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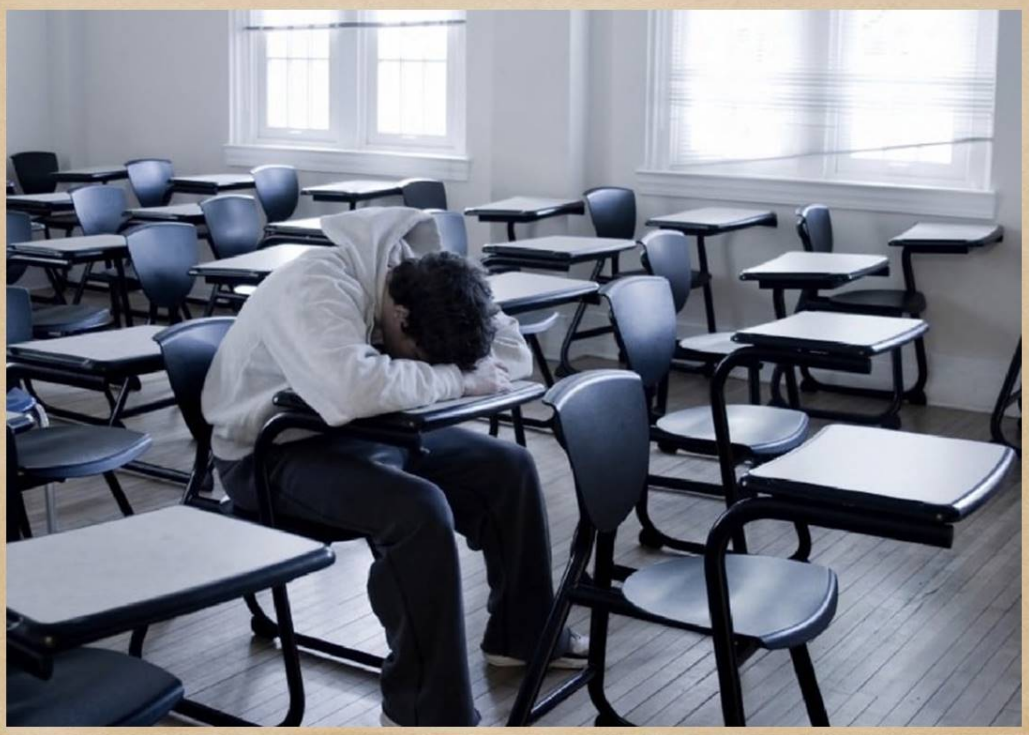

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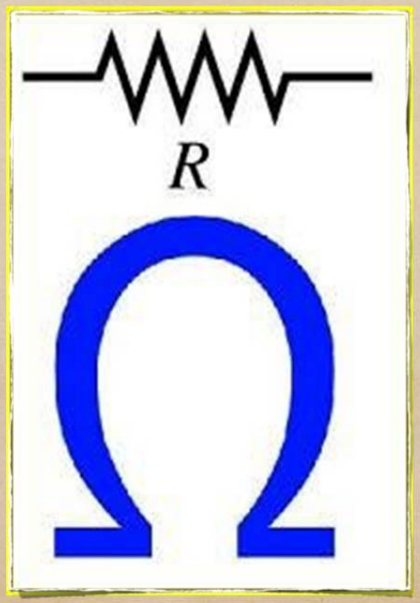

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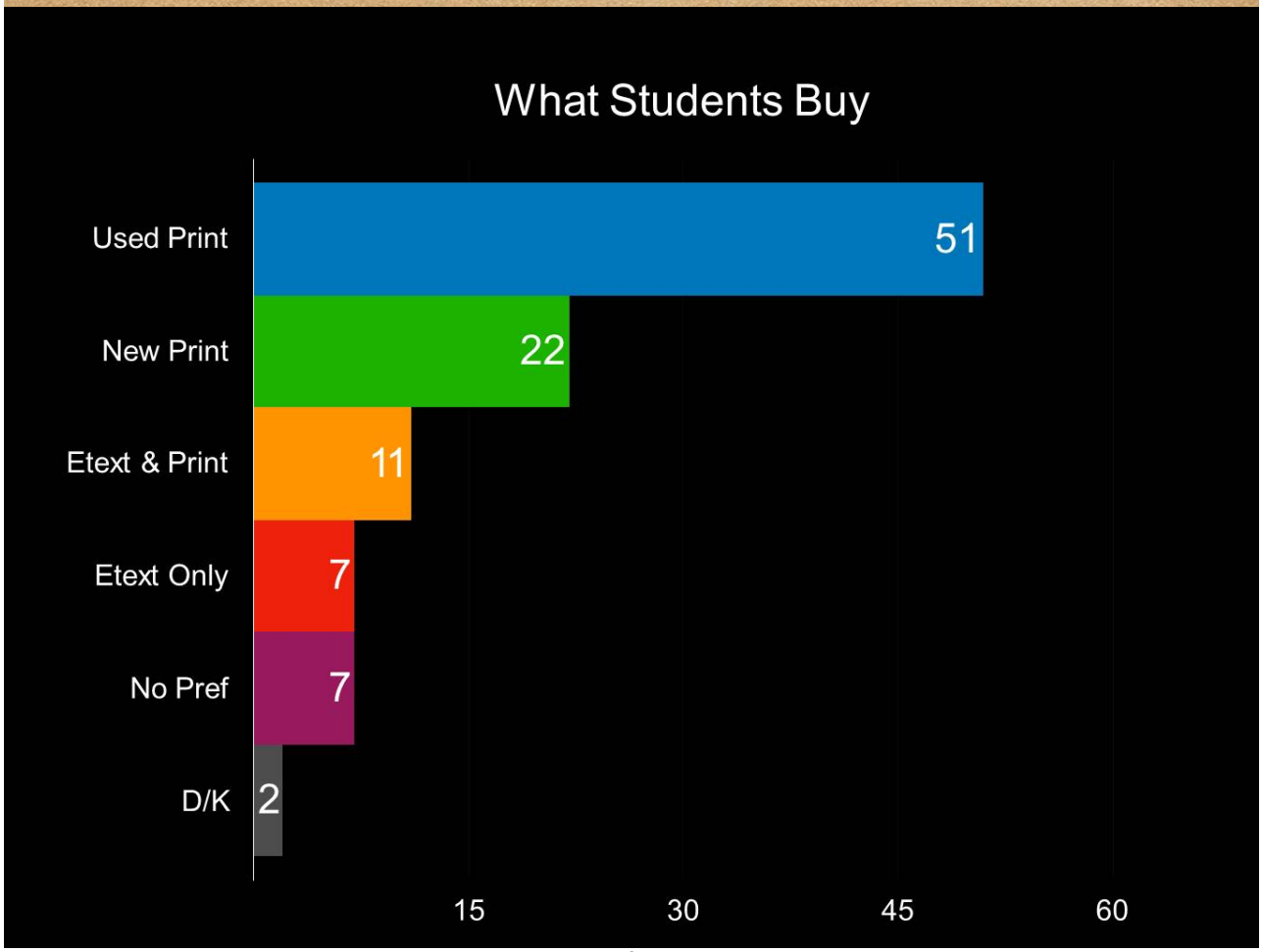

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Comparative Analysis of Nebraska Trade with India and China, 2002-2017

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Introduction

The main objective of the paper is to present a comparative analysis of Nebraska's trade with India and China and to provide intra-industry trade estimates for selected products for the period 2015-2017. The paper includes four sections. Brief demographic profiles of India, China, and Nebraska are presented in Section 1. The second section focuses on Data and Methodology. An analysis of Nebraska's trade with China and India is presented in the third section. Intra-industry trade estimates for selected commodities constitute the fourth section.

Section 1 - Profiles of Nebraska, China, and India.

[Figure 1]

Nebraska is located in the Great Plains region of the United States (Figure 1). Agriculture has been the cornerstone of its economy from the beginning because of its rich soil and water resources. Its nickname is the Cornhusker Sate because corn production constitutes the largest portion of its agricultural crop production. There is great demand for corn in ethanol production, hence corn production has exhibited an increasing trend in recent years. A solid manufacturing sector complements Nebraska's strength in agricultural industries and, so, the food processing, farm equipment, chemicals, and instruments are the top manufacturing industries in the State. Another economic strength for the state is the transportation industry. Nebraska is also the home to the world's largest train yard – the Bailey Yard in North Platte.

The main export partners for Nebraska are Mexico, Canada, Japan, China, South Korea, Australia, Hong Kong, Belgium, Germany, and the Netherlands. The top ten countries that Nebraska imports from are China, Canada, Germany, Mexico, Japan, United Kingdom, Austria, Switzerland, France, and India. The main exports of Nebraska are meat; industrial machinery; cereals; hides & leather; animal feeds; oil seeds; electrical machinery; precision instruments; pharmaceuticals; and chemicals. The main commodities imported are industrial machinery; organic chemicals; electrical machinery; motor vehicles & parts; pharmaceuticals; precision instruments; furniture, toys; sports equipment; and plastics.

[Table 1]

[Figure 2]

There has been a great change in China since 1978 where the focus is now on market oriented economic development. By 2000, output had quadrupled and for much of the population living standards improved dramatically, but political controls remained tight. China is located in Eastern Asia bordering the East China Sea, Korea Bay, Yellow Sea and South China Sea, between North Korea and Vietnam (Figure 2). The government's 13^{th} Five Year Plan was unveiled in March 2016. The emphasis is on the need to

increase innovation and boost domestic consumption so that the economy is less dependent on government investment, exports, and heavy industry.

The main commodities that are exported are electrical and other machinery, including computers and telecommunications equipment, apparel, furniture, and textiles. Its main exporting partners are USA 18.2%, Hong Kong 13.8%, Japan 6.1%, and South Korea 4.5 %. The main commodities imported by China are: electrical and other machinery, including computers integrated circuits and other computer components, oil and mineral fuels; optical and medical equipment, metal ores, motor vehicles and soybeans. Its main importing partners are South Korea 10%, Japan 9.2 %, USA 8.5 %, Germany 5.4 %, and Australia 4.4 %.

[Figure 3]

India is located in Southern Asia, bordering the Arabian Sea and the Bay of Bengal, between Burma and Pakistan (Figure 3). It became independent from the British rule in 1947. It has 29 states and 7 Union Territories. India's economy is diverse, including traditional village farming, modern agriculture, handicrafts, a wide range of modern industries, and a multitude of services. Despite several problems, such as significant overpopulation, environmental degradation, extensive poverty, and widespread corruption, two factors are driving India's emergence as a regional and global power -- the launching of economic reforms in 1991 and a largely youthful population. India is developing into an open market economy. The country's growth averaged nearly seven percent per year from 1997-2017. However, in 2011, the growth slowed due to a decline in investment caused by high interest rates, rising inflation, investor pessimism, and slow world growth. The positive economic factors for India are a young population, a low dependency ratio, healthy savings and investment rates, and increasing integration into the global economy. The factors that deter potential growth are India's discrimination against women and girls, an inefficient power generation and distribution system, ineffective enforcement of intellectual property rights, decades long civil litigation dockets, inadequate transport and agricultural infrastructure, limited nonagricultural employment opportunities, high spending and poorly targeted subsidies, inadequate availability of quality basic and higher education, and accommodating rural to urban migration.

India's major mineral resources include coal, iron ore, mica, bauxite, chromite, natural gas, diamonds, limestone, and thorium. The main agricultural products are wheat, oilseed, cotton, jute, tea, sugarcane, lentils, onions, potatoes, dairy products, sheep, goats, poultry, and fish. The main industries are textiles, chemicals, food processing, steel, transportation equipment, cement, mining, petroleum, machinery, and software. The main commodities exported by India are petroleum products, precious stones, vehicles, machinery, iron and steel, chemicals, pharmaceutical products, cereals, and apparel. The export partners are USA 16%, UAE 11.7%, and Hong Kong 5.1 %. Crude oil, precious stones, machinery, chemicals, fertilizer, plastics, and iron and steel

constitute the primary imports. India imports from China 17%, USA 5.8%, UAE 5.4%, Saudi Arabia 5.2% and Switzerland 4.2%.

[Figure 4]

[Table 2]

Table 2 is self-explanatory. Both the countries have huge populations. However, in terms of land area, China is almost three times larger than India. The population growth rate is higher for India (1.2%) than China (.41%). Only in the category of 0-14 year-olds does India (27.34%) exceed that of China (17.2%) in percentage terms. China's GDP and GDP per capita are more than twice that of India but the growth rates of GDP are similar. Household consumption contributes more to GDP in India than China whereas for Government consumption and Investment in Inventories the contributions are higher in China than in India. China has a Balance of Trade Surplus and India has a Balance of Trade deficit. In both countries, the contributions to GDP by Service and industry sectors are higher than the agricultural sector. Unemployment and inflation rates are higher for India (8.8%; 3.8%) than China (4%; 1.8%).

Section 2- Data and Methodology

One of the main objectives of this paper is to analyze the trade of both these countries with Nebraska.

Data

In order to analyze the trade between Nebraska and Japan, the following variables were used.

Value of Nebraska Exports to Japan, China, and India
Value of Nebraska Imports from Japan, China, and India

Methodology

Simple analytical tools were used to examine the trade patterns of Nebraska with India and China and Japan. Tables and graphs depict the flow of imports and exports between the three entities and Nebraska.

A semi-log model was used to analyze the data and OLS (Ordinary Least Squares) was used to estimate the growth rates for Nebraska imports from and exports to Japan, China, and India. The following four regressions were fitted:

$\text{Log } X_{China} = a_1 + b1T$ (Equation 1)
$\text{Log } M_{China} = a_2 + b2T$ (Equation 2)
$\text{Log } X_{India} = a_3 + b3T$ (Equation 3)
$\text{Log } M_{India} = a_4 + b4T$ (Equation 4)
$\text{Log } X_{Japan} = a_3 + b3T$ (Equation 5)
$\text{Log } M_{Japan} = a_4 + b4T$ (Equation 6)

Where X_{China} and M_{China} are Nebraska exports to and imports from China and X_{India} and M_{India} are Nebraska exports to and imports from India.

Another measure used to examine Nebraska's trade with China and India is the intra-industry Trade Index. For an individual product group or industry *I,* the share of IIT is formulated as:

$$IITi = 1- (|Xi - Mi| / (Xi + Mi)) \quad (1)$$

where Xi and Mi stand, respectively, for the exports and imports of industry *i*.

If all trade is balanced, IITi equals 1. If all trade was one-way, IITi equals zero. Thus, the closer IIT is to 1 (that is, Xi = Mi), the more trade in industry *i* is intra-industry trade. The closer IITi is to zero (that is, either Xi = 0 or Mi = 0), the more trade in industry *i* is inter-industry trade. Therefore, the index of intra-industry trade takes values from 0 to 1, that is, $0 \leq GLi \leq 1$.

Section 3 - Analysis of Nebraska Trade with Japan, China, and India

The period of study is 2002-2017 but due to data availability, the period of study for imports is restricted to 2008-2017. The growth rates for Nebraska exports to and imports from India and China are presented in Table 3.

Table 3 shows that X_{China} (Nebraska's exports to China) have a greater growth rate (6%) than M_{China} (Nebraska's imports from China,) a 3% growth rate. Both values are statistically significant and the R^2 values are good. In the case of Nebraska's Trade with India, the growth rates are significant, but the R^2 values are low for Nebraska's imports from India. Further, the growth rate of M_{India} (Nebraska imports from India) is greater at 5% than X_{India} (Nebraska exports to India) at 3%.

[Table 3]

The Graphs 1, 2, & 3 below depict Nebraska's trade with Japan, China, and India.

[Graph 1]

[Graph 2]

[Graph 3]

Graphs 1, 2, & 3 show that Nebraska imports from China are consistently higher than imports suggesting that Nebraska has a "trade deficit" with China. (Note: There are problems with the assignment of specific import and export values to individual states that make the calculation of precise state-level "trade deficits" problematic and

according to the Census Bureau inadvisable.)[1] The best one can say, in the case of Nebraska trade with India, is that the estimated gap between exports and imports is not large for the period 2008 to 2014, then for the period 2015 to 2017 estimated state imports from India are apparently much larger than exports.

Section 4 - Intra-industry Trade Analysis

In this section, the intra-industry trade analysis for Nebraska's trade with Japan, China, and India selected commodities is presented. The formula used to calculate these values was presented in Section 2 under Methodology. Here, despite the admonition above, we calculate precise values for IITi.

[Table 4]

Table 4 suggests that Nebraska trade with Japan, China, and India is more inter-industry than intra-industry. Intra-industry trade is significant for Textiles & Fabrics and Leather & Allied Products. In the case of Nebraska's trade with India, intra-industry trade is evident for Computer & Electronics, Food & Kindred Products, Machinery except Electrical, and Textiles & Fabrics.

Conclusions

The main conclusions from the study are:

- The included graphs show that Nebraska imports from China are consistently higher than imports reflecting the possibility that Nebraska may have a trade deficit with China. In the case of trade with India, the gap between exports and imports is less for the period to 2008 to 2014 suggesting less potential for a trade deficit, and then the imports from India are much higher than state exports to India from 2015 to 2017, suggesting a potentially large trade deficit.
- Nebraska trade with China and India is more inter-industry than intra-industry. Intra-industry trade is significant for Textiles & Fabrics and Leather & Allied Products. In the case of Nebraska's trade with India, Intra Industry trade is prevalent for Computer & Electronics, Food & Kindred Products, Machinery except Electrical and Textiles & Fabrics.
- This study is essentially exploratory in nature and requires more in-depth research and extended data.

[1] "Data users should keep in mind that import and export transactions are compiled with the state information recorded at time the goods enter or leave the United States. This timing produces reporting limitations. The export origin of movement may not always imply production origin and import destination may not always reflect where the goods are consumed or used. In addition the trade data do not provide information to track or monitor interstate flows. Given these conditions, the concept of calculating trade balances at the state level using destination and origin state data is problematic and may produce unintended results." (USDOC, Census Bureau, USA Online, 2018) Also, what does a state-level trade deficit mean? States don't have a foreign trade policy that could impose tariffs or other barriers to eliminate a "trade deficit".

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Figure 1 - Nebraska

Table 1 – Nebraska Demographic Profile

VARIABLE	VALUE
Population	1,920,076
Ages 0-19	27.5%
Ages 19-24	57.9%
Ages 65+	14.6%
Persons 65 years and above	15.0%
Total Employment	870,279
Land Area	76,824 sq mi
Water – % of land area	0.68%
GDP (2016)	$115,345 million
Total Exports	$6,369,969,992
Total Imports	$3,559,973,645
Unemployment rate	3.2 (2016)
Average Annual per capital income	$49,636
Economic Growth	1.7%
Percentage below poverty level	11%

Source ((https://globaledge.msu.edu/states/nebraska/tradestats)

Figure 2 - China

Source: (https://www.cia.gov/library/publications/the-world-factbook/geos/in.html

Figure 3 - India

Source: (https://www.cia.gov/library/publications/the-world-factbook/geos/in.html

Figure 4 - Japan

Table 2 - Demographic and Economic Comparisons between India, China, & Japan

Variable	CHINA	INDIA	JAPAN
Total Area	9,596,960 sq. km	3,287,263 sq. km	377,915 sq. km
Land	9,326,410 sq. km	2,973,193 sq. km	364,485 sq. km
Water	270,500 sq. km	314,070 sq. km	13,340 sq. km
Population	1,379,302,771*	1,281,935,911	126,451,398
0-14 years	17.15%	27.34%	12.84%
15-24 years:	12.78%	17.9%	9.64%
25-54 years	48.51%	41.08%	37.5%
55-64 years	10.75%	7.45%	12.15%
65 years and over	10.81%	6.24%	57.87%
Population Growth Rate	0.41%	1.17%	-0.21%
GDP	23.12 trillion*	$9.447 trillion*	$4.884 (trillion)
GDP real growth rate:	6.8%*	6.7%*	1.5%
GDP per capita	$16,600*	$7,200*	$42,700
GDP composition by end use			
Household consumption	38%	58.7%	55.9%
Government consumption	14.6%	11.6%	19.5%
Investment in inventories	1.1%	4.0%	0.2%
Exports of goods and services	19.6%	18.4%	17.8%
Imports of goods & services	-17.7*	-20.2%*	-16.8%
GDP compos. by sector of origin:			
Agriculture	-8.2%	16.8%	1.0%
Industry	39.5%	28.9%	29.7%
Services	52.5%*	46.6%*	69.3%
Labor force by occupation			
Agriculture	28.3%	47.0%	2.9%
Industry	29.3%	22.0%	26.2%
Services	42.4%	31.0%	70.9%
Unemployment rate	4%*	8.8%*	2.9%
Population below poverty line	3.30%	21.90%	16.1%
Revenues	$2.672 trillion	$248.7 billion	$1.678 trillion
Expenditures	$3.146 trillion*	$330.3 billion*	$1.902 trillion
Taxes & other revenues	22.4% GDP	10.2% GDP*	34.3% of GDP
Public Debt	18.6% GDP	50.1% of GDP*	223.8% of GDP
Inflation Rate	1.8%*	3.8%*	0.4% (2017 est.)

Table 3 - Growth Rates for Exports and Imports

Variable	N=	Growth Rate	t-value	Adj R^2
X_{China}	16	0.0637	11.4572	0.8967
M_{China}	10	0.0297	3.4453	0.5471
X_{India}	16	0.0300	5.8447	0.6885
M_{india}	10	0.0466	2.4302	0.3528
X_{Japan}	16	0.0348	5.5617	0.6661
M_{japan}	10	0.0057	0.6810	-0.0634

Graph 1

Source: USDOC, USA Trade Online, 2018

Graph 2

Source: USDOC, USA Trade Online, 2018

Graph 3

Table 4. Intra-Industry (IIT) Values for Select Industries for Nebraska Trade with Japan, China, and India

Nebraska Trade w/ China, 2016	
NAICS Code/ Description	**Value of IIT**
311 Food & Kindred Products	0.18
313 Textiles & Fabrics	0.99
316 Leather & Allied Products	0.76
325 Chemicals	0.40
331 Primary Metal Mfg	0.06
333 Machinery, Except Electrical	0.12
334 Computer & Electronics	0.40
336 Transportation Equipment	0.03
Nebraska Trade w/ India, 2016	
NAICS Code/ Description	**Value of IIT**
311 Food & Kindred Products	0.86
313 Textiles & Fabrics	0.63
316 Leather & Allied Products	0.09
325 Chemicals	0.09
331 Primary Metal Mfg	0.19
333 Machinery, Except Electrical	0.85
334 Computer & Electronics	0.95
336 Transportation Equipment	0.08
NE trade w/ Japan, 2016	
NAICS Code/ Description	**Value of GLi**
311 Food & Kindred Products	0.01
313 Textiles & Fabrics	0.09
314 Textile Mill Products	0.25
325 Chemicals	0.27
326 Plastics & Rubber Products	0.53
331 Primary Metal Mfg	0.95
332 Fabricated Metal Prods, Nesoi	0.35
333 Machinery, Except Electrical	0.06
334 Computer & Electronics	0.63
335 Electrical Equip., Appli. & Comps	0.10
336 Transportation Equipment	0.34
337 Furniture & Fixtures	0.50
339 Misc. Manfact'd Commodities	0.33

Source: International Trade Administration, USA Online, 2018

Teacher Environmental Education & Sustainable Student Stewardship

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Abstract

This presentation presented the results and ongoing work of the NOAA B-WET project on the 'Gulf Coast Guadalupe River Watershed Teacher and Student Environmental Education.' Plastic debris, aquiculture, and industrial run-off enter our watershed, which then ends up in the oceans. The dead zone off the Gulf coast is larger than 8,700 square miles due to aquiculture runoff. Environmental education is more important than ever! The main goal of the project was to increase teacher and student knowledge and skills on watershed ecology and enhance watershed environmental awareness with stewardship. Partnerships are most important to the success of the project and a stewardship site with easy access and visibility. Participants learned how to design a sustainable stewardship project in their community, improve environmental education, and contribute to environmental research.

Teacher Environmental Education & Sustainable Student Stewardship

The research project was funded by the National Ocean & Atmospheric Administration (NOAA) Bay Watershed Education & Training (B-WET) to help provide meaningful high school science teacher environmental professional development, transfer their experiences to the classroom, and a community sustainable stewardship project. One would have thought since the 70's people would be more environmentally responsible? Apparently, they are not and according to 'Don't mess with Texas' littering, especially plastic debris is everywhere and young people are responsible for most of it. One in four adults' admits to it (Don't mess with TX, 2017).

Plastic bags and plastic debris can be found 20,000 kilometers deep in the oceans and bits of plastic are discovered in ice cores of the Artic. Plastic is everywhere In addition, to plastic debris, there are aquiculture and industrial waste in our watershed, which end up in the oceans. The dead zone off the Gulf coast is larger than 8,700 square miles (NOAA, 2017).

To help change the environmental attitudes of the high school students, teachers, and community we have been conducting research since 2016 focused on local watershed science instruction professional development, water quality testing (surface & well water), partnerships, and implementing a sustainable environmental stewardship project at the storm drain in Victoria, TX (Figure 1). Students were administered an environmental attitudes survey, and both the teachers and students were invited to help track the trash and then clean it up. Teachers impact thousands of students & their families. Water quality is important to the community because the watershed provides surface water and groundwater for farms, ranches, and homes, fishing and hunting activities, and surface water recreation.

Teachers performed water quality tests on water shed field trips and laboratory, such as dissolved oxygen, solids, turbidity, nitrates, ammonia, phosphorus, and

coliform. They are making a contribution by ccollecting a baseline set of data for future monitoring of the Guadalupe River's health by evaluating the amounts of nutrients carried by the river water, identify the chief sources of fecal pollution and increase environmental awareness among the local residents.

Results from the environmental attitudes survey and the storm drain litter tracking as well as water quality data from several sampling sites along the Guadalupe River are being analyzed. In addition, evaluation feedback from the teachers was conducted by McREL and their results have been instrumental in shaping the teacher professional development. Ensuring time for reflection, engaging activities and newly learned skills that can be readily used in the classroom, plus resources/supplies were all important to the teachers.

