



DEVRY UNIVERSITY

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A MESSAGE FROM THE ASSOCIATE NATIONAL DEAN, FACULTY LEADERSHIP AND DEVELOPMENT

This Fall we find the Journal celebrating its fifth year of publication. Over 60 faculty were responsible for the launching of the DeVry University Journal of Scholarly Research, lead by one of our dear colleagues, Dr. John Gibbons.

We continue to be proud of the analogical practices our faculty have embraced to transform our classrooms. The current volume, just as those in the past, continues to celebrate the diverse scholarship embraced by our faculty as well as devotion to modern teaching and learning – one of our core values.

This issue includes several pieces of work highlighting technology in our classrooms. Hill writes on the the impact of dashboards on student engagement and performance. Hibsman and Rose offer a paper on AI and simulations. Lastly, Saldana focuses on the the importance of creating a community of practice to drive knowledge creation. Saldana's work is particularly relevant and timely. Communities of Practice are an essential component of our faculty community and these are driving progress and shaping our future.

All in all, this volume includes six articles, one letter and several book reviews. In honor of Dr. Gibbons, we present to you the Fall 2019 DeVry University Journal of Scholarly Research.



Lynn Marie Burks, PhD.
National Dean, Faculty Leadership and Development



A MESSAGE FROM THE MANAGING EDITORS

We would like to extend a very warm welcome to the DeVry University Community and our broader audience of scholars to the Fall, 2019 issue of the *DeVry University Journal of Scholarly Research* (DUJOSR). Huge thanks are due to all of our contributors and the Journal committee – this is, without question, a labor of love that reflects the strength of the commitment to scholarship in our academic community. Our thanks go to all of the authors of the many submissions we received and we very much look forward to including their work in future issues. Finding the time to undertake research and write is no small task and we applaud everyone who is engaged in this pursuit.

After the thanks and jubilation of putting another issue to bed, so-to-speak, we have the sad, yet celebratory task of dedicating this issue to our friend and most ardent supporter, Dr. John Gibbons.

This issue is dedicated to the memory of John Gibbons, who worked with us to create the Journal over 5 years ago – as the story goes the Journal was born at a Symposium in Chicago. John led the Journal team with the same spirit, passion, humor and determination that he did with everything in life and work, and to that point, here we are delivering Vol 5. Issue no. 1. Enjoy!

Please consider contributing to the Journal as an author or reviewer in a future issue – as our next issue will appear in Spring 2020 we would welcome submissions that seize the opportunity to focus on the emerging educational experience in higher education.

To view or share current or past issues of the Journal, visit the DeVry University Newsroom: newsroom@devry.edu and the DeVry University Library: library.devry.edu, and internally in the CTE, in Canvas and the DeVry University Library.



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DEVRY UNIVERSITY JOURNAL OF SCHOLARLY RESEARCH



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The DeVry University Journal of Scholarly Research (ISSN 2375-5393 1) is a semi-annual, multi-discipline, peer-reviewed, journal devoted to scholarship and education research.

The journal is the work of the faculty, staff and administration of DeVry University. The views expressed in the journal are those of the authors and should not be attributed to the sponsoring organizations or the institutions with which the authors are affiliated.

MANUSCRIPT SUBMISSIONS INFORMATION

The journal welcomes unsolicited articles, case studies, reviews, and letters on scholarship, education research or related subjects. Text and citations should conform to APA style as described in the Publication Manual of the American Psychological Association (6th ed.). Because the journal employs a system of anonymous peer review of manuscripts as part of its process of selecting articles for publication, manuscripts should not bear the author's name or identifying information.

Electronic submissions of manuscripts (MS Word) and all other communications should be directed to: DUJOSR@devry.edu

EDITORS AND REVIEWERS

DeVry faculty who wish to apply for positions on the Journal's board of editors or as reviewers of manuscripts should contact Deborah Helman or Michael Bird.

PEER REVIEWERS FOR THIS ISSUE

The following DeVry faculty served as peer reviewers for this issue. We thank them for their service.

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INSTITUTIONAL REVIEW BOARD

DeVry University has an Institutional Review Board (IRB) to protect the rights and welfare of humans participating as subjects in a research study. The IRB ensures the protection of subjects by reviewing research protocols and related materials. DeVry University's colleagues and students who want to conduct research must first contact the IRB for an application. Once received, the IRB will review the application and supporting materials to determine if all criteria have been met before approving the research. In support of helping colleagues and students gain an in-depth understanding of ethical research processes, the IRB obtained a Collaborative Institutional Training Initiative (CITI) membership. CITI provides globally accepted training that aids the research process. Those who wish to submit applications to the IRB are required to complete CITI training beforehand.

For additional information, you can contact the DeVry University IRB through the following email address: dvuirb@devry.edu.

IRB MEMBERS

Lorenzo Bowman, JD, PhD
Senior Professor
College of Business & Management
404-583-2340
lbowman@devry.edu

Moe Saouli, DPA
Assistant Dean of Academic Excellence,
Long Beach & San Diego
562-997- 5581
msaouli2@devry.edu

John W. Weber,
DBA Senior Professor and National Faculty Chair
630-829-0208
jweber@devry.edu

IRB ADMINISTRATOR

Andrea Henne, EdD
Professor College of Liberal Arts & Sciences,
College of Business and Management
858-361-5002
aheene@devry.edu



LETTER TO THE EDITORS: *POETIC LICENSE*

Dear Editor,

In case you consider publishing poems, please consider looking at my one attached and feel free to let me know what you think. I know it has been long since my first publication in the first edition.

THE YEAR WAS 1983, BUT 1988, 2000, AND 1975 WERE OTHER YEARS TOO!

A year is not 12 months, I beg to differ,
And stand not to be corrected!
Yes, it is not, and never was!
And the year was 1983,
But 1988, 2000, and 1975 were other years too,
Years of maybe regeneration?
No wonder, they were more than 12 months.
Years of come rain, come thunder,
It's for sure a long way to the north pole,
But it can be reached,
Because I reached it in record time,
And now at the lonely mountain top,
But the real year was 1983,
And 1988, 2000, and 1975 were other years too,
That I know were for sure more than 12 months long,
AND STAND NEVER TO BE CORRECTED!



This poem is about how much longer time appears to be when one is on an academic journey. For me, the years I highlighted above were the toughest in school, but our students who include single working moms, soldiers back from foreign deployment, and those who are first in their families to set foot in college, have theirs too, but they are also fighters who want more for themselves, their families, and futures. As professors, our inspiration comes from their resilience and bravery. We then match them with extraordinary pedagogy, genuine care, and unrelenting commitment to our university's values of teamwork and communication, accountability, integrity that equals ownership, and continuous improvement, but still one can "***stand NEVER to be corrected!***" that a year in college is more than 12 months.

Sincerely,

Elliot Masocha

Professor College of Business and Management
DeVry University, Columbus, OH



AMERICAN ANTIPATHY: PARTISANSHIP AND THE DECLINE OF POLITICAL EMPATHY

ANDREW TUHOLSKI

COLLEGE OF LIBERAL ARTS & SCIENCES

Author Note: Andrew Tuholski is a visiting professor in political science at Chamberlain University, Downers Grove, IL.

ABSTRACT

Political parties in a polarized, unempathetic political climate often believe that they are losing ground and under some form of existential threat. These beliefs appear to do the emotional work of dehumanizing the other party and result in a loss of emotional and cognitive empathy. The purpose of this empirical study was to compare temporal changes in cross-party political empathy. Studying the period from 1980 to 2016, this study suggests that Americans who identified with a major party significantly reduced their empathy toward the other major party, with Chow breakpoint regression analysis identifying the mid-to-late 1990s as independent downward breakpoints for strong partisans of both parties. This finding was interpreted through Davies' theory of revolutionary change and placed into the larger context of scholarly discussion pertaining to polarization.

Correspondence regarding this article should be addressed to Andy Tuholski at andy.tuholski@gmail.com

Keywords: political empathy, polarization, empathy, political parties

Political empathy is “the ability of citizens to relate to and understand events and issues outside their own immediate life space” (Neuman, Just, & Crigler, 1992, p. xiii). In this formula, life space is a measurable space whose dimensions are given by an individual’s various identities and positions in the world. Such identities and positions have been explored in the qualitative, case study-oriented development of political empathy theory, as in the work of Daniel Lerner (Lerner, 1958). However, datasets such as the American National Election Studies (ANES) also offer the ability to examine political empathy in terms of measurable differences between self and other (Hughes & Tuch, 2003; Kim & Kou, 2014; Unnever, Cullen, & Fisher, 2005). Specifically, ANES offers the possibility of measuring the following contrasts:

- A respondent’s major party identification and a respondent’s like of anything about the other major party.
- A respondent’s major party identification and a respondent’s continuously measured liking of the other major party on the so-called Group Thermometer measure of ANES.

While ANES does not ask questions that directly mention empathy, there is a strong and positive correlation between liking and empathy (Edwards-Jones, 2006).

LITERATURE REVIEW

An empirical study carried out by Spanierman, Poteat, Beer, and Armstrong on white undergraduate students in the United States employed cluster analysis to identify five distinct personality clusters in the sample, which were characterized by varying levels of empathy, among other measures (2006). They found that the one of the five clusters, E, which had the lowest empathy scores, was nearly two and a half times as likely to contain self-identified Republicans. More generally, in their moral foundations theory, Graham, Haidt, and Nosek have argued that the left is characterized by higher levels of empathy than the right, with empathy represented by moral intuitions related to harm / care and fairness / reciprocity (2009).

In a paper presented before the American Psychological Association, Marchant and McCreary found that only one of three sub-constructs within empathy, perspective-taking, varied significantly across the American major-party spectrum, with young Americans with higher levels of perspective-taking more likely to be Democrats (2016). In this empirical study, emotional reactivity and empathic concern, the two other sub-constructs of empathy, were found to be equal between self-described Democrats and self-described Republicans.

In the context of American political life, there is substantial evidence that, despite episodes and incidents of stark partisan difference, cross-party empathy has been relatively high for long periods of time (Brewer, Mariani, & Stonecash, 2002). In analyzing political competition in the American South, Bruce Kalk has argued that it was not until the modern Republican Party was hijacked by so-called ultra-segregationists in the 1960s that a massive partisan fissure opened between contemporary Republicans and Democrats (Kalk, 2001). After the Democratic President Franklin Roosevelt's New Deal, Kalk argued that the Republican Party organized itself around principles of antisocialism and anti-statism that did not imbue Republicans with the visceral dislike and suspicion of Democrats that they would develop when, in the 1960s, the Republican Party's big tent expanded to include

ultra-segregationists and their political allies. While acknowledging the genuine gulf between Democrats and Republicans that has existed since the formation of the Republican Party in 1854, it is still possible to argue, as Brewer et al. have, that the development of hyper-partisanship—whose consequences include declining empathy for the other side—is a more recent phenomenon.

The various changes in the cross-party empathy of Democrats and Republicans can be understood in Davies' theory of revolutionary action, according to which "The crucial factor is the vague or specific fear that ground gained over a long period of time will be quickly lost" (Davies, 1962, p. 98). For the Republican Party that came to be the party of segregationists in the 1960s, the fear was that the Civil Rights era would deprive Southern whites of the privileges they had enjoyed, and fears of the loss of white prestige appear to inform the ongoing intensification of Republican partisanship (Inwood, 2015). This thesis aligns well with the findings of the current study, in which the breakpoints for declines in Republican empathy for the Democratic Party and Democratic empathy for the Republican Party took place during Democratic administrations. It could be that the last two Democratic Presidents of the United States, Barack Obama and Bill Clinton, have given rise to Republican fears about the loss of race and class privilege and concomitant Democratic counter-reactions (Hughey & Parks, 2014). For Democrats, growing partisanship could be driven by the fear that the emerging Democratic coalition (which consists disproportionately of racial minorities and women) will, under era of Republican control of government, lose its own gains (Hudson, 2017).

While Davies' (1962) theory was crafted to explain revolutions, it appears to apply equally well to eras of declining empathy for political others within the same states. For example, Muslim Turks and Christian Armenians coexisted successfully for six centuries in the Ottoman Empire before the Armenian Genocide (Bloxham, 2005). The collapse of the former Yugoslavia was also accompanied by a rapid decline in

empathy between Serbs, Bosnians, and Croats who had also coexisted and intermarried for centuries (Denich, 1994). So-called primordial explanations (Geertz, 1973) of political conflict rely on explanations of tribalism, but Davies' argument suggests that tribalism is not a sufficient condition for the rapid decline of political empathy; parties in a polarized, unempathetic political climate must believe that they are losing ground and under some form of existential threat. Such beliefs appear to do the emotional work of dehumanizing the other, and dehumanization has been described as the loss of both emotional and cognitive empathy (Čehajić, Brown, & González, 2009; Haslam, 2006; Mekawi, Bresin, & Hunter, 2016). In emotional terms, the dehumanized other is viscerally disliked; in cognitive terms, the dehumanized other is imbued with undesirable qualities and characteristics (Hoffman, 2001).

One of the gaps in the literature on political empathy is the absence of time-series perspectives. The benefit of utilizing a longitudinal dataset such as that of ANES (ANES, 2017) is the ability to detect changes in political empathy. Because ANES asks respondents about their like of parties, it is possible to treat the variable of liking as a proxy measure of empathy, as other researchers have done (Edwards-Jones, 2006; Mullen & Abeles, 1971).

METHODOLOGY

This study was carried out on the ANES time-series dataset, which includes data from 1948 to 2016. The first dependent variable was that of the Group Thermometer, a continuous ANES rating that measures a positive affective state towards various groups, including the Democratic and Republican Parties. The second dependent variable was a dichotomous measure of liking or not liking the Democratic and Republican Parties. These were treated as measures of empathy because of the documented positive correlation between liking and empathy (Edwards-Jones, 2006; Mullen & Abeles, 1971).

The main methodological contribution of the study was the application of time-series operators to the first of these two dependent variables, with the independent variable being

that of major party identification among ANES respondents. Time-series approaches have two distinct utilities in this context. The first utility is simply measurement of change over time, which is not reliably captured by cross-sectional approaches such as regression. The second utility is comparative. Because there are two general models of time-based empathy in this study—the empathy of Democrats toward the Republican Party and the empathy of Republicans toward the Democratic Party—it is possible to compare and contrast the temporal dynamics of these two kinds of political empathy. For example, using Chow breakpoint regression, it is possible to determine which of these two kinds of empathies—Democratic empathy toward the Republican Party or Republican empathy toward the Democratic Party—began to decline first (Chow, 1960). Using other time-series approaches, it is also possible to determine whether these two kinds of political empathy are co-integrated (Bölük & Mert, 2015) or Granger cause (Granger, 1988) each other.

The Group Thermometer variable in ANES is a continuously measured variable that can be treated as a point estimate and a 95% confidence interval (CI); Group Thermometer point estimates for each available year in ANES can subsequently be entered into time-series procedures. ANES also contains a binary measurement of liking the Democratic and Republican Parties; this binary measurement can be treated as an odds ratio (OR) point estimate and a 95% CI for the OR. Calculated ORs can also be entered into time-series procedures for changes over time. The use of a binary variable as well as a continuous variable to measure cross-party empathy constitutes a kind of robustness check. Both of these variables are measurements of an ANES respondent's like of a major party, but one variable offers a continuous scale, and another takes a yes / no form when asking respondents if they like anything about a major party. To the extent that these measurements coincide with each other, they suggest a likely decline in cross-party political empathy in the United States, as demonstrated in the findings. When statistical inference was necessary, the chosen Alpha was .05.

LIMITATIONS OF THE STUDY

The study had several limitations. One of the limitations was the use of sequential numbering of years in the ANES dataset in order to avoid gaps, which, in turn, would have prevented the application of certain time-series analyses. Thus, for example, 1980 was designated as year 1, 1982 as year 2, etc., even though this method treating gaps of dissimilar length (such as the gap between 1980 and 1982 and the gap between 2008 and 2012) equally. The quality of time-series analysis in this study was also limited by the relatively few years for which data are available in ANES. In addition, the study was limited by the assumption of a conceptual relationship between liking (or positive affect in general) and empathy. Although there appears to some empirical as well as theoretical support for positive affect / liking as being closely related to empathy, it is still the case that the ANES dataset does not explicitly ask respondents about political empathy in particular. However, even if empathy is not necessarily the variable measured by the ANES responses analyzed in the study, the findings are still relevant to changes in cross-party positive affect, which is either identical to political empathy or similar enough to render the findings of the study relevant to researchers interested in political empathy.

FINDINGS

MAJOR PARTY IDENTIFICATION AND EMPATHY FOR OTHER PARTY: REPUBLICAN EMPATHY

In ANES, one of the measures of party identification is partisanship (VCF0301), a variable that recognizes seven categories: Strong Democrat, weak Democrat, independent with Democratic leanings, independent with Republican leanings, weak Republican, and strong Republican. The Group Thermometer rating for the Democratic Party (VCF0218) is a measure of how participants feel about the Democratic Party in general, with 0 indicating the most negative affect possible and 100 indicating the most positive affect possible. VCF0301 and VCF0218 can be utilized as time-series measures of empathy by calculating change in self-identified Republicans’ thermometer ranking of the Democratic Party by year.

Starting from 1980, it is possible to calculate both a mean and 95% confidence interval for self-identified Republicans’ group thermometer ratings of the Democratic Party. The data in *Table 1* below suggests that Republicans first lowered their estimates of the Democratic Party in 1994; until that year, the 95% confidence intervals of the Democratic Party group thermometer for strong Republicans

Table 1: CHANGES IN DEMOCRATIC PARTY THERMOMETER FOR REPUBLICANS

1980-2016, MEAN AND 95% CISS			
Year	Weak Republicans	Independent Republicans	Strong Republicans
1980	47.88 (45.21-50.55)	47.25 (44.12-50.38)	40.75 (36.43-45.07)
1982	49.60 (47.04-52.15)	50.96 (47.38-54.53)	40.62 (37.31-43.94)
1984	51.63 (49.64-53.62)	53.17 (51.00-55.34)	42.05 (39.29-44.82)
1986	52.43 (50.21-54.66)	51.24 (48.94-53.54)	40.86 (37.82-43.90)
1988	51.85 (49.31-54.38)	51.60 (49.01-54.20)	39.07 (36.51-41.63)
1990	52.72 (50.09-55.35)	53.53 (51.28-55.78)	44.58 (41.11-48.05)
1992	48.93 (46.85-51.001)	47.51 (45.20-49.82)	35.65 (33.07-38.22)
1994	44.38 (42.14-46.61)	41.61 (39.05-44.15)	29.76 (27.56-31.96)
1996	46.87 (44.61-49.14)	44.43 (41.43-47.53)	29.16 (26.38-31.95)
1998	47.82 (45.34-50.31)	45.89 (42.30-49.49)	36.28 (32.54-40.02)
2000	48.63 (45.69-51.56)	44.48 (41.90-47.06)	32.80 (30.20-35.41)
2004	45.86 (43.02-48.69)	48.70 (45.55-51.84)	33.36 (30.14-36.57)
2008	43.40 (40.29-46.50)	46.27 (43.58-48.97)	31.08 (28.26-33.90)
2012	36.76 (35.15-38.38)	32.94 (31.24-34.64)	19.67 (18.33-21.02)
2016	33.70 (31.66-35.75)	30.18 (28.26-32.11)	16.71 (15.37-18.04)

remained within the same general bounds. A comparison of the confidence intervals from 1992 and 1994 indicates that independent Republicans, weak Republicans, and strong Republicans all indicated significantly lower views of the Democratic Party in 1994 as opposed to 1992. Another substantial decline in Republicans’ views of the Democratic Party took place during Barack Obama’s two terms.

It is important to conceptualize changes in the group thermometer rating as changes in political empathy. The data in *Table 1* pertain to a continuous variable related to liking the Democratic Party. Liking others is a measure of empathy; Yabar et al. found that “the display of empathy tends to be spontaneously shown towards individuals who are liked” (Yabar & Hess, 2007, p. 47). Thus, on the basis of Yabar et al.’s empirical findings and their theoretical underpinning, there are good reasons to assume that the decline in the group thermometer rankings of the Democratic Party among Republicans (whether weak, independent, or strong) suggests a decline in the political empathy of Republicans.

