

How to Use Padlet in the Classroom

- **Student Response Tool**
  - Socrative (http://socrative.com/)
    - Socrative is an easy to use student response tool or "clicker" that can be used on any Internet accessible device. Once a teacher account has been established, students simply click on the *student login* app or button on the website, enter in the teacher provided room number, and access to the teacher created quiz, survey, poll, or even an exit ticket is provided. What makes Socrative ideal for the classroom is the ability to select teacher-paced or student-paced assessment administration. This allows the teacher to conduct both formal and informal assessments with easily exportable data in spreadsheet format.

Socrative in the Classroom: Formative Assessment Tool

- **Review/Game Tools**
  - Flocabulary (http://www.flocabulary.com/)
    - Flocabulary is a collection of content-based songs and videos designed to appeal to today's students. Using hip-hop themes and catchy phrases, Flocabulary introduces concepts through memorable pneumonic devices and lyrics. Each video provides the lyrics to the song, challenging questions, fill-in-the-blank sing-a-longs, and are correlated to the national standards, including Common Core State Standards.

Flocabulary – Order of Operations (PEMDAS)

  - Speed Match Quiz Maker (https://www.superteachertools.net/speedmatch/)
    - Speed Match Quiz Maker is the perfect review tool for use on an active board. Words, phrases, equations, dates, etc. are typed in with matching components (i.e. definition with vocabulary word). The online tool then starts a timer and allows the user to drag responses to the corresponding matching item. If the match is incorrect, the item goes back to its location. When matches are correct, the item disappears. The timer stops when all matches are correctly made and allows the user to enter his/her name to keep a log of completion times which can be used as a competition in the classroom.
  - Crossword Puzzle Tool **(http://www.readwritethink.org/files/resources/interactives/crossword/)**
    - Crossword Puzzle Tool, published by ReadWriteThink, allows the user to quickly and easily type in puzzle answers, then add in the clues to generate a crossword puzzle. The puzzle can be completed online, printed, or saved as PDF.
  - Flashcardstash (http://flashcardstash.com/)

        - Flashcardstash is the perfect tool to organize content that is then transformed into various types of instructional strategies: quiz using matching and fill-in-the-blank formats, matching of words to definitions, flashcards, and a "learning mode". The teacher enters a vocabulary word. The program then pulls in definitions from creative commons sources for the teacher to select from or the teacher can type in a specific definition or explanation. The teacher also has the option to add an image. Once five or more items are entered, students can then be invited to use the tool individually or the teacher may opt to use the vocabulary set with the entire class.

- **Publishing Tools**

    - Newspaper Clip Generator (http://www.fodey.com/generators/newspaper/snippet.asp)

        - Do you want your students to complete a 'quick write' assignment? The newspaper clip generator allows the user to enter any date, assign a name to the newspaper, create a headline title, and enter text for a news article. Once generated, the clip can be saved as a JPG file.

    - TradingCard Creator (http://www.readwritethink.org/parent-afterschool-resources/games-tools/trading-card-creator-a-30181.html)

        - The Trading Card Creator, published by ReadWriteThink, allows students to creatively display research on a person, place or thing into a trading card style publication. The program allows students to enter the topic and then generates a customized card with question fields the students complete. Users have the option to save and print the final publication.

    - BioCube Creator (http://www.readwritethink.org/files/resources/interactives/cube_creator/)

        - The Cube Creator, published by ReadWriteThink, allows students to creatively display research as a biography (biographical or autobiographical format), mystery cube to be used after reading or before writing a mystery story, story cube to map out key elements of a story, or a "create your own cube". This program also provides a planning sheet for students to use as a guide to their research on an assigned topic. Users have the option to save and print the final publication.

    - Comic Creator (http://www.readwritethink.org/files/resources/interactives/comic/)

        - The Comic Creator, published by ReadWriteThink, allows students to express their creative writing skills in a comic strip format. Students can select from 1 to 6 panel displays and can then select from provided backgrounds, characters, objects, and speech bubbles. Users have the option to print the final publication.

- Storybird (http://storybird.com/)
    - Do you want to use artwork from real artists to create a book? Storybird allows students to co-author with real artists who have submitted their images for use in publishing a storybook. The user selects a set of artwork, then selects individual images for each page of the text, types in narrative, and clicks publish for the book to be published and accessible on the Internet. Users have the option to make the book private or public and even to invite collaborators to assist in the writing and editing process. Books cannot be downloaded or printed without paying a fee. However, the books are stored permanently on the user's account for easy access and sharing with others.

Storybird Introduction for Educators

- **Graphic Organizer**
    - Text2MindMap (https://www.text2mindmap.com/)
        - Need a quick and easy tool to generate graphic organizers? Text2MindMap is just such a tool. Using simple indention (outline format) to delineate categories and sub-categories, the user types in text and clicks the "draw mind map" button to have his/her graphic organizer displayed. Options for customizing colors, connecting lines, etc. are available. The user can elect to save, save a provided web link to access it online in the future, or save a link that will allow the graphic organizer to be edited in the future.

K-12 classrooms are being transformed into 21st Century learning spaces through 1:1 computing and *bring your own device* (BYOD) initiatives combined with systemic, on-going training. Collaborating with a local university is an excellent means to provide customized courses to these districts and individual schools to support both training and mentorship of implementation in the classroom.

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