The project has been successful and is still a work in-progress to increase teacher and student knowledge and skills on watershed ecology, and enhance watershed environmental awareness with stewardship. The University of Houston-Victoria, the City of Victoria, the Victoria County Groundwater Conservation District, the Victoria ISD, and NOAA have all supported this project. Partnerships are most important to the success of the project and a stewardship site with easy access and visibility.

Figure 1. Stewardship Site: Spring Creek Storm Drain, Victoria, Texas

Don't Mess with Texas (2017). http://www.dontmesswithtexas.org/about/litter-facts/#research

National Ocean Atmospheric Administation (NOAA) (2017). http://www.noaa.gov/media-release/gulf-of-mexico-dead-zone-is-largest-ever-measured

Educate, Don't Indoctrinate

Six Research-based Protocols to Help Teachers Avoid Indoctrination in Materials and Teacher Bias

Presenters

Greg Levitt, UNLV
Allen Deever, Research
Steven Grubaugh, UNLV
Gabe Gonzales, K-12 EMO

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Abstract

- This research study defines the sources of indoctrination that creep into social science teaching through omission or commission. This presentation outlines research-validated methods to avoid indoctrination in both materials and teacher bias.

Implications of Teaching and Indoctrination

Does teaching necessarily imply the indoctrination of one's students?

What is meant by "indoctrination."

- This study defined indoctrination as it applied to the classroom, and demonstrated that teaching often involves indoctrination, either through the content of the lessons, hidden messages in textbooks (Sadker, 2017; Ferguson, Brown, & Torres, 2016), statements by the teacher (Journell, 2016), or the teachers intended delivery (Håkansson, 2015).

Fundamental Ideas

- The fundamental idea behind this study was that teachers can teach without having indoctrinated their students (Copp, 2016).
- This study demonstrated how the act of indoctrination was contrary to creating life-long, metacognitive learners (Han, 2015; Taylor, 2014).

Teaching as a Controversial Occupation

- "Trump is unfit to be President or Commander-in-Chief." "Clinton is the most corrupt politician to ever seek the Presidency."
- "Put God back in our schools!"
- "America is more divided today than it was before the Civil War."

Conformational Bias

- Where the beliefs or opinions of students diverge from their teacher (Journell, 2016), they may be unwilling to accept even unbiased facts that are presented to them by their teacher (Jeyaraj & Harland, 2016).

Definition of Indoctrination

- "Indoctrination" is typically used in reference to political, economic, or religious beliefs and ideologies that are extraneously inserted into particular portions of a curriculum.

Definition and Categories of Indoctrination

- Indoctrination involves the teaching of disputatious (equivocal, non-evidential) statements as being true (Pratte, 1992).
- Such statements can be categorized into six categories:

1) Imperative or command statements;
2) Analytical statements;
3) Preference or attitude statements;
4) Value or obligation statements and judgments;
5) Empirical statements; and
6) Metaphysical statements

(Taylor, 2017; Journell, 2016; Håkansson, 2015).

Imperative or Command Statements

Non-Indoctrination statements

- Imperative or command statements such as “shut the door now” or, “please close the window” are examples of command statements. While one can disagree, or disobey commands there is no logic in disputing the statement. Verification is unimportant except if the door, for example, was not open. Teaching with the use of imperative or command statements does not involve indoctrination.

Analytical Statements

Non-Indoctrination statements

- Analytical statements are true by definition, and denial - claiming the opposite - is absurd. “Red is a color.” “2 x 2 = 4.” “I was born in...” are all analytical statements. There is no logic to dispute this type of statement. Analytical statements can be verified by appeals to the laws of language, math or logic. However, what is true analytically is not always true empirically. For example, 1 + 1 = 2, however, 1 drop of water + 1 drop of water = 1 (bigger) drop of water, not 2 drops of water. Teaching analytical statements does not involve indoctrination.

Preference or Attitude Statements

Potential for Indoctrination

- These types of statements express something that is desired, preferred, or valued by the speaker. However, students recognize that the something that is preferred is desired or liked simply because the speaker likes it.
- "I love history," or "I hate chemistry," could all be preference statements. Like imperatives, there is no logic in disputing these statements. Likewise, verification is unimportant.
- Teaching a preference statement as if it were an empirical statement may involve indoctrination.

Value or Obligation Statements and Judgments

Potential for indoctrination

- These express something that is desirable, preferable, valuable, or something that one morally should/should not do.
- There is value in disputing these types of statements, which can be disputed by either disputing the criteria used to make the statement or judgment, or accepting the criteria and claiming that it does not apply in this case.
- Example: "You should do your homework" and "You should work hard to get good grades" could be verified partly on empirical grounds and partly on the criteria of value. Judgments are verified on appeals to criteria relevant to the activity.

Empirical Statements

Potential for indoctrination

- This type of statement is factual; the world makes it true or false, and it is based on publicly agreed upon criteria. There is logic to dispute this type of statement.
- It may in fact be true or false, but you cannot argue for or against an empirical statement without evidence. If no evidence is available, then the statement may simply be a preference statement.
- Teaching empirical statements may involve indoctrination. If an educator teaches false empirical statements as true, the teacher may be committing an act of indoctrination.

Metaphysical Statements

Potential for indoctrination

- With a metaphysical statement, among intelligent people who have considered the issue, one cannot achieve general agreement as to the sort of evidence that would count for or against the supposition.
- As an example, scientific creationism is a non-scientific theory informing people about a supernatural phenomenon.
- Therefore, statements on that topic are metaphysical statements, and there is no logic to dispute that type of statement. Therefore, wherever metaphysical statements are taught as truth, it may involve evidence of indoctrination.

A Quick Check for Potential Indoctrination

- To evaluate any of the six categories of statements for potential indoctrination, check to see how a statement can be verified (proven true or false).
- If publicly agreed upon criteria or principles cannot be established, then it makes no sense to dispute the statement, which means that teaching the statement as true may represent an act of indoctrination.

Morality of Indoctrination

- It is the opinion of the researchers of this study that indoctrination in all classrooms, and social science classrooms in particular, is wrong and in opposition to the precepts of healthy pedagogical principles.
- One of the educational purposes of teaching is to help students develop cognitive perspective (metacognition) and rationality to develop and promote independent thinking and analysis.
- Teaching statements that are of a disputatious nature but are presented as truths, as well as teaching certain ideologies as truths, can be classified as forms of indoctrination.

9 Principles of Teaching Without Indoctrination

1. Avoid teaching value judgments, non-scientific theories, metaphysical statements, or false statements as facts.
2. Train students in reflective methods that lead to critical-thinking (Han, 2015; Taylor, 2014).
3. Be skeptical of statements presented as "facts" without empirical evidence, and encourage students to recognize and be skeptical of such statements in teaching materials (Sadker, 2017; Han, 2015).
4. Check classroom materials for accuracy and encourage students to fact-check materials for contradictions (Sadker, 2017).
5. Encourage students to fact-check the statements of the teacher for both accuracy and bias (Han, 2015).

9 Principles of Teaching Without Indoctrination

6. Teachers could be trained to become more aware that many statements and positions are value judgments and therefore require justification.
7. Avoid teaching metaphysical statements as true, or teaching preference or value statements as true without establishing criteria or acceptable evidence.
8. Avoid implanting or establishing in the student a fixed or closed mind with regard to a belief, or set of beliefs of a disputatious nature, despite otherwise compelling evidence to the contrary (Taylor, 2014).
9. Require that appropriate evidence be given to support empirical statements, no matter how legitimate the source seems to appear.

Conclusions

- Teaching may involve varying degrees of indoctrination, either by purposeful design, inadvertently, or both, but pedagogy does not inherently require indoctrination to take place.
- This study demonstrates that social science subjects can be presented in an enlightened classroom, even religion, politics and scientific creationism when the teacher assists their students in keeping an open mind and teaches them to be aware of the differences between opinions, suppositions, and empirical facts.

Brief References

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Questions & Reminder

Reminder

- If you'd like to receive these materials, please sign up on the iPad database and we'll send you a copy of these resources.
- Your email and information will not be shared at all and will be deleted after the materials are sent.

Preexisting Social Science NCSS C3 Lesson Plans

Research-based Resources and Benefits for Elementary - University Professionals

Presenters

Greg Levitt, UNLV
Steven Grubaugh, UNLV
Gabe Gonzales, K-12 EMO
Allen Deever, Research

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Abstract

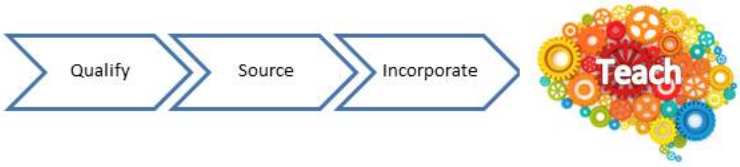
- Research on the new NCSS C3 standards-based lesson plans from government resources (e.g., Library of Congress, Smithsonian), professional organizations (e.g., NSSA, NCSS), and interest group websites.

Are We Asking Too Much of New Teachers?

- Preservice teachers face many issues in becoming 21st century teachers.

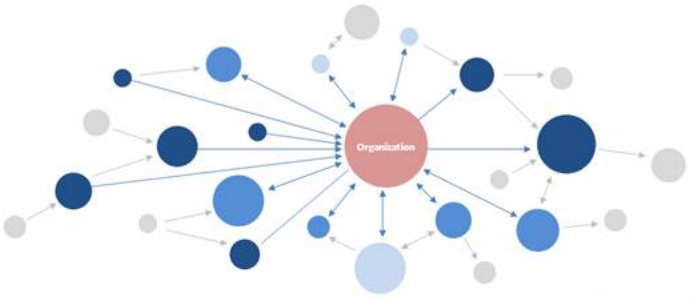
Some Help: Use Pre-existing Lesson Plans

- Utilizing the combined expertise of professional educators and content experts who have created excellent lessons, unit plans and activities for teachers will both increase the quality of lessons and student learning and save teachers' time from creating lessons to allow teachers to do focus on what they love to do – to teach.



Sources of Lessons

- Publically funded Government based websites: (Library of Congress, Smithsonian)
- Professional Organization websites: (NCSS, ALA)
- Interest Group Websites: (Center for Civic Education, ICivics).
- For Profit Websites: (Textbook companies, Stores)



Guidelines & Best Practices

Choosing Appropriate Lesson Plans (1)

Teacher Concerns

- Does it address at least one appropriate standard?
- Does it address an important concept or issue? Is it more than just fun?
- Is it factual?
- Is it biased?
- Does it fit into your curriculum?
- Can lesson goals be assessed?

Guidelines & Best Practices

Choosing Appropriate Lesson Plans (2)

Student Concerns

- Is it engaging?
- Is it accessible?
- Is it worth the time to learn?

Examples

Lesson Plan Websites for all Social Studies Content Areas

- **National Council for the Social Studies**: NCSS is the largest professional association in the country devoted solely to social studies education. NCSS serves as an umbrella organization for elementary, secondary, and college teachers of history, civics, geography, economics, political science, sociology, psychology, anthropology, and law-related education.
- **C3 Teachers.org**: The Inquiry Design Model (IDM) is a distinctive approach to creating curriculum and instructional materials that honors teachers' knowledge and expertise, avoids over-prescription, and focuses on the main elements of the instructional design process as envisioned in the Inquiry Arc of the College, Career, and Civic Life (C3) Framework for State Social Studies Standards (2013).

Google Like a Boss (1)

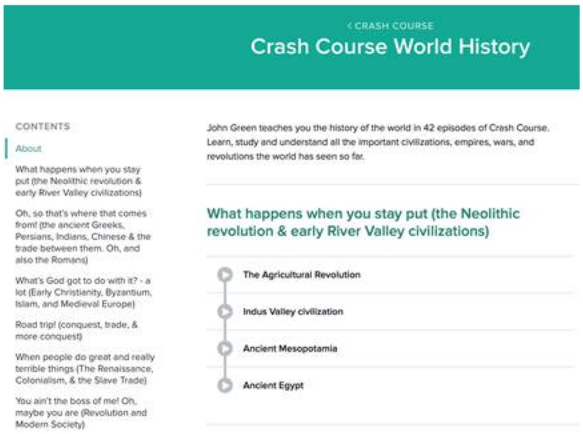
- Analyzing results – large data

Google Like a Boss (2)

- Analyzing results – granular data

Lesson Enrichment Strategies

- Sites like the Crash Course for history videos, lend themselves to enhancing comprehension and supporting differentiated instruction.



Conclusions

Teachers expand their reach for expertise and enrich learning experiences.

- By using these pre-existing lesson plans and media, teachers can save time and infuse new life into their instruction.
- With the sources researched in this article, teachers can animate the study of history.
- The extensive research for this article has been to carefully develop the content-rich links useful to writing lesson plans and enhancing teaching with media for social science teachers and their students.

Questions

Reminder

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Websites for All Social Studies Content Area Lesson Plans

–National Council for the Social Studies: NCSS State Councils:

–C3 Teachers.org:

–Teaching Channel:

–Education World:

–Annenberg Learner:

–Discovery Education:

–PBS Learning Media:

–Teachers.net:

–Khan Academy:

Websites for US History Lesson Plans

–Stanford History Education Group:

–Teaching History.org:

–Zinn Education Project:

– Library of Congress Teachers, America's Library: American Memory:

– America's Story

–Smithsonian Institution: For Teachers Smithsonian History Explorer:

–Facing History:

–National Archives and Records Administration (NARA) Educator Resources:

–National Historical Publications and Records Commission (NHPRC) DocsTeach: Bring History to Life:

Websites for World History Lesson Plans

–World History for Us All

–Stanford History Education Group:

–The Big History Project:

–Teaching History.org:

–World History Center

–History Channel:

–Women in World History:

–AP Central: AP World History AP World History Course HomePage:

–Center for Teaching History with Technology

Websites for Civics Lesson Plans

- **Center for Civics Education**:
- **CivicsRenewalNetwork.org:**
- **iCivics**:
- **Youth Leadership Initiative:**
- **100 milestone documents of American history:**
- **Kids in the House:**
- **Law Related Education:**
- **Newseum: The Interactive Museum of News:**
- **Street Law:** Teaching About Law. Advancing Justice for All.
- **Oyez**: A free, online multimedia database of the U.S. Supreme Court.

Websites for Geography Lesson Plans

–**National Geographic Society – Education: National Council for Geographic Education:**

–**National Park Services Teacher Resources:**

–**National Parks Conservation Association**:

–**EPA Education Resources**:

–**Peace Corps: See Educator Resources:**

–**Schoolyard Garden Guides:**

Websites for Economics and Financial History Lesson Plans

–National Association of Economic Educators: EconEdLink EconEdReviews:

–Council for Economic Education:

–Foundation for Teaching Economics:

–Econoclass.org:

–Junior Achievement:

–The National Consortium for Entrepreneurship Education:

–Hands on Banking:

–Kiddynomics: An Economics Curriculum for Young Learners, Lessons for Grades Pre-K-K:

Websites for Multicultural/Diversity Lesson Plans

–Teaching Tolerance: Anti-Defamation League (ADL) Education and Resources:

–Facing History:

Websites for Individual State History Lesson Plans (not hot-linked)

–State Agencies

–State Parks

–State Museums

–State Historical Societies

Thank All of You For Attending

Greg Levitt, UNLV
Steven Grubaugh, UNLV
Gabe Gonzales, K-12 EMO
Allen Deever, Research

ESL in Teacher Education…

NSSA

Las Vegas – March 27, 2018

Jane C. Manner, Ed.D. - East Carolina University

ESL was absent in the Teacher Ed. Program…

- Growing Number of Culturally and Linguistically Diverse Students (CLDs) in public school
- Heavily impacted areas historically
- More recently impacted areas do not have resources

Teachers / Districts / College were not ready…

- Many more recently impacted areas are rural
- Rural schools have few resources
- Teachers need professional development
- Colleges of Education are not ready

How to Craft Professional Development?

- Some challenges are common to most areas
  - Student body becoming more diverse
  - The teaching staff is not diversifying as rapidly
  - Lack of trained staff

What to Consider…

- Some challenges are unique to the rural environment
  - Distance from one another and opportunities at Colleges of Education
  - Even if we go to them, it's hard to get a "critical mass"; teachers are very "spread out".

But we need to find a way for teachers, candidates and students…

- Another Challenge...
  - Preservice teachers aren't seeing good instruction for English learners in field experience – a pivotal story…
  - What do our teacher candidates think?

Questions for our Teacher Ed. Program…

- Research Question #1:
  DO OUR INTERNS PERCEIVE INSTRUCTIONAL SKILLS in ESL to BE IMPORTANT for THEIR PRACTICE?

More QUESTIONS…

- Research Question #2:
  HAS OUR PROGRAM PROVIDED a GOOD FOUNDATION in COURSEWORK for teaching ENGLISH Learners (Els) ?

More QUESTIONS…

- Research Question #3:

  HAS our PROGRAM PROVIDED APPROPRIATE FIELD EXPERIENCE in TEACHING ELs?

A Brief Survey for our Interns…

- METHOD:
  - **Three statements with Likert Scale for subjects to select the one closest to their perception**
  - **Numerical value assigned to each potential answer**
  - **Chi Square analysis**

ESL in Teacher Education…

- DATA ANALYSIS:
  - **High Significance found for all measures**

Table 1. Findings for Teacher Candidates

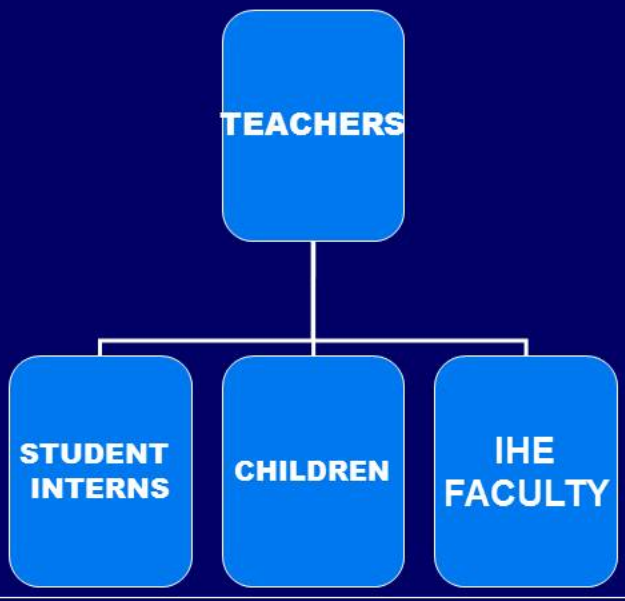
Question	X2	*df*	*p*=
1	46.48	4	< .001
2	34.74	4	< .001
3	20.58	4	< .001

n=24

We REALLY need a GRANT…

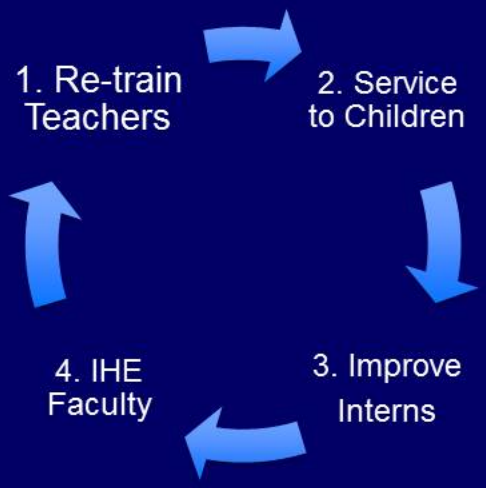
- PROJECT LEAP (Leading Exceptional Annual Progress)
- Funded by the U.S. Department of Education (Professional Development Grant)
- OELA OELA

Partnership with FIVE SCHOOL DISTRICTS…



- "TRICKLE DOWN" System…
  - Start with teachers
  - Immediate impact for children
  - Immediate impact for student teachers
  - Eventual impact for IHE faculty

ESL in Teacher Education…



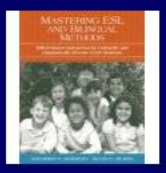
- **START with INSERVICE TEACHERS**
- **IMPACT CHILDREN**
- **MODEL for INTERNS**
- ***SHARE with IHE FACULTY**

ESL in Teacher Education…

- Fund tuition for five courses representing the five domains of NCATE / TESOL Standards
  - Methods
  - Assessment
  - Linguistics
  - Culture & Language
  - Professionalism

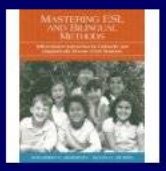
HOW?

- Fund fees and materials including:
  - Graduate Registration
  - CLASSIC MODEL from CIMA at Kansas State University CIMA
  - Provide Textbooks and DVDs



HOW?

- Provide fully online access to professional development...
- Facilitate asynchronous team-based education via Blackboard...
- We go to them for two meetings...



WHEN?

- FIVE YEAR PERIOD...
- COHORT MODEL OVER FIVE SEMESTERS...

SUMMER INSTITUTE…

OUTCOMES?

- More than 80 teachers in five counties
- Passing grade on PRAXIS I
- Add-on licensure in ESL

- We funded travel to conferences…

Participants sharing practice as national presenters…

Transformative power of this experience…

OUTCOMES...

- Development of 4 new courses in our program
- Hosting a website with video of key instructional strategies being implemented
- Better models for our teacher candidates in the field
- Better services for ELs in 5 counties

Contact Information...

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- East Carolina University
- Greenville, NC

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Teaching the Teachers:

Professional Development for Teaching Children in Poverty…

Jane C. Manner & H. Carol Greene
National Social Science Association
March 27, 2018, Las Vegas

A Context of Poverty..

- Eastern North Carolina
  - Primarily rural and low-income
  - If we were a "state unto ourselves"…

East Carolina University…

- An emphasis on service
- An emphasis on partnerships with communities near and globally
- A long history of Teacher Education
- Multiple connections with schools…through our graduates
- The benefit of our faculty participating in those schools

We see it, but what are we doing?

- Our teacher candidates know what the term "socioeconomic status" means…
- Our teacher candidates can define poverty as economic fragility…
- Our teacher candidates know what a Title I school is…
- But….do we prepare them to work effectively in this context?

An Examination of our Program and others…

- We include diversity in multiple forms, but (in spite of our context) any real emphasis on poverty as a central issue is absent

An Examination of our Program and others…

- We include diversity in multiple forms, but (in spite of our context) any real emphasis on poverty as a central issue is absent

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- Our candidates are aware of financial limitations imposed by poverty, but little else…

An Examination of our Program and others…

- We include diversity in multiple forms, but (in spite of our context) any real emphasis on poverty as a central issue is absent
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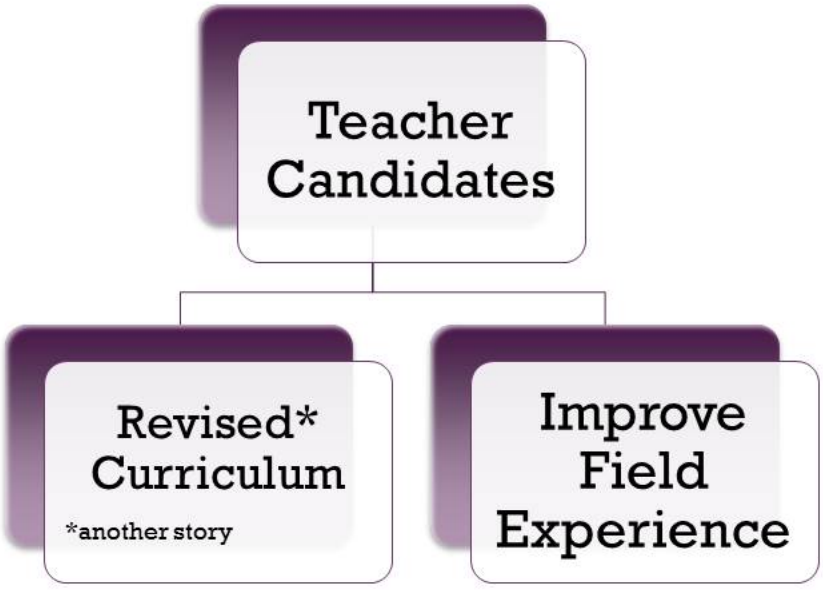
- Our candidates are aware of financial limitations imposed by poverty, but little else…
- Our candidates are not directed to explore the different kinds of poverty, varying reasons for it, or HOW it can impact the teaching / learning process.

An Examination of our Program and others…

- We include diversity in multiple forms, but (in spite of our context) any real emphasis on poverty as a central issue is absent
- Any attention to poverty relates to simplistic views of it
- Our candidates are aware of financial limitations imposed by poverty, but little else…
- Our candidates are not directed to explore the different kinds of poverty, varying reasons for it, or HOW it can impact the teaching / learning process.
- Like most others, our candidates may have understandings and experiences that influence and may mislead their perceptions of those in poverty

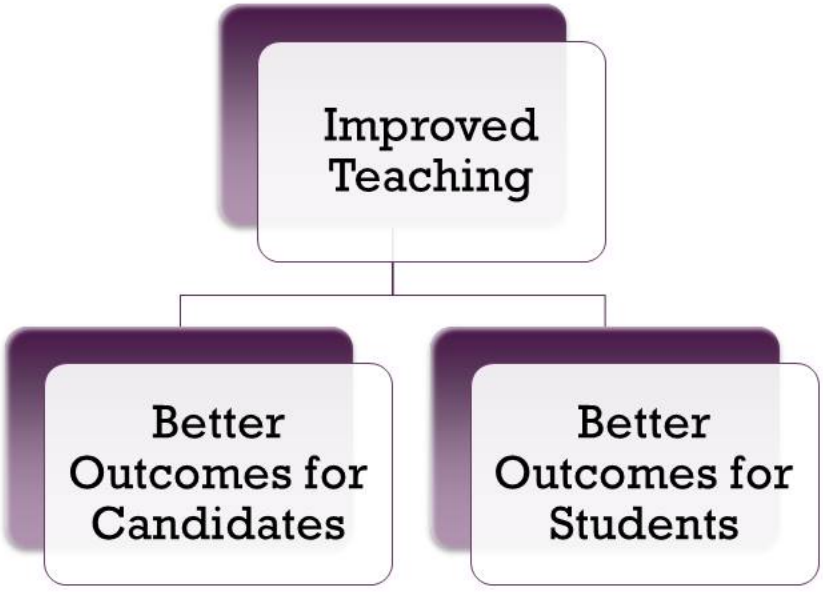
What can we do?

What can we do for the Candidates?



How can we do that?