MAJOR PARTY IDENTIFICATION AND EMPATHY FOR OTHER PARTY: DEMOCRATIC EMPATHY

In ANES, the Group Thermometer rating for the Republican Party (VCF0224) is a measure of how participants feel about the Republican Party in general, with 0 indicating the most negative affect possible and 100 indicating the most positive affect possible. VCF0301 and VCF0224 can be utilized as time-series measures of empathy by calculating change in self-identified Democrats’ thermometer ranking of the Republican Party by year.

Starting from 1980, it is possible to calculate both a mean and 95% confidence interval for self-identified Democrats’ group thermometer ratings of the Republican Party. The data in *Table 2* below suggest that strong Democrats first lowered their estimates of the Republican Party in 2004 (coinciding with the re-election of President George W. Bush), whereas weak and independent Democrats took another two election cycles after 2004 to significantly reduce their group thermometer ratings of the Republican Party. The Obama years further reduced self-described Democrats’ estimation of the Republican Party.

Table 2: CHANGES IN REPUBLICAN PARTY THERMOMETER FOR DEMOCRATS

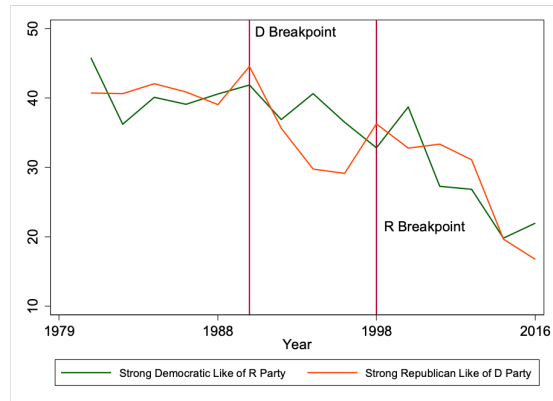
1980-2016, MEAN AND 95% CIS			
Year	Weak Democrats	Independent Democrats	Strong Democrats
1980	51.69 (49.51-53.87)	55.90 (52.92-58.88)	45.79 (42.63-48.94)
1982	51.57 (49.35-53.79)	47.55 (44.23-50.87)	36.24 (33.33-39.15)
1984	51.65 (49.64-53.66)	46.72 (43.86-49.59)	40.12 (37.27-42.98)
1986	53.24 (51.16-55.32)	49.57 (46.83-52.32)	39.09 (36.50-41.69)
1988	51.76 (49.30-54.22)	51.08 (48.32-53.83)	40.57 (37.86-43.27)
1990	50.32 (48.03-52.61)	51.40 (48.64-54.16)	41.87 (39.14-44.60)
1992	46.26 (44.24-48.28)	43.81 (41.57-46.05)	36.91 (34.63-39.20)
1994	49.52 (47.47-51.57)	49.27 (46.86-51.67)	40.61 (37.74-43.47)
1996	45.88 (43.56-48.20)	45.20 (42.81-47.59)	36.50 (34.00-39.10)
1998	41.91 (39.10-44.74)	43.70 (40.41-46.97)	32.81 (29.70-35.95)
2000	45.84 (43.45-48.23)	46.86 (44.11-49.61)	38.70 (36.07-41.33)
2004	45.60 (42.29-48.92)	42.45 (39.33-45.57)	27.27 (23.98-30.56)
2008	39.28 (37.02-41.54)	41.29 (39.03-43.55)	26.82 (24.85-28.80)
2012	32.73 (31.34-34.13)	32.80 (31.21-34.40)	19.79 (18.72-20.86)
2016	34.71 (32.84-36.58)	32.09 (30.00-34.19)	21.94 (20.44-23.42)

It is important to conceptualize changes in the group thermometer rating as changes in political empathy. The data in *Table 2* pertain to a continuous variable related to liking the Democratic Party. Liking others is a measure of empathy; Yabar et al. found that “the display of empathy tends to be spontaneously shown towards individuals who are liked” (Yabar & Hess, 2007, p. 47). Thus, on the basis of Yabar et al.’s empirical findings and their theoretical underpinning, there are good reasons to assume that the decline in the group thermometer rankings of the Democratic Party among Republicans (whether weak, independent, or strong) suggests a decline in the political empathy of Republicans.

COMPARISON OF DEMOCRATIC AND REPUBLICAN EMPATHY DECLINES FOR THE OTHER PARTY

It is clear that Democrats’ empathy for the Republican Party (as measured by general like of the Republican Party) as well as Republicans’ empathy for the Democratic Party (as measured by general like of the Democratic Party) declined from 1980 to 2016. However, the dynamics of these declines were somewhat different. A Chow breakpoint analysis (Chow, 1960) indicated that, for strong Democrats, the breakpoint for empathy for the Republican Party came in 1990, whereas, for strong Republicans, the breakpoint for empathy for the Democratic Party came in 1998. A vector autoregression (VAR) including three variables (year, Democrats’ like of the Republican Party, and Republicans’ like of the Democratic Party) followed by a test of Granger causality indicated that neither Republicans’ like of the Democratic Party ($\text{Chi}^2 = 3.691, p = 0.158$) nor Democrats’ like of the Republican Party ($\text{Chi}^2 = 0.136, p = 0.934$) Granger caused each other. In addition, an autoregressive distributed lag (ARDL) model indicates the absence of long-term co-integration between Democrats’ like of the Republican Party and Republicans’ like of the Democratic Party, $t = -0.120, p = .905$.

Figure 1: DECLINING IN OTHER-PARTY POLITICAL EMPATHY FOR STRONG DEMOCRATS AND STRONG REPUBLICANS, 1980 TO 2016.



The ARDL and Granger causality tests are of interest because they suggest that the declines in empathy discussed above are independent of each other, even though a cross-sectional method of analysis, such as ordinary least squares (OLS) regression, would indicate some connection between Democrats’ declining like of the Republican Party and Republicans’ declining like of the Democratic Party.

REPUBLICAN EMPATHY FOR THE DEMOCRATIC PARTY: AN OR APPROACH

The statistical procedures applied above were all based on Group Thermometer ratings, which are continuously measured (0-100) variables. However, ANES also contains binary questions about liking political parties. Variable VCF0374 asks ANES respondents if they like anything about the Democratic Party, for instance. In this section of the findings, two predictor variables were created, one in which strong Republicans = 1 and all others = 0 and one in which strong Democrats = 1 and all others = 0. Next, two outcome variables were created, one in which liking the Democratic Party = 1 and not liking the Democratic Party = 0 and one in which liking the Republican Party = 1 and not liking the Republican Party = 0. The coding of these variables allowed logistic regressions with ORs to

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be conducted, modeling two outcomes: (a) The likelihood (*OR*) of a strong Democrat liking the Republican Party and (b) the likelihood (*OR*) of a strong Republican liking the Democratic Party. Such *ORs* were generated for all available years in the ANES dataset.

In the context of *Tables 3 and 4*, an *OR* represents the odds that a strong partisan, whether Democrat or Republican, would find anything to like about the other major party. In this context, an *OR* with 1 in the 95% confidence interval would suggest that a strong partisan would be just as likely as anyone else in the dataset to find something to like about the other major party. The expectation was that the *ORs* would be well below 1 in both instances, indicating that (a) strong Republicans would be significantly less likely than non-strong Republicans to like anything about the Democratic Party while (b) strong Democrats

would be significantly less likely than non-strong Democrats to like anything about the Republican Party. Beyond this expectation, the purpose of data analysis was to observe changes in *OR* point estimates and 95% CIs over time for both strong Democrats' and strong Republicans' odds of liking anything about the other party.

It should be noted that each of the *OR* calculations presented in *Table 3* was significant at $p < .05$. An examination of the 95% CIs indicates that the confidence intervals were quite broad until after the election of President Obama in 2008, at which point the entirety of the confidence intervals fell below their previous (1980-2004) values. A similar pattern can be seen in the *ORs* for Democrats' like of the Republican Party.

Table 3: CHANGES IN STRONG REPUBLICANS' ODDS OF LIKING ANYTHING ABOUT THE DEMOCRATIC PARTY

1980-2016, 95% CI			
<i>Year</i>	<i>OR</i>	<i>Lower Bound</i>	<i>Upper Bound</i>
1980	0.42	0.29	0.63
1982	0.29	0.19	0.43
1984	0.39	0.30	0.52
1986	0.42	0.27	0.66
1988	0.42	0.32	0.55
1990	0.53	0.32	0.88
1992	0.29	0.22	0.39
1994	0.34	0.26	0.46
1996	0.57	0.38	0.86
2000	0.30	0.22	0.40
2004	0.42	0.31	0.58
2008	0.27	0.20	0.37
2012	0.15	0.12	0.18
2016	0.17	0.14	0.21

DEMOCRATIC EMPATHY FOR THE REPUBLICAN PARTY: AN OR APPROACH

It should be noted that each of the *OR* calculations presented in *Table 4* was significant at $p < .05$. An examination of the 95% CIs indicates that the confidence intervals were

quite broad until the re-election of President Obama in 2012, at which point the entirety of the confidence intervals fell below their previous (1980-2008) values. For strong Democrats, as for strong Republicans, the odds of liking anything about the other party fell significantly during the Obama years.

Table 4: CHANGES IN STRONG DEMOCRATS' ODDS OF LIKING ANYTHING ABOUT THE REPUBLICAN PARTY

Year	OR	1980-2016, 95% CI	
		Lower Bound	Upper Bound
1980	0.33	0.24	0.46
1982	0.43	0.32	0.58
1984	0.35	0.27	0.45
1986	0.56	0.39	0.80
1988	0.29	0.22	0.38
1990	0.46	0.31	0.68
1992	0.32	0.24	0.41
1994	0.58	0.44	0.76
1996	0.28	0.19	0.43
2000	0.31	0.24	0.41
2004	0.34	0.24	0.47
2008	0.31	0.25	0.39
2012	0.15	0.13	0.18
2016	0.22	0.19	0.27

VALIDITY TESTING

As defined in this study, empathy is a trait or orientation based on positive affect for the other. It is possible that, in the time period measured by ANES, respondents' affect for their own parties declined as well; if so, it would be conceptually more difficult to conclude that the findings of this study represent a decline in empathy. It might be the case that the changes measured in this study are changes in the strength of political affiliation manifested as changes in liking both one's own major party and the other major party. For this reason, the conceptual logic and internal validity of the study both depend on demonstrating that the decline in liking the other party is somehow distinct from liking one's own party.

Table 5 contains a comparison of changes in own-party empathy with changes in other-party empathy for two groups, strong Democrats and strong Republicans. These comparative data offer a means of determining whether the decline in other-party liking can truly be considered a change in empathy, as opposed to a change in overall sentiment about both major parties, including one's own. The data in *Table 5* below suggest that both strong Democrats and strong Republicans registered lower levels of liking for their own parties in the time period between 1980 and 2016, but this effect was small. For strong Democrats, the 95% CI of the change of liking the Democratic Party, from 1980 to 2016, was between -2.27% and -7.63%. For strong Republicans, the 95% CI of the change of liking the Republican Party, from

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1980 to 2016, was between -5.10% and -12.77%. By comparison, for strong Democrats, the 95% CI of the change of liking the Republican Party, from 1980 to 2016, was between -19.21% and -28.50%. For strong Republicans, the 95% CI of the change of liking the Democratic Party, from 1980 to 2016, was between -18.38% and -29.70%. Clearly, for strong partisans of either major party, raw declines in like of the other major party were significantly greater than raw declines in the like of one's own party.

the changes in positive affect for the other party indeed represent a form of empathy decline. As noted in the introduction and literature review, empathy can be understood in terms of positive affect for the other. Theoretically, then, it can be expected that a decline in American political empathy, expressed as a party-identified respondent's decreasing like of the other major party, would be greater than any decline in the like of one's own party. As this pattern was observed in the data, empathy decline,

Table 5: COMPARISON OF OWN- AND OTHER-PARTY LIKING

1980-2016				
Year	<i>Strong Republicans' Liking of Democratic Party</i>	<i>Strong Republicans' Liking of Republican Party</i>	<i>Strong Democrats' Liking of Democratic Party</i>	<i>Strong Democrats' Liking of Republican Party</i>
1980	40.75 (36.43-45.07)	81.58 (79.06-84.10)	84.81(83.21-86.42)	45.79 (42.63-48.94)
1982	40.62 (37.31-43.94)	81.47 (79.39-83.56)	85.12 (83.58-86.66)	36.24 (33.33-39.15)
1984	42.05 (39.29-44.82)	82.58 (80.92-84.24)	85.22(83.80-86.64)	40.12 (37.27-42.98)
1986	40.86 (37.82-43.90)	81.85 (79.96-83.73)	83.55 (82.11-84.98)	39.09 (36.50-41.69)
1988	39.07 (36.51-41.63)	82.85 (81.09-84.62)	84.46 (83.02-85.91)	40.57 (37.86-43.27)
1990	44.58 (41.11-48.05)	79/27 (76.88-81.66)	80.92 (79.36-82.48)	41.87 (39.14-44.60)
1992	35.65 (33.07-38.22)	77.89 (75.96-79.82)	80.59 (79.27-81.91)	36.91 (34.63-39.20)
1994	29.76 (27.56-31.96)	80.14 (78.61-81.67)	79.61 (78.11-81.10)	40.61 (37.74-43.47)
1996	29.16 (26.38-31.95)	77.94 (76.02-79.87)	82.93 (81.37-84.49)	36.50 (34.00-39.10)
1998	36.28 (32.54-40.02)	75.20 (72.54-77.86)	79.80 (77.58-82.01)	32.81 (29.70-35.95)
2000	32.80 (30.20-35.41)	78.24 (76.42-80.05)	82.88 (81.27-84.49)	38.70 (36.07-41.33)
2004	33.36 (30.14-36.57)	82.18 (80.49-83.87)	81.92 (80.06-83.78)	27.27 (23.98-30.56)
2008	31.08 (28.26-33.90)	74.98 (72.89-77.07)	84.10 (82.83-85.370)	26.82 (24.85-28.80)
2012	19.67 (18.33-21.02)	76.73 (75.66-77.80)	82.40 (81.63-83.17)	19.79 (18.72-20.86)
2016	16.71 (15.37-18.04)	72.65 (71.33-73.96)	79.87 (78.79-80.94)	21.94 (20.44-23.42)

Based on the robustness testing, it seems likely that, even among strong partisans of either major party, the years 1980 to 2016 saw a decline in positive affect for one's own party, which could correspond to a rising displeasure with the political process in general. However, this decline was substantially less than the decline in positive affect for the other party. One plausible interpretation of these findings is that

which is other-focused, appears to possess more explanatory power than an alternative explanation such as disengagement or anomie.

CONCLUSION

The findings of the study indicate that, in the period from 1980 to 2016, Americans who identified with a major party (whether this identification was weak, strong, or associated

with self-described political independence) significantly reduced their like of the other major party. ANES describes its group thermometer as a feeling thermometer; it is therefore specifically designed to elicit affect, which, in turn, is closely related to empathy (Edwards-Jones, 2006; Mullen & Abeles, 1971). In an affect-based model of empathy, positive feelings, or liking, adhere primarily to the self and its perceived in-groups (Hoffman, 2001). As Hoffman noted, empathy is not merely the cognitive ability to think oneself into the position of another, and to appreciate the other, but also affective response to the other. Therefore, changes in the degree to which one likes the other correspond to changes in affective empathy.

The time-series findings suggest a decline in cross-party empathy in the United States that, on the basis of Chow (1960) breakpoint regression, can be located in the mid-to-late 1990s for both strong Democrats and strong Republicans. The 1990s appear to be the decade in which both strong Democrats and strong Republicans broke from their earlier,

stable levels of like for the opposite party and registered declining levels of empathy for the other party. In retrospect, it seems plausible that the two Clinton terms created the background conditions for the subsequent decline in cross-party empathy measured in this study, with the Clinton impeachment being the Chow breakpoint for mounting Democratic dislike of the Republican Party and the early years of Republican resistance to Clinton being the Chow breakpoint for mounting Republican dislike of the Democratic Party. Then, apart from these breakpoints, there is a further decline in both Republican like of the Democratic Party and Democratic like of the Republican Party coinciding with the Obama era. If these findings are reliable, they suggest a period of initial cross-party empathy decline from the Clinton years that was further exacerbated during the Obama era. Future qualitative researchers might wish to analyze forces responsible for cross-party empathy decline that appear to coalesce around Democratic Presidencies

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THE EFFECTS OF STUDENT ACTIVITY DASHBOARDS ON STUDENT PARTICIPATION, PERFORMANCE, AND PERSISTENCE

EDWIN H. HILL, III

COLLEGE OF ENGINEERING & COMPUTER SCIENCE

Author Note: Ed Hill is a Professor in the College of Engineering & Computer Science at DeVry University, Miramar, FL.

ABSTRACT

While dashboard systems have been developed and are starting to be implemented, it is not yet clear how activity and performance data from dashboards influences student behavior. In addition, much of the research has been focused on instructor-facing dashboards rather than student-facing dashboards. This study implemented a student-facing dashboard in the learning management system and measured how information on the dashboard may have influenced participation in discussions, student performance on graded items, and persistence in future courses. Activity indicators included frequency of posting, average length of posts, percent of posts made to peers, and percent of posts made to instructor. The current score for the student, as a measure of performance, was also shown on the dashboard along with the current class average. The analysis of results indicated no significant differences in participation or performance between the experimental and control groups ($f(4, 59) = .947, p = .443$). Similarly, no significant differences were found in persistence between the two groups ($\chi^2(2) = .960, p = .619$). Further research is needed to more fully understand the use of student dashboard interfaces and their impact on student behavior. Future studies using a similar methodology should incorporate larger sample sizes and include all students

in the class, rather than using self-selected samples. A better understanding of how the use of dashboards influences participation, performance, and persistence is needed in order to develop effective strategies for supporting students.

Correspondence regarding this article should be addressed to Dr. Hill at ehill@devry.edu

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THE EFFECTS OF STUDENT ACTIVITY DASHBOARDS ON STUDENT PARTICIPATION, PERFORMANCE, AND PERSISTENCE

Institutions are turning to data-driven methods and are increasingly taking advantage of learning analytics as they address the concerns of student success (Ferguson, 2012). There are a number of data sources that can be used for this type of analysis, including student management systems (SMSs) and learning management systems (LMSs). Although LMSs capture information about student activity for online and blended format classes, the data are not always easy to view

or interpret (Cohen & Nachmias, 2011). While students can view their own activity in a course, it is typically difficult for them to compare their activity with others in the class.

Researchers have focused attention on data visualization techniques to help schools, faculty, and students understand the at-risk student population and to develop tools that can improve student success. Among these tools are dashboards that use data from the LMS to visually represent information that can be useful at the institutional level as well as helpful to faculty and students. While the focus has generally been on teacher-facing dashboards, student-facing dashboards are also of interest and may support educational goals set by institutions and educators.

An area that needs attention is the lack of student participation in online discussions (Hewitt, 2005). Studies suggest that students can use dashboards to get an indication of how they are doing relative to their peers (Santos, Verbert, Govaerts, & Duval, 2013). Researchers have also explored the impact of faculty-facing dashboards on retention and performance (Arnold & Pistilli, 2012). The question remains whether student-facing dashboards have an impact on retention or performance.

There is reason to believe that dashboards may help motivate students. Macfadyen and Dawson (2010) found that usage of course tools such as threaded discussions were predictive of student success. A “Check My Activity” tool developed by Fritz (2011) was developed to show a student’s activity compared with the activity of their peers. In the study, Fritz found that 28% of

students were surprised by their level of activity compared with that of their peers. These tools can help make students more aware of their activity. An increase in activity is predictive of student success. There remains the question of whether activity information displayed in a student dashboard influences student behavior. It is important for researchers to fill in this gap in order to best address the issue of improving student outcomes.