So, if we can TEACH the teachers…

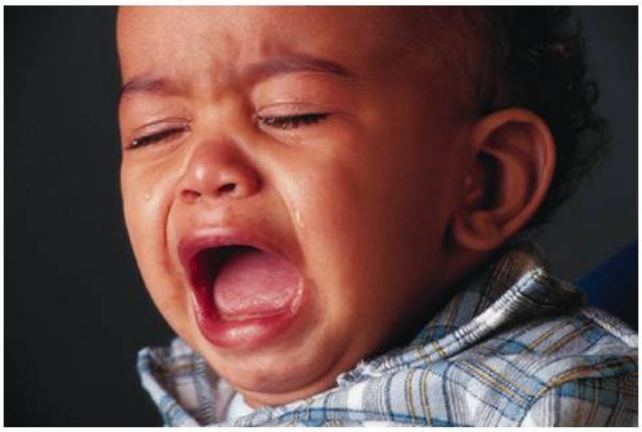


How did we start?

- We recognized that we needed a comprehensive, conceptual framework to guide the work
- A review of the literature disclosed some unhelpful, diametric opposition:
  - DEFICIT VIEW & "CULTURE of POVERTY" – Ruby Payne
  - FUNDS of KNOWLEDGE – Positive, but does not recognize some common challenges

How did we start?

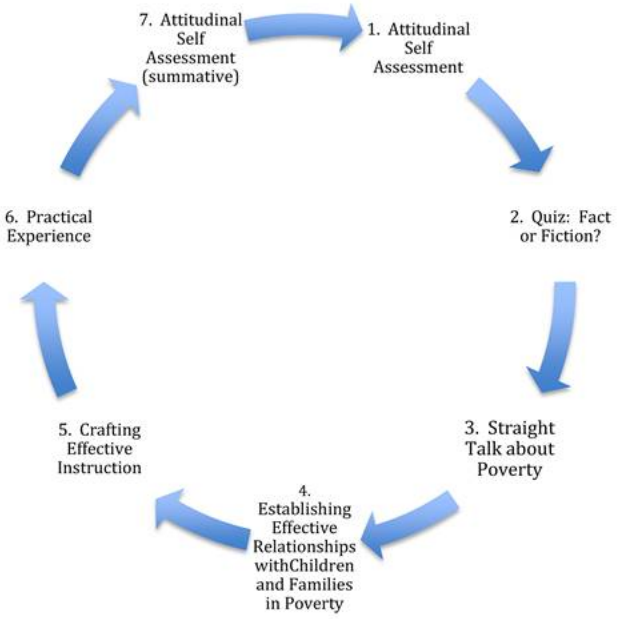
We weren't happy…



The CESPR Model

- Four components of the CESPR model include:
  - Cognitive Support
  - Emotional Engagement
  - Social Learning
  - Positive Relationships
- This model offers a realistic perspective by recognizing the inherent truths from both ends of the competing paradigms in the literature on poverty and brings together both assets and deficiencies of children from poverty by:
  - supporting the funds of knowledge position in recognizing that all children have learning experiences that can provide the foundation for achievement
  - recognizing that children of poverty often have limited experience with behaviors and language that align with success in school and offers ways to support them

Putting it into Practice: A Professional Development Model



Lessons learned so far…

- One has to do with the cycle of professional development: THE MYTH-BUSTING QUIZ
- One has to do with the format of the session(s): WHERE to DO IT

The Quiz…

- 1. Teachers must modify standards for students in poverty, so that they can work at a lower, more appropriate level.
- 2. Teachers need to maintain a business like attitude with low-income students so that order in the classroom can be preserved.
- 3. Poor students' families do not value education as much as middle class families do.
- 4. Children in poverty can come from all races, but the majority of them are black.

Probably stay away from school…

- Too many distractions
- 'mini-absences'

Contact us…

- Jane Manner, mannerj@ecu.edu
- Carol Greene, greeneh@ecu.edu

When Lethal-Injection Drugs Expire:
Arkansas' Rush to the Death Chamber

Joseph A. Melusky
Saint Francis University (PA)

Abstract

The Supreme Court continues to evaluate methods of execution in light of "evolving standards of decency." Lethal injection is currently the most widely used method in the United States. In 2017, Arkansas' Republican Governor Asa Hutchinson planned to execute eight men in 11 days before the State's supply of midazalom, the anesthetic used in lethal injections, reached its expiration date at the end of April. No state had executed so many men in such a compressed span of time since the death penalty was reinstated in 1976. This paper examines Arkansas' rush to the death chamber.

Introduction

The Eighth Amendment prohibits "cruel and unusual punishments." It does not, however, absolutely prohibit the death penalty. The Fifth and Fourteenth Amendments provide that persons cannot be deprived of "life, liberty, or property, without due process of law." Persons *can* be deprived of their *lives* if they receive due process of law.

But the death penalty is unconstitutional if it is inflicted in a "cruel or unusual" fashion. Execution methods change. Today's "cruel and unusual" punishment may have been acceptable yesterday. Burning at the stake, drawing and quartering, boiling in oil, disembowelment, crucifixion, and beheading were once common and usual. Such methods are now rejected as incompatible with contemporary standards of decency. Courts look to evolving standards as they evaluate methods (Melusky 2012). The guillotine was once hailed as a humanitarian advance in the technology of death. The electric chair promised "instantaneous" and "painless" death. Gruesome malfunctions led to today's supposedly more "humane" method of execution: lethal injection.

From *Furman* (1972) to *Gregg* (1976)

In 1972, the Supreme Court struck down a challenged death penalty law in *Furman v. Georgia.* Five separate concurring opinions were issued. Justices Brennan and Marshall concluded that capital punishment is *always* constitutionally prohibited. Other Justices – Douglas, Stewart, and White – objected to racial bias or arbitrariness in how the death penalty was *applied.* States were giving juries too much discretion about whether or not to impose the death penalty. The four Nixon appointees – Chief Justice Burger and Justices Powell, Rehnquist, and Blackmun – dissented. Burger emphasized that the Court had *not* banned capital punishment and invited state legislatures to reform their capital-punishment laws to limit jury discretion.

Thirty-five states accepted Burger's invitation by revising their death-penalty laws. In *Gregg v. Georgia* (1976) and two companion cases, *Proffitt v. Florida* (1976) and *Jurek v. Texas* (1976), the Court found that some modified death-penalty laws successfully addressed the *Furman* problems. Writing for the majority in *Gregg*, Justice Stewart said that the Eighth Amendment draws its meaning from "the evolving standards of decency that mark the progress of a maturing society" (*Trop v. Dulles* 1958). "Excessive" punishments that inflict unnecessary pain or that are disproportionate to the severity of the crime are prohibited. But capital punishment for the crime of murder is *not* necessarily disproportionate. It is an extreme sanction that fits

the most extreme crimes. Dissenting, Justices Brennan and Marshall reaffirmed their *Furman* belief that capital punishment is constitutionally impermissible. Capital punishment returned in 1977 when convicted murderer Gary Gilmore was executed by a Utah firing squad.

Executions: By the Numbers

In previous papers, I described where and how often executions have been performed (Melusky 2015; 2016). Thirty-one states, the federal government, and the U.S. military currently authorize capital punishment. Nineteen states and the District of Columbia do not. Since 1976, 1,472 executions have taken place (as of March 28, 2018). The peak year for executions was 1998 when 98 were performed. It has been in decline with 20 executions having been performed in 2016 and 23 in 2017. Some states use it far more frequently than others. Texas leads the nation by a large margin. Three states – Texas, Oklahoma, and Virginia – account for over half (53%) of all executions. Oklahoma leads the nation in executions per capita and Texas ranks second. Regionally, the vast majority of executions take place in the South (2.201) followed by the Midwest (181) and the West (85). Executions are rare in the Northeast (only four). Statistics also appear to undermine the argument that capital punishment deters serious crimes. The South leads the nation in executions, but it also has the highest murder rate (6.5 per 100,000 as in 2016). The Northeast, with the fewest executions, has the lowest murder rate (3.5 per 100,000 in 2016) ("Facts about the Death Penalty" 2018; "State Execution Rates" 2018).

How Are Executions Performed in Death-Penalty States?

Various methods have been used in the United States including hanging, firing squads, the gas chamber, and electrocution. Today lethal injection is the preferred method of execution. Since *Gregg*, the vast majority of executions used this method: 1,297 executions were performed by lethal injection, 158 by electrocution, 11 by gas chamber, three by hanging, and three by firing squad ("Facts about the Death Penalty" 2018). All death-penalty states and the federal government now use lethal injection as their primary execution method.

***Baze and Bowling v. Rees*, 533 U.S. 35 (2008)**

This case reflects the Supreme Court's approach to cases involving lethal-injection challenges. Here petitioners challenged Kentucky's three-drug lethal injection procedures. Petitioners conceded that the protocol was "humane," but there was a risk of "significant pain" if the procedures were not followed properly.

In a seven-to-two decision, the Court rejected the constitutional challenge. Chief Justice Roberts announced the judgment noting that capital punishment is constitutional so "there must be a means for carrying it out." Some risk of pain is inherent in any execution method. The Constitution does not require the elimination of any and all such risk. The risks of an inadequate dose of the first drug (the sedative), improper mixing of chemicals, or improper setting of IVs are *not* "objectively intolerable." In fact, lethal injection *is* widely tolerated as the preferred method of execution across the nation. Roberts concluded that Kentucky's procedures did not violate the Eighth Amendment.

Concurring, Justice Stevens stated his *personal* opposition to the death penalty. Like Justices Blackmun, Powell, Brennan, and Marshall before him, Stevens concluded that contemporary decisions to retain the death penalty were "the product of habit and inattention rather than an acceptable deliberative process that weighs the costs and risks of administering that penalty against its identifiable benefits." He expressed concerns about discriminatory application of the death penalty, the possibility of wrongly convicting an innocent defendant, and the irrevocable nature of capital punishment. He concluded that the death penalty represents "the pointless and needless extinction of life with only marginal contributions to any discernible social or public purpose." A penalty with such "negligible returns" is excessive, cruel, and unusual. So why did he concur? Citing respect for precedent, Stevens acknowledged that the Court had upheld the constitutionality of the death penalty and established a framework for evaluating methods of execution. Applying these standards, he found Kentucky's procedures constitutionally acceptable.

Justice Thomas, in a concurring opinion joined by Scalia, said that "a method of execution violates the Eighth Amendment only if it is deliberately designed to inflict pain." The Eighth Amendment targets "intentional infliction of gratuitous pain." Thomas believed that Kentucky was trying to make capital punishment "more humane, not to add elements of terror, pain, or disgrace to the death penalty." In sum, the protocol was "designed to eliminate pain rather than to inflict it."

Justice Ginsburg, joined by Justice Souter, dissented. Use of pancuronium bromide and potassium chloride on a *conscious* inmate would produce "agony" and "searing pain." The constitutionality of Kentucky's protocol "turns on whether inmates are adequately anesthetized by the first drug . . . , sodium thiopental." In most instances, lethal injections will produce a painless death. But mistakes can happen. "Rare though errors may be," Ginsburg stated, "the consequences of a mistake about the condemned inmate's consciousness are horrendous." But how rare are these errors that Justice Ginsburg mentioned? How infrequently do accidents occur?

Botched Executions

Michael Radelet cites 46 examples of botched executions that took place between 1982 and 2014 (Radelet 2016). His list of botched executions includes two by gas chamber, 10 by electrocution, and 34 by lethal injection.

Radelet's examples of lethal injections gone wrong do not convey an impression of serene and antiseptic death. Problems often involved officials' difficulty in finding a suitable vein. A history of drug abuse by some of these prisoners contributed to these difficulties. For example, in 2009, Romell Broom actually survived his own execution in Ohio! For two hours, officials unsuccessfully attempted to find a useable vein while Broom winced and grimaced. Broom tried to help his executioners find a good vein. Ohio Governor Ted Strickland intervened and ordered the execution to stop so that physicians could be consulted for advice on how to execute Broom more efficiently. As of this writing, Broom remains on Ohio's death row. On March 16, 2016, the Ohio Supreme Court cleared the way for a second execution attempt (Berman).

In 2014, Oklahoma designed an experimental drug protocol to be used in Clayton D. Lockett's execution. Oklahoma Governor Mary Fallon asked the courts to allow the execution and a bill was introduced in the Oklahoma House of Representatives to impeach judges who voted to delay the execution. It took officials more than an hour to find a useable vein. Ten minutes after administering the first drug (a sedative) a physician (whose presence conflicted with some medical ethical standards) announced that Lockett was unconscious and ready to receive the two lethal drugs, drugs that would cause excruciating pain to a conscious recipient. Lockett was *not* unconscious: "Lockett began . . . writhing on the gurney, clenching his teeth and straining. . . ." Officials lowered the blinds. Fifteen minutes later, witnesses were ordered to leave. Minutes later, the Director of the Oklahoma Department of Corrections stopped the execution. Lockett, while still in the execution chamber, died 43 minutes after the execution began. The cause of death was listed as a heart attack. An autopsy revealed that he died from the lethal drugs. Oklahoma's official report on the execution cited insufficient training of corrections officers, communication difficulties between those inside and outside the execution chamber, and a lack of contingency planning in case of problems (Melusky 2015; 2017) – more errors. In light of such cases, are errors really "rare"? If "accidents happen," how many are too many?

Arkansas contributed to this history of botched executions. In 1923, a man was removed from his coffin and put back in the electric chair after it was discovered that he was still breathing. ("And Then There Were None" 2017).

It has been estimated that something went wrong in about 3% of U.S. executions performed from 1890 through 2010. Lethal injection has had the highest rate of botched executions ("Botched Executions" 2018).

The Court Revisits Oklahoma's Lethal Injections: *Glossip v. Gross* (2015)

In *Baze,* the Court upheld Kentucky's use of the anesthetic sodium thiopental in executions. Anti-death-penalty advocates pressured pharmaceutical companies to prevent the drug (and, later, another barbiturate called pentobarbital) from being supplied for executions. When these drugs became difficult to obtain, Oklahoma decided to use midazolam, a sedative, as the first drug in its three-drug protocol. Clayton Lockett's botched execution used this method. Four death-row inmates – Charles Warner, Richard Glossip, John Grant, and Benjamin Cole – argued that midazolam cannot sustain the level of unconsciousness needed for surgery so it is unsuitable for use in executions. Warner was executed on January 15, 2015 after the Court declined to stay his execution by a five-to-four vote. In her dissenting opinion, Justice Sotomayor said she was "deeply troubled by evidence suggesting that midazolam cannot be constitutionally used as the first drug in a three-drug lethal injection protocol."

In this case, the Supreme Court ruled by a five-to-four vote that the petitioners failed to show that Oklahoma's use of midazolam violates the Eighth Amendment. Justice Alito, announcing the judgment of the Court, cited *Baze*. Since it has been settled that capital punishment is constitutional, it logically follows that "there must be a [constitutional] means of carrying it out." *Some* risk of pain is inherent in any method of execution. The Constitution does not require the avoidance of *all* risk of pain. Holding

that the Eighth Amendment demands the elimination of essentially all risk of pain "would effectively outlaw the death penalty altogether."

In a dissenting opinion joined by Justice Ginsburg, Justice Breyer stated, "[R]ather than try to patch up the death penalty's legal wounds one at a time, I would ask . . . a more basic question: whether the death penalty violates the Constitution." Constitutional defects in the administration of the death penalty include unreliability, arbitrariness, and long delays. As a result, the death penalty is in decline and "most places within the United States have abandoned its use." The death penalty has become an increasingly "unusual" form of punishment. These developments, along with his own years of experience on the Court, led Breyer to believe that "the death penalty, in and of itself, now likely constitutes a legally prohibited 'cruel and unusual punishment'."

Breyer condemned capital punishment for its unreliability, citing studies of wrongful convictions and, perhaps, even some wrongful executions. Some researchers have estimated that four percent of those sentenced to death are actually innocent.

Breyer also said that it has become "increasingly clear that the death penalty is imposed arbitrarily." The Court tried to make the death penalty less arbitrary by restricting it, in Justice Souter's words, to "the worst of the worst" (*Kansas v. Marsh* 2006). But Breyer described several studies that indicate that factors such as race, gender, and local geography, rather than the egregiousness of the crime, often determine death sentences. Research "strongly suggests that the death penalty is imposed arbitrarily." The constitutionality of the death penalty depends on its application to the worst of the worst. Evidence indicates that "it is not so limited."

Dissenting, Justice Sotomayor reviewed medical expert testimony that was considered by the District Court. Experts agreed that midazolam is used as the sole anesthetic only in minor procedures that are "not terribly invasive." One testified that it would be a "big jump" to conclude that the drug would effectively maintain unconsciousness throughout an execution. Calvin Lockett awoke during his execution. Sotomayor wrote, "none of the State's 'safeguards' for administering these drugs would seem to mitigate the substantial risk that midazolam will not work." Making sure that officials have properly secured a viable IV site will not enable midazolam to *maintain* unconsciousness. The drug can *induce* unconsciousness. The problem is that an inmate may be awakened by the pain caused by the second and third drugs. At that point, it is too late.

The Supreme Court has recognized that methods of execution involving unnecessary cruelty are "categorically off-limits." But even if we accept that the death penalty is, in the abstract, constitutional, a method of execution that is "barbarous" or "involves torture or a lingering death" does not become constitutionally acceptable just because it is the only method currently available to a State. If all available execution methods are "cruel and unusual," nothing compels states to perform executions. Lethal Injection, Sotomayor concluded, is the latest step in a long search for "neat and non-disfiguring" methods of execution. Lethal injections hide the prospect of excruciatingly painful deaths "behind a veneer of medication." Ignoring evidence of the insufficiency of

midazolam as a sedative to save this execution protocol is a “contortion” that is “not worth the price.”

Recent Developments: Arkansas’ “Conveyor Belt of Death”

Oklahoma’s three-drug execution cocktail was narrowly upheld in *Glossip*. But what would come next? In *Baze,* Justice Stevens said, “I assumed that our decision would bring the debate about lethal injection as a method of execution to a close. It now seems clear that it will not.” He was right. The number of death-penalty states is declining. States are finding it increasingly difficult to obtain lethal-injection drugs. Some states are exploring alternate means of execution and some are contemplating a return to earlier methods like firing squads and the electric chair. And then there is the approach that Arkansas took.

In 2017, Arkansas Governor Asa Hutchinson announced plans to execute eight men in 11 days before the end of April when the State’s supply of midazalom expired. The irony is unmistakable. Presumably, lethal-injection drugs that reached their expiration date might endanger the health of the men slated for execution! The State had not carried out an execution since 2005. No state had executed so many men in such a compressed time period since capital punishment was reinstated in 1976. Texas came the closest, having executed eight men in May and eight more men in June of 1997. Court orders stayed the executions of four of the inmates: Bruce Ward, Don Davis, Stacey Johnson, and Jason McGehee. Four of the eight men were executed: Ledell Lee (on April 20), Jack Jones and Marcel Williams (both on April 24), and Kenneth Williams (on April 27). Regarding the multiple executions of April 24, states had executed two or three inmates on the same day just ten times in the past 40 years. No state had ever successfully executed two people on the same day using midazalom. (“Arkansas Schedules Unprecedented Eight Executions in Ten-Day Period” 2017). Ledell Lee’s request for a stay of execution was rejected by the U.S. Supreme Court by a five-four vote. The newest Justice, Neil Gorsuch, in his first recorded vote, provided the fifth vote allowing Lee to be executed. Dissenting, Justice Breyer complained about the randomness and arbitrariness of executions. In a separate dissent, Justice Sotomayor repeated her concerns about the use of midazalom.

Concerns and Criticisms:

The State had not executed anyone since 2005 when Eric Nance was put to death in the Cummins Unit near Gould, Arkansas. Gould’s mayor, Essie Mae Cableton, worked as a prison guard for almost 20 years including ten years at Cummins, which houses the execution chamber. When interviewed, Cableton said, “It’s too many at one time. Now, I’m not saying that they’re not some bad individuals. But it’s just too many at one time.” Rita Sklar, executive director of the Arkansas chapter of the American Civil Liberties Union (ACLU), said, “This is just a ghastly assembly line of death. It does not comport with human decency.” Wendy Kelley, director of the Arkansas Department of Corrections (DOC) attended a Rotary Club lunch meeting in Little Rock and asked if anyone wanted to sit in on the executions. No one volunteered to observe. This is in spite of the fact that support for the death penalty in Arkansas is higher (71%) than it is nationwide (49%) (Lee 2017).

Four companies raised concerns about how the Arkansas DOC obtained its lethal-injection drugs. McKesson Corporation alleged that Arkansas bought ten boxes of vecuronium bromide, a drug that is used to stop the prisoner's breathing, without disclosing its intended purpose for the product. The order was opened under the account of a licensed physician which led the company to conclude that the drug would be used for a legitimate medical purpose. The company demanded that the drug be returned. The State Supreme Court allowed the DOC to use the drug. (Blinder 2017; Byrd and Scheffler 2017).

Former corrections officers from across the United States wrote a letter to Governor Hutchinson warning of the psychological toll that the compressed execution schedule would take on prison personnel. The letter stated that performing so many executions in such a short span of time "will impose extraordinary and unnecessary stress and trauma on the staff responsible for carrying out the executions." An additional concern was that the pace would "create an unacceptable risk of unconstitutional error." A "botched execution" does not serve a "state's interest in justice." Carrying our executions, the letter noted, takes a "severe toll" on the psychological wellbeing of corrections officers who have dedicated their lives to protecting the safety of prisoners and who are now asked to participate in the execution of persons under their care. Twenty-three officers signed the letter ("Letter to Governor Hutchinson from Former Corrections Officials" 2017). Frank Thompson, a former warden for the Arkansas DOC and superintendent to the Oregon State Penitentiary, wrote that "[t]here is absolutely no way to conduct a well-run execution without causing at least one person to lose a little bit of their humanity." Executions can produce "post-traumatic stress" in those who participate. Jerry Givens, who participated in 62 executions in Virginia, said, "I just ask the governor a favor. . . . Just have some heart for the officers that have this task. . . . Think about their lives afterwards." ("Corrections Officials Warn Arkansas Leaders about Psychological Trauma from Unprecedented Execution Schedule" 2017). Governor Hutchinson declined these requests and ordered the executions to proceed.

The Inmates:

The eight inmates were Bruce Ward, Jason McGehee, Stacey Johnson, Don Davis, Marcel Williams, Kenneth Williams, Ledell Lee, and Jack Jones. Ward, Davis, and Johnson received stays of execution from the Arkansas Supreme Court. McGehee received a stay and was granted clemency by Governor Hutchinson at the recommendation of the Arkansas Parole Board. He was resentenced to life without parole. The remaining four were executed by lethal injection.

According to a report by Harvard University's Fair Punishment Project, five of the eight cases involved persons who suffered from mental illness or intellectual impairment. One suffered a serious head injury had an IQ score of 70. Another suffered from paranoid schizophrenia and believed he was on a mission from God. Another suffered physical and mental abuse, was burned, beaten, and raped, and was pimped out by his mother. In two other cases attorneys failed to conduct mitigation investigations to determine if the clients had illnesses or disabilities. The quality of lawyering was suspect. One lawyer was drunk in court. Another struggled with mental illness. Others missed deadlines and failed to visit their clients. The Project

recommended that the Governor declare a moratorium on executions. ("New Report: Prisoners on Arkansas's Execution List Defined by Mental Illness, Intellectual Disability, and Bad Lawyering" 2017).

The Four Who Survived:

Bruce Ward has been on death row for more than 20 years. He was diagnosed with paranoid schizophrenia and did not understand that he was slated to die. "Divine revelation," he claimed, convinced him that he would leave prison and receive riches and great acclaim. He says that he receives regular communications from God and that God allows him to be incarcerated to strengthen him for his special mission as an evangelist. He said that he has been visited by his deceased father and by "little resurrected dogs." His mother frequently beat him with a belt, put tar on him, and placed him in ice-cold water. Ward received a stay of execution.

Jason McGehee suffers from bipolar disorder. Mental illness runs in his family. When he exhibited bipolar symptoms as a child, his mother claimed instead that he was "possessed by the devil." He began inhaling gasoline when he was three years old. He was an alcoholic by age 11. He was using heavier drugs a few years later. He may have brain damage with impairments to his frontal lobes. His father beat McGehee and his mother. When his father grew tired of the family dogs, he killed them by cutting their throats with a knife. After divorcing his father, McGehee's mother remarried, became a religious fanatic, and treated her son literally like a dog, forcing to live outside in a dog house when he missed a curfew. McGehee's step-father kicked the boy's pet dog to death while forcing the boy to watch. The jury never heard any of this evidence because McGehee's lawyer failed to investigate the case. McGehee received a stay of execution.

Little information is available about Stacey Johnson because his lawyers failed to conduct a background investigation. His guilt was uncertain. His conviction was based largely on testimony from six-year old Ashley Smith, the daughter of the murder victim. The girl provided inconsistent stories and was under pressure from the prosecutor to help convict Johnson. The District Attorney told the young girl that "she was the only one who can 'keep him behind bars'." Her grandmother told the girl that if Johnson got out, he would try to "kill [her] next." Johnson received a stay of execution.

Don Davis has been on death row for more than 25 years. Evidence suggests that he has intellectual disabilities. He has recorded IQ scores in a range indicating intellectual impairment. He also suffered a serious head injury. He has never received a full mental health evaluation by an independent specialist. In the absence of a mitigation investigation, the full extent of his impairments is unknown. Davis received a stay of execution. (New Report 2017)

The Four Who Were Executed:

Ledell Lee insisted that he was innocent. He asked for a DNA test to compare the results to DNA that was found at the bloody murder scene. No physical evidence ever directly implicated Lee. The State refused the DNA request. Lee presented evidence of ineffective counsel assistance. His lawyers did not conduct a mitigation investigation into his background. Lawyers did not talk to some of his siblings and they did not ask his mother to testify. One attorney had substance abuse problems to the

point that he was unable to locate the witness room and was not familiar with his own witnesses. He appeared drunk in court and slurred his words. New counsel missed deadlines, refused to accept Lee's phone calls, and ignored his letters. One of his lawyers surrendered his law license because he was suffering from "bipolar disorder with psychotic features and anxiety." Lee also provided evidence that a judge was having an affair with the assistant prosecutor in his case. Lee was executed on April 20 (New Report 2017; Stern 2017).