PROBLEM STATEMENT

The impact of dashboards on bringing about changes in student behavior is still not well understood. Few studies have looked at changes in student behavior as a result of dashboard usage. Park and Jo (2015) looked at nine prior studies of learning dashboards and found that there was not sufficient evidence to prove their effects as a pedagogical treatment. In their analysis, only two of the tools were student-facing, and most of the studies looked at design, usability, or satisfaction rather than the effectiveness as a pedagogical treatment. These factors suggest an area of further inquiry for researchers. If students improve their behavior as measured by participation, performance, and persistence through the use of dashboards, institutions may see improved student outcomes.

STUDY GOAL

The goal was to measure the changes in student behavior when a student-facing dashboard is implemented. Students were provided with a dashboard showing frequency of posting, average length of posts, number of posts made to peers, and posts made in reply to the instructor. Specifically, the research examined three possible impacts on student behavior when dashboards are used. The first measure was student participation as measured by discussion activity. The second measure was performance as measured by the overall course grade. The third measure was persistence as determined by students enrolling in one or more courses the following session and attending at least the first two weeks.

In the current study, the visualizations were designed for presentation to students to show

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their activity relative to that of their peers. The dashboard used elements of the design developed by Santos et al. (2013), which showed student activity relative to the class. A red/yellow/green status indicator found in the tool developed by Arnold and Pistilli (2012) was also incorporated.

The current study featured a dashboard that indicated posting frequency for a student relative to that of their peers. Students could get a picture of whether they were posting more frequently, less frequently, or about the same as their classmates. Another indicator shown in the dashboard was length of posts relative to their peers in terms of average number of words per post. Students were able to visualize whether their posts were longer, shorter, or about the same as that of their peers. As an indicator of social presence in online discussions, the third indicator shown was the number of replies to classmates, as opposed to replies to the instructor. Students were able to see how frequently they posted in response to classmates' posts. They could determine if making more replies to classmates, fewer replies to classmates, or about the same number of replies to classmates compared with their peers. To support this research, relatively simple but well-established metrics were used on the dashboard.

RESEARCH QUESTIONS

The study focused on a research question suggested by Corrin and de Barba: "what actions do students take in response to dashboard feedback" (2015, p. 430)? Specifically, the research question for this study was what impact does the use of a student-facing dashboard showing student activity in relation to peer activity have on student behavior as measured by participation, performance, and persistence?

Question 1

How does student participation differ between students that have access to a peer activity dashboard and students that do not have access to the tool as measured by frequency and length of posts? H0: Members of the experimental group

will not have significantly greater participation in online discussions compared with the control group as measured by the number of posts written during the duration of the class or the average word count per post.

Question 2

How does student performance differ between students that have access to a peer activity dashboard and students that do not have access to the tool as measured by final student grade? H0: Members of the experimental group will not have significantly better performance in the class compared with the control group as measured by overall class score.

Question 3

How does student persistence differ between students that have access to a peer activity dashboard and students that do not have access to the tool as measured by continued enrollment in the subsequent eight-week session? H0: Members of the experimental group will not persist at a significantly greater rate than those in the control group as measured by the enrollment and attendance in subsequent courses.

METHODOLOGY

To answer these questions, the study implemented a student-facing dashboard in classes at a national, for-profit university. The study was conducted in nine courses. Of these courses used in the study, five were sections of an introduction to the College of Engineering and Information Sciences (CoEIS) class. This is generally among the first courses any student in a technical major takes and is designed to introduce them to the programs and careers in the CoEIS. There was one section of a logic and design course. This course is among the first computer information systems (CIS) courses taken and is an introduction to computer programming. Another class was a business communication class that was for upper level students (300-level) in the College of Business and Management (CoBAM). There was one section of a project management course (400-level) in the CoBAM. The remaining course was an upper level (400-level) human

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resource management course in the CoBAM. All courses were conducted completely online. The subjects included 64 students. Of those, 33 were randomly assigned to the experimental group with the remaining 31 assigned to the control group.

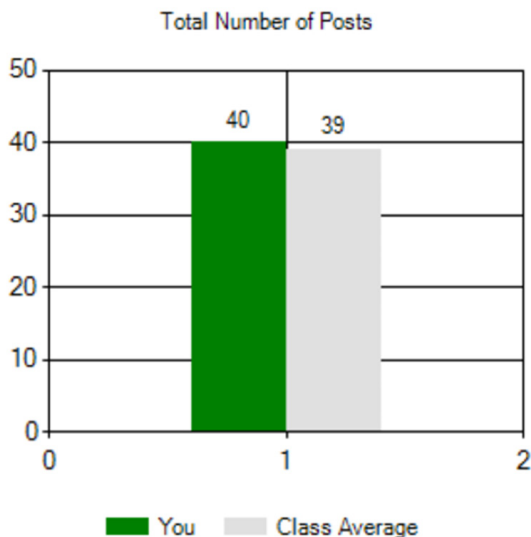
DASHBOARD DESIGN

The dashboard design was driven by the four phases of the Learning Analytics Process Model described by Verbert, Duval, et al. (2013). The indicators on the dashboard were depicted

as simple column charts and pie charts. To promote awareness of how the student’s online activity compared with the activity of peers, the dashboard depicted the following indicators:

Student’s Number of Posts per Week compared with Peers’ Average Number of Posts per Week (Figure 1). Student activity in the discussions has been used as a measure of participation (Hew & Cheung, 2008). Barber and Sharkey (2012) found that the number of posts students made was significantly correlated with success in the course. In the example below (Figure 1) the student has posted 40 times to date compared with a class average of 39 times to date.

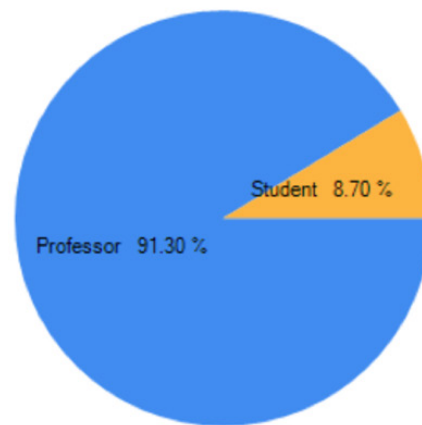
Figure 1: DASHBOARD INDICATOR SHOWING NUMBER OF POSTS



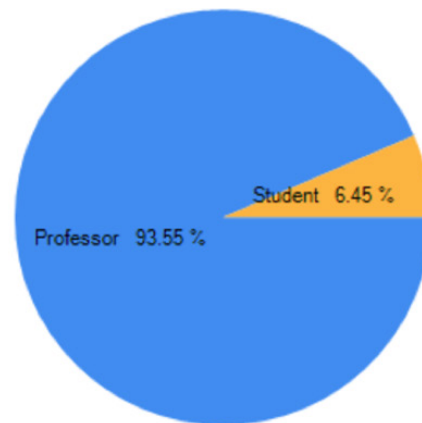
1. Student’s percent of replies to peers and percent of replies to the instructor (Figure 2). Mazzolini and Maddison (2003) found that students felt more satisfied when discussions had greater student to student interaction. In the example below (Figure 2), the percent of replies to the professor is shown in blue, while the percent of replies to peers is shown in orange.

Figure 2: DASHBOARD INDICATOR SHOWING PERCENT OF REPLIES TO PEERS VS. PROFESSOR

Your Posts to Peers and Faculty Over the Entire Course



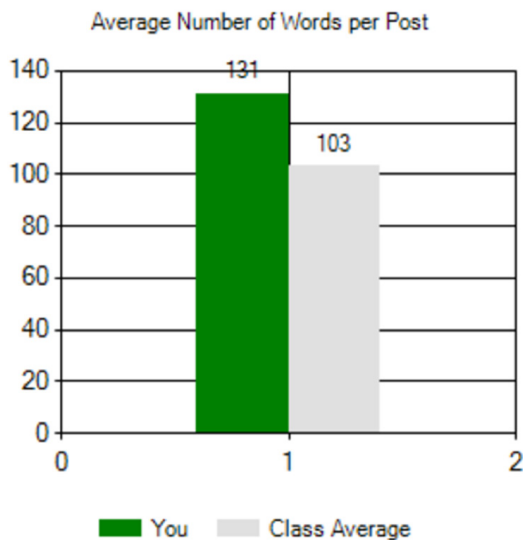
Class Average Posts to Peers and Faculty Over the Past 7 Days



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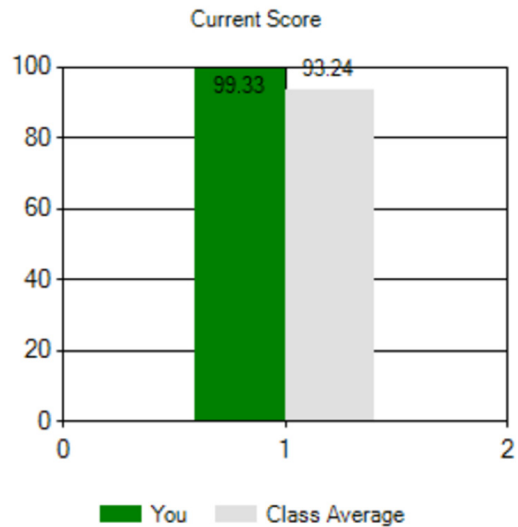
- Student’s Average Word Count per Post compared with Peers’ Average Word Count per Post (Figure 3). While word counts do not directly measure quality, Dennen (2008) stated that “insufficient participation, both in terms of quantity and quality, can quickly render a learning activity ineffective” (p. 209). Making students aware of the length of their posts may help them avoid the shorter “I agree” type responses and get them to think about providing more depth in their replies.

Figure 3: DASHBOARD INDICATOR SHOWING AVERAGE NUMBER OF WORDS PER POST



- Student’s Current Cumulative Class Average compared with Peers’ Current Cumulative Class Average (Figure 4). This indicator simply shows the student’s current score as a percent (points received to date divided by points possible to date).

Figure 4: DASHBOARD INDICATOR SHOWING CURRENT SCORE FOR THE CLASS



IMPLEMENTATION OF DASHBOARD

The implementation of the dashboard was accomplished using software developed for this study. The software was designed to support the following three steps: extract the data from the LMS; process the data and generate the dashboard text and visuals; display the data to the student on a web page via a link in the LMS.

DATA EXTRACTION

The extraction process retrieved metadata including date/time-stamp of the discussion post, the ID of the author of the post, and the ID of the person being replied to (if the post is a reply). The body of the message was also retrieved. Gradebook data were retrieved including current overall score for the class for each student.

DISCUSSION DATA

- MessageID: Unique identifier for the discussion post.
- CourseID: Unique identifier for the course.
- Week: Identifier for the Unit (Week) of the course.
- Title: Title for the post.
- Description: Content of the post.

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- AuthorID: Unique identifier for the author of the post.
- PostDate: Date/Time stamp of when the message was posted.
- ParentAuthorID: Unique identifier of the person being replied to (if applicable).
- ParentMessageID: Unique identifier of the message being replied to (if applicable).
- WordCount: Computed based on white-space between words (number of whitespace blocks + 1)

GRADE DATA

- Total number of points awarded to date for each student.

ADDITIONAL DATA

- The system also counted the number of times a dashboard was viewed by each student.
- Persistence data were not available in the LMS. Instead school administrators were able to run persistence reports to be used as the source of persistence data.

DASHBOARD GENERATION

The visualizations for the dashboard were created using the chart class available in the .NET Framework. This class allows ASP.NET applications to generate charts on the fly from data found in the database. The dashboard graphics depicted in *Figures 1 - 4* were displayable on a web page.

DASHBOARD DISPLAY

To access their dashboard, students in the experimental group were given a link in the LMS. The unique URLs contained a random number assigned to each student that was used to display his or her dashboard page. The application used this unique identifier to query the database, providing the necessary data and generating the dashboard web page. Upon loading, the web page displayed the indicators based on the most recent data load.

INSTITUTIONAL REVIEW BOARD

Institutional Review Board (IRB) approval was granted by NSU and the participating university for this study. Because student academic data (final grades) were collected, permission from students was required. A consent form was provided for students in the study courses. Sixty-nine students submitted the informed consent form; however, some of the students who signed the form dropped from the course or did not participate. The dataset used represented 64 students out of the original 69 who consented to be in the study.

SAMPLE SELECTION

A total of nine class sections were used in the study with five different courses from different levels (100-level, 300-level, and 400-level) and seven different faculty members. A total of 64 students participated in the study. The table below shows the number of students who participated in the study and completed their courses.

EXPERIMENT AND DATA COLLECTION

The study was conducted over an eight-week session in the nine classes. A link was added to the home page area in the LMS for each student in the experimental group. Each student was only able to see their own link. Faculty were able to see all the links for students, but were asked not to click on the link to prevent a false count of the usage.

At the end of the eight-week session, data from the experimental and control groups were retrieved from the hosted database and stored locally. Persistence data, not available via the LMS, was requested from school administrators.

ANALYSIS AND PRESENTATION OF DATA

The data from the LMS were extracted using the API provided by the LMS developer and were stored in an MS SQL Server Database on the Azure Cloud Platform. From there the data were imported into a local MS Access database so that ad-hoc queries could easily be performed. Persistence data were provided by the institution participating in the study and added to the MS

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Table 1: COURSES AND PARTICIPANTS

1980-2016						
Course/Section	Instructor	College	Level	Subjects		
				Experimental	Control	Total
Introduction to Engineering Technology and Information Sciences/A	RF	EIS	100	4	4	8
Introduction to Engineering Technology and Information Sciences/B	LF	EIS	100	5	4	9
Introduction to Engineering Technology and Information Sciences/C	LK	EIS	100	3	3	6
Introduction to Engineering Technology and Information Sciences/D	GC	EIS	100	3	3	6
Introduction to Engineering Technology and Information Sciences/E	GC	EIS	100	5	5	10
Subgroup Total: Introduction to Engineering Technology and Information Sciences		EIS	100	20	19	39
Logic and Design/A	SP	EIS	100	4	5	9
Business and Communication/A	WW	BAM	300	2	1	3
Project Management/A	MB	BAM	400	4	3	7
Human Resource Management/A	WW	BAM	400	3	3	6
Total All Courses				33	31	64

Access database. The various measures for each student were then consolidated into an Excel spreadsheet. The data included the number of dashboard views, total number of posts, posts to instructor, posts to peers, average word count, final grade, and persistence. The data were then imported into Statistical Package for the Social Sciences (SPSS) for data analysis.

When analyzing data with a single independent variable and multiple dependent variables, MANOVA is an appropriate statistical tool. The independent variable was student access to the dashboard (yes or no). The dependent variables were the total number of posts, posts to peers, average word count, and final course grade. The analysis attempted to determine whether there was a statistically significant difference in the measures between the experimental group and the control group. Because MANOVA produces values for each interaction, it can uncover

correlations between the dependent variables. This technique was used by Farag (2012).

Persistence was analyzed using a Chi Squared analysis that is appropriate when determining if there are non-random associations between values that represent categorical data (Rovai, Baker, & Ponton, 2014). In this case, the number of students in the experimental and control groups that attend class in the following session were compared. This statistical technique has been used to analyze the results of using different protocols in educational settings (Zydney, DeNoyelles, & Kyeong-Ju Seo, 2012).

SUMMARY

The researcher explored the impacts of student facing dashboards on student participation, performance, and persistence. A dashboard application was developed that used data from the LMS to visually show students how their

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activity in the course compared with the activity of their peers. Student activity was measured during the study including number of posts made, number of posts made to peers, average word count, and final course grade. Persistence data were also gathered by the school and made available for the study. Data were processed and analyzed in SPSS to determine whether the use of the dashboard had any impact on students.

RESULTS

DESCRIPTIVE STATISTICS

Table 2 shows the descriptive statistics for the study group.

Table 2: DESCRIPTIVE STATISTICS

	<i>Number of Posts</i>	<i>Word Count</i>	<i>Percent Posts to Peers</i>	<i>Final Grade</i>	<i>Persistence Rate</i>	<i>Dashboard Views</i>
<i>Group (N)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M</i>	<i>M</i>	<i>M (SD)</i>
E (33)	27.06 (14.517)	93.80(40.978)	58.84 (.243)	75.18(28.944)	72.7%	11.91 (15.302)
C (31)	24.45 (14.196)	107.10(61.637)	54.28 (.253)	77.83(25.252)	74.2%	n/a

MANOVA RESULTS

MANOVA was used to answer the following research questions. Q1: How does student participation differ between students that have access to a peer activity dashboard and students that do not have access to the tool as measured by frequency and length of posts? H1: Members of the experimental group will have significantly greater participation in online discussions compared with the control group as measured by the number of posts written during the duration of the class or the average word count per post.

Q2: How does student performance differ between students that have access to a peer activity dashboard and students that do not have access to the tool as measured by final student grade? H2: Members of the experimental group will have significantly better performance in the class compared with the control group as measured by overall class score

The Wilk’s Lambda test was chosen for the results of the multivariate test. The results indicated no significant differences between the experimental and control groups ($f(4, 59) = .947, p = .443$; Wilks’ $\Lambda = .940$; partial $\eta^2 = .060$). Based on this analysis, the hypothesis that there will be significant differences in measures of participation or performance, research questions 1 and 2, between the experimental and control groups was rejected.

CHI SQUARED TEST RESULTS

Chi Squared analysis was used to answer research question Q3: How does student persistence differ between students that have

access to a peer activity dashboard and students that do not have access to the tool as measured by continued enrollment in the subsequent eight-week session? H3: Members of the experimental group will persist at a significantly greater rate than those in the control group as measured by the enrollment and attendance in subsequent courses.

Of the participants studied, 72.7% of the experimental group persisted into the next session (or graduated) and 74.2% of the control group persisted into the next session. The results are ($\chi^2(2) = .960, p = .619$). This is considered not significant so the hypothesis that there will be significant differences in persistence rates between the experimental and control groups was rejected.

CONCLUSIONS

The hypotheses regarding dashboard impact on participation (Q1, H1) and performance (Q2, H2) were rejected. Based on the results of this study, there does not appear to be any significant impact of the dashboard on measures of participation as measured by number of posts and average word count per post, or on student performance as measured by the final grade.

The hypothesis regarding the impact on persistence (Q3, H3) due to dashboard access was rejected. The results did not show a significant difference in persistence when students have access to the dashboard tool compared with a group of students that did not have access to the dashboard tool.

LIMITATIONS

While there did not appear to be a significant impact in this limited study, the results are not conclusive. For a school of this size, a sample size of approximately 380 students would have yielded a 95% confidence level. The sample size was relatively small, and the study sample was comprised solely of voluntary participants. The results do not necessarily depict the nature of the overall class, as only a small subset of students in each course agreed to participate in the study. The number of courses as well as the number of participating faculty were also limited due to time and resource constraints.

IMPLICATIONS

This study represented an early attempt at exploring the use and impact of student facing dashboards. While other studies have focused on dashboard design, as well as faculty and student

feelings about dashboard use, few studies have examined the impact on specific educational outcomes due to the use of dashboards. The results did not indicate a significant impact of dashboards on participation, performance, or persistence. However, the results were not conclusive due to the limitations described. Further research is needed to determine why no effect was seen when earlier research suggested that there should be an impact on students, and this study can serve as a proof-of-concept and as a model for larger studies.

RECOMMENDATIONS

Further research into dashboard impact should be considered. To overcome the limitations in this study, it is recommended that sample size be increased. In addition, where possible, entire classes should be included rather than only including volunteers. This study included small samples of students from different courses and at different levels in their program of study. More useful information may come from studying larger groups of more similar students. This study was also limited to a single eight-week session. Longitudinal studies that follow students over time may yield patterns that a single study may not be able to uncover.

This study serves as a proof of concept to explore the development, use, and impact of dashboards. There is still great interest in understanding and improving student participation, performance, and persistence. Further studies can build on what was learned, incorporating more robust samples to better understand the impact of dashboards on student behavior.

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A.I. INFLUENCES ON PRACTICAL PRETENDING, ROLE PLAYING, AND ESCAPIISM THROUGH SIMULATIONS IN THE CLASSROOM

TIM HIBSMAN & LYDIA ROSE
COLLEGE OF BUSINESS & MANAGEMENT
& KENT STATE UNIVERSITY

Author Note: Tim Hibsman is a visiting professor at DeVry University and Indiana University of Pennsylvania and Lydia Rose is a professor at Kent State University

ABSTRACT

Educational practices of the future are poised to incorporate practical pretending, role-playing, and escapism simulations utilizing artificial intelligence (A.I.), virtual reality

(VR) simulators and gaming apps to enhance learning while still meeting institutional ideological goals of higher education. The balance of satisfying the “wants” of students and meeting institutional ideological goals may be enhanced by utilizing practical pretending along with AI and VR technology. Students can engage in learning skills and appreciate higher level ideological goals of being an educated individual. The elements of escapism are explored as an engaging tool to role play and learn differently within the education system without the traditional demands of school work. AI technologies, VR simulators, and simulation games create a unique opportunity for role-playing scenarios where the student must implement and expand their education to advance. The more motivating element in education may be, “What level did you reach in the simulation?”

Correspondence regarding this article should be addressed to Dr. Hibsman at thibsman@devry.edu

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James Baldwin (2008/1963) in speaking to teachers, presented the paradox that the whole process of education occurs within a social framework and is designed to perpetuate the aims of society; but as students become educated, they begin to question those aims. Today, students, along with parents, expect education to prepare students with a means to earn a living within a chosen career. The latent functions of education to which Baldwin (2008/1963) refers includes becoming a productive member of society. This has manifested itself into the notion of education preparing students for the workforce. Since the 1970s, the academic environment has been challenged with teaching useful information and skills whereby education is the necessary fodder for “success” in the workforce (Beaumont, 1996) and where educators should be concerned with preparing students for a career (i.e., Collins, Knotts, & Schiff, 2012). Student motivation to learn is then placed on the institution to provide an engaging educational environment. It is in this sense that we speculate that artificial intelligence (AI) in classroom has a future in providing a highly engaging educational environment where students may pretend to engage as active professionals utilizing and continually learning relevant knowledge and skills within the classroom; we call this “practical pretending.” A form of practical pretending is role playing. The engaging classroom is essentially designed to be

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a form of escapism from the drudgery of a static, boring assignments in which the mind tends to reject or wander.

As a student proceeds through the educational process, the curriculum is typically designed to provide greater challenges as students near graduation. For example, basic writing skills are designed to be altered in higher level courses to fit a changing dynamic and/or an environment that is relative to the students' future (i.e., business proposal, research proposal, etc.). The specificity and guidance necessary for practical pretending, role playing, and educational escapism can be enhanced utilizing AI. In particular, AI has a significant advantage when it comes to trial-and-error learning by allowing both the self and the imagined self (perhaps an avatar) to participate in activities that may not necessarily result in a "win." B.F. Skinner's studies in the 1960s emphasized the positive influence to learning that enhances student success, focusing on presenting a positive learning environment that focuses on goal attainment and positive self-regard (Aspy and Hutchins, 1972). Aspy and Hutchins (1972) found that when teachers focused on goal attainment rather than on personalized critique, learning was enhanced. While issues of preserving one's self-esteem and maintaining a positive learning environment can sometimes be conflicting, there is little doubt that the best way to succeed is to practice a new skill and learn from one's own experiences. However, failing an assignment or a class can have a huge personal, financial, and temporal impact on students, especially when their peers might have succeeded at the same task. Instead of being put on the spot in front of a teacher or an entire class, the trial-and-error method of learning within a computer simulation can be much less intimidating, and much less damaging to the self-esteem of the student, particularly if AI tech, simulators, and games are designed to challenge students at a low level until skills are perfected and they are allowed to "level-up."

The trial-and-error learning in the video game environment is prevalent and dominant as well as expected by those that play video/online games. For example, in puzzle games, the first

time interacting with a puzzle, one may not realize which strategy to use to be successful. Puzzle games, text-driven adventure games, and even story-based games utilize the trial-and-error method of learning through an AI system. The AI system allows the student to experiment with new experiences and learning in a semi-private and hence relatively judgement-free environment. If the outcome is not desired, one can "restart" the game or level within the game to pursue a different outcome.

Currently, AI games and augmented reality games are typically utilized to escape the stress of school, work, and/or families with relatively limited advantages to success in education and the player's chosen career field. Often escapism is seen as negative and is an activity that takes one away from facing and dealing with the pressures of life. Probably the worst form of escapism is one that is damaging, such as drug abuse, self-harm, or self-induced isolation. Tuan, (1989) suggests that escapism is a survival mechanism typical of humans. The academic community is already involved in providing counselling and assistance to students, as well as staff, faculty, and administrators, because of the high level of stress within the educational environment.

We propose that AI and virtual reality in educational games and simulations can provide useful escapist activities while providing an enhanced, engaging learning environment while providing accountability for meeting learning objectives. Part of the educational process could be to teach students how and why they implement such practices as role playing and practical pretending as forms of escapism to meet academic and personal goals.

Utilizing AI simulations and games in education also allows for the possibility of data gathering. Evidence-based outcomes help schools (and the students themselves) to determine where strengths and weaknesses exist within themselves and the curriculum. Data on where one has leveled out in an AI simulator or game can provide guidance on the type of classes and subjects in which students should enroll. The data gathering could provide much more focused information

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that will be beneficial to student placement and course design needs. Many universities and colleges provide some type of open enrollment to students. However, student success can be negatively affected if the student does not have the basic skills for a particular course. Utilizing AI style simulators and VR games prior to enrollment can further prepare students by helping to determine specific courses as well as the manner (online, hybrid, face-to-face) in which those courses are to be taken.

Time (temporal resource) is one of the most valuable resources, especially for teachers who have only a limited time per day and academic year to meet the annual objectives. AI can easily automate some of the basic activities in education. Attendance used to be a time-consuming task of reading off all the names in the class every single day. Now as students walk through the door they sign in or maybe scan their ID badges to register their attendance. As the bell rings and class begins, attendance is already done. Not only is grading a time-consuming task, but just the task of entering grades into a grade sheet for multiple students for multiple assignments on multiple days can be better spent engaging students. Many of the Learning Management Systems (LMSs) or online learning platforms already incorporate this feature. Multiple choice tests and quizzes are automatically graded, inputted in the gradebook and provide feedback on missed questions. Someday AI tools may be able to grade essay exams and provide pertinent feedback instantaneously.

AI technology in the classroom can enhance overall inclusion of students through simulations that incorporate practices such as practical pretending, role playing, and escapism. The educational possibilities of including augmented simulations, intelligent tutoring systems, and virtual haptic simulators can enhance educational teaching strategies such as practical pretending and role playing. Additionally, embracing escapism by utilizing AI technology in the classroom may enhance overall learning motivation as well as reduce the stress of a

zero-sum, temporalized educational environment of passing/failing that is detrimental to student success. We will tackle these issues by first exploring the role of practical pretending, then role playing, and lastly, we will argue for the importance of escapism as a tool/practice to enhance learning.

PRACTICAL PRETENDING

There are many difficulties and barriers to implementing a more active learning strategy or instructional change. The practical pretending simulations may sound like a good idea, but there are various factors that need to be considered during the design phase. Some of the common barriers to instructional change include the powerful influence of the educational tradition and the sense of what it means to be a faculty member. For most people, there is discomfort and anxiety when doing things differently than expected. Additionally, there is typically limited time and incentives for faculty to change if no temporal structure is put into place. Lastly, there are certain specific obstacles associated with the use of active learning strategies that incorporate practical pretending. Bonwell (1991) highlighted the following as obstacles: 1) The difficulty in adequately covering the assigned course content in the limited class time available, 2) a possible increase in the amount of preparation/set-up time, 3) the difficulty of using active learning in large classes, and 4) a lack of needed materials, equipment, or resources.

In many disciplines within the liberal arts, there is strong belief that the human connection is necessary for these disciplines.

Human interaction lies at the heart of the disciplines in these areas, yet instructors too often expect students to acquire relevant knowledge in a learning environment with little interactive content. While logistic necessity (large class sizes) dictates that the lecture format will likely continue to be important in the learning process, this only increases the need for balancing passive with active learning wherever and whenever the possibility arises. (McCarthy & Anderson, 2000, p. 281)

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When a class requires group interaction, why does the group have to consist of real humans? A VR group simulation can change the participants in the group interaction to fit the class or instructor objectives. Group interaction is not limited by who is available. On the contrary, the virtual group members can be specifically designed to focus on certain skills such as leadership, conflict resolution, and task management. The traditional teacher may see lectures and tests as the no-nonsense form of learning. However, the widely accepted online use of video lectures flips the classroom and provides time in the classroom for simulations. Students can engage in AI simulations and computer-generated activities outside of class time. Traditionally, computer simulations were seen as a form of video games with limited educational value. In his 1961 book, *Man, Play and Games*, Roger Caillois focuses on the difference between reality and play. “In effect, play is essentially a separate occupation, carefully isolated from the rest of life, and generally is engaged in with precise limits of time and place [...] One plays only if and when one wishes to. In this sense, play is free activity. It is also uncertain activity. Doubt must remain until the end, and hinges upon the denouement.” (Caillois, 1961, pp. 6, 7) Combining play and education is now the challenge. How do you make education fun? Can you make education so fun that students will volunteer for it? Many summer camps, including Space Camp and others focusing on cyber-security, computer programming, engineering, acting, and ROTC, offer career simulations that draw in youth.

In his study comparing play to work, Caillois (1961) attempts to harness the positive aspects of games for instructional purposes. He asks at what point is using games for educational purposes violating or corrupting some of the basic principles of games—that play is free and voluntary, nonproductive, and separate from the real world? In other words, play differs from work. Caillois (1961) claims that a game one is forced to play ceases to be play. A classroom that forces a game using AI or VR loses the benefits

possible in a motivating, interactive learning environment. “Huizinga (1950) argued that the ‘fun element’ underlies the intensity, absorption, and power of games and that play is the direct opposite of seriousness” (Garris, Ahlers, & Driskell, 2002, p. 459). In this sense, student choice in selecting and playing simulation games for classroom purposes should maintain an element of freedom and choice in terms of which game to play and when to play.

Practical pretending, whether in the classroom or a game, allows students with all kinds of intellectual and physical abilities to be included. While we might argue that once practical pretending is in the classroom it loses the element of fun, we can explore why fun is lost. Perhaps it is because the student, while pretending, is in fact still identifying as themselves in a situation in which they are being judged/graded. It is in this sense that we highlight the significant impact that role playing can have in the practice of practical pretending.

ROLE PLAYING

Throughout their daily interactions, most people play different roles and different characters. In the stereotypical scenario, at home one might play the role of the provider, the nurturer, the housekeeper, the entertainer, the gardener, the player. At work one might be the hardworking employee or responsible boss. On the team one might be the playmaker, pinch hitter or player-coach. Each role takes on different characteristics. Goffman (1959) describes role taking as follows:

When an individual plays a part he implicitly requests his observers to take seriously the impression that is fostered before them. They are asked to believe that the character they see actually possesses the attributes he appears to possess, that the task he performs will have the consequences that are implicitly claimed for it, and that, in general, matters are what they appear to be. (p. 20)

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As we venture into simulation learning activities we anticipate a certain type of behavior from certain professionals. One would expect a doctor to be serious when presenting a prognosis. When a police officer is called to a house for a possible domestic violence concern, it would be norm-breaking to show up in shorts and a Hawaiian shirt. Goffman (1959) describes the necessity of

We often expect, of course, a confirming consistency between appearance and manner; we expect that the differences in social statuses among the interactants will be expressed in some way by congruent differences in the indications that are made of expected interaction role. (p. 25) consistency in appearance and dress as follows:

Waskul and Lust (2004), describes the impact of role playing on interactions:

In fantasy role-playing games, participants collectively create and play fantasy personas in an imaginary universe by using a vast system of rules that function as guidelines for make-believe action and interaction. Consequently, role-playing games obligate participants to occupy a liminal role located in the boundaries of persona, player, and person. (p.338)

One of the most popular summer camps is Space Camp in Huntsville, Alabama. The camp provides residential programs in space, aviation, and robotics which are designed to promote science, engineering, aviation, and technology. Student trainees cultivate teamwork, leadership and decision-making skills through simulated missions. Not only are students surrounded by space, aviation and defense artifacts, but they interact in a continuous role-playing environment utilizing NASA, Air Force, and Navy simulators. This gives students an opportunity to totally immerse themselves in a learning environment that includes their activities, clothing (flight suits), food, and housing.

Some careers have an increased risk factor. Imagine the danger involved in such professions as police officer, fire fighter, electricians, emergency medical technicians or other

emergency first responders. A VR simulation provides an opportunity to experience some of the most dangerous aspects of the career in complete safety. Davidson (1984) argues that “role plays, simulations, and games can be used to help students experience ‘stressful, unfamiliar, complex, or controversial situations’ by creating circumstances that are momentarily real, thereby letting students develop and practice those skills necessary for coping.” (p. 91).

Some companies support Take Your Child to Work Day . There are several reasons for this activity: build morale, show family support, and show a child what a parent does for them. It also is kind of like an internship day. It shows the child what a day at work really involves. It is an opportunity to show an element of reality of what work means. A role-playing simulation works in a similar fashion with similar benefits.

A number of careers already have AI simulations via phone/tablet applications. Table 1 lists careers in which games have been designed to give the player knowledge and skills regarding that particular career.

Table 1: CAREERS WHERE PHONE/TABLET APPLICATIONS ARE AVAILABLE TO LEARN AND EXPERIENCE MORE ABOUT THE FIELD

Aviation (pilot, navigator, ground crew, etc.)
Carpentry
Culinary (chef, waitress, manager, etc.)
Dental (hygenist, front office, dentist)
Electrician
Hairstylist
Medical (physician, nurse, pharmacy technician, EMT, anesthesiologist, chiropractor)
Musician
Tattoo artist
Welding

Additionally, role playing games that emphasize some type of practical pretending can significantly enhance the learning environment. AI games that incorporate augmented reality, haptic sensation, or an Intelligent Tutoring System (ITS) can be ideal to meet classroom

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objectives by bringing role playing and practical pretending to the forefront of learning.

Augmented reality takes a normal environment and adds a level of virtual reality to experience a simulated environment (e.g., Pokemon Go and Harry Potter: Wizards Unite). Augmented reality is the integration of digital information in a designated environment in real time. In virtual reality the entire environment is artificial. Augmented reality preserves and uses the existing environment and overlays new digital information. These kinds of simulations are enhanced with role playing.

Simulations that incorporate haptic sensation increase the level of learning by utilizing multiple senses. More and more of these haptic sensations are being integrated into VR simulations. One common device is the gaming chair. The basic ergonomic elements of the chair include: the chair mechanism, adjustable seat height, lumbar support, breathable material, adjustable armrests, swivel, and system compatibility. In addition to these, the technical features are what makes-or-breaks the experience. Some of these features are: vibration mechanisms, wireless capabilities, built-in steering wheel or joystick, three-zone vibration, subwoofer, headphone jack, volume and bass controls, and pedal peripherals.

Many controllers have a vibration sensation. Headsets have automated volume controls. New gamers' gloves can provide heat and pain sensations. Imagine that one is in a simulation and puts their hand in fire—the fingertips would suddenly get hot. Imagine taking a syringe and accidentally stabbing yourself in a simulation and feeling a prick sensation. The games start to simulate the real-life sensations thus providing a practical and memorable experience. If augmented reality and haptic sensation is combined with Intelligent Tutoring Systems (ITS), the level of practical pretending and role playing to enhance learning would be sensational. "An intelligent tutoring system (ITS) is a computer system that aims to provide an immediate instruction or feedback to the learner" (Psotka, 1988, p.3). The purpose of an ITS is to provide effective learning platform using a variety of

computer technologies. Corbett (1997) focuses on the element of "sustained reasoning activity" when describing ITS:

The goal of intelligent tutoring systems (ITSs) would be to engage the students in sustained reasoning activity and to interact with the student based on a deep understanding of the student's behavior. (p.852)

The challenge of sustaining reasoning activity is to keep games as games and not making them undesirable work dreaded by students. It is in this sense that we argue that AI influences on practical pretending and role playing educational games and simulators should embrace the element of escapism.

ESCAPISM

Traditionally the term escapism is associated with finding a distraction from life's unpleasantnesses through entertainment. The stresses of daily life contributes to the practice of seeking out distractions or removing oneself from stressful environments. Some of the most common forms are sleeping, eating and exercise. By sleeping you can simply ignore the pressures of the daily life and at the same time, hopefully, wake up refreshed. Eating is often enjoyable because of the elaborate sensory experiences, but some over-indulge. Exercise often involves changing the environment and physical activities that also involves multiple sensory experiences. At a gym one encounters new people and surroundings, as well as monitors or screens

to watch while working out. The passive form of escapism is being an observer; examples include watching a movie or reading a book. If the participant has a vivid imagination these passive forms can be quite rewarding. The common notion of "Get Lost in a Book" is easily found on memes and posters in our culture. The active form of escapism provides the participant a direct interaction. Video games are a primary example, but with VR simulations, more dimensions and features are creating a more effective and beneficial interaction. "...[A]ctive escapism provides the benefits of affirmation and empowerment through projective fantasy

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(i.e. role-play) and presence (i.e. immersion into a mediated reality)” (Kuo, Lutz, & Hiler, 2016, p. 499).

Movies and video games are becoming more and more popular forms of entertainment and escapism. An element of escapism is creating an alternate reality where players can immerse themselves to the point of forgetting or distracting themselves from their real lives. Historically, during hard economic times, entire populations of people have looked to escapism as a form of coping and dealing with their depressed state. In *Culture and Politics in the Great Depression*, author Alan Brinkley states,

In the radio schedules of the 1930s most of the programming was pure, escapist entertainment: music, variety shows, adventures, comedies. And the movies of the 1930s, with a few notable exceptions, were films that consciously, deliberately set out to divert people from their problems. (Brinkley, 1999, p. 10)

In 2008, at the beginning of the last major recession, social games like *Farm Town* and *Mafia Wars* and social gaming like *World of Warcraft* and *Second Life* served as virtual reality escapes from daily economic hardship. Players could go online to a virtual cafe and interact with friends, relatives, and other people in make-believe worlds where they could plant and harvest crops or create a mafia family and fight other mafias, or merely have a cup of virtual coffee.

These forms of entertainment “consciously, deliberately set out to divert people from their problem” (Brinkley, 1999, p. 10). Instead of negative self-perceptions and the idea of running away from problems, students should be encouraged to run toward different goals. Run toward dreams. Run toward interests. Run toward new adventures with just the expectation of learning something that may inspire and captivate you.

People engage in their favorite activities for many different reasons. The present research suggests that one of these

reasons is to unwind from a constant monitoring of the self. There seem to be at least two ways of approaching the escape state, which in turn have different determinants and consequences. The two-dimensional model of escapism proposes a distinction between self-expansion (promotion focus) and self-suppression (prevention focus) in escapist engagement. (Stenseng & Kraft, 2012, p. 34)

Calleja (2010) describes the connection between games and escapism:

Digital games are often viewed as being inherently escapist on two counts. First, they are the shining proponents of cutting edge virtuality, embodying the alluring unreality of something erroneously conceived of existing on the other side of a screen. A second reason for associating games with escapism relates to a common perception of play and games as opposite of seriousness and work and somehow set apart from the ordinary, everyday life. (p. 335)

Escapism typically is inspired by several conditions. The current situation is lacking in some way and there is a desire to change the current situation. Ideally, the situation is good, but one wants to make it better, such as by getting a promotion or a house instead of an apartment. However, a more dramatic change might be desired—a new career, new friends, or new city. These conditions may lead one to escape to an imagined world to experience and share the emotional sentiment of a well-constructed interaction (i.e., movie, book, story, game) with a desirable outcome.