Jack Jones was convicted of the rape and killing of Mary Phillips. He strangled her while her 11-year-old-daughter was in the room. Shortly before his execution, Jones read a letter apologizing to the daughter. Jones had spent more than 20 years on death row. He arrived at the death chamber in a wheelchair, his leg having been amputated because of diabetes. His lawyers raised concerns that his multiple medications could interfere with the sedative midazalom. Jones suffered from bipolar disorder, depression, and visual hallucinations. He had attempted suicide on several occasions. His father physically abused him and he had been sexually abused by three strangers who kidnapped and raped him. His lawyers submitted almost none of this mitigation evidence to the jury. Jones was executed on April 24. There were difficulties in finding a suitable vein to administer the lethal drugs (New Report 2017; Pilkington and Lartey 2017).

Marcel Williams was sentenced to death for the rape and killing of Stacy Erickson. He abducted and raped two other women before he was arrested. When he was nine or ten, his mother permitted him to be sexually abused by women in exchange for food stamps, a place to stay, or covering the family's electric bills. When he served time in an adult prison as an adolescent, he was raped by three men. His mother beat him regularly, sometimes using extension cords. Trial attorneys did not tell the jury about the abuse he suffered as a child. Lawyers representing him as his execution neared pointed out that Williams weighed nearly 400 pounds and the execution team would have even more trouble finding a suitable vein for injection than they had with Jack Jones. Following a brief delay, Williams was executed on April 24, about three hours after Jones (New Report 2017; Pilkington and Lartey 2017).

Kenneth Williams was serving a life sentence for killing Dominique Herd, an 18-year-old cheerleader. In 1999, he escaped from prison by hiding in a garbage truck. He arrived at Cecil Boren's house nearby. There he killed Boren and fled in his car. A car chase ended in an accident that killed a truck driver, Michael Greenwood. Williams was sentenced to death. Williams had an IQ score in the intellectual disability range. He had a history of neuropsychological problems. He suffered significant head injuries and may have had brain damage. As a child, he was raised in six different foster homes under conditions of extreme poverty. His parents were substance abusers. He witnessed and experienced physical abuse at the hands of his father. Pleading for his life, his attorneys said that he had changed in prison where he became an ordained minister. Kayla Greenwood, daughter of the deceased truck driver, wrote a letter to Governor Hutchinson asking that Williams' life be spared. She explained that she and her family paid travel costs so that Williams' daughter, Jasmine, could fly from Seattle with her five-year-old daughter. The Greenwoods drove from their home in Missouri, met

Jasmine Williams at the airport in Little Rock, and drove her to the prison so she could visit her father one last time. Greenwood wrote, “Jasmine has done nothing at all, but like me, she could lose her father.” A spokesman for Hutchinson declined comment when asked if the Governor had read the letter. Once again, the U.S. Supreme Court denied a motion for a stay. Neil Gorsuch approved his fourth execution. Kenneth Williams was executed on April 27. Witness reports said that Williams’ body moved, “lurching, jerking, convulsing and coughing” during the lethal injection (Berman 2017; New Report 2017; Pilkington 2017).

Aftermath:

Following these executions, Governor Hutchinson said, “The long path of justice ended tonight and Arkansans can reflect on the last two weeks with confidence that our system of laws in this state has worked.” In addition, the families “were finally provided the justice they were promised and they also saw that our system of laws have [sic] meaning” (Berman 2017).

In *Roper v. Simmons* (2005), the Supreme Court held that capital punishment “must be limited to those offenders . . . whose extreme culpability makes them the most deserving of execution.” It is reserved for the “worst of the worst” (*Kansas v. Marsh* 2006*).* In Arkansas, four men were executed and four were not. The State executed a man with an IQ of 70, a man who watched his parents kill his pet dogs, men with mental illnesses whose attorneys failed to conduct full mitigation investigations and whose histories of severe abuse were not disclosed to juries. Does this “April in Arkansas” inspire “confidence that our system of laws . . . has worked”? Or does it bring to mind Justice Breyer’s lament that the imposition of capital punishment has become “arbitrary”?

Postscript:

As of March 26, 2018, Arkansas had no additional executions scheduled through 2022 (“Upcoming Executions” 2018).

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Learning: What is it?

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Abstract

Learn and Learning are two words which are espoused almost daily by many people. Yet, it is a word that everyone seems to use but no one can give a quick definition. In this work, we will attempt to explain why a word which seems to be so simple is so very difficult to define. Undergraduate and graduate student reflection on what is learning was evaluated and categorized. In addition, the main themes identified by the students was administered to a group of professors at a conference. The students and professors agreed on 'what is learning' and where it should take place.

Introduction

What is Learning? If you ask ten persons, you will get ten unique answers. If you ask a hundred persons, you will get a hundred answers. Some may not be 100% unique, but each will be unique in its own style of that person. It is definite that learning is a multi-faceted term and very difficult for one to define with a single word or even two. (Straumanis, 2012). Microsoft WORD Thesaurus list the term 'learning' as both a noun and a verb. As a noun it is synonymous as knowledge, education, erudition, scholarship, culture and wisdom. As a verb, it is studying, absorbing, acquiring, cramming and swotting. As an antonym ignorance is listed. When learning is the topic, it seems to be bondless and even a bit mysterious.

Learning?

Educators in general use phrases such as, the student will learn….. how to add two digits numbers…. My students learned about the Congo today…the students learn to categorize monocot and dicot seeds, today…I am learning to sew on buttons…Etc. Each of the above uses a form of learn and each is very different. The first example expects the students' to be able to use prior abstract knowledge and the other example is using a physical application. But the term learn is very vague in that to one person it will mean that the act is done with 100% accuracy while to another learn is more abstract and the amount of knowledge grained is not truly expressed and still to another it is an action that must be able to be viewed by others.

Learning is not due to the natural unfolding of one's abilities. Instead, learning is a conscious process. While the level of consciousness varies, one is consciously taking in and processing new information while learning--it does not happen naturally. Learning involves consciously using the senses to take in information from the world around one's self. Learning also involves thinking through the information and making connections to previously learned information; these connections gives one a frame of reference to better process and later recall the new information. As a final part of learning, one should be able to express one's understanding of the information. A person should be able to express the understood information, whether it be silently explaining the information to one's self or by using other methods of expression such as speech, drawing, or writing". (E. Junek, 2018 Personal communication).

In the very early 2000's the National Science Foundation (NSF) made a large investment in the science of learning. In the past, this robust learning had been reserved for only the hard-natural sciences and mathematics. They defined this

robust leaning as successful and went on to measure the degree of robustness (learning) using 'three criteria: (1) long-term retention, (2) effective preparation for further or deeper learning and application, and (3) effective transfer of knowledge or skills to novel situations' *(Straumanis. 2012).*

Study

Students in graduate and undergraduate classes at a small university in the USA were asked to read three published referred journal articles and write a short three to five-page paper on, "What is Learning?" cite the references in APA, and complete a one-half to two page personal reflection on what he/she believed to be 'learning.' There were 24 undergraduates and 26 graduate students participating. The students were given two weeks to complete the assignment and were told in the beginning of the semester that there would be an assignment on learning, which gave them time to think prior to doing the actual writing. This proved to be a more difficult assignment than expected as many of the students wanted to write 'how to teach.' After a little discussion, they were able to understand what it is to 'learn.' The annotations from the articles were read and evaluated however were not used in this study. The reflective writing portion of the assignment was analyzed for this investigation.

Results

Each of the reflective writings was evaluated and the student learning definitions were categorized into the following four themes:

1. Learning is the comprehension and use of the knowledge.
2. Learning is the acquisition and building knowledge.
3. Learning is a style or an approach to knowledge.
4. Learning is the remembering of knowledge.

Definition						
	UNDERGRADS		GRADS		TOTAL	
Learning is the comprehension and use of the knowledge.	14	58%	17	65%	31	62%
Learning is the acquisition and building knowledge	7	29%	7	27%	14	28%
Learning is a style or an approach to knowledge.	1	4%	2	4%	3	6%
Learning is the remembering of knowledge.	2	8%	0	0	2%	4%
	24		26		50	

The researchers concluded and agreed with the 62% who completed the assignment that "learning is the comprehension and use of the knowledge". This seemed to indicate that 'learning is both a noun and a verb'. The works of Hilsdon (2010) and Newcombe (2010) support this conclusion.

Then a second evaluation of the reflections was completed by the researchers to categorize, “Where the students believed the learning should take place?” The following three category themes were identified:

1. Equally inside and outside the classroom
2. Primarily in the classroom
3. Primarily outside the classroom

Where should learning take place						
	UNDERGRADS		GRADS		TOTAL	
Equally inside and outside the classroom	19	79%	22	85%	41	82%
Primarily in the classroom	4	17%	4	15%	8	16%
Primarily outside the classroom	1	4%	0	0	1	2%
	24		26		50	

The researchers concluded and agreed with the 82% who completed the assignment that “learning should take place both inside and outside the classroom.” At a recent conference presentation on “learning” the audience was asked to complete a quick survey of the two questions. The audience mainly consisted of university professors. The results were almost identical to the results collected from the grad and undergrad students.

Conclusions

J. Young, (2018, personal communication) concluded her paper with a quote. A wise man, by the name of Albert Einstein once said, “Education is not just learning the facts, but training the mind to think.” This is most likely the best conclusion to a discussion on learning. She seems to capture the essence of the study. The words ‘learn’ and ‘learning’ are often tossed about in a reckless and thoughtless manner. As educators, they are words that have great meaning and should be used with care.

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Understanding How Two Key Political Events Impacted the Presidential Legacies of Four Presidents of the United States

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Introduction

This paper focuses on how key political events impacted the presidential legacies of four presidents of the United States. Firstly, this paper focuses on the two key political events that impacted the presidential legacy of Millard Fillmore. Secondly, this paper focuses on the two key political events that impacted the presidential legacy of Franklin Pierce. Thirdly, this paper focuses on the two key political events that impacted the presidential legacy of Andrew Johnson. Fourthly, this paper focuses on the two key political events that impacted the presidential legacy of Chester Arthur. Lastly, this paper concludes with an analysis of how the key political events impacted the presidential legacies of the four presidents of the United States.

Millard Fillmore

Essentially, Millard Fillmore became the 13th president on July 9, 1850 after the death of Zachary Taylor. It is an important fact that two key political events impacted the presidential legacy of Millard Fillmore. Firstly, the presidential legacy of Millard Fillmore was impacted by his strict enforcement of the Fugitive Slave Act of 1850, which was one of the five parts of the Compromise of 1850 that he signed into law. Secondly, the presidential legacy of Millard Fillmore was impacted by the results of the National Whig Party Convention of 1852.

Enforcement of the Fugitive Slave Act of 1850

Democrat Senator Stephen Douglas (IL) introduced the Compromise of 1850 in five separate bills. According to the article, *The Compromise of 1850 and the Fugitive Slave Act* (2013), all five separate bills were passed by both houses of Congress and then signed into law by President Millard Fillmore in September of 1850.

- California became the 31st state and was admitted as a free state.
- The territories of New Mexico and Utah were created and the voters in each territory were allowed to decide the slavery question according to popular sovereignty.
- The border dispute between Texas and New Mexico was settled and the State of Texas was compensated for lost lands.
- The slave trade (not slavery) was banned in Washington, D.C., but Congress declared that it had no power to ban the slave trade between slave states.
- The Fugitive Slave Act placed federal officers at the disposal of slave-owners that were seeking their escaped slaves.

According to Robert Rayback (1959), the political philosophy of President Fillmore on slavery was that the strict enforcement of the Fugitive Slave Act of 1850 was necessary, proper, and constitutional. All fifteen southern slave states favored the strict enforcement of the Fugitive Slave Act of 1850. The state legislatures in several southern states used secession threats in order to put the pressure on President Millard Fillmore and the federal bureaucracy to enforce the Fugitive Slave Act of 1850. All sixteen northern non-slave states opposed the strict enforcement of the Fugitive Slave Act of 1850. The state legislatures in several northern states passed laws prohibiting the enforcement of the Fugitive Slave Act of 1850, passed laws that prohibited state judges to assist slaveholders, and passed laws that extended to blacks the right to trial by jury in fugitive slave disputes.

According to the article, *The Compromise of 1850 and the Fugitive Slave Act* (2013), the strict enforcement of the Fugitive Slave Act of 1850 by President Fillmore was supported by many pro-slavery southerners and opposed by many anti-slavery northerners. President Millard Fillmore strictly enforced the Fugitive Slave Act of 1850 in the following ways.

- He strictly enforced the requirement that all citizens had to help the federal government catch runaway slaves because he strictly enforced fines of up to $1,000 and/or jail time up to 6 months for people who let fugitive slaves escape.
- He strictly enforced the requirement that federal government law enforcement officers had to arrest anyone suspected of being a runaway slave because he strictly enforced arrests on a person's testimony of ownership.
- He strictly enforced the requirement that special federal courts had to hear runaway slave cases because he strictly enforced earnings of $10 for judges who sent the accused to the South and earnings of $5 for judges who freed the accused.

National Whig Party Convention of 1852 Results

The 1852 National Whig Party Convention was the 4th National Whig Party Convention and it was held from June 17, 1852 to June 20, 1852 in Baltimore, Maryland. There were 296 party delegates from the 31 states in attendance at the National Whig Party Convention of 1852 because each state was awarded the number of party delegates equal to its number of electoral votes in the Electoral College. The main business of the National Whig Party Convention of 1852 was to adopt the party's platform and nominate the party's candidate for president. The party delegates at the National Whig Party Convention of 1852 were divided on the issue of slavery because the party delegates from the northern states favored the Wilmot Proviso of 1846 (which banned slavery in any territory acquired from Mexico) and the party delegates from the southern states favored the strict enforcement of the Fugitive Slave Act of 1850. According to the article, *Whig National Convention of 1852* (2013), one key position of the National Whig Party Platform of 1852 was that the Fugitive Slave Law must be maintained with strict enforcement until further legislation is necessary to guard against the evasion and abuse of the law.

The 296 convention delegates at the National Whig Party Convention of 1852 were divided on their party's candidate for President because many northern delegates favored United States Army General Winfield Scott of New Jersey and many southern delegates favored President Millard Fillmore of New York. It took 53 ballots before one of the candidates received 149 convention votes (a majority of the convention votes) because most of the 41 convention delegates from the 6 New England states supported Daniel Webster of Massachusetts. After 53 ballots, United States Army General Winfield Scott of New Jersey had 159 (53.72%) votes, President Millard Fillmore of New York had 112 (37.84%) votes, Daniel Webster of Massachusetts had 21 (7.09%) votes, and 4 (1.35%) delegates did not vote. According to the article, *Whig Party Platform of 1852, June 17, 1852* (2013), Winfield Scott was finally nominated after 53 ballots because several convention delegates from the 6 New England states and Virginia switched their support. In the 16 northern free states (176 votes), Scott had 142 votes, Webster had 21 votes, Fillmore had 11 votes, and 2 convention delegates did not vote. In the 15 southern slave states (120 votes), Fillmore had 101 votes, Scott had 17 votes, and 2 convention delegates did not vote.

Impact on Presidential Legacy of Fillmore

It is an important fact that two key political events impacted the presidential legacy of Millard Fillmore. Firstly, the presidential legacy of Millard Fillmore was impacted in the following ways because of the way in which he strictly enforced the Fugitive Slave Act of 1850.

- He gets credit for preventing the secession of the 15 southern slave states.
- He gets credit for preventing a civil war between the 16 northern free states and 15 southern slave states.

Secondly, the presidential legacy of Millard Fillmore was impacted in the following ways due to the results of the National Whig Party Convention of 1852.

- He gets credit for being the very first incumbent president to try and fail to win the nomination to be their party's candidate for president.
- He gets credit for failing to win his party's presidential nomination because he lost the support of the northern antislavery Whigs in the 16 northern free states for strictly enforcing the Fugitive Slave Act of 1850.

Franklin Pierce

Essentially, Franklin Pierce became the 14th president on March 4, 1853 after winning the presidential election of 1852 for the Democrat Party. It is an important fact that two key political events impacted the presidential legacy of Franklin Pierce. Firstly, the presidential legacy of Franklin Pierce was impacted by the way that he enforced the Kansas-Nebraska Act of 1854 when it came to the Kansas Territory. Secondly, the presidential legacy of Franklin Pierce was impacted by the results of the National Democratic Party Convention of 1856.

Enforcement of the Kansas-Nebraska Act of 1854

On January 23, 1854, Democrat Senator Stephen Douglas of Illinois introduced the Kansas-Nebraska Act to set up a government for the Nebraska Territory in order to establish a northern railroad route from Chicago to California that went through Nebraska and Kansas. The Nebraska Territory stretched from Texas north to Canada and from Missouri west to the Rockies. Essentially, Senator Stephen Douglas proposed that the Nebraska Territory be divided into two territories (Kansas and Nebraska) and that the settlers living in each territory be allowed to decide the issue of slavery by popular sovereignty. Congress passed the Kansas-Nebraska Act on May 30, 1854 and President Pierce signed it into law (Gara, 1991).

According to the article, *Kansas-Nebraska Act of 1854* (1991), the Kansas-Nebraska Act of 1854 repealed the Missouri Compromise of 1820 because it allowed the settlers living in each territory to decide the issue of slavery by popular sovereignty. The Kansas-Nebraska Act of 1854 caused anti-slavery northerners from New England and pro-slavery southerners from Missouri to rush into Kansas to vote on the slavery issue. Kansas held elections in 1855 and selected a proslavery government seated in Lecompton, Kansas. Two key laws passed by the proslavery government were that people could (1) be put to death for helping slaves escape and (2) get two years of hard labor for speaking out against slavery. Antislavery settlers refused to accept these laws so they elected their own antislavery government seated in Topeka, Kansas.

According to the article, *Kansas-Nebraska Act of 1854* (1991), Pierce recognized the proslavery government in Lecompton picked by fraudulent election practices and ordered the antislavery government in Topeka to disband. Therefore, a local civil war was fought in Kansas in 1856 between the supporters of the antislavery government and the supporters of the proslavery government. A band of proslavery supporters raided the town of Lawrence, destroyed homes, and smashed the press of a Free Soil newspaper. A band of antislavery supporters then went into the town of Pottawatomie Creek in the middle of the night where they dragged five proslavery settlers from their beds and murdered them. This civil war continued thought-out 1856 as both sides used guerrilla warfare or hit and run tactics. By late 1856, more than 200 people had been killed and the newspapers were calling the territory Bleeding Kansas. President Pierce allowed this civil war to exist for over a year in Kansas between the proslavery government and the antislavery government before using military force. However, the use of military force by President Pierce to enforce the Kansas-Nebraska Act of 1854 did not stop the civil war in Kansas or remove the antislavery government in Topeka.

National Democratic Party Convention of 1856 Results

The 1856 National Democratic Party Convention was the 7th National Democratic Party Convention and it was held from June 2, 1856 to June 6, 1856 in Cincinnati, Ohio. There were 296 party delegates from the 31 states at the National Democratic Party Convention of 1856 because each state was awarded the number of party delegates equal to its number of electoral votes in the Electoral College. The main business of the National Democratic Party Convention of 1856 was to adopt the party's platform and nominate the party's candidate for president. The party delegates at the National Democratic Party Convention of 1856 were divided on the issue of slavery. According to the article, *Democratic Party Platform of 1856* (2013), one key position of the National Democratic Party Platform of 1856 was that the Democratic Party supports the Kansas-Nebraska Act of 1854 in a way that supports the proslavery territory government seated in Lecompton, Kansas and in a way that does not support the antislavery territory government seated in Topeka, Kansas.

According to the article, *Democratic National Convention of 1856* (2013), the four key presidential candidates were President Franklin Pierce of New Hampshire, Senator Stephen Douglas of Illinois, Senator Lewis Cass of Michigan, and United States Minister to the United Kingdom James Buchanan of Pennsylvania. Most of the 296 convention delegates were divided between Senator Stephen Douglas of Illinois and James Buchanan of Pennsylvania. The rule of the convention was that a candidate had to receive a two-thirds majority (198 votes) of the 296 votes in order to win the party's presidential nomination. It was no easy task for the 296 convention delegates to pick a presidential candidate because no presidential candidate received a majority (149) of the 296 votes until the 15th ballot when James Buchanan received 168½ votes. On the 15th ballot, James Buchanan received 168½ votes (majority), Stephen Douglas received 118½ votes, Lewis Cass received 4½ votes, Franklin Pierce received 3½ votes, and the State of Kentucky only used 11 of its 12 votes. On the 16th ballot, James Buchanan received 168 votes (majority), Stephen Douglas received 122 votes, Lewis Cass received 6 votes, and Franklin Pierce received 0 votes. On the 17th ballot, James Buchanan received all 296 votes and won the presidential nomination because he was the northerner who was willing to appease the southern slave-owners.

Impact on Presidential Legacy of Pierce

It is an important fact that two key political events impacted the presidential legacy of Franklin Pierce. Firstly, the presidential legacy of Franklin Pierce was impacted in the following ways because of the fashion in which he enforced the Kansas-Nebraska Act of 1854 when it came to the Kansas Territory.

- He gets credit for recognizing the proslavery government seated in Lecompton over the antislavery government seated in Topeka, which would eventually split the Democratic Party into northern and southern wings.
- He gets credit for allowing a civil war to exist for over a year in Kansas between the proslavery government and the antislavery government before using military force.
- He gets credit for being a weak president because he was not able to (1) stop the civil war in Kansas and (2) remove the antislavery government in Topeka.

Secondly, the presidential legacy of Franklin Pierce was impacted in the following ways due to the results of the National Democratic Party Convention of 1856.

- He gets credit being the second incumbent president to try and fail to win the nomination to be their party's candidate for president.
- He gets credit for being the first and only elected President to try and fail to win the nomination to be their party's candidate for president.
- He gets credit for failing to win his party's presidential nomination because (1) he lost the support of the antislavery Democrats in the sixteen non-slave states for supporting the proslavery government in Lecompton, Kansas and (2) he lost the support of the Democrats for not being able to stop the civil war in Kansas.

Andrew Johnson

Essentially, Andrew Johnson became the 17th president on April 15, 1865 after the death of Abraham Lincoln. It is an important fact that two key political events impacted the presidential legacy of Andrew Johnson. Firstly, the presidential legacy of Andrew Johnson was impacted by his non-strict enforcement of Reconstruction. Secondly, the presidential legacy of Andrew Johnson was impacted by the results of the National Democratic Party Convention of 1868.

Enforcement of Reconstruction

Reconstruction or the rebuilding of the southern states after the Civil War became the responsibility of President Johnson on April 15, 1865. According to the article, *Andrew Johnson: Domestic Affairs* (2015), enforcement of reconstruction by President Johnson was lenient because he did not require the 11 former states of the Confederate to help the freedmen start new lives. Additionally, enforcement of reconstruction by President Johnson was lenient because he only required that in the 11 former states of the Confederate that (1) a majority of white voters in each state pledge loyalty to the United States, (2) all states write a new state constitution, (3) all states ratify the Thirteenth Amendment, and (4) all states allow former Confederate officials to vote and hold office. By December of 1865, all 11 of the former Confederate states (1) had met the requirements of President Johnson and (2) were accepted by President Johnson as 1 of the 36 states of the United States of America. Voters in all 11 of the former Confederate states were allowed to elect representatives to Congress and many of the elected representatives had held office in the Confederacy.

Enforcement of reconstruction by President Johnson was opposed by many Republicans in Congress because (1) many of the elected representatives had held office in the Confederacy and (2) the 11 former Confederate States passed Black Codes to deny Blacks (freedmen) the right to vote, own guns and land, serve on juries, work skilled jobs, or hold public office. When Congress met in December of 1865, Republicans (1) refused to recognize the 11 former Confederate states, (2) refused to let the representatives elected in the 11 former Confederate states take their Congressional seats, and (3) set up a Joint Committee on Reconstruction to draw up a new Congressional Reconstruction plan for the 11 former Confederate states. December of 1865 was the last month of Presidential Reconstruction and January of 1866 was the first month of Congressional Reconstruction (Nash, 1971).

According to the article, *Andrew Johnson: The Veto President* (2015), three key laws were vetoed by President Johnson because he believed that the three key laws were unconstitutional. Johnson vetoed the Freedmen's Bureau Bill of 1866 because he believed that it was unconstitutional for the federal government to help only a class of formerly enslaved people (1) go to school, (2) find jobs, (3) get food, (4) get clothing, and (5) get housing and shelter over accepted state powers. Johnson vetoed the Civil Rights Act of 1866 (1st civil rights law) because he believed that it was unconstitutional for the federal government to (1) end the Black Codes, (2) give citizenship to Blacks, and (3) provide basic civil rights to Blacks over accepted state powers. Johnson vetoed the Reconstruction Act of 1867 because he believed that it was unconstitutional for the federal government to require state governments to (1) disband, (2) write new constitutions, (3) approve the 14th Amendment, and (4) give voting rights to Black men over accepted state powers.

National Democratic Party Convention of 1868 Results

The 1868 National Democratic Party Convention was the 11th National Democratic Party Convention and it was held from July 4, 1868 to July 9, 1868 in New York City, New York. There were 317 party delegates from the 37 states in attendance because each state was awarded the number of party delegates equal to its number of electoral votes in the Electoral College. The main business of the National Democratic Party Convention of 1868 was to adopt the party's platform and nominate the party's candidate for president. According to the article, *Democratic Party Platform of 1868* (2015), one key position of the Democratic Party Platform of 1868 was the immediate restoration of all the States to their rights in the Union including the regulation of voting rights by the States.

According to the article, *Democratic National Convention of 1868* (2015), no candidate could win the 212 votes (two-thirds majority) needed for nomination until the 23rd Ballot. The majority of the 189 delegates from the 18 northern delegations favored United States Representative George Pendleton (OH) who was in 1st place on Ballots 1 thru 15. The majority of the 128 delegates from the 19 southern delegations favored United States Army General Winfield Hancock (PA) who was in 1st place on Ballots 16 thru 21. United States Senator Thomas Hendricks (IN) was in 1st place on the 22nd Ballot. The 23rd Ballot was the compromise ballot because all of the 317 delegates decided to vote unanimously for Governor Horatio Seymour (NY) to be their party's candidate for President.