John Limon (2016), in *Escapism; Or, the Soul of Globalization* describes three rules of escapism: “[A]ll problems must be solved by personal relations, the escapism must be self-conscious, this self-conscious escapism must be muddled with an actual escape” (p. 51). The participant must take an active role in the simulation with a clear understanding that there is a beneficial

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goal at the end. The actual escape and virtual experience is unique to each participant and the problem-solving skills are worthy of analysis and sharing with other peers. In the astronaut simulations at Space Camp, multiple students are all in the same simulation, but they have different roles. At the end of the simulation they share their individually unique experiences as a mission specialist, mission commander, pilot, payload specialist, or flight director/mission control. Each perspective provides a unique look at that same simulation from different angles.

Schools themselves often provide children an escape for from their home lives. School provides friends, teachers who care about them, and a safe environment. Taking it one step further—the classroom takes the students from the entire student body and narrows the environment to just children of the same age. Taking it further—a group assignment creates an intimate interactive learning environment. Finally—an individual assignment provides the solitude of a self-awareness learning environment. The individual assignment does not have to contain the solitude of loneliness of a single individual. The individual assignment in the VR world may include multiple characters, sensations, and interactions.

Many athletes imagine that they are competing at a much higher level. In fact, some coaches tell athletes to envision themselves in the Olympics or playing at a professional level. This escape to a higher level often helps the athletes to push themselves to new heights. Also, the encouragement of the fans, the hometown crowd, or family also pushes the athlete to do the best that is possible.

What if youth and young adults could build their own community and populate it with their own buildings, people, animals, and creatures? *Minecraft* and *Farmville* specialize in this area. *Civilization* is such a games first developed and released in 1991 and most recently released in

its fifth edition in 2016. Utilizing AI technology and simulation allows these games to include augmented reality and haptic sensation. On the educational front, such AI games could include an “advisor” as a personal teacher, mentor, or tutor to learn traditional classroom theory in a simulated environment and escape the drudgery of merely reading and writing, reviewing text. This would allow the benefits and purposes of escapism to enhance the learning environment by utilizing entertainment and fun. “Escapist” entertainment’s essential purpose is to draw us away from our everyday troubles, and sometimes, to help us to fantasize ourselves as better, more important, and better off than we really are” (Longway, 1990).

Ultimately, we argue that if games and simulators embrace the ideals of escapism, not only will practical pretending and role playing be a learning environment, but sustained engagement will be enhanced.

CONCLUSION

Practical pretending, escapism, and role playing are all logical practices with practical outcomes. This article focuses on the ways that AI technology in the classroom has the potential to enhanced overall inclusion of students through simulations that incorporate practices such as practical pretending, role playing, and escapism. We argue that including augmented simulations, intelligent tutoring systems, and virtual haptic simulators can enhance educational teaching strategies such as practical pretending and role playing. Embracing escapism in the development of AI technology in the classroom may enhance overall learning motivation as well as reduce the stress of a typical educational environment. Ultimately, AI and VR influences on practical pretending, role playing and escapism can highly enhance student success, merging concepts of play and work for the learning environment.

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SUPPLY CHAIN MANAGEMENT CIRCLE OF SUPPORT

FELICIA A RINEY

COLLEGE OF BUSINESS & MANAGEMENT

Author Note: Felicia Riney is a visiting professor at DeVry University

ABSTRACT

This article is based on my experience working as a member of a supply chain in the production industry. The ultimate supply chain encompasses all members involved in the final product (the initial supplier to the customer) and maintains an open flow of communication (Min, Zacharia, & Smith, 2019). In this article, I will present the supply chain circle of support as a method for augmenting communication and improving the supply chain flow. The model can enhance the operational flow of internal and external members of the supply chain. I will show the groups of a supply chain, internal and external, and who the members are in those groups. The groups make up the operational components of the supply chain circle of support. Every member of the groups has certain functions. When each individual member performs the functions, a continuous flow develops that leads to enhanced production, reduced waste, and increased revenue. The strength of the supply chain circle of support is created through effective and open communication. Improvements in technology have made it easier to establish communication lines throughout operations. The supply chain circle of support and open communication enable company leaders to reach the end goals of supply chain management, which are productivity and customer satisfaction.

Correspondence regarding this article should be addressed to Dr. Riney at friney1@yahoo.com

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As modern-day leaders broaden their perspectives and expand globally, supply chain management becomes more complex, and emerging methods are needed to maintain the supply chain flow (Choi, 2018; Daehy, Krishnan, Alsaadi, & Alghamdi, 2019). The ultimate supply chain encompasses all members involved in the final product (the initial supplier to the customer) and maintains an open flow of communication (Min, Zacharia, & Smith, 2019). Supply chain management focuses on the continuous flow of processes that promote the effective communication and relationship-building required when producing a product.

This article explains two methods that promote the supply chain flow. One method that promotes the flow of processes is the circle of support, which can be applied to the supply chain. A circle of support provides a visual guideline for the members involved in the supply chain process. It also illustrates how the process flows from start to finish. The end goals of supply chain management are productivity and customer satisfaction. Any interruption in the flow can cause delays, loss of revenue, and loss of customer satisfaction. Establishing a method of operations that can be monitored and adjusted is important for success and for developing a flow. Another method, maintaining communication channels and visibility, keeps everyone moving in the same direction. A circle of support and a heightened communication method are two tools for keeping the supply chain flow stabilized.

SUPPLY CHAIN MANAGEMENT COMPOSITION

As for supply chain management's development and growth, much effort has been made to improve safety, environmental sustainability, and quality. In recent literature reviews, there

is not enough current research on tools about supporting relationship-building in the supply chain. The literature also lacks information about the delicate balance and bond that exist between internal and external members of the supply chain. Relationship-building is essential because the various groups must work jointly to make the supply chain process flow smoothly. The process consists of internal and external influences

on both the inflow and outflow channels of a company. The internal members are those who work directly within the company. The external members are those who work outside of the company, mainly for other organizations.

The basis of this article is to express how relationships and key integration benefits are improved when using a supply chain circle of support model. Using the model enhances communication and relationship-building among the members in the supply chain. The concept of a supply chain circle of support will be presented as a tool to help integrate all internal and external members involved. The circle of support is an integrated flow of processes that clearly displays how information moves from one member to another, which helps manage production and additional business processes. A tie between communication and the circle of support will also be shown as an effective strategy to use in supply chain management.

TRENDS IN THE WORKFORCE

My background in accounting/business is built on 22 years of work experience and 27 years of educational development. My work experience covers many industry types, such as corporate, governmental, private industry, manufacturing, regulatory, and academia to name a few. My focus on supply chain management functions cover 14 of the 22 years, and I have been teaching supply chain-focused courses for almost two

of those 27 years. One area of opportunity has continued to stand out: the need to enhance communication in the supply chain.

Supply chain communication is internal as well as external. Internally, there are various departments that may exist in a company, such as sales, customer service, planning, production, or logistics. Externally, there are various groups, such as suppliers, customers, carriers, or outsourcing agents. If communication does not exist or is weak anywhere within the supply chain, companies can suffer. The lack of communication within the supply chain leads to inefficiencies and weaknesses, while information sharing provides integration across the chain, creates beneficial collaboration, and helps companies survive (Raweewan & Ferrell, 2018). An example of inefficiency is customer service members not updating the order system with an emergency order or notifying production of the urgency of the order. This behavior can cause the order to be produced late. An example of integration across the chain is the procurement manager working closely with a supplier to get an emergency part delivered, which allows production to continue as planned.

BUILDING RELATIONSHIPS

As business strategies, globalization, and global competition increase in complexity, the need for a tenacious relationship between members of the supply chain is critical (Raweewan & Ferrell, 2018). One technique that can be adopted is a supply chain circle of support that focuses on internal and external communication processes. The circle of support should be the core of the organization that provides an extension to the internal and external supply chain branches. The branches ultimately enhance internal and external production processes. Enhancement of the supply chain led to my research on communication within the supply chain and continued research on the circle of support.

The components of a circle of support can vary, but the focus is the same. The circle provides a continuous flow of standard processes among members working towards a common goal. In her article, K. Robinson (2010) talks about a

circle of support in reference to an individual business owner starting and running his/her own business. She has some good thoughts about a new business looking to adapt a circle of support or to enhance an existing circle of support.

K. Robinson (2010) suggested that a circle of support consists of trusted advisors, people committed to the success of the company, individuals with certain expertise, and a group that respects the internal and external members. Those same traits should be in any circle of support.

SUPPLY CHAIN CIRCLE OF SUPPORT

A circle of support is a tool that portrays a strategic plan for customer satisfaction by outlining the resources available from the entry point of the cycle to the end point of the cycle (Strakos & Riney, 2006). I created *Figure 1* to show a visual of a circle of support as applied to a supply chain in the production industry. As a former demand planner in a production organization, I worked daily with the entire production team that encompassed the supply chain members from sales to logistics. I was able to see the communication failures between the internal and external members of the supply chain and the negative effect on operations. Two distinct groups exist within the circle of support, and they have distinct functions: the inner supply chain (ISC) and the external supply chain (ESC).

I created *Figure 2* which shows that both the ISC and the ESC have individual functions: internal supply chain functions (ISCF) and external supply chain functions (ESCF). In my former production organization, each group had specific tasks that members were responsible for completing. Some tasks were one-time tasks, but the majority of the tasks were repetitive. Therefore, *Figure B* was created to show the continuous pattern that establishes the flow of the supply chain that keeps operation processes in motion.

The strength of the circle of support lies in the ISC and ESC working in tandem towards a common goal. The common goal is to increase the profitability of those involved as well as heighten customer satisfaction. Working in tandem means each group has to understand

who exists in the groups, the functions of the group members, and who is responsible for the functions. Establishing this basic understanding of roles and duties sets the momentum for relationship-building.

INTERNAL SUPPLY CHAIN GROUPS

Referring to *Figure 1*, the ISC consists of groups such as sales, customer service, planning, production, warehousing, and logistics (packaging & distribution), which are typically seen in a production supply chain. Successful communication within the supply chain begins with the ISC. The ISC establishes the expectations and guidelines associated with operations within the internal groups and among the internal and external groups. Internal communication solidifies the relationship of ISC members by creating a venue for relaying the policies, informing the members, transferring information, building trust, supporting the chain of command, and establishing a respectful environment (Jacobs, Yu, & Chavez, 2016).

INTERNAL SUPPLY CHAIN FUNCTIONS

Figure 2 shows that the functions of the groups in the ISC are continuous in nature. The internal groups must collaborate on decision-making processes and increase knowledge with open lines of communication (Duhamel, Carbone, & Moatti, 2016). The function of sales is to maintain direct contact with the customer and customer service to meet customer needs. The sales person should also continue to grow the customer base. Customer service should work closely with the sales person to understand the desires and necessities of the customer. This opens a path for clear communication so that the customer receives the ordered product on the expected due date. The clear path of communication helps the planner who has to schedule the orders for production. Scheduling is successful when the planner understands exactly what the customer expects. The planner guides the production team on when to produce the product so that it can be staged in the warehouse. The product will sit in the warehouse until the requested delivery date.

Logistics will then proceed to package the product properly and ship the product to the customer. Without a prolific ISC, a business could face risks, negative performance, and a failing supply chain process (Duhamel et al., 2016).

EXTERNAL SUPPLY CHAIN GROUPS

Referring to *Figure 1*, the ESC consists of groups such as suppliers on the front end of the external supply chain and customers on the back end of the external supply chain. Successful communication must flow from the ISC to the ESC. The ESC works within the constraints established with the various partners, which rely on specific communication and understanding by both parties. Continued communication throughout the relationship ensures that the suppliers deliver products on time, and that the customers receive their products on time. Delays are costly and can disrupt the entire flow of the supply chain. Communication between internal and external groups creates collaboration, which is needed to eradicate uncertainty and diminish risk (Duhamel et al., 2016).

EXTERNAL SUPPLY CHAIN FUNCTIONS

Figure 2 shows that the functions of the groups in the ESC are continuous in nature. The external groups must collaborate to secure the flow of resources, capabilities, and information (Duhamel et al., 2016). In order for a business to make a product, it needs supplies, resources, and/or services. Those resources often come from external suppliers. Suppliers have to be dependable and reliable so that a business can produce and deliver products to the customer by the due date. Some customers order products to replenish their stock, while others order products used to manufacture their products. Regardless of the final destination of the ordered product, the customer expects to receive precisely what is ordered by the requested due date. Without a dynamic ESC that is able to adjust to different situations, a business risks operational flaws, networking issues, and a weak external supply structure (Duhamel et al., 2016).

ISCF AND ESCF INTEGRATION

Ivanov, Dolgui, Ivanova, and Sokolov (2018) suggested that disruptions in the supply chain can be caused by the ripple effect (extraordinary risks) or the bullwhip effect (cyclical risks). Integration of supply chain members minimizes risks when the upstream and downstream flows are properly managed (Trowbridge, 2017). The ISCF and ESCF are continuous and flow in a pattern that is free of interruptions because of the tools used in the supply chain process. One tool is open communication. Open communication allows the groups to manage risks that lead to interruptions. Coordinating the integrated communication may require feedback and discussion and the appropriate technical equipment (Jacobs et al., 2016). The integrated communication helps the production team understand that there may be a delay in raw materials. With that information, customer service can contact any customer that may be affected, and the planner can schedule the production of orders accordingly. Logistics can then notify the carrier of a change in the pick-up schedule.

There are other methods that can be implemented into the supply chain to prevent disruptions and enhance communication. Synchronization methods, internet technology, and software programs are ways to stabilize the supply chain processes. For example, point-of-sale systems allow the synchronization of data. In a supply chain, all members receive the same data at the same time (Hanks, 2019). Internet technology allows members to have the information they need immediately. This is important for global supply chains that cross time zones. A web-based supply chain management system provides speed, clarity, and continual availability (Hanks, 2019). One software program for all processes in the supply chain creates clean data. A comprehensive supply chain program builds communication between the functions and various databases (Hanks, 2019). This eliminates the need to manipulate data from one program to another. The appropriate method to use will depend on the structure of an individual company.

TECHNOLOGICAL SUPPORT

Along with an outlined strategy for the flow of processes to enhance communication, effective communication requires appropriate technological equipment and tools. Ingram (n.d.) suggested that information technology is important for business success in the areas of production technology and communication technology. Having the appropriate infrastructure makes communicating much easier. Technology is changing and growing as the internet becomes a normal resource for ecommerce and a tool for progression. Being able to communicate internally and externally through many mediums (such as the internet, email, virtual meetings, and cell phones) keeps everyone connected.

Production technology improves efficiency and increases production, and communication technology is a must for competing in today's industries (Ingram, n.d.). Production technology increases when the functions (ISCF and ESCF) coexist allowing the suppliers and companies to interact and maintain the appropriate levels of raw materials and resources. The companies must also interact with the customers to make sure they are satisfied with the end product. Therefore, the ISC and ESC must be in sync, so that resources enter the supply chain at the supplier entry point and exit the supply chain at the customer exit point. Sometimes coexisting and being integrated means sharing technology with external members.

INFORMATION SHARING TOOLS

Sharable technology exists in various forms that can be directed towards internal use, external use, or internal/external use. One method of sharing information on the inflow and outflow sides of the supply chain is by having accessible software to track shipments. The software can be web-based so that external members can track their product. Managers can then track orders that they place with other companies as well as shipments made to customers. A. Robinson (n.d.) suggested that computerized transportation management systems (TMS) improve efficiencies, reduce errors, provide organization, and drive consolidation. The technology also establishes

board. A method of sharing information internally would be by using tools such as radio frequency identification (RFID). RFIDs improve the inventory tracking process of the supply chain. This can be beneficial to many internal employees, such as managers, production employees, sales, customer service, as well as planning. A. Robinson (n.d.) saw RFIDs as a controlling device for eliminating inventory errors and order errors because of the tracking capabilities of the software.

Finally, social media can be used as a method of sharing information about the supply chain movement. Social media is a communication outlet used by many companies and individuals to share all types of news, updates, and ideas. For companies, this can be an outlet for marketing efforts, branding, or solidifying customer loyalty. A. Robinson (n.d.) thinks social media avenues such as Twitter and Facebook are viable for visibility, communication, product demand, marketing, customer interaction, and for providing supply chain updates. The goal is for companies to implement sharable technology that boosts supply chain communication to the next level.

COMMUNICATION

Communication is the foundation of the circle of support. When used properly, the circle of support can act as a model to manage the flow of information and processes of the supply chain. Here is a scenario of broken internal communication in a company without the assistance of the circle of support. Company A purchased chemicals from Company B in order to produce Company A's products. The chemicals are normally delivered by railcar. On one occasion, due to bad weather, Company B informed the purchasing manager of Company A's procurement department that Company B would not be able to deliver chemical until the following week. The purchasing manager became busy and neglected to inform the mill manager or production manager. He had to rush to the airport for a business trip.

As the purchasing manager was walking out of the office, he told the purchasing specialist to

follow up on the chemical delivery with Company B. The purchasing specialist was not aware of the expected delay, so he planned to follow up with Company B on Monday. Before the production manager left on Friday evening, he noticed that chemicals were low. However, he did not worry because he knew that the railcar would arrive as normal that weekend.

Later Saturday night around 3am, the mill manager received a phone call from the production manager that production was shut down indefinitely. There were no chemicals on site and no expected delivery until the following week. Poor communication caused a flow interruption. Better communication and a flexible supply chain were needed in this situation.

The mill manager immediately called the procurement manager, who called the purchasing manager. The purchasing specialist was blamed for the loss of production. The purchasing specialist was blamed for not following up with Company B even though the purchasing manager did not provide him with all the details needed.

A gap in communication shut down all production leading to loss of revenue. If the purchasing manager had spent five minutes communicating better, the purchasing specialist could have diverted to another form of transportation and had some chemical delivered by truck. This would have allowed production to continue until the railcar shipment became available. A circle of support could have helped this scenario end differently, but a strong communication method has to be part of the solution. The circle of support would have provided guidance on the flow, and a strong communication method would have provided ways to communicate effectively.

COMMUNICATION WEAKNESSES

Weakness in supply chain communication has been known to cause great financial loss across the supply chain and on the inflow and outflow sides of the supply chain. For example, Benedict (2017) stated that weaknesses in communication lead to increased lead times, additional paperwork, negative financial performance, and

unnecessary tasks for both internal and external members. These factors diminish customer value and the customer's trust in the company's ability to manage production. With advancements in technology, there is no excuse for breakdowns in communication.

Technology has grown from pencil and paper, sending correspondence through postal mail, and flying to a different country for a meeting. We have grown to using smartphones, sending emails, and having teleconferences via a web meeting with leaders from all over the world. Instead of saving data on a disc, companies now use web-enabled services, which removes the physical need to hand over a disc. Technology has contributed to supply chain development by providing an outlet for sharing knowledge and ideas, permitting the exchange of commerce, and opening new lines of communication (Saeidi et al., 2019). Without the growth of technology, supply chain growth would still be possible, but maybe not as effective. Without technological advances, communication and collaboration would be slower and perhaps more costly, and the members may appear fragmented (Saeidi et al., 2019). Technology makes processes more effective because it closes the distance gap between members and members' locations and allows supply chain communication to continue without interruptions (Ardalan, 2019).

STRENGTHENING THE SUPPLY CHAIN

A company can use the circle of support to make communication and the supply chain stronger. The leaders of a company must expose the core capabilities that exist in the internal and external supply chain, install technology that opens the communication flow, and direct processes in a logical manner through a circle of support. In my opinion, the manager is a significant driver in the strategic goals of a company. The manager must recognize what resources are available internally and externally, recognize the core capabilities of the company, and understand the flow of their value chain (Monday, Akinola, Ologbenla, & Aladeraji, 2015). Some argue that the value-chain activities that are chosen greatly influence how efficiently the resources and capabilities are utilized (Othman & Sheehan, 2011). The manager

has to consider all factors of the organization in order to make a coherent choice in activities. Once established, the activities should be managed in a continuous flow as offered by a circle of support.

To determine the value of the circle of support, the manager can test the cost effectiveness of the activities to ensure that costs do not increase and that revenue does not decrease once the activities are implemented (Othman & Sheehan, 2011). Increased costs and decreased revenue means the manager should evaluate the components of the implemented circle of support to see if they meet the needs of that specific company. Another indicator is the satisfaction level of the customer. If the circle of support is constructive, the supply chain will experience minimal delays and product deficiencies, meaning that the customers' satisfaction level should increase.

ADDING VALUE

When looking at internal and external members of the supply chain, one value-related activity

is the enhancement of talent that comes from employees and external resources. Competitive advantage can be gained through the strategy of unique and distinct talent that the manager sees in the employees' work behavior (Monday et al., 2015). For example, an employee may be good at multi-tasking and completing tasks. If the manager makes that employee a shift leader, he or she may be able to increase production with the employees currently in the department. This allows the manager to see an increase in revenue from increased production without seeing increased costs because the same employees are used. Therefore, cultivating employees' unique talent base is a strategic move that takes what the company already has and uses it to the max instead of wasting resources and capabilities.

This concept also applies to members of the external supply chain on the inflow and outflow sides. Value exists when raw materials are received, in a timely manner, to allow production and delivery in a continuous flow. Adding value to the external supply chain includes managing the number of suppliers, reducing transportation costs, and outsourcing to the appropriate

partners ("Adding Value," 2017). Having the appropriate supplier means that production will not be slowed by lack of resources. Appropriate resources lead to on-time product delivery to the customer, who will remain loyal. Building that bond with the customer allows sales projections to be made based on customer loyalty. The company can then ensure that products are shelf-ready when needed and that a variety exists ("Adding Value," 2017).

CONCLUSION AND FUTURE STUDY

Strong core capabilities open the door for effective communication among members working towards a common goal. If a strong bond exists between the members of the supply chain and a communication base is established, the performance within the supply chain will be enhanced (Min et al., 2019). Open communication allows obstacles to be turned into opportunities. This article has shown that a developed circle of support provides guidance and needed direction. When the circle of support directs the internal/external supply chain influences, the two components allow the internal and external members of the supply chain to compete on the market as members of one unit working towards mutual dependence rather than as individual players (Min et al., 2019). The supply chain flow is improved, and communication among the members is enhanced. The circle of support is the visible blue print of the supply chain that shows the players and components as well as the communication flow.

For future research, different variables can be analyzed in relation to the circle of support. The variables could include but are not limited to cost fluctuation trends, growth and sustainability enhancement, and alternate process adaptability. Streamlining processes with a circle of support could reduce costs. A supply chain model should be designed with the reduction of system-wide costs as a strategic goal (Daehy et al., 2019).

A stabilized process supports the wise use of resources, which can increase sustainability and growth. According to Monday et al. (2015), an organization's resources increase

competitive advantage and improve efficiency and effectiveness in the market. The steps in the supply chain could change due to unexpected events pushing the members of the supply chain to make adjustments. Even the most successful

companies need flexibility to face supply chain risks that cause disruptions in production (Gouda & Saranga, 2018). The supply chain circle of support is a new avenue for research on effective supply chain tools.

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Figure 1: CIRCLE OF SUPPORT

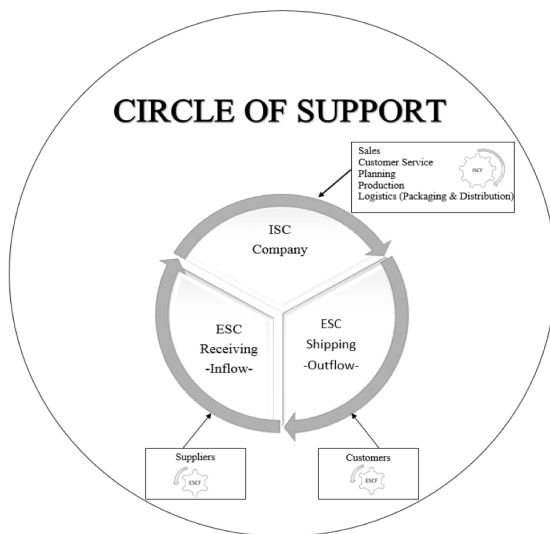
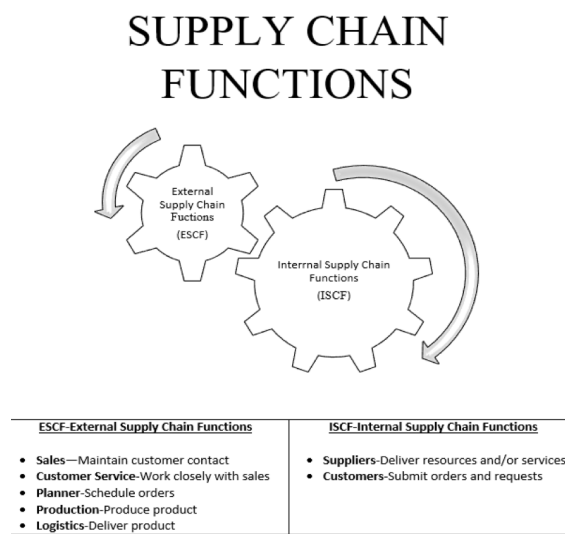


Figure 2: SUPPLY CHAIN FUNCTIONS





COMPARISON OF COP PROCESS OF KNOWLEDGE CREATION AND THEORY U REFLECTIVE PROCESS

DR. JACQUELINE B. SALDANA

COLLEGE OF BUSINESS & MANAGEMENT

Author Note: Jacqueline Saldana is an Associate Professor at DeVry University

ABSTRACT

Communities of Practice (CoPs) are groups intending to solve field-expertise problems (Wenger, 2004) with improved working processes and practices that become a body of knowledge. CoP members accomplish innovation through reflective collaboration. The Theory U proposed by Scharmer (2007) describes similar iterative cycles of reflection-action-reflection to produce new solutions. An analysis using the method of scientific operationalization exposed by Bridgman (1938) aligned the attributes in the CoP process of knowledge creation with the Theory U reflective process on the following constructs: (a) joint enterprise and co-initiating, (b) sense of common purpose and co-sensing, (c) reflective collaboration and presencing, (d) innovating and co-creating, and (e) shared repertoire and co-evolving. A systematic review of data from 125 scientific articles published from 2001 to 2019 confirmed a correlation between these dual-path behaviors through a Friedman statistical test that yielded significant p-value. A parallel model aligning CoP knowledge creation and Theory U reflective process is introduced exemplifying a dual U-shape behavioral path.

Correspondence regarding this article should be addressed to Dr. Saldana at jsaldana@devery.edu

Keywords: communities of practice, Theory U, knowledge creation, innovation

Abundant literature exists in the field of Communities of Practice (CoP), a topic that has acquired notable attention as organizations incorporate collective groups of experts as a resource to solve intricate problems. The members of a CoP share a passion for their “craft” or area of expertise and compare systematically with invisible colleges, epistemic communities, and learning communities (Saldana, 2014). People need to access their inner intelligence rather than conscious thought when collaborating to find novel solutions (Potter, 2015). Scholars (Potter, 2015; Schon, 1989) recognized reflecting as a “legitimate” managerial practice to solve organizational problems. Additional research (Moffatt, George, Lee, & McGrath, 2005; Potter, 2015) suggested that reflective analysis or the quality of attention while trying to find solutions to common problems can be embedded into the managerial decision-making processes. Theory U, on the other hand, is a leadership and change management paradigm evolved during the last two decades, that has acquired considerable notoriety among scholar circles, governments, corporations, banks, and national global organizations worldwide (Zeitler, 2014). In the Theory U frame (Scharmer, 2007), the “inner dimensions” of individuals improve their abilities to create new realities and solutions from the “inside out.” The objective of this article is to establish a direct link between the CoP process of knowledge creation and the core elements of Theory U, through the operationalization of both

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CoP and Theory attributes and the systematic review of 125 articles published from 2001 to 2019.

THE COMMUNITY OF PRACTICE IS A “REFLECTIVE BODY”

Wenger (2004) coined the term CoP to exemplify how “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (p. 4). After communities of experts collaborate to solve field problems, the outcome of the CoP is an area of expertise (i.e., “domain”) that consequently becomes a repository of explicit knowledge, good practices, and working methods. CoP members develop a common language and epistemology, or their “own way” to see the world through socialization and articulation of knowledge. According to Wenger (2004), this repertoire of community practices transcends the borders of the traditional organization.

Groups of CoPs can emerge in both small fields and complex industrial environments, and case studies show they can be effective in diverse trades and professions, including midwives, community watch groups, farmers, educators, artists, administrators, and pharmaceutical engineers (Saldana, 2016). They emerge most prominently during a crisis when experts are more adept to elevate their practice and take risks with the “urgent” purpose of establishing new procedures (Stauffer & Moser, 2010). When circumstances place a group of experts in a situation where they are required to listen and think as they go through intensive socialization, radical innovation can happen. The accomplishment of difficult tasks satisfies CoP members’ needs related to common purpose, which seems to motivate professionals to collaborate in these cohorts beyond their active careers. Nevertheless, it is important to emphasize that CoPs are not social clubs or organizational units, but groups that emerge spontaneously and are motivated by their common interest in solving industry problems (Wenger, 2004). CoP members self-organize themselves, adopting the roles that better suit a process of reflective collaboration through which they explore new practices, rather than being

appointed with the specific and traditional tasks of the technical team (e.g., leader, facilitator, or scribe). Inside the CoP’s system of collaboration (see Figure 1), members will also position themselves as champions (e.g., leaders) and peripheral groups (e.g., followers), but these roles are fluid and interchangeable. Furthermore, quantitative research (Saldana, 2014, 2016) tends to confirm that CoP members operate from a state of inner connectivity with themselves and with others, which yields to observable behaviors, such as reflective behavior, spontaneous networking, mutual engagement, and sense of common purpose.

Figure 1: THE COP SOCIAL STRUCTURE BY WENGER (2004) WAS EXPANDED THROUGH RESEARCH (SALDANA, 2014, 2016) ON COMMUNITY EXPRESSIONS

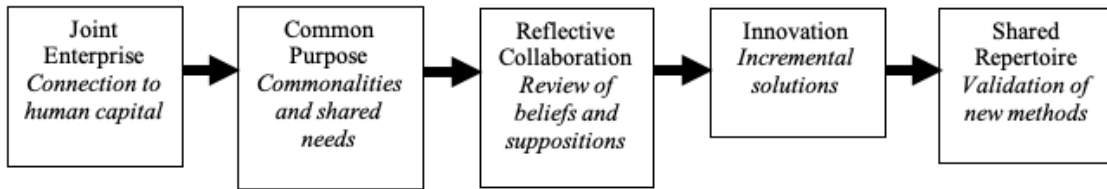


Penner, Dovidio, Piliavin, and Schroeder (2005) described how CoP members use reflective practice repeatedly at the micro-level (individual-to-individual or dyadic relationship), at the meso-level (individuals and specific circumstances), and macro-levels (groups to groups). This reflective practice is similar to Schon’s (1989) reflection-in-action frame, in which iterative cycles of analytical thinking take place, and the technical rationality of the CoP members is leveraged with their capability of reflecting about “what they know as revealed by what they do” (p. 30). The main activity of CoP members is to engage in reflective practice in which they use previous knowledge of a field to create a state of “not-yet-embodied” knowledge

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as well as a state of knowledge creation to transform situations and problems (see Figure 2).

Figure 2: ROLE OF REFLECTIVE PROCESSES IN THE CREATION OF COP KNOWLEDGE



CoP groups are legitimate reflective practitioners (Moffatt et al., 2005) because reflective learning at work is the direct result of collective inquiry, present when people are changing their mental models and working with innovative approaches (Sherwood & Horton-Deutsch, 2012). These processes also require CoP members to disclose biases, prejudices, and oppressive forces that can curtail knowledge creation, allowing CoP members to confront conflicting viewpoints that could manifest troubling social relationships in the process of collaboration (Moffatt et al., 2005).

THEORY U IS A REFLECTIVE METHOD

Otto Scharmer (2007) developed the Theory U model as an evolution of the U-Procedure frame for conflict negotiation introduced originally by Glasl and Lemson in 1968 at the Netherlands Pedagogical Institute (Bouey, 2018). The U-procedure morphed to Scharmer’s Theory U with the incorporation of additional theories on presencing. Scharmer defined presencing as acting from the individual’s highest potential to project a future that depends on consciousness to make it real. Presencing, a combination of the words “presence” and “sensing,” has been defined as “seeing from our deepest source.” Theory U, in general, suggests that people who use intuition and awareness to connect with others can increase cognition and critical thinking, or the ability of “crystallizing” new mental states (Scharmer, 2007). Scharmer recognized Theory U as a sound reflective practice frame, in which listening is the core element that creates a factual but emphatic and a “generative panoramic type of perception” (p. 3) that is boundless and fluid. Theory U connects

the members of a community by establishing negotiation-and-dialogue mechanisms that have served to “crystallize” new realities, from helping cancer patients to become resilient to global conglomerates innovating automobile

designs (Scharmer, 2018). Scholars and industry experts recognize the Theory U paradigm mostly by its curvilinear U shape that exemplifies a deeper capacity for active listening through what Scharmer (2004) has called the five movements of Theory U: co-initiating, co-sensing, presencing, co-creating, and co-evolving (see Figure 3).

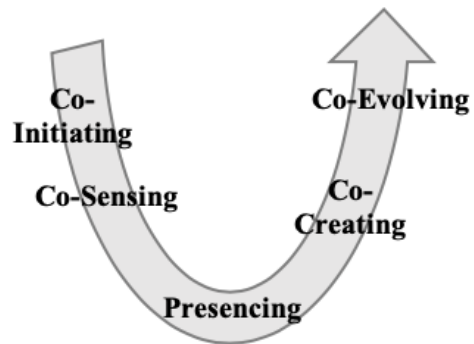


Figure 3: THEORY U REFLECTIVE PROCESS

Temple (2014) reported that the “Theory U approach presents organizational transformation as a journey where the desired outcome is the result of a deep understanding of the problem and underlying need for change” (p. 4). Finally, the simplicity of its design allows for applying Theory U concepts to both small-scale self-improvement projects and broader phenomena such as global warming or world hunger (Arthur et al., 2002).

COMPARISON OF COP PROCESS OF KNOWLEDGE CREATION AND THEORY U REFLECTIVE PROCESS

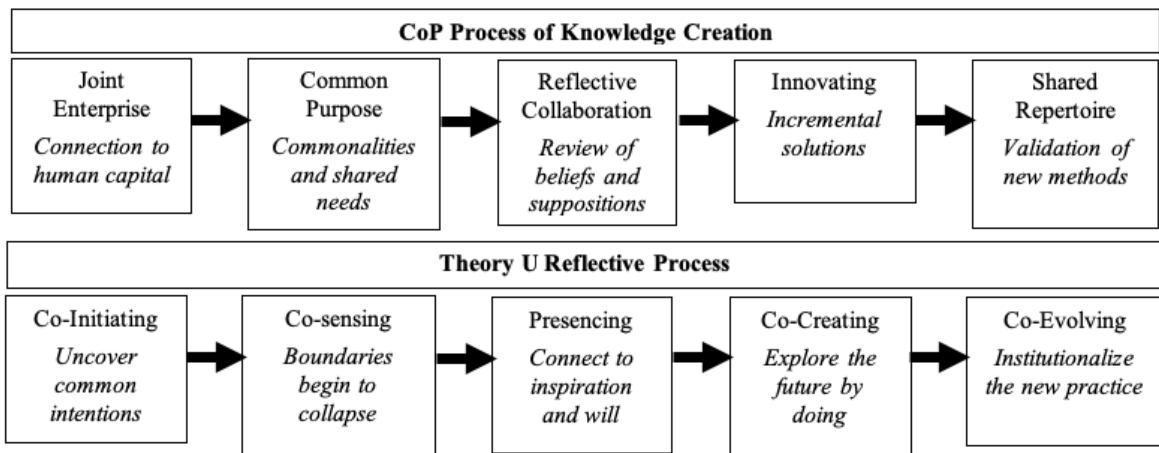
COMPARISON OF COP PROCESS OF KNOWLEDGE CREATION AND THEORY U REFLECTIVE

ProcessScharmer’s Theory U (2007) can explain how members of a community of practitioners can connect intrinsically to create new infrastructures. Boynton and Fisher (2005) reported notable stories on groups who accomplished remarkable innovation (i.e., virtuoso teams) in the arts and sciences by engaging in continual reflective inquiry. Theory U and the CoP innovation process resemble similar inquiry-brainstorming-creation processes. CoPs use epistemic reflexivity and critical reflection to adopt new practices through inquiry and advocacy (Brown, 1990). Similar to the Theory U experience, CoP members engage in reflective practice to connect transcendently and enable creativity. Sherwood and Horton-Deutsh (2012) reported that the use of reflective practices to solve field problems is not a new concept. The nursing practice pioneered the introduction of cycles of reflection-action to patient healthcare with groundbreaking initiatives and results, integrating reflection into the nurses’ professional mindset (Sherwood & Horton-Deutsh, 2012) and improving the effectiveness of treatment plans (Li et al., 2010). A process of construct operationalization (Bridgman, 1938) allowed aligning, side-by-side, the CoP process of knowledge creation and Theory U reflective practices (see Figure 4).

REFLECTIVE PROCESS

The process of operationalization allowed defining the concepts of CoP knowledge creation and Theory U through scientific theory to identify specific attributes that measure both concepts. Operationalization, also known as operationalism, has been broadly used in scientific research since Percy William Bridgman introduced the method in the 1920s (Chang, 2009). Scientific definitions of joint enterprise, sense of common purpose, reflective collaboration, innovation, and shared repertoire were all aligned with the descriptions of co-initiating, co-sensing, presencing, co-creating, and co-evolving, respectively (see Table 1, next page) to compare the CoP knowledge creation stages and the core elements of the Theory U. While the Theory U core concepts used Scharmer’s definitions, the CoP knowledge creation stages were based on constructs validated by previous research (Saldana, 2014).

Figure 3: ALIGNMENT OF THE COP PROCESS OF KNOWLEDGE CREATION AND THEORY U



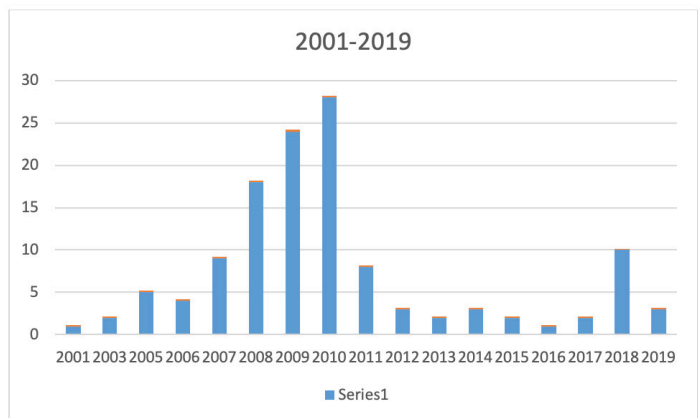
COMPARISON OF COP PROCESS OF KNOWLEDGE CREATION AND THEORY U REFLECTIVE PROCESS

Table 1: OPERATIONALIZATION OF COP KNOWLEDGE CREATION PROCESS BEHAVIORS AND THEORY U REFLECTIVE PRACTICES

CoP Knowledge Creation	Behaviors	Theory U Reflective Practice	Behaviors (Scharmer, 2007, 2018)
Mutual Engagement	A shared discourse reflecting a certain perspective on the world (Li et al., 2010)	Co-Initiating	“Build common intent through attentive listening to others and the self”
Sense of Common Purpose	Bonds of solidarity, reciprocal identification, commitment, and shared leadership structures (Fominaya, 2010). Members matter and believe they will satisfy shared needs through mutual commitment (Townley, Kloos, Green, & Franco, 2011)	Co-Sensing	The boundary between the observer and the observed begins to collapse
Reflective Collaboration	Understanding of new realities through looking at the past to find new solutions (Tal & Morag, 2009); the careful, persistent, and active, consideration of any knowledge, belief, or supposition (Kinsella & Whiteford, 2010)	Presencing	Connecting a most profound source “of inspiration and stillness—and to the place from which the future possibility begins to arise”
Innovating	Incremental solutions to subject matter problems as expansion or refinement of existing knowledge (Dane, 2010)	Co-Creating	Explore the future by doing; enacting prototypes fast-cycle feedback from all stakeholders in real-time
Shared Repertoire	“The ability to assess the appropriateness of actions and products with specific tools, representations, and other artifacts” (Li et al., 2010)	Co-Evolving	Interweave and link with the broader ecosystem around; practitioners begin to see, strategize, and act from a new mindset.