Impact on the Presidential Legacy of Johnson

It is an important fact that two key political events impacted the presidential legacy of Andrew Johnson. Firstly, the presidential legacy of Andrew Johnson was impacted in the following ways due to the lenient way that he enforced reconstruction.

- He gets credit for allowing the southern states to pass laws that (1) supported white supremacy and (2) opposed Blacks having civil rights, voting rights, and/or the right to hold public office.
- He gets credit for refusing to sign and/or enforce the Freedmen's Bureau Bill of 1866, the Civil Right Act of 1866, and the Reconstruction Act of 1867 because he felt that these laws were unconstitutional.
- He gets credit for being a weak president because he enforced reconstruction in a fashion that did not help solve the social, economic, and political problems that existed in the southern states after the Civil War.

Secondly, the presidential legacy of Andrew Johnson was impacted in the following ways due to the results of the National Democratic Party Convention of 1868.

- He gets credit for being just the third incumbent president to try and fail to win the nomination to be their party's candidate for president.
- He gets credit for failing to win his party's presidential nomination because he lost the support of the Democrats due to his lenient enforcement of reconstruction.

Chester Arthur

Essentially, Chester Arthur became the 21st president on September 19, 1881 after the death of President James Garfield. It is an important fact that two key political events impacted the presidential legacy of Chester Arthur. Firstly, the presidential legacy of Chester Arthur was impacted by his strict enforcement of the Pendleton Civil Service Reform Act of 1883. Secondly, the presidential legacy of Chester Arthur was impacted by the results of the Republican Party National Convention of 1884.

Enforcement of the Pendleton Civil Service Reform Act of 1883

Senator George Pendleton (D-OH) introduced the Pendleton Civil Service Reform Act in December of 1882. Congress passed the Pendleton Civil Service Reform Act on January 4, 1883. President Chester Arthur signed the Pendleton Civil Service Reform Act into law on January 16, 1883. According to the article, *Pendleton Civil Service Reform Act of 1883* (2016), the Pendleton Civil Service Reform Act of 1883 created a Civil Service Commission to develop examinations to hire federal employees based on merit and included the following key provisions.

- Provided for open competitive examinations for federal government job positions.
- Prohibited federal civil service employees from being fired for political reasons.
- Required that people must have the necessary skills and qualifications before they could be hired for federal government civil service jobs.
- Required that people who scored the highest on the examination for each federal government job earned that federal government civil service job based on merit.
- Required that presidents hire people for federal government civil service jobs on the basis of merit and decide which federal government civil service job positions would come under the Civil Service Commission.

According to the article, *Chester Alan Arthur: Domestic Affairs* (2016), the Pendleton Civil Service Reform Act of 1883 required presidents to (1) hire people for federal government civil service jobs on the basis of merit and (2) decide which federal government civil service job positions would come under the Civil Service Commission. The Pendleton Civil Service Reform Act of 1883 legalized the merit system and outlawed the patronage system. President Arthur strictly enforced the Pendleton Civil Service Reform Act of 1883 because President Chester Arthur decided to initially include about 14,000 federal civil service jobs or 10.5 percent of the federal civil service employees under the Civil Service Commission.

National Republican Party Convention of 1884 Results

The 1884 National Republican Party Convention was the 8th National Republican Party Convention and it was held from June 3, 1884 to June 6, 1884 in Chicago, Illinois. There were 820 party delegates from the 38 states, 8 territories, and Washington, D.C. in attendance at the National Republican Party Convention of 1884. Each state was awarded the number of party delegates equal to two times the number of electoral votes that the state had in the Electoral College. Washington, D.C. and the 8 territories were each awarded 2 party delegates. The main business of the National Republican Party Convention of 1884 was to adopt the party's platform and nominate the party's candidate for president. The party delegates were divided on the issue of civil service reform. According to the article, *Republican Party Platform of 1884* (2016), one key position of the National Republican Party Platform of 1884 was that the Republican Party supports the Pendleton Civil Service Reform Act of 1883 and further extension of the reform system already established by law within the States and the Territories.

According to the article, *Republican Party National Convention of 1884* (2016), two party factions at the National Republican Party Convention of 1884 stopped any candidate from winning the 411 votes (majority) needed for nomination until the 4th Ballot. The Republican Stalwarts and the Republican Half-Breeds were the two factions and they were split between Stalwart President Chester Arthur (NY) and Half-Breed Former Secretary of State James Blaine (ME). The Republican Stalwarts were the conservative faction and they supported the patronage system and opposed the merit system. The Republican Half-Breeds were the moderate faction and they supported the merit system and opposed the patronage system. Former Secretary of State James Blaine (ME) finished in 1st place on all 4 Ballots and President Chester Arthur (NY) finished in 2nd place on all 4 Ballots. On the 4th Ballot, Chester Arthur won 207 votes and James Blaine won the presidential nomination because he won 541 votes.

Impact on the Presidential Legacy of Arthur

It is an important fact that two key political events impacted the presidential legacy of Chester Arthur. Firstly, the presidential legacy of Chester Arthur was impacted in the following ways because of the way in which he strictly enforced the Pendleton Civil Service Reform Act of 1883.

- He gets credit starting the merit system for hiring civil service workers because he placed about 14,000 federal civil service jobs under the Civil Service Commission.
- He gets credit for providing legal protections against being fired without a show of reasons related to job requirements/duties because he placed about 10.5 percent of the federal civil service employees under the Civil Service Commission.

Secondly, the presidential legacy of Chester Arthur was impacted in the following ways due to the results of the National Republican Party Convention of 1884.

- He gets credit for being just the fourth and last incumbent president to try and fail to win the nomination to be their party's candidate for president.
- He gets credit for failing to win his party's presidential nomination because he lost the support of the Republican Stalwarts for strictly enforcing the Pendleton Civil Service Act of 1883.

Conclusion

Yes, it is an important fact that two key political events impacted the presidential legacies of Millard Fillmore, Franklin Pierce, Andrew Johnson, and Chester Arthur in the following fashions.

- Millard Fillmore gets credit for enforcing the Fugitive Slave Act of 1850 in a way that prevented (1) the secession of the 15 southern slave states and (2) a civil war between the 16 northern free states and 15 southern slave states. In addition, Millard Fillmore gets credit for being the very first incumbent president to try and fail to win their party's presidential nomination due to the results of the National Whig Party Convention of 1852.
- Franklin Pierce gets credit for enforcing the Kansas-Nebraska Act of 1854 in a fashion that did not (1) stop a civil war in Kansas between the proslavery and antislavery governments and (2) remove the antislavery government in Topeka. In addition, Franklin Pierce gets credit being the second incumbent president and the first and only elected President to try and fail to win their party's presidential nomination due to the results of the National Democratic Party Convention of 1856.
- Andrew Johnson gets credit for enforcing reconstruction in a fashion that allowed the southern states to pass laws that (1) supported white supremacy and (2) opposed Blacks having civil rights, voting rights, and/or the right to hold public office. In addition, Andrew Johnson gets credit for being just the third incumbent president to try and fail to win their party's presidential nomination due to the results of the National Democratic Party Convention of 1868.
- Chester Arthur gets credit for enforcing the Pendleton Civil Service Reform Act of 1883 in a fashion that (1) started a merit system for hiring civil service workers and (2) provided legal protections against being fired without a show of reasons related to job requirements/duties. In addition, Chester Arthur gets credit for being just the fourth and last incumbent president to try and fail to win their party's presidential nomination due to the results of the National Republican Party Convention of 1884.

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Online Human Services, Social Work, and Social Science Rural Community College Students' Self-Reported Perceptions of Benefits and Challenges of Taking Online Social Science Courses in Their Program Curriculum: A Five Year Case Study.

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This case study of community college students examines five years of data collected from online human services, social work, and social science majors at a community college in rural central Nebraska. It examines their self-reported perceptions of benefits gained from taking online social sciences courses as a part of their program curriculum. There is virtually no existing research on this topic. This research examines how 62 rural community college students studying human services, social work, and social sciences as their majors responded to a series of 13 demographic questions and two open-ended questions. The two open-ended questions are related to self-reported benefits of taking social science courses online for their program curriculum, and how these students will benefit from them in both their majors and future careers. Data was collected from fall 2012 through fall 2017. The online social science courses used in this research include the following courses: Introduction to Sociology, Social Problems, and Gerontology. The purpose of the study is twofold. First, to assess the perceived value of taking social science classes online for their majors at a community college; and second, to assess how it will affect their careers.

Introduction

The purpose of this study is twofold. The first aim of the study is to examine the 62 human services, social work, and social science majors at a rural community college in central Nebraska and determine what their perceptions are of the benefits of taking online social science classes for both their majors and future careers. The second aim is to answer the questions: 1) why these students are taking a social science course online at this community college and 2) what are the primary reasons they are taking other online courses at this community college.

Gregory and Lampley (2016) suggest the sheer convenience and flexibility online education offers to students living in rural areas is attractive to students. Rural community college students especially benefit from online classes, because unlike their four-year counterparts, many students are nontraditional and have both work and family obligations which may make attending a lecture class impossible.

Austin (2010) states: “Developing courses that provide a global perspective and are multicultural can be especially important to rural community colleges and their students who may not have other chances to learn about or experience other cultures” (p. 31). Building on Austin’s (2010) idea, many of the rural community college student respondents in this study reported similar reasons for taking online social science courses.

Five Human Services student quotes from our study show the value of taking online social science classes to students living in a rural area. These randomly chosen quotes are shown below:

Student 1: “Social Science classes help me in my major learn about differences in people and their cultures along with factors that affect people differently. I enjoy learning about the items that sociologists point out and ways that they find theories about certain points that can relate to everyone.”

Student 2: “As I previously stated, it will make me more aware of and have a greater ability to respond to different situations people I may “treat” in the future are facing. It gives me a better understanding of where people are coming from and how to properly address the issues they may face. Also, it makes me more aware of my own flaws so I can address my own false beliefs…which I was shocked to realize last semester I had

unknowingly been generalizing and stereotyping Asian Americans without even realizing. I had to write a paper about how they are portrayed through media, and it make me aware that the stereotyping of the media soaked into my brain. I had a kind of epiphany while I was answering that question; I realized that I had in fact always assumed that Asians are all extremely intelligent and found out that was a generalization and stereotype that I had come to see as reality when in actuality, my false assumption was based solely upon media portrayal. This is partially because I have never known any Asians, so I had no frame of reference to alter my ill-founded belief. I was grateful that the class required me to analyze media and form my own opinion, for I was SHOCKED to know that I had been so quick to just buy into what I had seen on TV."

Student 3: "Social science classes are going to help me in my career be able to understand the difference in people and also norms of their culture. Taking these classes help me kind of have a relevant idea on different factors of a culture. The one point I have to understand though that is the key factor to make my career a success that everyone is different."

Student 4: "Taking sociology classes online can benefit anybody in any career because it allows you to be more tolerant and understanding towards others who may be different from what you are used to."

Student 5: "Having a better understanding of all types of social backgrounds will help me to better assist patients I may treat. If I have prior knowledge of what types of obstacles a person or family faces, it will be much easier to help me navigate their way beyond those barriers and become successful and socially well-adjusted human beings. I could never begin to understand other people without this type of course, and without that understanding, I would be unable to offer advice that would be beneficial. By knowing the issues people face, I will be better informed how to help them."

Demographics

During the 2016-2017 academic year this rural Midwestern community college served a total of 21,708 students (9,238 were full-time or part-time, credit seeking students); 88.4% or 19,198 of the students were in the 25-county Service Area this college serves in rural central Nebraska (Enrollment Report, Central Community College, 2016-2017). The five most popular majors on campus as of the 2016-2017 academic year were: Academic Transfer, Business Administration, Nursing, Early Childhood Education, and Information and Technology Systems (Enrollment Report, Central Community College, 2016-2017).

College-wide, approximately 60% of the students were women and 40% were men. Approximately, 9,237 were credit-seeking students. College-wide, approximately 74.9% were White Non-Hispanic; 19.7% Hispanic/Latino; 2.1% Black Non-Hispanic; 1.7% Asian/Pacific Islander; 0.7% Native American; 0.2% two or more races; and 0.7 race unknown. This college has three primary campuses, a Learning Center in Kearney, Nebraska, and several smaller satellite campus sites in the 25 county region of central Nebraska it serves (Enrollment Report, Central Community College, 2016-2017).

Purpose of the Study

The fields of Human Services/Social Work/Social Sciences are popular majors for many community college students nationwide. The primary function of the human services profession is to assist individuals and communities to function as effectively as

possible (http://www.nationalhumanservices.org/what-is-human-services; retrieved on January 25th, 2018). A person with a strong desire to help others, strong communication skills and the ability to manage time would make a strong candidate for this field.

There are many aspects of this major that may lure a student into this field regardless of their age, race/ethnicity, socio-economic standing, or gender. Many of these traditional and nontraditional aged students majoring in Human Services are interested in helping others as their full-time profession. A few examples of jobs one may secure upon graduation with a Human Services degree include: Community Health Advocate, Substance Abuse Counselor, Life Skills Instructor, Gerontology Aide, Halfway House Counselor, Adult Day Care Worker, Child Advocate and Crisis Intervention Counselor to name a few (https://online.grace.edu/news/human-services/what-is-human-services) and (http://www.nationalhumanservices.org/what-is-human-services).

Estimates from 2013 suggest approximately 30% of U.S. higher education students are enrolled in at least one online course (Gregory and Lampley, 2016). Many community college students are nontraditional students with adult responsibilities such as work and family commitments which may make attending lecture classes impossible. (Gregory & Lampley, 2016; Xu & Jaggars, 2014; Austin, 2010 and Leist & Travis, 2010).

Thus, this study seeks to answer how Human Services/Social Work/and Social Science majors view taking online social science courses as beneficial to both their major and future careers. These three aforementioned majors are in the "helping professions" and this study seeks to discover what skills students believe they will obtain.

Essentially, this study is an in-depth examination of how rural community college students view taking online social science classes as a benefit to both their majors and future careers. We wanted to learn what self-reported skills, if any, students plan on obtaining in the online social science classes that may be able translate into their future careers.

Review of Literature

According to several different sources in the popular press, the fields of human services and social work are two of the fastest growing fields of study at many community colleges and four-year colleges. A recent article, retrieved on January 25th, 2018, from the Grace College Human Services website, states that the field of Human Services will grow 22% by 2022 (https://online.grace.edu/news/human-services/what-is-human-services). Another source states that the field of human services is expected to grow even faster than the national average for all occupations which is 7% (https://www.allpsychologyschools.com/human-services/what-is-human-services/).
Another website from the community college used for this study suggests: "The job outlook is excellent. The need for human services workers is expected to grow by nearly 28% between 2010 and 2020" (https://www.cccneb.edu/humanservices/). According to Moore, et al., (2015), the predicted job growth for social workers between 2010 and 2020 is 25%. Last, according to the Bureau of Labor Statistics, retrieved on February 20th, 2018, social science occupations are projected to grow 10% from 2016 to 2026, which is faster than the average for all occupations (https://www.bls.gov/ooh/life-physical-and-social-science-science/home.htm). In sum, all three fields represented in

this study are experiencing upward growth and promise which will benefit both our current and future citizens in need of help.

Thus, human services, social work, and social science majors have a very promising job outlook. This research examines community college students in rural central Nebraska who are majoring in human services, social work and the social sciences and their attitudes toward taking online social science classes and how those classes may benefit them in their majors and future professions. The student respondents were asked two open-ended questions related to taking one of three online social sciences courses: Introduction to Sociology, Social Problems, and Gerontology.

This section briefly discusses what human services, social work and the social sciences are as major fields of study and what type of employment graduates in this field typically secure. First, the differences between Social Work and Human Services will be discussed. In a recent online article submitted by Grace College on January 25, 2018, it states that both human services and social work are careers based on serving the needs of people, but in different ways. Human Services professionals focus on larger populations and seek to serve the needs of a group of people, not just individuals. Social Workers, on the other hand, focus primarily on helping one individual with a problem (https://online.grace.edu/news/human-services/what-is-human-services/). Social scientists, on the other hand, study all aspects of society, including the past and present, human behavior and relationships in groups.

The National Organization for Human Services (NOHS) has identified six major statements of knowledge, skills, and attitudes that future human services employees must possess to be successful in this field. First, understanding the nature of human systems: individual, group, organization, community and society, and their major interactions. Second, understanding the conditions which promote or limit optimal functioning and classes of deviations from desired functioning in the major human systems. Third, skill in identifying and selecting interventions which promote growth and goal attainment. Fourth, skill in planning, implementing, and evaluating interventions. Fifth, consistent behavior in selecting interventions which are congruent with the values of one's self, clients, the employing organization, and the Human Service profession. Sixth, process skills which are required to plan and implement services (http://www.nationalhumanservices.org/what-is-human-services).

According to Xu and Jaggars (2014), distance education, through online education, has experienced strong growth, especially at community colleges nationwide. This growth has been largely attractive to nontraditional students. According to Leist and Travis (2010), many rural community colleges have incorporated online courses into degree and certificate programs to enhance their reach of students over large geographical distances. They also believe there is an economic benefit for both the community college and their students. Moore, et al., (2015) state the benefits of online social work programs in a variety of situations. First, it is valuable to rural students. Second, it is valuable to students who do not want to physically attend as a result of financial or career reasons. Third, it may help active-duty military personnel or their spouses to receive a high-quality education. Fourth, and finally, it allows students to personalize their education by seeking out programs that have their own personal specialized curriculum. This is the crux of what our study is about: program students, specifically, human services, social work and social science students at a rural

community college, seeing the value in taking online social science courses for both their majors and future careers. What skills or skill sets do they believe they will obtain from taking online social science courses? Will it be the same as what current literature reports? Will our students report developing other skills outside of what the existing literature reports?

There isn't any current literature available that specifically addresses our two research questions. Other studies focus on building online programs in rural or urban areas in these majors and report how beneficial online courses are for those living in rural or urban areas, but not for the purposes of their majors or future careers. That is what makes this study unique. Our focus is student-centered and specifically focused on what rural community college students' attitudes are toward perceived benefits of online social science classes for both their majors and future careers. In other words, our students are reporting what they perceive to be the value of online social science classes. This exploratory research endeavors to discover what self-reported skills online rural community-college social science students in a Midwestern state are planning on receiving in these classes that will translate to being successful in both their majors and future careers.

Methods

This research follows the case study method and is exploratory in nature. It uses data collected from 62 rural community college students majoring in the fields of human services, social work, and the social sciences over a five-year period. The survey instrument is offered each semester to all online social science students in three different social science classes: Introduction to Sociology, Social Problems, and Gerontology. It is not a mandatory class requirement. It is voluntary. Students can either elect to complete it or disregard it.

The study examines rural community college students' self-reported perceptions of benefits and challenges in taking online social science courses as part of their program curriculum. This study further seeks to answer why human services, social work, and social science majors are taking online social science courses and asks them how the online courses will benefit them in both their majors and future careers. Since these three majors are in the "helping professions", we believe the data collected for this research between the fall semester of 2012 and fall semester of 2017 to be valuable for examining this topic of study.

Data was collected from three different community college campus sites, including a learning center (all three campus sites and the learning center were within one community college system, some just in different geographic locations). At these locations, students were taking online social science and online human services courses. Two of the sixty-two online student respondents were from two different four-year colleges in the state of Nebraska. Also, two online student respondents were from the state of Iowa. The three campus sites and the learning center are all operated by the same community college represented in this study. It covers a 25-county area in rural central Nebraska.

Students were administered a 23-item survey instrument in which they were asked to answer 13 demographic questions and ten open-ended questions. Only two of the ten open-ended questions were used for this research. The instrument was only

administered to online social science students at the 100 and 200 level at this rural community college in central Nebraska.

This instrument asked the students questions such as highest level of education they had completed, highest level of education both parents had completed, major area of study, gender, age, political affiliation, income, race, and mother and father's occupation. Two of the ten open-ended questions asked in the instrument are addressed in this study. They are in the "Findings" section below.

Findings

This case study focuses on two open-ended research questions. First, "How is taking a social science course online going to benefit you in your major?" Second, "How is taking a social science course online going to benefit you in your career?"

There were 62 online respondents over the course of five years who participated in this study. The only students included in this study were those who planned to go into a "helping" field upon their graduation from this college. Therefore, only three different majors were included in this study. They included: Human Services majors (45), Social Science majors (13), and Social Work majors (4).

In the next two sections of the paper, a summary of comments made by students representing these three majors will be explored. Their responses to the two primary research questions in this study are typed out exactly as they appear on the instrument used in this study. There may be grammatical errors appearing in some statements made by the student respondents. The principal investigators of this research believed it necessary to not correct grammatical errors in this section of the paper, as it could perhaps take away "the effect" of what the student respondents were trying to convey in their answers to the two questions. The first question of this case study follows.

How is taking a social science course online going to benefit you in your major?

This section examines a sampling of 30 students' responses to the question above. The purpose is to gain a perspective on how Human Services, Social Work, and Social Sciences students believe taking online social science classes at the local community college will benefit them in their major. Only two of sixty-two student respondents did not answer this open-ended question.

The reason why these 30 student respondents' answers were selected is because they best represented the main themes of this open-ended question/section. The conclusion section of this paper offers a synopsis of the answers to the question above.

Student 1: "It gives me more flexibility so that I can possibly serve in AmeriCorps position and also gives me the opportunity to figure out some health challenges." *Student 2*: "Social Sciences are a large part of Social Work. I believe that it will help me be able to relate to more individuals and it will help direct me in what I need to explore while obtaining my major." *Student 3*: "It is going to help me to achieve a certification in Human Services. It will help me to better understand the elderly population which I am choosing for the people I want to work with."

Student 4: "My major at the moment is in Social Services, so knowing what is going on in the world will help me help my clients. There are different difficulties that go on in different cultures, so I can apply that to helping them. I can use what I learned in Introduction to Sociology and in this class, Social Problems, to make helping them easier." *Student 5*: "I'd like to major in social science, so it has given me a feel for it."

Student 6: “I will be working with the elderly population and this helps me to know how to interact with them.”

Student 7: “There are a couple of ways that taking gerontology will benefit me in my major. I am currently working toward my human services degree at Central Community College. It is required that we take some form of social science course in order to fulfill the degree requirements. I also plan to possibly work with the elderly when I am finished with the program, so this gerontology course will benefit me in many ways. I have learned a lot throughout the course and have also had on site experience at an assisted living home for this course.” *Student 8*: “It is going to benefit my major because there may be situations where I only communicate with someone over the computer and never see them face-to-face, so this course online helps me to becoming familiar with communication over the computer.” *Student 9*: “Social Science is a major part of human services as human services deals with a variety of populations from every social class. The information learned can be used to better help those who are different than myself.”

Student 10: “It will greatly benefit my major, as my major is Human Services, which requires an understanding of how social environments factor into a person’s behavior.” *Student 11*: “I am going into Human Services to work with families that have children with behavioral, mental, and etc. to help their families to become well and to help them find resources etc.” *Student 12*: “This course is going to help me understand how people operate. It helps me to understand the world around me and what people classify as social problems. That is huge for my major, because as a therapist, I will see many different people who have many different problems. In order to be able to respond appropriately, I will need to know as much about social sciences as I can. It is preparing me for classes that I will be taking in my bachelor’s degree.”

Student 13: “It helps open my views and thoughts on different issues and perspectives of things I haven’t really looked at. I have learned a lot about the process of aging and things that I should have been educating myself on long before I was 30. It also helps me understand things that I may soon face with future clients, family members, and myself.” *Student 14*: “It may help me decide what population I want to work with in Human Services. And, to help me gain more knowledge and skills in other areas.” *Student 15*: “I believe that by taking this course I will have a better understanding of a population that will grow and require assistance within the human services field.”

Student 16: “I am hoping it will give me greater understanding of other social situations to which I have not been exposed.” *Student 17*: “Taking this course will benefit my major if I decide to work with this population of people in the Human Services field.” *Student 18*: “I think it will go hand in hand with my psychology major. In order to understand humans, you need to know the different situations that might influence their thought process.”

Student 19: “This Gerontology online class is going to educate me on what I need to know when working with these groups of people. I will get a better understanding of the aging process and some issues that affect them as they reach certain ages.” *Student 20*: “Taking a social science course online is going to benefit me in my major because I get to learn the social problems that are happening among one another. All of the conflicts I will be learning in this class can help me problem solve when I get into my

major." *Student 21*: "Taking a social science course online is going to benefit me because it is required to take one for my degree. Taking it online will show that I have worked with computers."

Student 22: "This benefits my current career (major)—as it simply reinforces what I have been instructed in that position—that policies are best practice for changing society. My career—it helps to gain the broader spectrum to see how impactful public policies/laws/identified social problems impact people as individuals. Also, will help to be aware enough to advocate when a social problem has not yet been identified publically." *Student 23*: "The social science class online will help me because I will be doing this on my own and when I finish my class to graduate, I will have to do paperwork and other important things by myself." *Student 24*: "I am planning on majoring in social services at UNO spring 2018. This course was suggested to me by my advisor but I also feel like this course is very interesting and I can see how it can be beneficial to my major."

Student 25: "I think it will provide me with a well-rounded variety in my education." *Student 26*: "The first thing is I have to have it for my generals. However, the main reason I took this class is to learn more on how sociology views problems. Before I took this class, I had some ideas about why people are poor but after reading I realized it has more to do with than just not wanting to work. I want to learn about how people live and what is the issues people are facing that I might not know or understand." *Student 27*: "By learning about the world's social problems, I will have a better insight in my job as a counselor."

Student 28: "This is going to benefit me by letting me see what problems there are surrounding us and have an open-mind to the problems that people face every day." *Student 29*: "I am going into Social Work to eventually work in a lockdown facility as a social worker and this helped me focus on how society acts in a whole." *Student 30*: "I will be taking lots of sociology/psychology type classes in order to better understand people and their tendencies. Understanding why people do what they do, and how they think will be very beneficial and crucial in making good solid judgments."

How is taking a social science class online going to benefit you in your career?

This section examines a sampling of 28 students' responses to the question above. The purpose is to gain a perspective on how Human Services, Social Work, and Social Sciences students view taking online social science classes at the local community college as a benefit to their future career. Only three of sixty-two student respondents chose not to answer this open-ended question.

The reason why these 28 student respondents' answers were selected is because they best represented the main themes of this open-ended question/section. The conclusion section of this paper offers a synopsis of the answers to the question above.