After aligning these constructs, a systematic review of 125 CoP articles from 2010 to 2019 was conducted to confirm the presence of this dual-path (CoP and Theory U) of behaviors. The criteria for inclusion were study articles where were published in academic publications and which used the scientific method to conduct and present research results. *Figure 5* reflects the distribution of 125 articles from 2001 to 2019.

Figure 5: DISTRIBUTION OF YEARLY PUBLICATION OF RESEARCH ARTICLES



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The sample of articles included studies from 23 countries in 22 industry sectors (see *Table 2*). The distribution of the sample of articles demonstrated how a variety of fields in diverse geographic areas has disseminated CoPs as problem-solving mechanisms.

Table 2: COUNTRIES AND INDUSTRIES REPRESENTED IN THE COP ACADEMIC LITERATURE

Country	f	%	Industry	f	%
Australia	5	0.04	Agriculture	1	0.01
Brazil	2	0.02	Banking	2	0.02
Canada	6	0.05	Call Center	1	0.01
Germany	3	0.02	Construction	4	0.03
Greece	1	0.01	Consulting Firms	6	0.05
Hong Kong	1	0.01	Creative industries	3	0.02
Indonesia	1	0.01	Disaster Management	2	0.02
Israel	3	0.02	Education	50	0.4
Italy	1	0.01	Engineering	3	0.02
Korea	2	0.02	Forest/Steel	2	0.02
Malaysia	2	0.02	Healthcare	6	0.05
Multinational	18	0.14	Hospitality	1	0.01
Netherlands	1	0.01	Insurance	1	0.01
New Zealand	2	0.02	Legal Services	1	0.01
Norway	2	0.02	Management	2	0.02
Scotland	1	0.01	Military	1	0.01
Singapore	3	0.02	Nonprofit	4	0.03
South Africa	5	0.04	Nursing	1	0.01
Spain	4	0.03	Oil Industry	1	0.01
Sweden	1	0.01	Public Service/ Politics	8	0.06
Taiwan	2	0.02	Real State	1	0.01
The Netherlands	1	0.01	Safety	1	0.01
United Kingdom	20	0.16	Technology	23	0.18
United States	38	0.3			
TOTAL	125	1	TOTAL	125	1

The literature reflected the presence of visible expressions of the Theory U core elements of co-initiating, co-sensing, presencing, co-creating, and co-evolving aligned with studying knowledge creation among CoPs (see *Figure 6* next page). The distribution of data from 125 articles was submitted to a Friedman test with repeated measures to confirm if a correlation between CoP and Theory U elements existed.

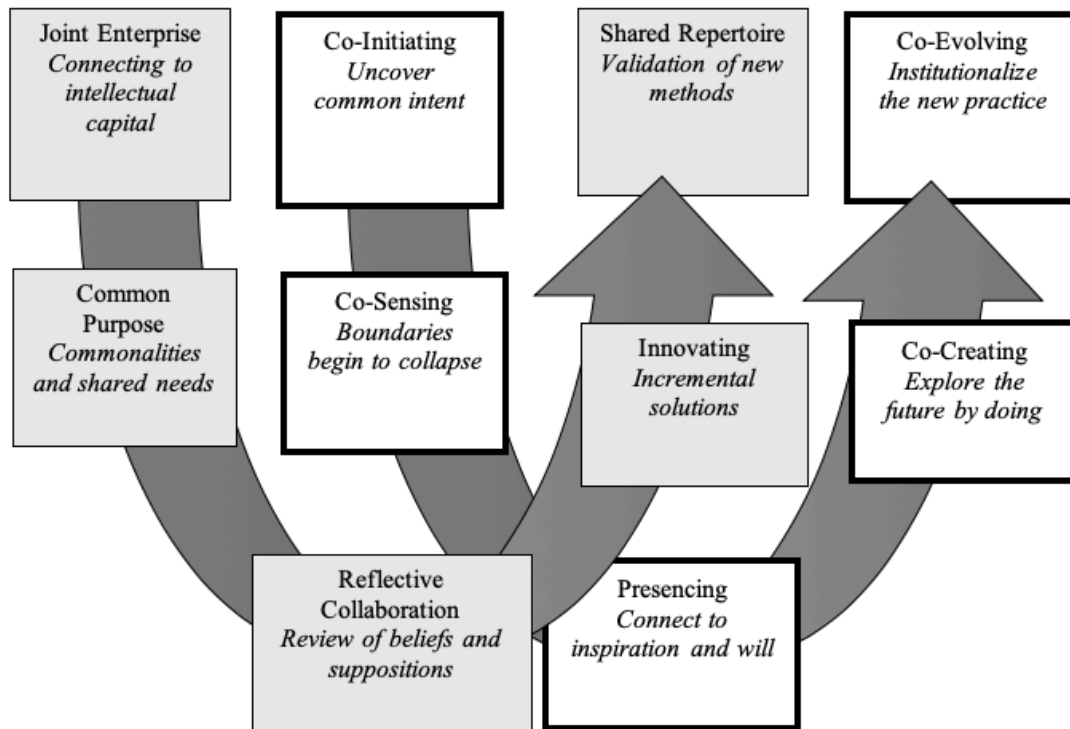
Friedman is a non-parametric test that can be used for continuous data under the assumptions that constructs are measured in three or more categories and samples do not need to be distributed normally. The Social Science Statistics website (n.d.) powered the statistics calculators used in this analysis. The results of the Friedman test yielded a *p*-value of

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.00007 (the X2r statistic is 24.344 [4, N = 125]) at an error margin of .05, making the correlation of a dual path of behaviors significant.

that created Linux, reported how individuals who embrace co-initiate joint enterprise can unleash powerful capabilities to maximize intellectual capital (Bach & Carroll, 2010). Simultaneously,

Figure 6: COMPARISON OF COP KNOWLEDGE CREATION PROCESS AND THEORY U REFLECTIVE PRACTICE



JOINT ENTERPRISE IS CO-INITIATING

Joint enterprise and co-initiating allow members of the CoP to create a shared understanding that “bonds” them together. A joint enterprise, like co-initiating, goes beyond mutual engagement in that individuals purposely introduce the

“intention” to collaborate. Joint enterprise is a type of “craft intimacy” (Wenger, McDermott, & Snyder, 2002, p. 122), or, as in co-initiating, the moment in which practitioners realize

that they share a common goal, challenge, or an issue that requires them to use previous knowledge in the form of expertise to find a solution. Notable innovation case studies, such as the scientific community’s response to an alert about the dangers of chlorofluorocarbons (CFCs) in the 1970s and the technology group

co-initiating brings people together through attentive listening (Gau, 2016). As Scharmer (2007) reported, individuals in the co-initiating stage uncover shared intentions and an initial set of inquiries to explore.

CO-SENSING IS SENSE OF COMMON PURPOSE

Sense of common purpose, like co-sensing, emerges from the alignment between community members with similar values and thinking processes (Townley et al., 2011). A sense of common purpose is critical to flourish and sustain new ideas that come when members of the community experience reciprocal identification, bonds of solidarity, and commitment (Fominaya, 2010). Formation of identity processes fortifies group cohesiveness

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and prepares its members for reflective collaboration and innovation. It also relates to how members of the community see certain realities with the same scope and can establish horizontal connections that allow them to immerse in new contexts (Scharmer, 2007). The outcomes of co-sensing or sense of common purpose included better personal relationships and improved capacity for the creation of generative bonds.

PRESENCING IS REFLECTIVE COLLABORATION

Presencing, like reflective collaboration, is the connection of the self to options and solutions not ideated in the past. Scharmer (2007) emphasized that “presencing connects us to those who surround us” (p. 127), and its roots can be traced to broader intention, curiosity, compassion, and courage. Concurrently, reflective collaboration surges from the increased consciousness about the elements that hold a community of practitioners through time (Carey, Smith, & Martin, 2009). Kinsella and Whiteford (2010) defined reflective collaboration as the careful, persistent, and active consideration of any knowledge, belief, or supposition within an area of expertise. The concept is also associated with the internalization and transformation of ideas through the understanding of diverse epistemologies. CoP leaders use reflection to develop a holistic assessment of values, beliefs, and contexts (Price, 2005). Reflective collaboration increases collective learning as long as participants enact their power of intention (Gausdal, 2008; Warhust, 2008) because individuals must engage actively and deliberately in thoughtful partnership (Machles, Bonkemeyer, & McMichael, 2010) while leveraging their passion for common ideas.

CO-CREATING IS INNOVATING

Dane (2010) defined innovation as incremental solutions to subject matter problems as expansion or refinement of existing knowledge, whereas Anand, Gardner, and Morris (2007) described it as the capacity to create structural paths to propitiate leading-edge ideas. Innovation is socially interactive and spatially

embedded within cultural processes (Strambach, 2002). Innovation, like co-creating, requires the appropriate quantity and quality of expertise related to a specific social system to emerge. Innovation marks the path of progress, and imitation supports the use of the best method. Co-creating is exploring the future by doing and “by iterating through the guidance of fast-cycle feedback from all stakeholders in real-time”

(Scharmer, 2018, p. 4). Prototyping is proposed by Scharmer as the activity that facilitates innovation among practitioners while they engage in discovery through error-and-trial, peer-to-peer consultation, and networks of knowledge.

CO-EVOLVING IS SHARED REPERTOIRE

A shared repertoire encompasses the capabilities produced by members of a CoP through the process of knowledge creation (Wenger, 2004). It concerns the routines, stories, vocabulary, and new ways of addressing problems after the members of a CoP have experienced a period of innovation. Co-evolving, concurrently, is embodying and institutionalizing a new reality (Scharmer, 2018). Individuals begin to see, strategize, and act from that new reality as an emerging whole. After a period of innovation, co-evolving helps to “close the loop” between awareness and collective impact. Co-evolving outcomes include the adoption of shared experiences, newly formed generative alliances, and new work narratives (Scharmer, 2018). The CoP literature demonstrated co-evolving as embedded communication roadmaps, best practices, and new knowledge management processes.

CONCLUSION

The CoP process of knowledge creation shares attributes and manifestations of Theory U, in which members connect with others at deeper levels of understanding that permit the flourishing of new ideas. Although scholars have aligned the core principles of Theory U to diverse professional fields, self-consciousness applied to the creation of knowledge can be further explored to understand how individuals can experience specific mental paths that accelerate innovation. In a time when society

COMPARISON OF COP PROCESS OF KNOWLEDGE CREATION AND THEORY U REFLECTIVE PROCESS

in general experiences high uncertainty, iterations of self-reflection seen in CoPs and Theory U have the capability of promoting new local and global solutions with accelerated dissemination when these are adopted from the inside out. Members of CoPs engage in Theory U socialization processes defined as co-initiating/joint enterprise, co-sensing/common purpose, presencing/reflective collaboration, co-creating/innovation, and co-evolving/shared repertoire. Mental transcendence, reflective practice, and mutual engagement facilitate “real” connections with root-cause problems and methods that fit the unique conditions of a field of expertise. Theory U increases the ability of CoP members to both adapt to change and to think creatively.

By a method of operationalization and statistical analysis, this article aligned the stages of knowledge creation and the Theory U core elements and then identified these elements in 125 academic articles in the CoP academic literature published from 2010 to 2019. The formal review yielded parallelisms between how the CoP stages of knowledge creation unfold, creating a similar configuration, direction, and synergy to those observed through the Theory U. In comparing a dual path of processes between CoPs and Theory U, both co-initiating and joint enterprise happen when CoP members purposefully listen to each other, find commonalities, and establish a set of initial inquiries. This moment of co-initiation is when practitioners recognize that they have a common challenge or issue of interest, and they show a willingness to listen attentively. Co-sensing and sense of common purpose relate to the way members of a CoP reduce silos and become more cohesive through reciprocal identification. Co-sensing/sense of common purpose sets the grounds for reflective collaboration because CoP members will experience reciprocal identification, bonds of solidarity,

and commitment. Presencing and reflective collaboration are both the connection with the higher self (from within and with others) through the awareness of new ideas and possibilities. It is after this careful and persistent consideration of belief that co-creation emerges. Co-creation or innovation is a series of new ideas and prototypes, which results from this deep level of connection and which receives inspirations from previous experiences, intuition, and creative thinking that can target solutions from personal and professional perspectives. Finally, co-evolving is the equivalent to a shared repertoire of practices. Co-evolving/shared repertoire happens as members continue to engage in hands-on practice and repeated actions that become best practice when the outcomes are positive. Both co-evolving and shared repertoire presume that continuous communication will allow CoP members to ideate new working routines that are soon embedded into the existing field and organizational practices.

Members of a community of practitioners must “socialize” their problems before they can find solutions or achieve continuous improvement, for which reflective practice is increasingly becoming a legitimate practice among organizations and professional communities. Documented outcomes of reflection-in-action applied to professional fields demonstrated that developing connections, active listening, and reflective practice are fundamental activities in the reframing of thinking systems and organizational transformation. Scharmer’s (2007, 2018) Theory U facilitates boundless thinking from which CoP members can connect with their inner self and, from that place of connection, collaborate with peers to elevate

a professional practice. When members of the community engage in reflective practice, CoPs are more productive, creative, and innovative.

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EXAMINING TRANSFORMATIONAL LEADERSHIP COMPONENTS AS PREDICTORS OF JOB SATISFACTION AND JOB RETENTION AMONG MILLENNIALS WORKING IN VETERINARY HOSPITALS: A METHODOLOGICAL STUDY

LINDA WAYERSKI

COLLEGE OF BUSINESS & MANAGEMENT

Author Note: Linda Wayerski, is an assistant professor, DeVry University, Phoenix, AZ

ABSTRACT

Research has shown various leadership styles may have varying effects on job satisfaction and job retention for the millennial generation who are veterinary technicians. Using Kouzes and Posner's Leadership Practice Inventory-Observer questionnaire; veterinary technicians' perceptions of the five practices (model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart) related to transformational leadership, was measured. In addition, three questions from the Michigan Organizational Assessment Questionnaire were used to measure job satisfaction, along with job retention being measured using three survey questions from Johnsrud and Rosser's research. In this study, the theory of transformational leadership was used to examine how millennial veterinary technicians responded to their leaders' practices. The purpose of this quantitative correlational study was to determine if any or all five practices of transformational leadership predicted job satisfaction and job retention among millennial veterinary technicians who work in a veterinary hospital.

Correspondence regarding this article should be addressed to Dr Wayerski at Linda.Wayerski@devry.edu

Keywords: transformational leadership; job satisfaction; job retention; millennials; veterinary hospitals

According to the U.S. Census (2016), each year, one million millennials enter the workforce. A millennial by definition for this study was born between 1978 and 2000. Based on predictions from the U.S. Census (2016) Stahno and Yang (2014), by 2020, the U.S. workforce will be 40% millennials. The millennials have been dubbed the entitlement generation due to their lack of long-term commitment and their propensity to consistently change professions, giving them a reputation as "job hoppers" (Poddar, 2015, p. 47). Adkins (2016) has suggested this younger generation does not focus on staying with one employer, and some tend to have multiple jobs annually. The U.S. Department of Labor, Bureau of Labor Statistics (BLS, 2016) reported millennial employees have a history of having two to three jobs in less than a year. Because job satisfaction is inversely related to job turnover, the potential for millennial turnover suggests they have less job satisfaction than other generation cohorts (Cho, Kiss, & Yu, 2016; Hoole & Bonnema, 2015). It has been projected millennials will have on between 15 to 20 jobs over their lifetimes as compared with an average of 11.3 jobs for baby boomers (Fardellone, Musil, Smith, & Click, 2014; Lyons, Schweitzer, & Ng, 2014). The increasing number of millennials in the workforce and retirements

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of working baby boomers, it is imperative for business leaders to understand what motivates the millennial generation (Adkins, 2016; Lyons et al., 2014).

Moore, Coe, Adams, Conlon, and Sargeant (2014) conducted an online survey with 274 veterinary team members about job satisfaction. The results showed that veterinary technicians (VTs) were the least engaged employees based on physical exhaustion (Moore et al., 2014). There are elevated levels of turnover in the veterinary medicine sector (Kanji, Coe, Adams, & Shaw, 2012; Rigoni & Nelson, 2016) and this is due to the lack of job retention of support staff, which includes VTs (Villaruel et al., 2010). The average annual turnover in a veterinary practice is 29.7%, which is double the national average of 12% to 15%; more than a quarter of the turnover (35%) is in VT positions (Heuristic, 2016).

The role of a VT is to support veterinarians. These veterinary professionals work directly under the supervision of a licensed veterinarian (Heuristic, 2016). VTs assist the veterinarian in the following functions: client relations, laboratory analysis, physical pet exams, pet handling techniques, stabilization, administration of medications, and surgical assistance (Heuristic, 2016). According

to the U.S. Department of Labor Bureau of Labor Statistics (BLS, 2016), millennials are dominating the workforce in veterinary practices across all positions; however, VTs identified as millennials have been reported with a turnover rate of 35% and an average job tenure of two years (BLS, 2016).

Between 2010 and 2020, positions in veterinary practice are expected to grow between 20% and 52% (BLS, 2016). The U.S. Department of Labor, Bureau of Labor Statistics (BLS, 2016), predicts that the U.S. is expected to experience a 20% increase on an average in VT positions with projected annual VT job openings between the years of 2014 and 2024 (BLS, 2016). Veterinary practices that increase job satisfaction could benefit from job retention strategies for VTs

(Dittmar, 2016). Given that 62% of veterinary workers are millennials, an understanding of

the factors that underlie the job retention of this generation would offer a benefit to this industry.

A key characteristic of millennials in the workplace is they must feel purposeful and being relevant (Larkin, 2014). Additionally, Larkin (2016) found that millennials tend not to view their work as a significant part of their life in comparison to other generational cohorts. Millennials want to be empowered and engaged in the workplace.

PURPOSE OF THE STUDY

The study suggests that the implementation of transformation leadership could be a factor in lowering job turnover and improve job satisfaction within millennial VT's. Kouzes and Posner (2007) suggested that transformational leadership can be measured in terms of the overall effectiveness that leaders have on employees. Kouzes and Posner (2007) identified five exemplary practices of effective leadership that apply to leaders in all types of organizations (model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart) serves as a catalyst for leaders to find their true self. Kouzes and Posner (2007) also explained the extent to which leaders are to convince employees to work harder to achieve the goals of the organization depends on how they encourage and engage with their teams.

THE PROBLEM STATEMENT

The specific problem is that turnover rates among millennial VTs are increasing in veterinary medicine, and continue to climb (Kanji et al., 2012; Rigoni & Nelson, 2016); there is little research on how to manage VTs to reduce job turnover (Larkin, 2016). About 62% of workers in the veterinary field are millennials (BLS, 2016). The millennial professional population is less engaged than other employees in veterinary practice (Moore et al., 2014).

The employment need for VTs is expected to grow at an increase of approximately 9200 positions over 10-years due to the growth being faster than the net replacement (BLS, 2016). Leaders who demonstrate practices consistent with the tenets of transformational leadership theory are positively associated with job satisfaction and job retention (Rigoni & Nelson, 2016). Researchers

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have called for more investigations of leadership factors associated with job retention and job satisfaction among millennials VTs (Fanning & Shepherd, 2010; Larkin, 2016). Without more research, the veterinary medical sector may suffer from having significant amounts of turnover and inadequate staffing.

The purpose of conducting this quantitative correlational study was to determine if any or all five factors of transformational leadership predict job satisfaction and job retention among millennial VTs who work in a veterinary hospital. The results could contribute to the training, developing, and providing further leadership education to leaders in veterinary medicine who supervises VTs. The populations in the study were VTs located across the U.S. as participants. The participants were recruited from a website which is a professional organization that promotes to the veterinary sector in all positions. However, there have been no studies in which the five factors of transformational leadership theory were tested in the context of job satisfaction and job turnover intentions (Larkin, 2016).