*Student 1***:** "Social Work takes discipline and taking an online course helps me be intentional about meeting what is expected of me." *Student 2*: "Web classes require a tremendous amount of discipline which is difficult for me without building a relationship with classmates and instructors. I crave group settings; not too fond of doing it alone with no one around me." *Student 3:* "Social Science classes will benefit me in my career because it will give me the opportunity to empathize and reach out to a wider variety of populations."

Student 4: “The reason that taking this course will benefit me in my career is because if I do choose to work with the elderly population with human services, I have learned a lot of information about different aspects related to the elderly population throughout this course. I will be able to incorporate the information I have gained from taking this course into my professional life.” *Student 5*: “It is going to benefit me in my career by knowing more about computers and how to properly and appropriately communicate over the computer.” *Student 6*: “I have chosen to work with the elderly population so this course will give me the information I need to succeed.”

Student 7: “I would like to work with older adults and the courses I am taking contain updated information focused on gerontology.” *Student 8*: “I am working on my Master’s degree in social work, so the classes I am taking will directly affect my career as a CPS worker, which is my ultimate goal.” *Student 9*: “Hopefully, as I mentioned before, I may be able to assist people that I may not have understood where they were coming from if not for this course.”

Student 10: “I am going into Human Services to work with families that have children with behavioral, mental, and etc. to help their families to become well, and to help them find resources etc.” *Student 11*: “The more social science classes that I take, the more I will better understand individual relationships to society. Society is everything to us, in other words, it affects all of our lives entirely. To better understand why a patient may not feel that she is pretty enough could be because society makes “thin” girls out to be the prettiest. I need to know about how society affects us so that I can understand what steps I need to take to remove its effects on us.” *Student 12*: “It helps give me experience using the web, a computer, and finding different methods to do research to further my education and are tools I can use in my career as well.”

Student 13: “I will be able to have a certificate on top of my degree which will provide proof that I have been educated in several different areas of the human services field.” *Student 14*: “To help me relate to other people with backgrounds different from mine or those that I have encountered throughout my life.” *Student 15*: “Taking a social science course online will benefit me in my career of becoming a child protective service because there can be problems that can happen between a family and I can use what I learned in this social problems class to apply it to the problem to simply aide the situation.”

Student 16: “Taking this class will benefit me in my career because it helped me learn more about using computers and showed me that I am great at figuring different websites out as well as using google docs and different types of files. (PDF, RTF, DOC, and etc.).” *Student 17*: “This benefits my current career—as it reinforces what I have been instructed in that position—that policies are best practice for changing society.” *Student 18*: “I feel like taking social problems allows you to see the many different problems that people of all classes deal with, along with problems of different classes, races, gender, etc. This course, I hope, will give me better understanding on how to handle problems as they arise with others in an open-minded manner.”

Student 19: “This course has helped me in seeing not only the patients from different cultures, but how they operate and what is expected from me. Without this course, I just thought cultures were strange, and did not understand them at all.” *Student 20*: “Taking a social science course online will allow me to become certified to teach all 5-12 social science courses in Iowa. Also, it will make me more marketable to smaller school

districts in Iowa, which rely on their social sciences teachers to teach more than one social science discipline." *Student 21*: "I believe taking a variety of courses which help me to have a better understanding of people's culture, situation, and concerns will help me to be more understanding and more effective in the helping profession."

Student 22: "I will have a better understanding of others and their social problems. This class made me think about things I would not have if it wasn't for this class." *Student 23*: "I will have a better understanding of other people's backgrounds and "where they're coming from" as their counselor." *Student 24*: "It will help me with cultural differences with my patients."

Student 25: "This particular course assisted me in obtaining a better understanding of the elderly population. Working with the elderly population is something I am interested in." *Student 26*: "This class will help me understand the social problems that are around and not be judgmental about these problems." *Student 27*: "With this course being a convenient online course, this course will be helpful to me in the future when I have completed my schooling, and this course may also help me in my everyday life; with the information that I will be gaining." *Student 28*: "I want to go into law so I think it will be very beneficial in the way of understanding people in the context of society, which I will need to do often!"

No Answer/Negative/Unsure

Out of the 62 student respondents in this study, there was variation on how many students did not answer the two open-ended questions. For the first open-ended question, "How is taking a social science course online going to benefit you in your major?" only two students didn't answer the question. For the second open-ended question, "How is taking a social science class online going to benefit you in your career?" only three students didn't answer the question.

There were a few students who had outright negative points of view on one or both of the two open-ended questions asked on the instrument. In this section, a few student responses will be shared. Five student responses follow. Responses have been typed exactly as students responded. *Student 1*: "Don't know if I will do well in this web-based course as I struggle with them. I do much better in lecture classes." *Student 2*: "Taking this class online does not benefit my major, except for more insight." *Student 3*: "It does not help me obtain my degree, however, it will help further down in my education career, and it will help to work with others and have a concept how one social problem may lead to another one." *Student 4*: "I would rather take it in a classroom setting, but I was unable to do so, and being able to take this online will help me continue the work I need to do and learn and have a better understanding of various issues." *Student 5*: "I would not take web-based classes ever but presently I have no other choice. I simply have no choice in this current situation."

Limitations

There are numerous limitations to this study. First, although there were four different campus locations included in this study, it was all a part of one community college system. This study focuses on rural Midwestern community college students and the potential barriers they may experience in obtaining higher education through online learning. Some barriers our student respondents mentioned included: driving distance, band width issues, access to internet in very rural areas, access to internet based on

socio-economic status, family obligations, single mothers finding reliable childcare, time management issues, and lack of confidence in using technology to name a few.

Students at much larger community colleges in an urban setting, for example, may not experience some of these issues. Also, students at other rural Midwestern community colleges or rural community colleges in other regions of the country will most likely have their own unique set of issues which may be significantly different from this community college.

Certainly, this case study could have been strengthened by including the three other rural community colleges in Nebraska into our study. Yet another way this study could have been enhanced would have been to distribute the survey to other rural community colleges in surrounding Midwestern states.

Another limitation was gender bias. There were 55 women respondents which represented 89% of student respondents in the study. There were only 7 male respondents, which represented 11% of the study. There was also racial bias in the study as 90% of respondents were white, 5% Hispanic/Latino, 3% African American and 2% Asian American. The researchers would like to point out that both the gender and racial bias may be related to the types of majors represented in the study. The fields of human services, social work, and social sciences are predominantly female. Additionally, for the 2016/17 year at Central Community College, exactly 60% of the students were female and 40% of the students were males (Enrollment Report, Central Community College, 2016-2017).

Other limitations include: 1.) This study only surveyed online rural community college adults in three different majors; permission was not granted for the survey to be administered in other online social science classes. 2) Only three social science courses were permitted to be used for this study. 3) If future research is conducted on this topic, other rural community colleges around this state and other rural community colleges around the country will need to be examined to better generalize outcomes. 4) Certainly, many more online social science courses will need to be included from various fields such as psychology, philosophy, anthropology, and political science in strengthening future studies. 5) More student respondents would also strengthen future studies on this topic.

Conclusion

This case study addressed two primary questions as they relate to online Human Services majors, online Social Work majors, and online Social Science majors at a rural community college in the Midwest. The two questions guiding this 5-year case study project included: 1) How is taking a social science course online going to benefit you in your major; and 2) How is taking a social science class online going to benefit you in your career?

All of these students will be in the “helping professions” once they graduate. They will serve as advocates, counselors, case managers, educators, along with too many other professions to list fully here. The purpose of the study was to examine these three majors at a local community college to really get the online social science students to think about how they could use the information learned in the online social science classes and see how they apply to their majors and careers.

As was mentioned earlier, the study is limited in a variety of ways. Perhaps the three biggest limitations include only having 62 cases to examine, examining only four

different campus locations at one rural community college, and finally, only using three social science courses. There were other limitations, but these were key limitations the authors would like to mention, and we realize that the results reported may be skewed by these factors and that the results of this study in no way can be generalized to all rural Midwestern community college students or any other rural community college students. Rather, we see this study as both a starting point to examine the perceived usefulness of online social science classes for people in these "helping professions" and we hope it leads to further investigation on a grander scale.

Many of these rural community college students' responses are in line with what the literature reports in terms of benefits of taking classes online. For example, students reported that the online social science classes would help them understand various cultures, various religions, family backgrounds, being sensitive to the LGBTQ community, understanding older adults in retirement, children's behavior based on their family situations, group behavior in general, understanding people from different backgrounds, how to interact and socialize with the elderly population, learn about class and socio-economic issues, understand public policy and laws, understand current issues, and understand the world's social problems.

The existing literature related to rural online social science community college students does not address perceived "soft skills" and professional skills online social science students believe they may learn from taking online social science classes. Our study attempts to address this gap in the literature as it pertains to only rural online social science community college students and both their majors and future careers. This study examined the "soft skills" and professional skills rural community colleges students from three different "helping profession" majors expected to gain by taking an online social science class as part of their major. Some examples of expected findings in the study include: time management/budgeting time; flexibility in completing tasks; learned a lot about using the computer; complete tasks online related to my major and career; dealing with situations where I only communicate with someone over the computer; appropriate communication over email; learn my field over the computer; help me problem solve in my major; confidence of working with computers in my field; work independently and complete paperwork online; how to work with others; making good solid judgments on the job; sensitivity and how to address the issues clients are facing; and makes me aware of my own flaws.

This study also examined the "soft skills" and professional skills rural community college students expected to gain by taking an online social science class and how it may be useful in their future careers. Some examples of expected things learned include: Be intentional about what is expected of me; discipline to complete work independently; incorporate information learned from course into professional life; learn to comprehend things online; appropriate communication over the computer; obtain current information from course and use in my future profession; all classes I am taking will help me as a future CPS worker; better understand my clients after taking course; accept peoples' differences; gain experience using the computer, the web and find different methods to do research I can use in my career; apply knowledge from the social problems class when I work for CPS; help me learn more about using computers and how to use google docs and different types of files such as (PDF, RTF, DOC and etc.) and figuring out websites; give me better understanding on how to handle

problems as they arise with others in an open-ended manner; certified to teach all 5-12 social science courses in Iowa; more marketable; understanding other people's culture will make me more effective on the job; utilize learned theories from the class and apply them on the job; tolerance; understand obstacles a person or family must overcome and help them navigate around them; and understanding people in the context of society will help me as a future lawyer.

Future studies related to this topic need to include many more rural community colleges, more cases (student respondents), and examine a variety of social science classes in the sample. Doing these three things would certainly strengthen a similar study in the future.

The researchers would like to thank the 62 students for their time, honesty, and the candidness of their responses. Without them, this case study project would not have been possible.

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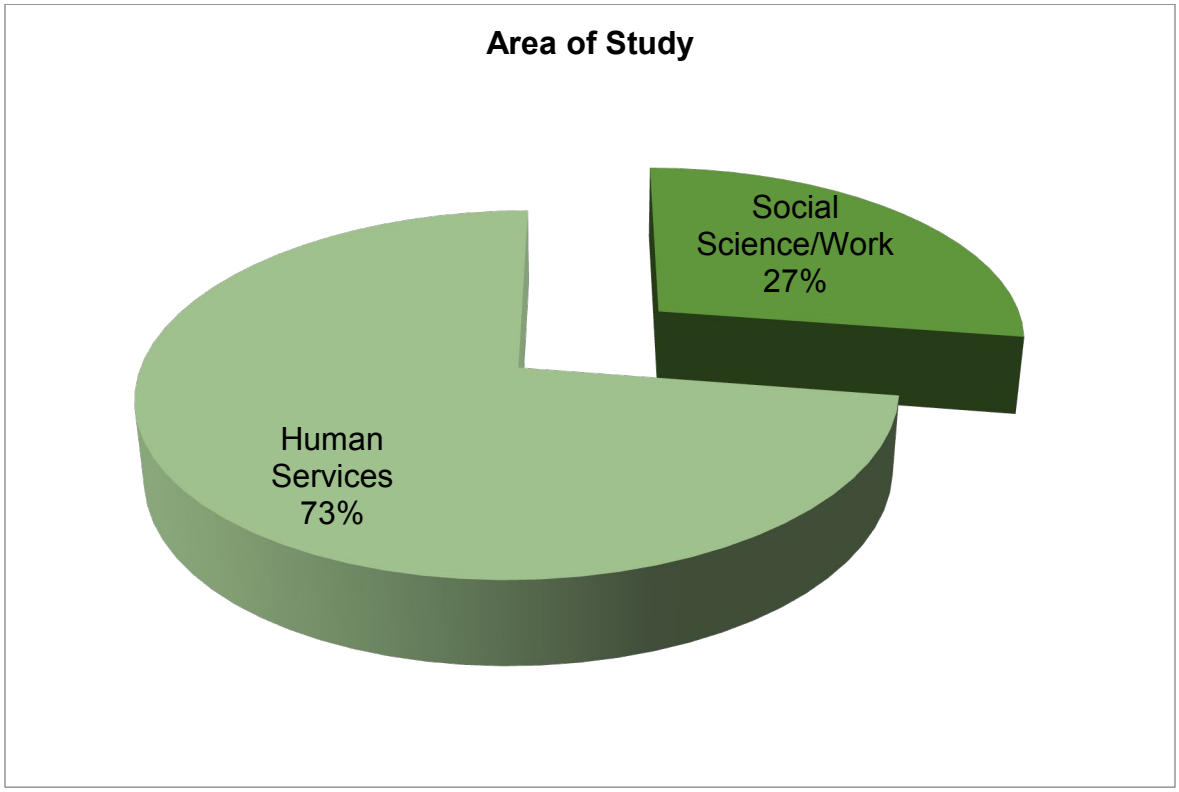
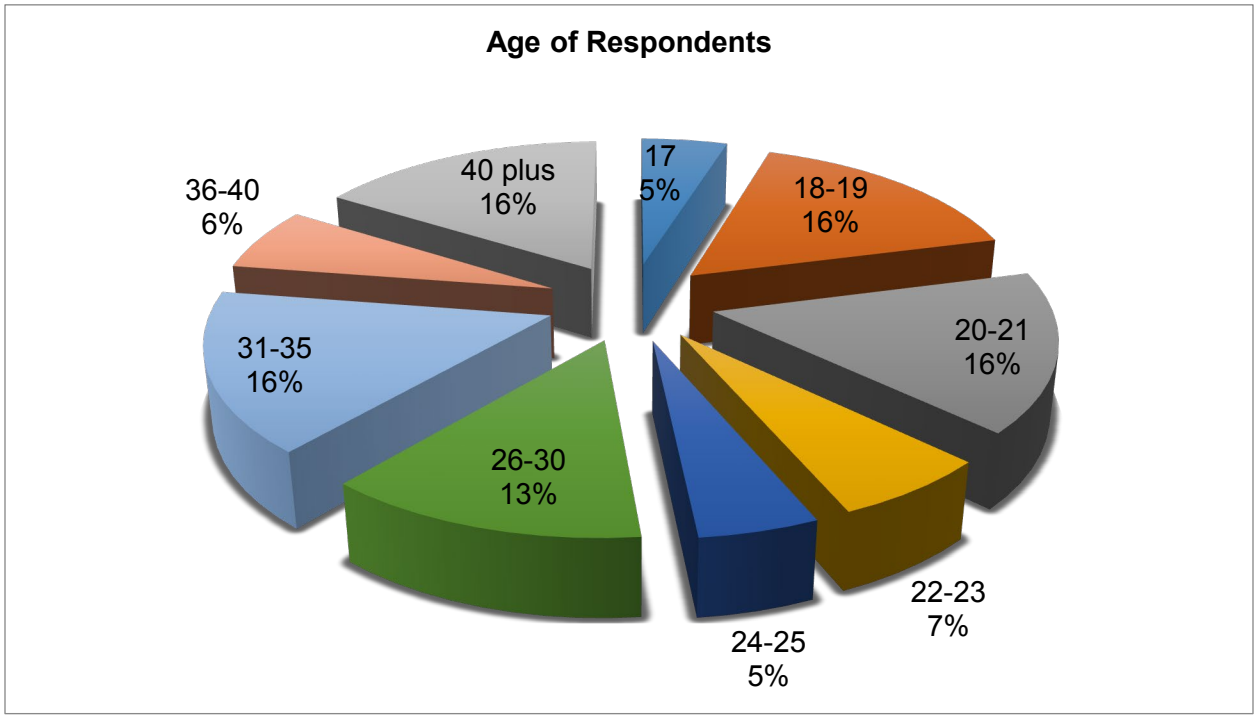
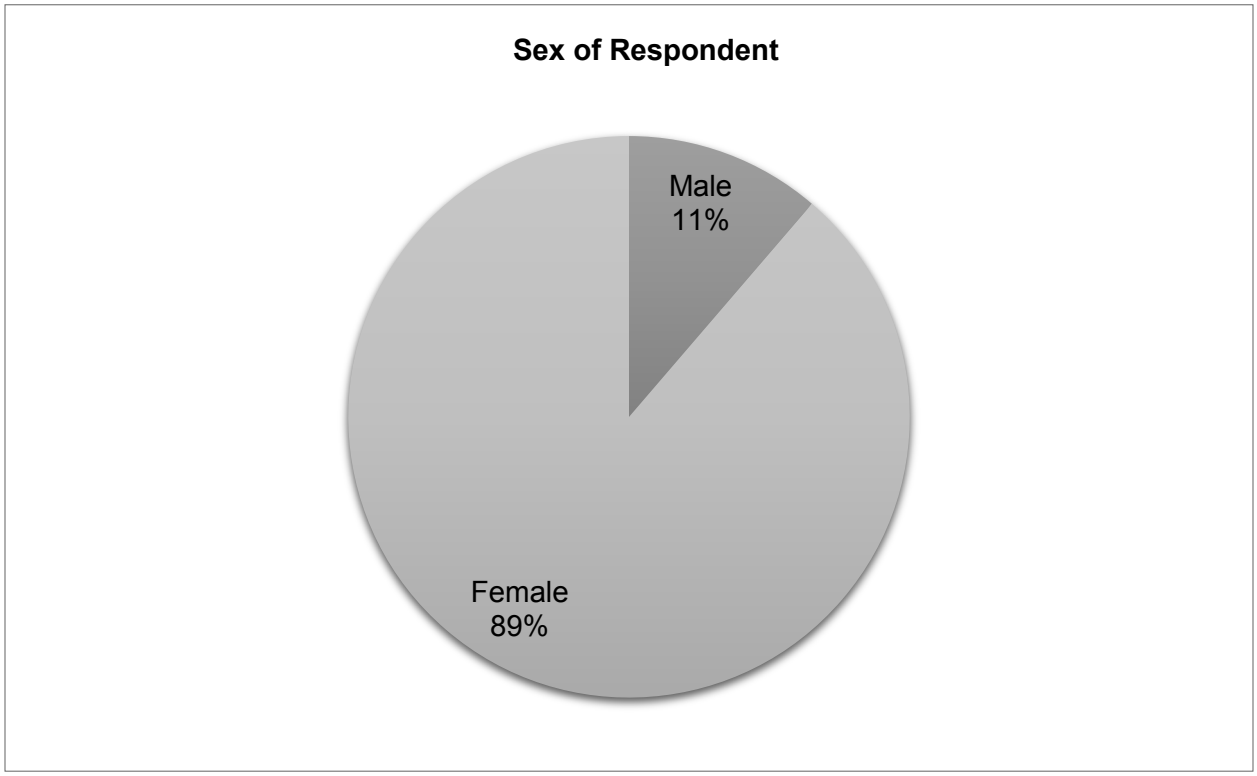


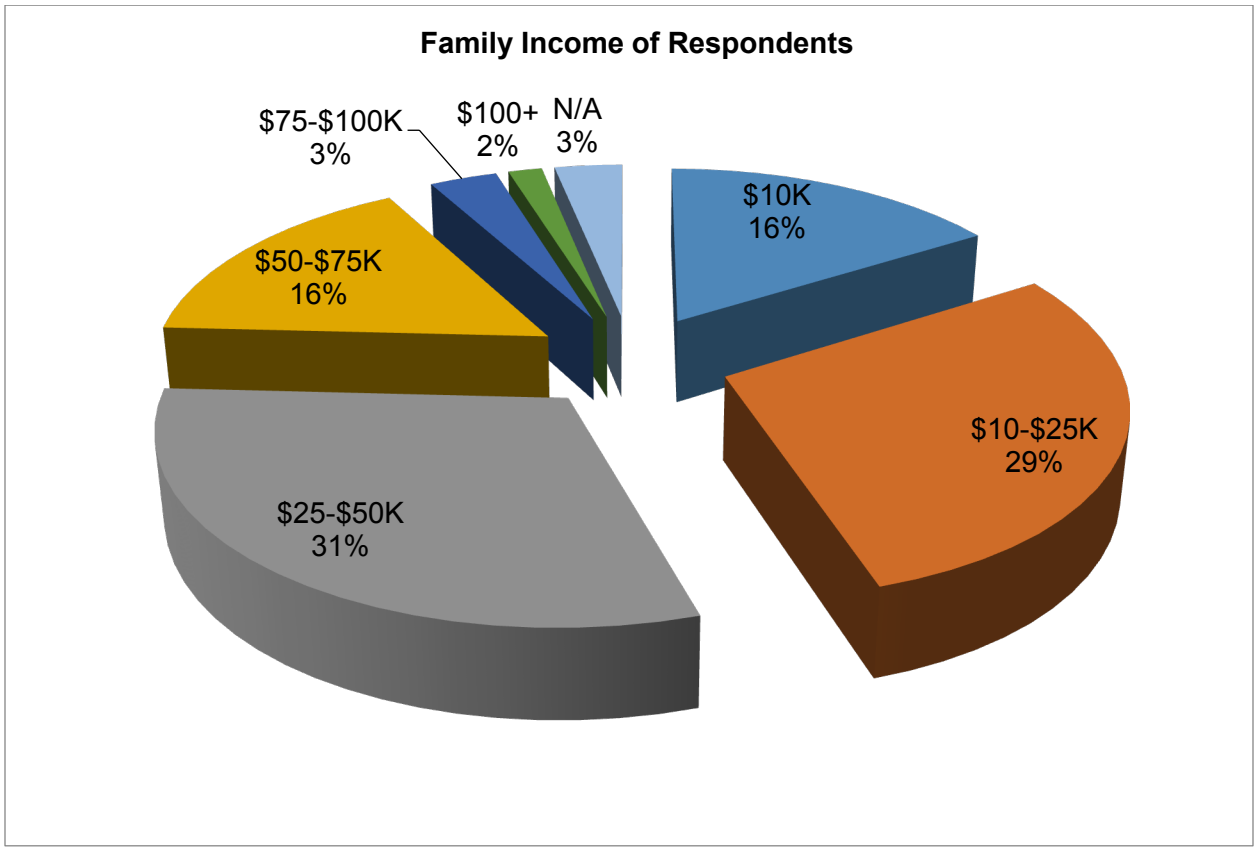
Major	Raw #s
Social Science/Work	17
Human Services	45



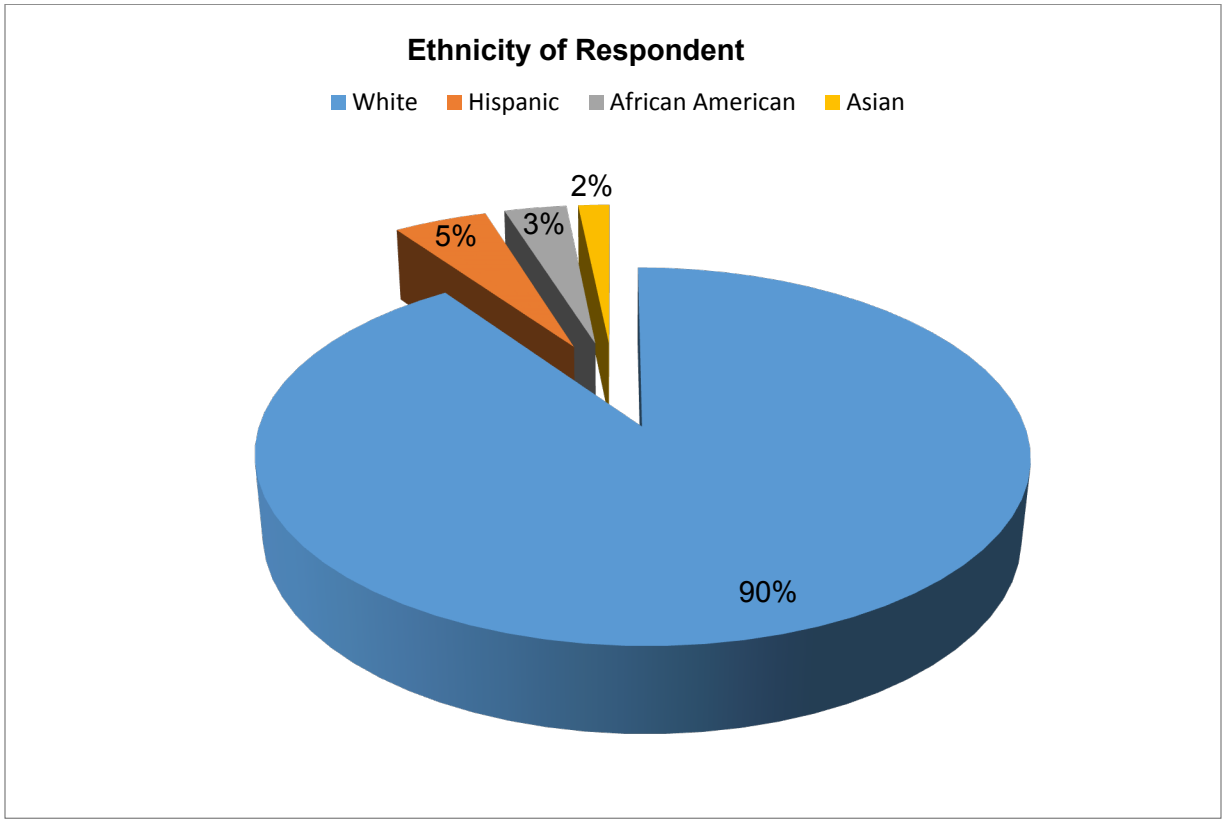
Age	Raw #s
17	3
18-19	10
20-21	10
22-23	4
24-25	3
26-30	8
31-35	10
36-40	4
40 plus	10



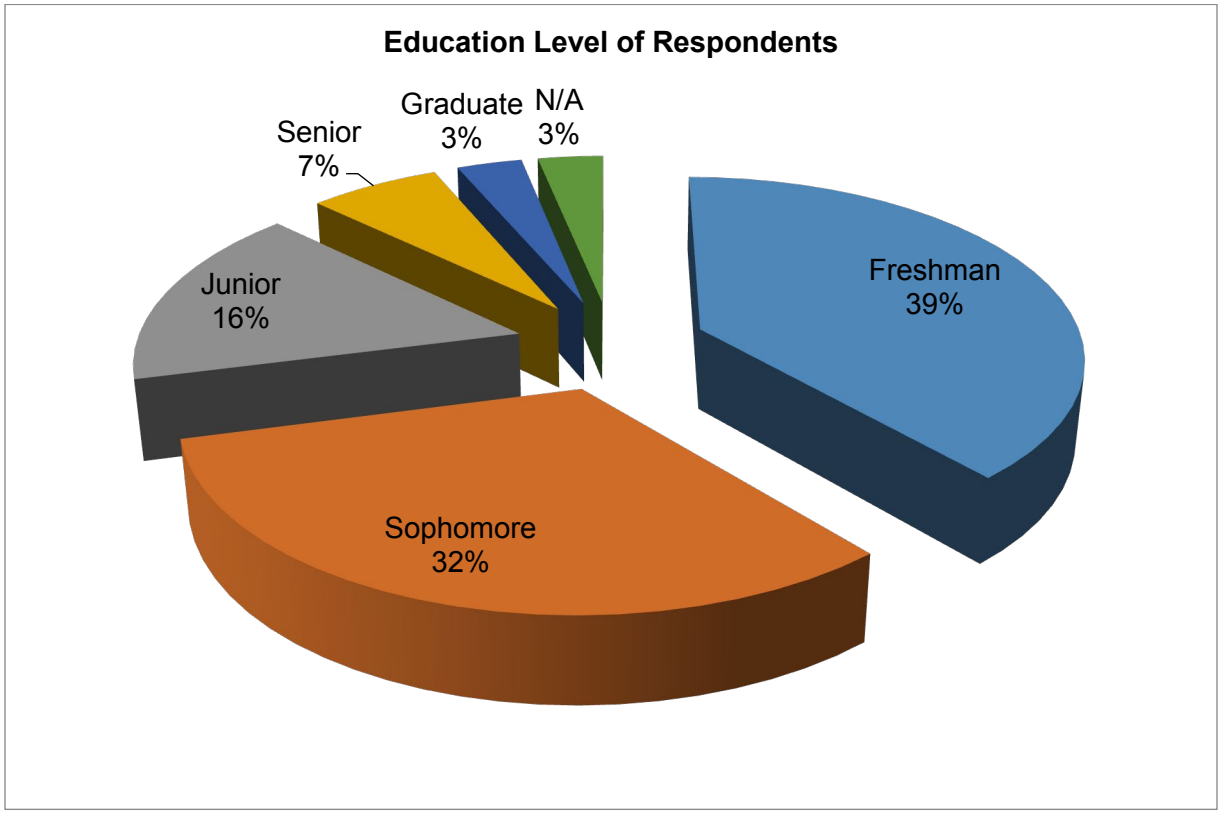
Gender	Raw #s
Male	7
Female	55



Income	Raw #s
$10K	10
$10-$25K	18
$25-$50K	19
$50-$75K	10
$75-$100K	2
$100+	1
N/A	2



Race/Ethnicity	Raw #s
White	56
Hispanic	3
African American	2
Asian	1



Class	Raw #s
Freshman	24
Sophomore	20
Junior	10
Senior	4
Graduate	2
N/A	2

Q1. How is taking a social science course online going to benefit you in your major?
to be aware of my flaws
to build computer confidence
to complete paperwork online
to complete tasks online
to deal with situations via computer
to develop time management
to foster better problem solving skills
to increase my sensibility to client
to learn computers
to learn flexibility in completing tasks
to use good judgment
to work independently
to work with others
to write appropriate emails

Q2. How is taking a social science class online going to benefit you in your career?
to accept peoples' differences
to better understand my clients
to build tolerance
to figuring out websites
to help me as a CPS worker
to help me as a future lawyer
to help me get teacher certified
to incorporate course information into my professional life
to increase my marketability
to learn appropriate computer communication skills
to learn to comprehend online information
to learn what is expected of me
to understand obstacles clients must overcome
to understand problems as they arise with others
to understand research methods
to understanding other cultures
to use PDF, RTF, DOC
to work independently

Integrating Technology to Enhance Culture Competence in Foreign Language Learning

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There was a time when language acquisition was thought to progress in a linear manner and that students' language proficiency was based solely on the number of years of study. In recent decades, due to the diversified teaching methodologies and the integration of technology in the language classroom, there came a shift to understand that language acquisition should proceed cumulatively, and should be also based on students' functional ability (Garza, 2010). In conjunction with other language associations in the nation, the standards task force of the American Council on the Teaching of Foreign Languages (ACTFL) has identified five goal areas that compass the diverse purposes of foreign language acquisition. [1] ACTFL advocates that the United States must educate students to be linguistically and culturally equipped to communicate successfully in a pluralistic American society and abroad. For the purpose, ACTFL has set forth standards which re-affirm that through the study of other languages students can gain knowledge and understanding of the cultures of the target language, and that students cannot truly master the language until they have mastered the cultural contexts in which the language occurs. Furthermore, ACTFL advocates that a language educator be responsible for the planning, instruction, assessment, and facilitation of any language course, leveraging technology to support language learning (ACTFL Position Statements).

Cultural instruction may range from teaching students to recognize and/or interpret major geographical features, historical events, aesthetic components of the target culture, including architecture, literature, and the arts to interpret everyday cultural patterns such as greetings, eating, shopping in order to act appropriately in everyday situations. In recent decades, technology has assumed an increasingly important role in the foreign language classroom to enhance language and culture acquisition. Well planned, culture can be easily integrated to enhance the four language skills of reading, writing, listening, and speaking with the aid of technology. In addition, tailoring instruction to students' learning styles is advised for better results. Howard Gardner's Multiple Intelligences Theory [2] provides seven distinct types of intelligences that represent seven different teaching/learning styles. According to this theory, learners are all able to know the world through language, logical-mathematical analysis, spatial representation, musical thinking, use of the body to solve problems or to make things, an understanding of other individuals, and an understanding of ourselves (Gardner 1990). Through the aid of the right type of technology, learning can be effectively enhanced. While iTunes, Audacity, videoconferencing, multimedia, and interactive books with audio elements can be useful resources for the visual learners, computer-based word games such as Jeopardy and Wordle can be of interest to verbal learners, and multimedia, CD-Rom can be useful tools for music learners. While animation and computer simulation can be pragmatic for physical learners, logical games and digital images can enhance logical learners' logic, reasoning, systems and sequences. Other computer-based devices such as Skype, videoconferencing and audio conferencing, computer conferencing and e-mail are good for social learners, and journals in Moodle and Private Blo are advantageous resources for intrapersonal learners who prefer to work alone or self-study.

In the foreign language classroom, although not all the instructors feel confident integrating technology in their teaching, given the diverse learning style of students, it is imperative for instructors to implement suited and effective computer technologies to enhance students' learning. With the advent of networked computers and Internet technology, computer-based instruction has been widely used in language classrooms throughout the United States nowadays. Hence, computer technologies have dramatically shifted the way languages were taught traditionally.

Using authentic video and audio materials

Through effective usage of authentic video and audio materials such as movies, recordings, music, video clips, etc. culture can be presented to student as a bridge between linguistic content and cultural information in a lively and engaging context. Because video and audio materials can be edited for presentation, instructors may design a lesson plan that emphasizes culture as the context for language learning while at the same time teaching vocabulary, grammar, and phrases. For authentic video segment, instructors may choose a current 30-or-60 second television or online commercial which contains multiple "layers," where repeated viewing can increase understanding of paralinguistic elements (gestures, body language, etc.). Salient features of the video: vocabulary, grammar, cultural elements, visual details, etc. should be sketched out and organized in a study guide for students. Language learning can be enhanced through: 1) Previewing: Introducing new concepts (lexical, grammatical, functional, cultural, etc.) and background information before the first viewing of the segment; 2) Guided viewing: Have students view and re-view the video material in order to solve the assigned task; 3) Follow-up: Provide additional information to complete the portrait presented in the video. Through computer, overhead projector, projection screen, Spanish websites, assignments, classroom discussion and teacher explanation, students not only are introduced to the target culture, but also learn new perspectives on different cultures as well as new vocabulary and sentence structures.
Instructors of Chinese may ask students to compare McDonald's in the U.S. and Taiwan through an online authentic video to enhance culture competence while engaging in language learning.
https://www.bing.com/videos/search?q=mcdonald%27s+in+taiwan&&view=detail&mid=236CB44CC76B77673B68236CB44CC76B77673B68&&FORM=VDRVRV

After watching the video from Youtube, students will work in groups of three or four to compare and contrast McDonald's in Taiwan and in the city they live in. Each group will share their finding to the rest of the class based on the video and their own experiences. To assess learning outcomes, students are first asked to list the McDonald's food items they like, and then formulate dialogues about ordering food in McDonald's in the target language (Chinese), playing the role of customers and cashiers.

Using Film to enhance culture competence
Instructors may assign the viewing of the film as homework or watch clips or the entire film in the classroom based on the time allocated. A variety of activities can be designed to enhance different language skills. A good example is *Like Water for*

Chocolate, a critical acclaimed film (1992) based on the novel of the same title (1989) by the Mexican screenwriter Laura Esquivel. [3] Themes related to the film may include: Mexican Revolution, the role of the *soldaderas* [4], magic realism [5,] the contradictory forces between indigenous religion and myth and the power of Catholic Church, and the themes of masculinity and gender identity, etc. In addition to learning language components in the film, students are invited to express their personal opinions through oral communication or writing, enhancing at the same time their critical thinking ability about Mexico during the revolution period from socioeconomic, political, cultural, and religious perspectives as reflected in the film.

Using lyrics to the song

Using songs as foreign language "text" is productive because music and lyrics can enhance memorization through rhythm. Instructors may choose a popular song in the target language, and sketch out a plan to use it in the classroom, adjusting the task to create exercises that are level appropriate. Using the lyrics as a guide, instructors cam ask students to first think about the images and then reveal as much about its meaning as possible. Viewing the video of the song online can add to the students' experience and take them deeper into linguistic and non-linguistic understanding.

A Web-Based approach to language and culture

With students spending more and more time on social networking sites on the Internet, instructors can use the Internet resources to facilitate authentic contact with the second language, e.g. connect with native-speaker pen pals, encourage direct interaction within virtual community of learners and native speakers, and use multiple modalities (text, audio, video, interactive, etc.) in real time. As the language learning and teaching community moves to digital learning tools, instructors may maximize their teaching effectiveness both in and out of the classroom. Instructors may introduce the nomenclature of well known features as "Search," "Click," "Enter," "Download", etc. in the target language to enhance vocabulary and facilitate students' navigating online in the target language. In recent years, the incorporation of online programs has become an essential elements of language textbook at all levels. These web-based programs encourage students to learn vocabulary, grammar, and cultural literacy at their individual proficiency levels. Students increase their time on task by far, as compared to relying on traditional classroom time. A study indicated that 100% of college students are internet users, 50% are online more than 6 hours every week, community college students are even more likely than those at 4 year institutions to use mobile devices and 71% of students would prefer to use digital learning materials over print (Zou 2011). An example is the online college level language learning and assessment program *MyLanguageLabs* by Pearson in Spanish, French, Italian, German, Russian, Chinese, Portuguese, and Chinese. Theses language programs offer a robust set of tools that allow students to hear native speakers, and practice their speaking through pronunciation guides, Blackboard Voice, videos, and audio recordings. The programs also grade homework and quizzes, allowing instructors to spend time engaging and interacting with students, modify instruction according to individual needs, teaching style and more, which results in a more engaging experience for students. Students, on the other hand, have the opportunity to listen to their own pronunciations, compare, and adjust to match the native speakers, Traditional assignments on paper have been converted to online exercises with audio-visual video clips for language and cultural

acquisition that students can practice on their own path and get immediate feedback from the computer.

Using technology in reading and writing

Technology in the form of word processors can enhance writing. Through the word processors spelling and grammar of the texts can be checked, and learners can engage with the editing process to produce the highest-quality text. Through online discussion forum, students' writings can also be displayed for others to look at and comment on. Students can also link with other classes internationally through pen pal program. Hence, they will have opportunities to write freely and improve their writing and reading skills writing and responding to their international friends.

Technology has changed the way of thinking, teaching, and learning for both the instructor and student. Although not all the instructors feel proficient with the integration of technology in the classroom, it is the responsibility of all instructors to find the most suited and effective methods and strategies to improve students' learning outcomes. Technology can be a functional tool for students with diverse learning styles and abilities.

Notes

1. The American Council on the Teaching of Foreign Languages (ACTFL) is an individual membership organization of more than 12,500 language educators and administrators from elementary through graduate education. Since its founding in 1967, ACTFL has been accredited for its innovation, quality, and reliability in meeting the changing needs of language educators and their students. From the development of Proficiency Guidelines, which are highly regarded as instrumental resources to assess language proficiency by institutions nationwide, to its leadership role in the creation of national standards.
2. Howard Gardner, professor of Education at Harvard University, differentiates intelligence into specific 'modalities', rather than seeing intelligence as dominated by a single general ability. He proposed this model in his 1983 book *Frames of Mind: The Theory of Multiple Intelligences*. The theory suggests that learners possess different kinds of mind and therefore, learn, remember, perform, and understand in different ways. (1991) The theory identifies seven types of intelligences that students possess that represent seven different teaching/learning styles include: Visual-spatial Learner; 2. Verbal-Linguistic Learner; 3. Physical -Kinesthetic Learner; 4. Logical-Mathematical Learner 5. Social-Interpersonal Learner; 6. Solitary-intrapersonal Learner, and 7. Musical Learner. According to Gardner, individuals differ in the strength of these intelligences and in the ways in which such intelligences are invoked and combined to carry out different tasks, solve diverse problems, and progress in various domains.
3. Laura Esquivel is a Mexican novelist, screenwriter and a politician who serves in the Chamber of Deputies (2012-2018) for the Morena Party. Her first novel *Como agua para chocolate* (*Like Water for Chocolate*) became a

bestseller in Mexico and the United States, and was later developed into an award-winning film by the same title.

4. *Soldaderas* refer to the women in the military who participated in the conflict of the Mexican Revolution, ranging from commanding officers to combatants to camp followers.
5. Magic realism or "magical realism", is a genre of narrative fiction and, more broadly, art (literature, painting, film, theatre, etc.) that, while encompassing a range of subtly different concepts, expresses a primarily realistic view of the real world while also adding or revealing magical elements. Magic realism often refers to fiction and literature in particular with magic or the supernatural presented in an otherwise real-world or mundane setting.

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Enhancing Student Engagement and Transformation of College Teachers and Students: Practicing Flipped Classroom Strategy

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Abstract

The flipped classroom is a pedagogical approach with a focus on learner-centered instruction, taking relevance and curiosity as key principles to enhance student engagement. The paper aims to explore how the implementation of flipped class enhances student engagement, and what changes and transformation may happen to college teachers and students while practicing flipped classroom strategy.

Keywords: flipped classroom, student engagement, relevance, curiosity

1 Introduction

Teaching and learning activities in higher education have been given great emphasis for several decades, and scholars work hard to explore how can improve learning efficacy from various perspectives including active, cooperative and blended learning, knowledge transfer and creation (Wu, 2016), behaviorism, cognitivism, constructivism and connectivism theories (Duta, Martinez-Rivera, 2015),etc. It is well recognized that student engagement is critical for learning (Bryson & Hand, 2007); and student-centered learning environments has positive potential value to facilitate students to actively engage in their own learning and high-order tasks (Shea, & Bidjerano, 2010). Therefore, what kind of pedagogical approach and what content to be taught necessitate practicing active learning strategy during class teaching.

In the past decade, the flipped classroom is regarded as an optional teaching methodology with a focus on learner-centered instruction.Students in the flipped classroom have more opportunity to learn actively rather than passively listening to teachers (Kim, Kim, Khera, Getman, 2014). However, is it necessary and right to emphasize student-centered pedagogical ideology? What principles should be applied to enhance student engagement? Hence, what changes and transformation will take place while practicing flipped classroom strategy?

2. Learning procedure and knowledge transfer

Knowledge transfer and learning are considered as two sides of a coin (Ho, & Wang, 2015), and the relationship between them has been increasingly perceived since the 21th century. In essence, when learning takes place, it means knowledge transfer has completed or mostly achieved success. Whether the knowledge is fully learned or acquired depends on several factors: transferor who initiates the procedure of knowledge transfer, ability to transfer, recipient who acquires the transferred knowledge, absorptive capacity, process of knowledge transmission, procedure of knowledge absorption, characteristics (complexity, implicit, explicit) of the knowledge to be learned (Nonaka, 1994), motivation, and other external environment (Wu, 2016).

On the base of a questionnaire and 371 sample of undergraduates affiliated to three universities investigated, statistical analysis has been done with SEM (Structural Equation Model), and the results are achieved as shown in Figure 1 and Table 1. Hence, we can find:

1) Processes of teachers' knowledge transmission (0.400) and students' knowledge absorption (0.683) have positive direct effects on learning performance and teaching efficacy.

2) From the view of direct effect (see Table 1), the process of students' "knowledge absorption" has exerted the largest influence on "learning performance" and 70.8% greater than the process of teachers' "knowledge transmission".

Hence, it can be inferred what students do is more effective than what professors have done, and it seems students should be the one who dominates learning.

[Figure 1]

[Table 1]

3. Two Key principles of flipped classroom to enhance student engagement

Though the captioned empirical research statistically supports the opinion that students play a more important role than professors do during teaching and learning activities, we are astonished by another fact recently: nearly 46% students are lack of interest in learning, 33% behave as academic fatigue, and only 21% do learn knowledge in an active way. Then why does such dilemma happen in class, eg.hatred towards study, little engagement in learning and academic fatigue syndrome of students? Some replies are "tired of …", "feel boring and useless". However, the real meanings can be interpreted as what I am taught in class is not relevant to my future career or interest, which can't arouse my curiosity or desire for the knowledge.

Therefore, when college teachers intend to practice flipped classroom strategy to enhance student engagement, they should focus on and need to know two key principles: relevance and curiosity.

Relevance means to meet students' real need for individual development and what they are expected. In general, students only want to spend time on what is relative to them intensely. So, college teachers have to distinguish what content is right to be "taught". Just get students involved! There are three ways to let students realized the knowledge they are "taught" by teachers has relevance to themselves. First is familiarization: teachers introduce and present new knowledge from the perspective or academic field that students have some similar impression or experience. Second is objective-oriented: teachers demonstrate or imply the value of new knowledge to students' life and future career. The third is to trigger students' incentive and motivation: teachers get their teaching activities to match with students' real needs for learning.

Curiosity or inquiry means to arouse students' attention. Curiosity can motivate students to foster active learning and curiosity-driven learning is ever

argued as a fundamental element of efficient education (Freeman, Eddy, McDonough, et al., 2014). Students would like to engage in what can inspire their curiosity and initiate their inquiry for unknown knowledge. So, how to launch the lecture with right teaching style, and how to empower students? Just make learning fun! Attracting students' attention at the beginning of teaching is a prerequisite for their learning. Firstly, teachers try to evoke students' unconscious and perceptual attention by telling an exciting story, remarkable topics, popular music or interesting games. Secondly, teachers encourage students to make further exploration in order to inspire their curiosity and intensify their inquiry for new knowledge.

When college teachers make sure the knowledge to be taught is relevant to students' benefit and development, and the way to teach get students feel curious, it is no doubt that students will improve their engagement.

As mentioned in Part 2, traditional kind of teaching (traditional face to face instruction) is not fairly workable, and not effective to students, then, how about flipped classroom with the focuses on relevance and curiosity of students? At least, it could be an option to take a try in the college class. The main purpose is to instruct students to be able to learn by themselves gradually.

4. Changes and transformation that may happen in the flipped classroom

The flipped classroom has become increasingly popular in the past ten years. As for higher education, it places more emphasis on knowledge application (Pluta, Richards, & Mutnick, 2013) and knowledge internalization. Comparing traditional teaching way (eg. teachers act as "sage on the stage"), flipped classroom strategy easily leads to role shift of college teachers and students, and causes spatial and temporal flip of students' learning.

Role shift. With the inversion of the teaching-learning process, many changes take place such as teaching patter, content, evaluation (Zhang, Wang, Zhang, 2013). College professors begin to take the role of facilitator and coach, and they shift from "sage on the stage" to "guide on the side". The teaching style turns to fully student-centered rather than teacher-centered. Meanwhile, students gradually play the major role of courses rather than the previous passive position, and they learn more actively and interact with teachers more intentionally. Relatively, college teachers (or professors) seemingly take a minor position.

Temporal and spatial flip. While practicing flipped classroom strategy, when and where to get knowledge internalized by students get inverted. Before classroom flipped, knowledge teaching and instruction happen in class and students' knowledge internalization is completed after class through homework and case study, etc. While classroom flipped, knowledge teaching is preferred to complete out of class by self-learning, and the knowledge internalization mostly takes place in class through interaction with teachers. That is to say, what is traditionally done in class and as homework out of class probably will be switched when the classroom is flipped.

Moreover, flipped classroom requires various transformations and changes for college teachers and students:

(1) The pedagogical ideology of college teachers: Student-centered instead of teacher-centered. Teachers put students' real need in the first place, and insensitively perceive what students want Vs. what they need (maybe quite different). Then, teachers adapt to play as a coach, facilitator, coordinator, assistant rather than a dominant "sage" as traditional way. It's a great challenge for the authority of professors. Meanwhile, teachers continuously update cutting-edge knowledge in order to keep up with the latest development and the Times. They have to design teaching plan and dynamically make adjustments, according to students' learning status and feedback. Hence, the workload of teaching becomes greater.

(2) Role shift of professor: getting off from sage on the stage. A brief comparison before and after practicing flipped classroom strategy is shown in Table 2. It can find that the content professors provide and design is more relevant to students' need, and students become more engaged in the course after classroom flippled.

[Table 2]

(3) Content to be taught: becomes more relevant to students. When professors teach in the traditional way, the content is arbitrarily determined by the professor, based on professor's own perspective and judgment about what are important knowledge and what students "ought to know". After flipped classroom strategy takes effect, professors make the teaching plan based on analysis and requirement of students' status, and ensure the teaching plan can get students feel excited, passionate and touched (Trigger students' learning Initiatives). What to be taught is up to status and interest of students learning before/outside of the class. In sum, college professors design course content and pattern which meet students' relevant needs and curiosity (Student-centered). That is to say, students perceive what they Need and Want to Learn based on self-learning of materials before class, while professors recognize what they Could and Would Teach in order to meet students' expectation in class.

(4) Time and space for knowledge internalization may change. Students study on their own or learning group out of class. Any place on campus, even at internship company, if available and accessible, could be converted into study venue. Thus, knowledge internalization becomes more flexible (eg. Field learning), and it could be fun for students, although internalization of knowledge mostly will be realized in class rather than after class.

(5) Facilities of teaching and learning have changed. Flipped classroom prefer to hold "jigsaw" seats (see Figure 2) instead of fixed seats, which are more suitable for group work, seminar, presentation, and interactive activities. Such creative equipment could get the class more fun. Besides jigsaw seats,

there are other software and hardware to support the practice of flipped classroom, such as network, desktop and mobile devices, LMS and apps, video and live broadcasting system, and technology supporting system.

Note: Photos taken at Ningbo Dahongying University

Figure 2 “jigsaw” seats for the flipped classroom

Short-term outcomes of practicing flippled classroom strategy: have embodied through changes of college teachers (professors) and students. Students have experienced engagement through at least five aspects: they have more time spent on study (see Figure 3); involve more active learning; prefer to teamwork and cooperative learning; get a higher average grade, and even become much happier.

[Figure 3]

Professors have changed too: they become more motivated to teach, involve more communication with students, spent more time on teaching design, get more knowledgeable with insights, and feel much happier as college teachers.

However, the long-term impact has not verified yet because of the limitation of the short period that we have practiced flipped classroom. To what extent that flipped classroom strategy could exert on college students’ capability of learning as well as knowledge maintenance and retrieval level, still needs to be tested in a relatively long-term.

5.Conclusion

According to the teaching and learning practice and empirical research, college students' learning behavior holds greater influence on teaching efficacy and learning performance than teachers' contribution. Therefore, in order to achieve learning outcome, practicing flipped classroom strategy with a focus on student-centered instruction would be an optional pedagogical approach. Taking relevance and curiosity as key principles to implement flipped classroom, we find some transformation and changes would take place:

1) Pedagogical ideology becomes student-centered instead of teacher-centered; 2)The role of college professor shift for sage on the stage to guide on the side, while the role of students turns to Participators at the center from the audience on the seat. 3) Content to be taught is up to students' status and interest in learning before and outside of class, which is partly specified by students what they want to be "taught". 4) Time and space for knowledge internalization vary more flexibly, and generally, internalization is realized in class instead of after class by traditional teaching way. 5) Facilities of teaching and learning including hardware and software are innovative and easy to make fun, which helps to inspire students' curiosity. The last but not least, short-term outcomes of practicing flipped classroom show college students and teachers attained positive improvement and impact. However, the long-term impact on students' learning and knowledge maintenance level, still requires further observation and tracing research.

Footnote:

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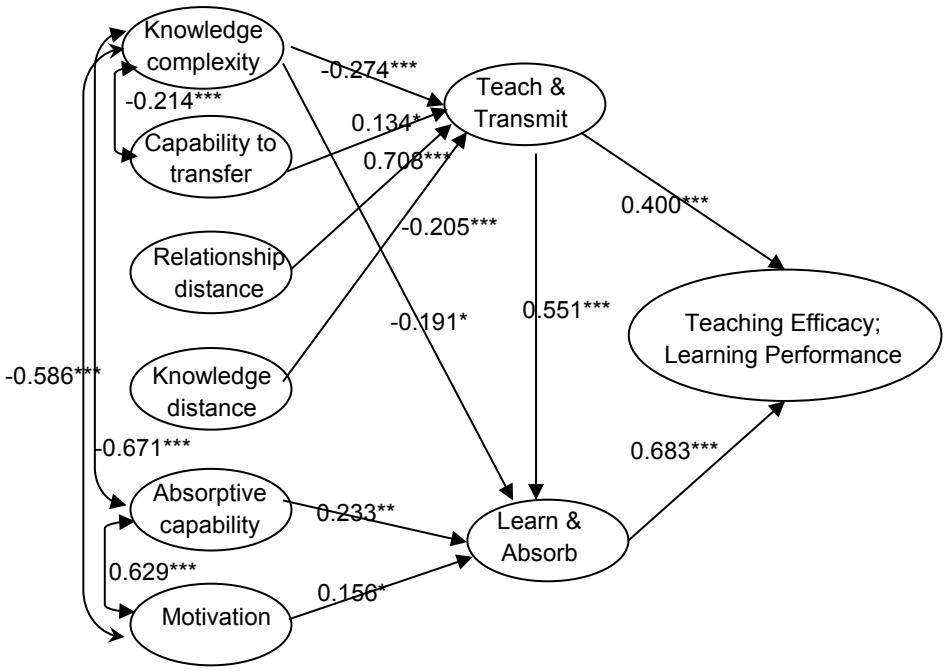

*** p<0.001； ** p<0.01； * p<0.05

χ^2	df	χ^2/df	GFI	AGFI	IFI	CFI	RMSEA
1457.614	880	1.656	0.852	0.833	0.915	0.914	0.042

Figure 1 Knowledge transfer and undergraduates' learning

Table 1 Effects on Learning Performance

Variables	Direct Effect	Indirect Effect	Total Effect
Teach & Transmit	0.400	0.377	0.777
Learn & Absorb	0.683	0.000	0.683
Relaitonship Distance	0.000	0.550	0.550
Knowledge Distance	0.000	-0.160	-0.160
Absorptive Capacity	0.000	0.159	0.159
Motivation & Incentive	0.000	0.107	0.107
Ability to Transfer	0.000	0.104	0.104
Knowledge Complexity	0.000	-0.343	-0.343

Table 2 Comparison: before and after flipped classroom strategy

	Professors	Students
Before	• Sage on the stage – Major leader – Pattern: lecture driven presentation, eg. Stand-and-deliver model – Professors' job is to transmit a body of knowledge, typically through a lecture. – Transmission of knowledge usually happens in class	• Audience on the seat – Secondary – Pattern: passive learning, depends on the expert perceptions and information – Students are there to absorb content. It's their responsibility. – Internalization of knowledge usually happens out of class
After	• Guide on the side – Instructional servant, coordinator – Flipped classroom – Professors' job is to provide what knowledge students inquire and guide them to find ways to solve problems. – Decision executor, seemingly	• Participators at the center – First place, a major leader – Active engagement – Students seem to dominate the learning process and work hard to meet their own expectation. – Decision maker

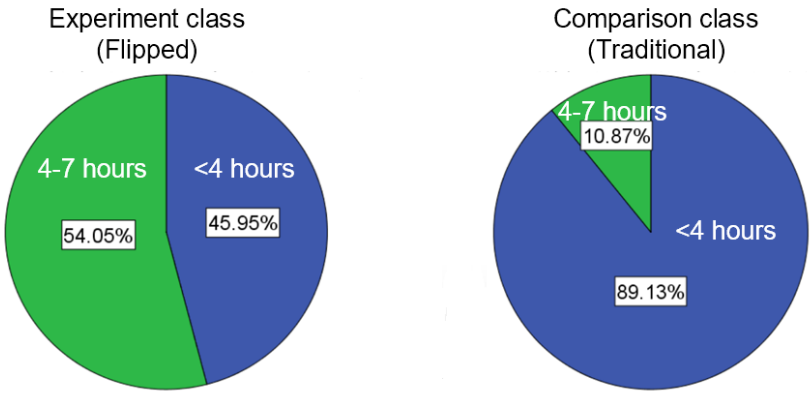

Figure 3 Average Time a student spent before class

Powering Seattle with 100% Renewable Energy

By Kaila Mclean and Malila Renger
Central Washington University

Introduction

The concern for using fossil fuels is increasing along with the rise in demand for renewable energies (Puget Sound Energy, 2018). In our paper we will discuss two major renewable energy sources: solar and wind. They are currently two of the fastest growing energy sources (Mearian, 2016). Our research will look at land use requirements for a solar and wind facility, analyzing different site selections to find the best location for a solar or wind facility, and look into the cost of transmission lines. This research will help us address and answer our question: How much land will be needed in order for Seattle proper to be fully powered by renewable energy?

Background

In 1896, Svante Arrhenius was the first to address the concept that carbon dioxide from burning fossil fuels influences climate change (The Discovery of Global Warming, 2017). Arrhenius looked at the fossil fuels being emitted by big companies as well as other data that was available to him in relation to carbon dioxide in the atmosphere. With his research and data, the calculations showed “temperature of the Arctic regions would rise about 8 degrees or 9 degrees Celsius, if the carbonic acid increased 2.5 to 3 times its present value. In order to get the temperature of the ice age between the 40th and 50th parallels, the carbonic acid in the air should sink to 0.62 to 0.55 of present value (lowering the temperature 4 degrees to 5 degrees Celsius)” (The Discovery of Global Warming, 2017). Arrhenius’s calculations were the first to show that burning fossil fuels can change the global temperature. The years to follow consistently raised some concern for the use of fossil fuels.

As of more recent, using traditional fossil fuels has been criticized more than ever due to the global energy crisis (Klare, 2017). The global energy crisis is a big factor that pushes the use of renewable energy to provide electricity. Federal and State energy policies have recently been focused more on clean and renewable energies to provide and sustain current and future energy needs. Renewable energy is naturally occurring energy that is not depleted, therefore making it a sustainable form of power generation. This statement can be debatable but for the most part renewable energy does not contribute to any major environmental impacts and it does not lead to any health or social problems.

Hydropower is currently the most used renewable energy source for generating electricity in the United States but solar and wind power have started to rapidly grow (Hydropower Explained, 2017). Solar is now the fastest growing energy source which has been partially driven by developments in China. The developments in China have been a major contributing factor to why solar is the “world’s cheapest energy source” (Grossman, 2017).

According to Seattle City Light, Seattle proper receives about 88% of its electricity generation from hydropower, 5% from nuclear, 4% from wind, 1% from coal,

1% from natural gas, 1% from biogas, and .30% from others which include biomass, other non-biogenic and petroleum. We are considering hydropower, nuclear, biogas, and wind to be renewable energy.

Seattle 2016 Energy Mix	
Source	Precentage
Hydro	88
Nuclear	5
Wind	4
Coal	1
Natural Gas	1
Bio Gas	1
Other	0.3
Total	100.3

We are assuming that Seattle receives about 97.7% of its power generation from renewables we will be analyzing and calculating how much land would be needed to have a solar or wind facility to power the remaining 2.3%. In our paper we will discuss the major renewable energy sources: solar and wind. The purpose of our paper is to figure out how Seattle proper could become 100% renewable when it comes to the type of power generation that is consumed. In order to do this we will be calculating the land use requirements for a solar and wind facility, analyzing different site selections to find the best location for a solar or wind facility, and looking into what it would cost to construct transmission lines.

Study Area

The area that we are focusing on is Seattle, WA which consists of 83.9 square miles. Seattle is located on the West Coast of the United States and is situated on an isthmus between the Puget Sound and Lake Washington. It is the largest city in the Pacific Northwest with a population of 704,352 people as of 2016 (Seattle Population, 2016). In order for us to attain the numbers and results that are most precise from our research on energy consumption, we have split Seattle into two focus categories: residential and non-residential. The purpose for splitting Seattle into these two focus categories is because they will have a different energy consumption averages.

Seattle City Light is the only utilities company that provides electricity to Seattle proper. The utilities company also provides power to a few other surrounding neighborhoods. Seattle City Light roots go back to 1886, when the light bulb was only 7 years old and they have been “lighting up the city” ever since 1910 (Seattle City Light History, 2017). With a growth in population, Seattle City Light is consistently working on advancing their technology in order to increase the amount of power that is produced along with becoming more energy efficient. In 2016 Seattle City Light had a total of 447,332 customers which is broken down to about 397,074 residents and 50,258 non-residents. Non-residential includes businesses, commercial, and industrial. The total

megawatt-hours consumed in 2016 was 9,180,438. Residents consumed 2,917,984 at 32% megawatts and non-residents consumed 6,262,252 at 68% mega-watts. On average, a resident in Seattle consumed 7,349kWhs and a non-resident consumed 124,606kWhs (Seattle City Light, 2016).

Land Use Metrics

There are various ways and notions on how land use impacts should be evaluated and as of today there is not one accepted method of approach (Canals et al. 2007). According to Canals et al, the review of the life cycle assessment has three suggestions for general ways to evaluate the land-use impacts (pp. 1, Denholm et al). The first is the area impacted. The second is the duration of the impact. The third and final is the quality of the impact. For the purpose of our paper we will be focusing on two land use impact categories: direct impact area and total area. Direct impact area is defined as the direct space that is utilized by the technology itself, access roads, and other infrastructures required by the technology. Total area is defined as "all land enclosed by the site boundary" (Ong et al., 2013).

Wind energy has more inconsistency when it comes to land use requirements versus solar. The spacing between turbines can be diversified as they sometimes must be placed much further apart than the required spacing due to the diameter of the rotor and the potential for turbines having impacts on each other if they are to be placed too close together (Denholm et al, 2009). Furthermore, once a suitable site is located there are four different patterns that the wind turbines can be placed. The patterns include single string, multiple string, parallel string, or clustered (Denholm et al, 2009). Solar panels consist of much more uniform models that work well in all different types of locations and geography (Denholm et al, 2009; Ong et al, 2013; Canals et al, 2007).

To determine the best site selection for solar panels and wind turbines we gathered GIS data on how much access to solar energy there is as well as wind speeds based on the location. This was done through GIS data in ArcMap. Figure 1 shows the average annual kWh/meter^2/day. The data shows that solar panels would do best in southern central Washington. Seattle area and west of the cascades is not a good area to install solar panels because the average solar energy received is too low for it to be considered. Figure 2 shows the wind energy potential and wind speeds in the state of Washington. Most areas in Washington do not have high enough wind speeds to make a wind facility feasible. Luckily, the valley region near Ellensburg, Washington has viable wind speeds.

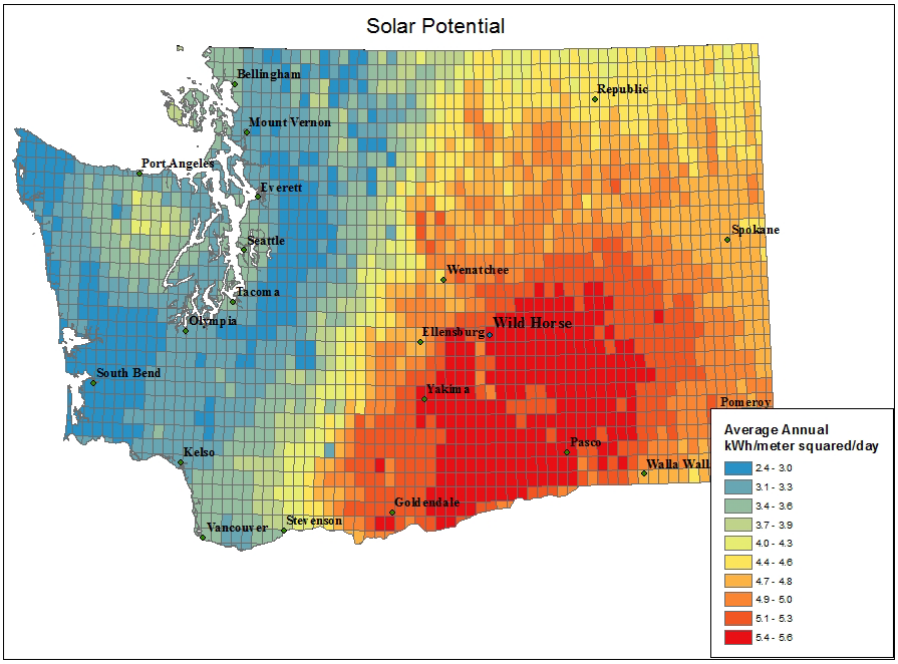

Figure 1 shows the annual average solar kWh/meter^2/day. Data is from National Renewable Energy Laboratory operated by the Alliance for Sustainable Energy, LLC for the U.S. Department of Energy

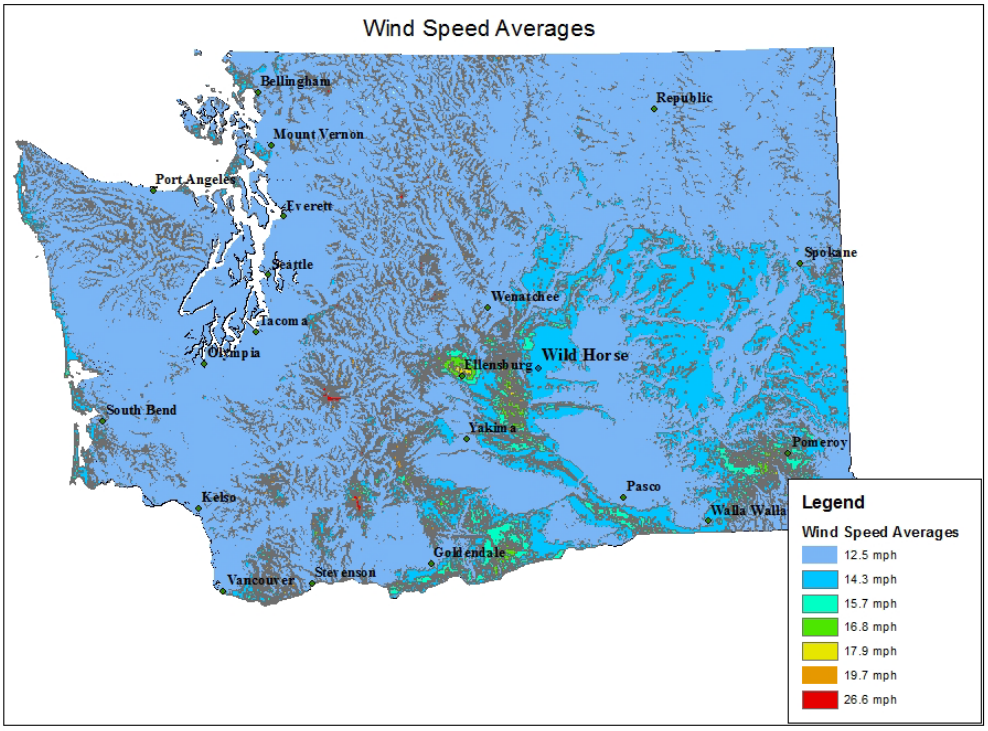

Figure 2 shows wind speeds for the state of Washington in mph. The data is from U.S. Department of Energy in 1986 by the Pacific Northwest Laboratory and is documented in the Wind Energy Resource Atlas of the United States, October 1986.

Methods and Evaluating Land Use Requirements

For our research we will mainly be using data and information from Seattle City Light, Puget Sound Energy, Wild Horse Wind and Solar Facility, and the National Renewable Energy Laboratory (NREL). To better evaluate if solar and wind can fulfill the rest of Seattle's energy demand we will have to break solar and wind down into subcategories. Solar and wind have various technologies along with other factors that affect how much energy they can produce and land requirements needed. To come up with calculations and answers to land use requirements, we used energy consumption figures provided by Seattle City Light, power generation figures given by Wild Horse Wind and Solar Facility and a solar and wind report from the National Renewable Energy Laboratory.

First, we looked at the total megawatt hours demanded by both residential and non-residential buildings. Second, we subtracted how much power is already provided by hydropower and other renewable energy sources. This leaves 2.3% of the total megawatt hours needed to be fulfilled to make Seattle a 100% renewable powered city. Third, we will calculate how much solar and wind energy it would take to fulfill this requirement. Fourth, we will calculate the land use requirements for a solar and wind facility for a project of this size to generate 2.3% of Seattle's energy demand. Lastly, we will compare solar technologies and wind technologies along with other data we have gathered to see what the most viable option is to provide energy to Seattle. The following sections will go further in depth of how we will calculate land requirements first for solar then for wind.

When deciding which type of solar panel to use for our solar facility or which wind turbine configuration to use for our wind facility, there are several types to consider. Both have a variety of technologies which can be implemented. In order to achieve maximum profit with minimum costs, close consideration for location must be evaluated. This means it is critical to look closely at geography prior to designing and constructing a new solar or wind facility. In the following sections we will discuss the different types of solar and wind technologies as well as looking into the cost of transmissions lines.

Solar

There are several types of solar energy production which include photovoltaics and concentrating solar power. Photovoltaics (PV) take direct energy from the sun and convert it into a type of energy people can use to power their lives. Photovoltaics produce minimal environmental damage and are safer for human when compared to other energies like coal. PVs have one of the lowest environmental impacts of all energy sources both renewable and nonrenewable (Boyle, 2012, p. 106). They emit no pollutants after they are installed and require little maintenance (Boyle, 2012). Small PV can be defined as producing between 1 MW and 20 MW while large PV produces over 20 MW. There are also different types of PV panels which include: fixed- don't move, 1-axis- move back and forth, 2-axis- is able to tilt and track the sun.

Concentrating solar power (CSP) can be defined as a solar technology that captures light turning it to heat to power conventional thermoelectric generation

systems. CSP can store the heat it captures, which means energy can be tapped during nighttime hours when there is no sunlight or when it is cloudy. There are various types of CSP technologies which include Parabolic Trough, Tower, Dish Stirling, and Linear Fresnel. These CSP technologies work by the sun rays hitting reflectors which then direct the rays to heat the fluid. The heat can be used for power generation, heat, and/or energy storage.

From data provided by National Renewable Energy Laboratory (NREL) and Wild Horse Wind and Solar Facility (WH&SF) we will be able to calculate the land use requirements for solar. WH&SF uses large fixed PV panels so we will be doing calculations to find out how many solar panels would be needed to fulfill 2.3% of Seattle's energy demand as well as calculations for direct and total land area required. Solar energy will be broken down into fixed PV, 1-axis PV, 2-axis PV, and 2-axis CPV. NREL provides data on energy capacity and acre requirements for each of these sources as well as breaking it down between total and direct land use requirements. We can also evaluate the impact difference between small PV, large PV, and CSP. Again, using data from NREL and WH&SF to get the capacity and land requirements for both total and direct. From there we can see how many solar panels it would take to create 211,150.074 megawatt hours and which technology would best fulfill this requirement**.**

We have included the following table from the NREL to show their data collected on required acres of land for solar. The table includes small PV, large PV, and CSP. For our research we will be focusing on large PV because there needs to be more than 20 MW produced.

Technology	Direct Area		Total Area	
	Capacity-weighted average land use (acres/MWac)	Generation-weighted average land use (acres/GWh/yr)	Capacity-weighted average land use (acres/MWac)	Generation-weighted average land use (acres/GWh/yr)
Small PV (>1 MW, <20 MW)	5.9	3.1	8.3	4.1
Fixed	5.5	3.2	7.6	4.4
1-axis	6.3	2.9	8.7	3.8
2-axis flat panel	9.4	4.1	13	5.5
2-axis CPV	6.9	2.3	9.1	3.1
Large PV (>20 MW)	7.2	3.1	7.9	3.4
Fixed	5.8	2.8	7.5	3.7
1-axis	9.0	3.5	8.3	3.3
2-axis CPV	6.1	2.0	8.1	2.8
CSP	7.7	2.7	10	3.5
Parabolic trough	6.2	2.5	9.5	3.9
Tower	8.9	2.8	10	3.2
Dish Stirling	2.8	1.5	10	5.3
Linear Fresnel	2.0	1.7	4.7	4.0

Figure 3. Summary of Land-Use Requirements for PV and CSP Projects in the United States from the NREL (Ong et al., 3013)

Wind

There are many different types of wind technologies, but we will be focusing on standard land turbines since offshore wind is impractical due to port traffic and not having the wind speeds necessary to produce enough power. In this report, we will look at different types of configurations. The configurations we will be looking at are single string, multiple string, parallel string, and cluster. Single string configuration looks like wind turbines in a line. Multiple strings consist of several single strings placed with no general pattern. Parallel string configuration consist of several strings parallel to each other. Lastly Cluster configuration looks much like a random distributed scatter plot.

Much like solar, wind land requirements will be calculated in a similar way. We will be using data from the NREL for total and direct impacts of wind turbines. Wild horse already has 127 turbines operating and they are in a multiple string configuration. We will be calculating the total number of turbines and acres required to power 2.3% of Seattle's energy demand.

Results

We researched various land requirements for a variety of different solar and wind technologies as well as the cost of transmission lines. Due to the access of already existing transmission lines that are available to Wild Horse Wind and Solar Facility, it

will not be necessary to construct new ones. This will greatly reduce the overall cost needed to increase the amount of solar panels and wind turbines.

After paying close attention to site selection, we decided that it would be most feasible to implement these technologies at the Wild Horse Wind and Solar Facility. We have also concluded that it would be best to use multiple string wind turbines and fixed angle multi-crystalline photovoltaic solar panels which are what the Wild Horse Wind and Solar Facility already uses. Multiple string wind turbines are a "series of identifiable strings of turbines, but not uniformly oriented" (pp. 7, Denholm et al).

Number of Seattle City Light Customers:	
Residential:	397,074
Non-Residential:	50,258
Total:	447,332

Mega Watt-hours provided by Seattle City Light:	
Residential:	397,074
Non-Residential:	50,258
Total:	447,332

2.3% of 9,180,438= 211150.074

To calculate the land needed to fulfill the rest of Seattle's energy needs we will have to make some assumptions. First assumption we made is that the energy demand will stay the same as it was in 2016 since it is the most recent year Seattle City Light has provided data. Our second assumption will be that wind turbines and solar panels will produce power at the same current level as they do at Wild Horse Wind and Solar Facility.

Total Power Demand

$$2.3\% \text{ of } 9{,}180{,}000\text{MWh} = 211{,}150.074 \text{ MWh}$$

$$\left(\frac{211150.074\text{MWh}}{1}\right) * \left(\frac{0.0010\text{GWh}}{1\text{MWh}}\right)$$

$$= 211.15\text{GWh}$$

Solar

Wild Horse currently has 2,408 solar panels and generates 500 kW of electricity. The panels have a total annual output of 650,718 kWh (Larsen, 2008). This needs to be converted into GWh. According to NREL a large fixed PV panel takes up 2.8 acres/GWh/yr. of direct area and 3.7 acres/GWh/yr. of total area.

$$\left(\frac{650718\text{kWh}}{1}\right) * \left(\frac{0.0010\text{MWh}}{1\text{kWh}}\right) * \left(\frac{0.0010\text{GWh}}{1\text{MWh}}\right)$$

$$= .65\text{GWh}$$

$$\left(\frac{2408\text{panels}}{.65\text{Gwh}}\right) = \left(\frac{\text{panles needed}}{211.15\text{GWh}}\right)$$

$$782230 \text{ panels needed to produce } 211.15\text{GWh}$$

Direct land use

$$\frac{2.8\text{acres}}{1\text{GWh}} = \frac{\text{acres needed}}{211.15\text{GWh}}$$
$$591.22 \text{ acres needed}$$

Total Land use

$$\frac{3.7\text{acres}}{1\text{GWh}} = \frac{\text{acres needed}}{211.15\text{GWh}}$$
$$781.25 \text{ acres needed}$$

Wind

The number of wind turbines required to produce 2.3% of Seattle's energy demand is based off data from Wild Horse Wind and Solar Facility. Wild Horse has 127 turbines on 9,000 acres of land. The 127 turbines produce 229MW annually and each turbine produces 1.8 MW. In the following section, megawatts are converted to megawatt hours. According to Wild Horse, the turbines have a capacity factor of 32.1%.

$$1.8\text{MW} * 32.1\%(\text{capacity factor}) * 24 \text{ hours} * 365 \text{ days}$$
$$= 5061.528 \text{ MWh can be produced by one turbine}$$
$$\frac{211150\text{MWh}}{5061.528\text{MWh per turbine}} = 42 \text{ turbines needed}$$
$$\frac{9000\text{acres}}{127\text{turbines}} = \frac{\text{x acres}}{1 \text{ turbine}}$$
$$70.866 \text{ acres are needed for 1 turbine}$$
$$70.866\text{acres} * 42\text{turbines} = 2{,}976 \text{ acres needed}$$

Using the methods described in the previous section, we came up with final calculations for implementing a solar or wind facility to provide Seattle proper with 2.3% of its energy demand. A solar facility would require 783,320 solar panels and 591.22 acres of land. A wind facility would require 42 wind turbines and 2,976.4 acres of land. The additional 42 turbines will be placed on high ridge tops where there is enough wind to generate power. We have decided that it would be most feasible to add on to the already existing Wild Horse Wind and Solar Facility due to the surrounding geography, energetic wind, and the access to transmission lines.

Discussion and Conclusion

With the research we did and data we collected, we were able to answer our research question: How much land will be needed for Seattle proper to be fully powered by renewable energy? Our paper shows that it is possible to supply those demands with 100% renewable energy. Based on feasibility, we came to the conclusion of adding more wind turbines, solar panels, and acres of land to the Wild Horse Wind and Solar Facility. The unique geography that this location has to offer and the access to already existing transmission lines is a major contributing factor as to why we picked this location. In order for Seattle proper to be fully powered by renewables there needs to be a power purchase agreement between Seattle City Light and Puget Sound Energy.

Seattle City Light is the utilities company that purchases the electricity and Puget Sound Energy is the company that produces the electricity.

Using more renewable energies like solar and wind will reduce our reliance on fossil fuels. Reducing the reliance on fossil fuels can help make the United States energy independent while helping the environment. Renewable energy is able to have high power production without producing greenhouse gas emissions. In our project, we calculated land requirements to have a solar or wind facility to provide Seattle proper with 2.3% of its energy demands. If we were to further the study, we would research ways to reduce the land acres needed. We would proceed with looking into rooftop solar and/or placing the solar facility within the acres already required by the wind facility.

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