Participants were limited to be VTs who were members of the millennial generation (i.e., workers born between 1978 and 2000). The Leadership Practice Inventory Observer (LPI-O; Kouzes & Posner, 2007) was used to survey VTs concerning how employees perceive leadership practices. The LPI-O questionnaire was the vehicle to collect data about the five transformational leadership theory practices from the standpoint of the employee focusing on their leader's behaviors (Kouzes & Posner, 2007).

The predictor variables were the five transformational leadership practices: model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart (Dimaculangan, 2012; Kouzes & Posner, 2007). The dependent variables were job satisfaction and job retention. Job satisfaction was measured with three items from the Michigan Organizational Assessment Questionnaire (MOAQ; Seashore, Lawler, Mirvis, & Cammann, 1982). Job retention was measured using a three-item survey developed by Johnsrud and Rosser (1999).

Two independent multiple regression equations were modeled, one with each of these outcome variables. According to a G*Power analysis, using effect size of 0.20, power of 0.95, and an alpha level of .05, the minimum sample size required for the study was 138 participants (Faul, Erdfelder, Lang, & Buchner, 2007).

Transformational leadership theory was appropriate for this study because it was associated positively with work engagement and dedication (Rigoni & Nelson, 2016). The focus of transformational leadership theory is the creation of positive change in an environment where followers can take care of each other's interests and apply them to the group as the leader enhances motivation, improves morale, and promotes performance (Bass & Avolio, 1994; Kouzes & Posner, 2007). Because VTs, especially those who are millennials, experience high turnover, it is imperative to find leadership styles to support these employees and contribute to increasing their job satisfaction. Deploying transformational leadership, researchers may examine how the five exemplary practices of leader behavior may influence group performance by facilitating the emergence of a positive team that is cohesive and trusting (Bass & Avolio, 1994; Kouzes & Posner, 2007; Lord, Day, Zaccaro, Avolio, & Eagly, 2017).

This quantitative research study was designed to determine whether the five practices of exemplary leadership of transformational leadership are predictive of job satisfaction and job retention of millennial VT workers (Constanza & Finkelstein, 2015). The predictor variables were the five practices of exemplary leadership behaviors from Kouzes and Posner's (2007): model the way, inspire a shared vision, challenge the process, enable others to act, and encourage the heart. The 30-item LPI-O survey was used to measure how employees perceive these leadership practices (Kouzes & Posner, 2007).

The outcome variables were job satisfaction and job retention and these variables were measured with the three-items of the MOAQ (Seashore et al., 1982) and Johnsrud and Rosser's three-item job retention survey (1999), respectively, between

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1978 and 2000, among VTs in a VT position in a veterinary hospital. The sample was randomly drawn from this population. Using a G*Power analysis and a priori sample size was estimated with an effect size of 0.20, a conservative power level of 0.95, and an alpha level of .05, the minimum sample size required was 138 participants (Faul et al., 2007). Participants who were members of the selected website or actively use the organization's website were recruited. The organization promotes veterinary industry continuing education courses to help keep these professional compliant with their license and certifications.

This study had several theoretical, research, and practical implications. Although researchers, such as George and Wallio (2016), have examined the phenomenon of millennial turnover. Baby boomers are leaving workplaces that were designed around their needs, which indicate businesses must consider the expectations of the millennials who will replace those (George & Wallio, 2016). The millennials as described by O'Donovan (2014) are loyal to people not jobs; however, that is why leader and peer relationships are so important. The population of millennials in the workforce has become the largest generational influence on how leaders need to drive job satisfaction in the workplace (Adkins, 2015). Additional research is required on the job role of VTs as related to job satisfaction and job retention of millennials in the workforce (O'Donovan, 2014; Poddar, 2015). The existing research results do not fully demonstrate reasons as to why millennials change jobs so often and why they leave. Few studies show the relationship between job satisfaction and reasons for leaving the veterinary practice (Fanning & Shepherd, 2010).

The practical significance of the proposed research lies in need to know more about how to keep millennial employees who are satisfied and retained in the workplace. These factors are related to decreasing turnover in the field of veterinary practice (Fanning & Shepherd, 2010; Villarroel et al., 2010), and the results of this study provided more information on these issues. Millennials are the fastest growing demographic

in the working population and are overtaking the retiring baby boomers (Adkins, 2015); it is essential for leaders and organizations to learn more about how to retain millennials (Larkin, 2016). Understanding the relationship between leadership practices, job satisfaction, and job retention can help leaders create training that is more effective (Bass & Avolio, 1994; Cloutier, Felusiak, Hill, & Pemberton-Jones, 2015; Greatwood, 2016; Lord et al., 2017).

FINDINGS

In addition to the practical significance, the findings could contribute to introducing transformational leadership theory to a little-explored population, the millennials (Anderson et al., 2017). For example, past research on transformational leadership theory has been conducted in nursing (Adeniran, Bhattacharya, & Adeniran, 2012; Fardellone et al., 2014; Lacasse, 2014), higher education (Balwant, 2016) and other fields, but not in the specific area of veterinary practice. The outcome of this study could aid in learning if using transformational leadership theory can help mitigate low job satisfaction (Avolio, Bass, Walumbua, & Zhue, 2004; Fardellone et al., 2014). The results demonstrated how using transformational leadership practices and theory can help to improve job satisfaction and job retention in the millennial generation (Adkins, 2015; Larkin, 2014).

A scatter plot of the data points was used to reveal whether there was an apparent linear relationship between the variables. A visual inspection of these plots between each of the predictors and each of the dependent variable showed a linear trend in the relationships between these variables. Each of the five predictors was positively associated with the dependent variable job satisfaction. Similarly, all five of the predictors are positively correlated with the dependent variable job retention (*Table 1*).

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Table 1: PEARSON CORRELATIONS: DEPENDENT VARIABLES AND PREDICTOR VARIABLES

DV	MOD	INSP	CHALL	ENAB	HEART
SAT	.28	.35	.29	.39	.37
RET	.33	.38	.32	.33	.33

Note: DV = dependent variable which are either job satisfaction (SAT) or job retention (RET) The independent variables are model the way (MOD), inspire a shared vision (INSP), challenge the process (CHALL), encourage the heart (HEART), n = 196 and p values are based on a single tailed t test with $\alpha = .05$. *all $p < .0001$

The positive and significant correlation coefficients are consistent with the visual assessment of a positive linear trend in the data. If the p value is less than .050, then the statistic indicates that there is not a constant variance for the residuals (Field, 2013). In Table 2, the p values for all Spearman rank correlations for the multiple regression models and all single variable regression models were greater than .050, which demonstrates significance; therefore, constant variances for the residuals can be assumed.

Table 2: CONSTANT VARIANCE TEST: P VALUES FOR SPEARMAN RANK TEST

DV	SR MOD	SR INSP	SR CHALL	SR ENAB	SR HEART	MR
SAT	.305	.970	.820	.400	.500	.210
RET	.491	.220	.180	.089	.079	.260

Note: DV = SR = simple regression. MR = multiple regression will all predictors included. The independent variables are model the way (MOD), inspire a shared vision (INSP), challenge the process (CHALL), encourage the heart (HEART); n = 196.

For all regression models, the researcher plotted the standardized predicted values of the dependent variable versus the distribution of standardized residuals. Visual inspections of these plots revealed an apparently consistent distribution of residual variances across the predicted values of the dependent variables. Thus, qualitative assessment of the apparent distributions of points was consistent with the statistical results indicating homoscedasticity of residuals.

The Durbin-Watson statistic was used to test for independence, i.e., lack of correlation, of the residuals. If this statistic is close to 2.0 then the observed residuals are uncorrelated (Field, 2013). As seen in Table 3, all the values are close to 2.0, and the residuals can be considered as independent.

Table 3: INDEPENDENCE OF ERROR TERMS: DURBIN WATSON STATISTICS

DV	SR MOD	SR INSP	SR CHALL	SR ENAB	SR HEART	MR
SAT	2.10	2.12	2.08	2.16	2.12	2.17
RET	1.95	2.02	2.00	2.04	1.96	2.04

Note: SR = simple regression. MR = multiple regression including, all predictors. The independent variables are model the way (MOD), inspire a shared vision (INSP), challenge the process (CHALL), encourage the heart (HEART); n = 196.

The normality of residuals for the regression models was examined statistically using the Kolmogorov-Smirnov (K-S) test and visually using normal probability-probability (P-P) plots and histograms that displayed the residuals' frequency distributions. The normal P-P plot contains the cumulative distribution of observed values; these were compared to a straight line inserted on the plot to visually inspect the whether the residuals appeared to be linear over the range of values. In all 12 of these plots, the residual values at smaller and larger values appeared to deviate slightly from the line. These plots suggested that the residuals may have a non-normal distribution, so the K-S statistics were also evaluated.

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The correlation coefficients for all pairwise computations between the predictor variables were all significant (*Table 4*). None of the values were greater than the threshold of .9; however, the comparison to this approximate threshold is not a definitive test. In addition to inspecting the correlation coefficients, a diagnostic statistic was computed to examine multicollinearity more fully. The variance inflation factor (VIF) was computed to detect whether there may be significant linear relationships between any two predictor variables. By the convention of statisticians, VIF values are greater than 10 indicate unacceptable collinearity between those variables (Field, 2010). None of the VIF values were close to 10 (*Table 4*), and this supports that the correlations between variables do not represent significant multicollinearity.

regression analyses. The tests were performed with settings to detect outliers that are two SDs from the predicted values. Several outliers were visually identified on each of the simple regressions.

Outliers were further assessed using Sigma Plot diagnostics in which points that are highly influential are tested using Cook’s distance statistic and a general leverage statistic. The results showed no “flagged” residuals that would suggest a increased influence of a point on predicted outcomes. That is, none of the simple regression models were built from data that had produced outlier points that could affect the results. Thus, it appears unlikely that the outliers affected the results of these models and outcomes of hypothesis testing. As mentioned

Table 4: BIVARIATE PEARSON CORRELATIONS BETWEEN PREDICTOR VARIABLES AND VIFS

	<i>MOD</i>	<i>INSP</i>	<i>CHALL</i>	<i>ENAB</i>	<i>HEART</i>	<i>VIF</i>
MOD	--	.82	.79	.76	.80	2.26
INSP	--	--	.87	.70	.78	2.27
CHALL	--	--	--	.68	.73	2.64
ENAB				--	.80	2.19
HEART					--	2.14

Note: The independent variables are model the way (MOD), inspire a shared vision (INSP), challenge the process (CHALL), encourage the heart (HEART), VIF = variance inflation factor, n = 196 and p values are based on a single tailed t test with $\alpha = .05$. All correlation values were significant at $p < .0001$

Overall there were no apparent violations of the assumptions for the data used in a regression model. The large sample size appears likely to neutralize any effect of non-normally distributed error terms. The apparent positive correlations between the predictors and the dependent variables and the scatter plots indicating a linear relationship supported the validity of performing the regression analysis to test the hypotheses.

above, the evaluation of outliers and highly influential data points can be more complex for multiple regressions.

To examine this phenomenon in the data used for a multiple regression, statistical measures were used in lieu of graphic inspections. Therefore, a leverage statistic and Cook’s distance variables were used to examine the data used for all

CONCLUSIONS

There is a rapid growth rate of millennial workers in the veterinary care field, and it is imperative to understand the factors that associate with job satisfaction and job retention. One cause has been recognizable to have a relationship with employee job satisfaction, and job retention is the leadership style of the leaders in the workplace (Bass, 1998, 1999; Bass & Avolio, 1994; Kouzes & Posner, 1998, 2002, 2007, 2011; Posner, 2013, 2016).

EXAMINING TRANSFORMATIONAL LEADERSHIP COMPONENTS AS PREDICTORS OF JOB SATISFACTION AND JOB RETENTION AMONG MILLENNIALS WORKING IN VETERINARY HOSPITALS

It is essential to examine transformational leadership behaviors within the millennial generation who work in veterinary practice as a VT to determine whether these factors relate with job satisfaction and job retention (Fanning & Shepherd, 2010; Larkin, 2014, 2016). There were several conclusions from the study. All five practices appear to be individually related to VTs perceptions of satisfaction and job retention. However, another conclusion is that the combined contributions of these practices cannot be conceived as a linear model. Only two of the exemplary practices from Kouzes and Posner (2007) appear to significantly contribute to job satisfaction and job retention when all were used together. If it is accepted that these five practices can capture transformational

leadership from a millennial viewpoint, then it can be concluded that a more complex model is needed to understand why and how each of the five practices is relevant to millennials.

A conclusion is that none of the five practices can be dismissed as being irrelevant for millennials, but it is possible that millennial VTs would thrive with a particular balance of the five practices used by their leaders. If these practices were to be considered together as an approach to lead millennials, then a conclusion might be that “inspire a shared vision” and “encourage the heart” should be those that are emphasized as a starting point for the leadership of VTs to help improve job satisfaction and job retention.

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THE ASIAN WEST END

Vengadasalam, S. (2019). *New Postcolonial Dialectics: An intercultural comparison of Indian and Nigerian English plays*. Newcastle upon Tyne, United Kingdom: Cambridge Scholars Publishing. ISBN: 978-1-5275-2184-1. 253 pp. \$119.95.

JASON R. ROSSI
DEVRY UNIVERSITY

Reviewer Note: Jason R. Rossi Regional Librarian, DeVry University

When I first heard about this monograph written by Sarbani Sen Vengadasalam, I was attending a book talk held by the DeVry University Library. She presented her recently published monograph to the audience with excitement and satisfaction. In her book, she reexamines dramas written or translated into English from playwrights who lived in India and Nigeria during the British Colonial era and post-independence period. Vengadasalam's reexamination utilizes an intercultural lens to highlight the interaction of cultures and the production of new cultural identities. But what is the lens of interculturalism that Vengadasalam uses?

Vengadasalam uses a definition of interculturalism from the Oxford English dictionary to start, "the taking place or forming of a communication between cultures, belonging to or derived from different cultures" (Vengadasalam, 2019, p. 48). She expands on the definition of interculturalism by placing it in the field of literary critical analysis. The author states, "interculturalism as a critical approach examines the clash and the communication between cultures expressed in the literary works from a perspective that is itself "derived from different cultures" (Vengadasalam, 2019, p. 48). This use of interculturalism allows the critic to see the product of a culture exchange between the colonized and the colonial power. The utility of interculturalism as a literary tool allows

it to be used in a variety of ways from work-specific research to a comparative analysis of several pieces. So, how does Vengadasalam use interculturalism and its framework in her monograph?

The author's method of utilizing interculturalism, is to apply it to a comparative study of playwrights and their works from India and Niger, covering the colonial and post-independence periods. Vengadasalam focuses on plays from these time periods that are written in English or have been translated to English. English is an important aspect for this study, because it is the language of the colonizer. Interculturalism allows the critic to view how the playwright portrayed the colonized population's use of the English language to express their insights, frustrations, and dreams within the context they found themselves living. Vengadasalam analyzes the plays: *Red Oleanders* (1926) by Rabindranath Tagore and *Procession* (1983) by Badal Sircar, which were produced and performed in India. The author's selection of a play written during colonial times and one written after independence allows an analysis of the evolution of the intercultural exchange in these two time periods. Vengadasalam also selected two plays from Nigerian playwright Akinwande Oluwole Babatunde Soyinka, *The Lion and the Jewel* (1959) and *The Road* (1965). Since both Nigerian plays are written by the same author, it allows the critic

to see how Soyinka has evolved his writing from the colonial to post-independence period. But what sources does Vengadasalam use to validate interculturalism and her analysis?

Vengadasalam's primary sources are the plays themselves. But she also applies her research to the whole bibliography of the playwrights themselves, and does not study them in a vacuum. She argues that the playwrights themselves are interculturalist by an extensive examination of their writings, published views, and activism. Vengadasalam also covers all prior critical theory that has been applied in colonial and post-colonial literature describing the benefits, but also the limitations of their use. Furthermore, she not only uses western scholarship, but the scholarship of academics from former colonized countries. The author covers prominent movements, such as Negritude and Swadeshi, even looking further back to ancient Hindu treatises such as Rasadhvani theory. However, as her discourse proves out in the monograph, none of these critical theories for analysis allow the intercultural interaction and communication to be observed and analyzed. The author makes her argument for the inclusion of interculturalism as a tool of critical theory analysis, but what new insights does it uncover from the plays analyzed?

The intercultural interactions evident in the plays of Tagore, Sircar, and Soyinka show the effects of cultural usurpation, adaptation, and assimilation on a population of people who have had their own cultural world and society upturned by the British Empire. The playwrights, in their dramas, even depict those individuals who are trapped between the colonial power and their own identity, and that of their own culture. This is evident when Vengadasalam compares the intellectuals portrayed in the dramas who are trained by the colonial powers, but are ineffective in changing their situation and are just as helpless as others to improve their fortunes. Another comparison discussed by the author, is that the Colonial plays from India and Nigeria had an identifiable other or an authority to resist against. However, in the post-independence plays of India and Nigeria, the playwrights did

not have identifiable authority to resist. It was the individual characters trying to exist in a new cultural landscape. Vengadasalam makes this clear while analyzing Soyinka's colonial and post-independence dramas by stating, "While the Bale and the white surveyor are corrupt in *The Lion and the Jewel*, corruption is everywhere in *The Road* (Vengadasalam, 2019, p. 213). These are just a few of the intercultural artifacts uncovered by the use of this method employed by Vengadasalam.

Vengadasalam use of the intercultural scaffolding in critical theory shows that the method has great promise. She validates its use by drawing attention to the similarities and differences in the pieces and the context in which they originated. The ability of the intercultural scaffolding to

be focused, widen, shrunk, and even stretched for one piece, or to compare multiple pieces of cultural works, gives it the ability to cast a new lens on a topic. Instead of forcing a cultural artifact into a rigid philosophical system/theory for understanding, interculturalism allows the critic to gauge the authenticity of when something truly is new, derived from an interaction between cultures. Vengadasalam has validated a new tool of analysis which broadens our understanding of the human experience.

Correspondence regarding this book review should be addressed to Jason R. Rossi at jrossi@devry.edu



ANTISEMITISM: HERE AND NOW

Lipstadt, D. E. (2019). *Antisemitism: Here and now*. New York: Schocken.
ISBN: 978-0-8052-4337-6, \$25.95

SHAWN SCHUMACHER

DEVRY UNIVERSITY

Reviewer Note: Shawn Schumacher is a Senior Professor of English and Humanities at DeVry University, Addison, IL.

The first—and only—time I was subjected to an antisemitic slur was in the fourth grade by a boy who demanded the change from my lunch money, so he could buy an ice cream sandwich in the school cafeteria. I declined to give this bully my few extra cents, and with that response, he viciously jammed his No. 2 pencil into my forearm, calling me “a stupid Jew.” Full disclosure here: I am not Jewish, and my swift retaliation resulted in a bloody nose for him and a trip to the principal’s office and after school detention for both of us.

I am certainly not proud of my violent reaction that day, and every time I see the small black dot of lead which remains in my left forearm, I am haunted - even 40 plus years later - by the incident. Today, I am persistently curious as to what may have caused that boy to call me such a repulsive name so many years ago and why - out of all of the names a kid could have called me - this particular, hateful anti-Semitic stereotype was invoked.

Deborah E. Lipstadt’s recently published book, *Antisemitism: Here and Now* (2019), relates the ugly reality of antisemitism in society today and delivers rich accounts of the reemergence of the white nationalist movement here in the United States and terrorist attacks on Jews throughout Europe. Lipstadt, who serves as Dorot Professor of Modern Jewish History and Holocaust Studies at Emory University in Atlanta, is perhaps best

known for having won a highly publicized legal victory over Holocaust denier, David Irving, when he sued her for libel in 1996; later, in 2016, Lipstadt’s case was made into the film, “Denial,” with Rachel Weisz, the British actor, portraying Lipstadt. In her book, Lipstadt provides astute analysis into current anti-Semitic behaviors including overt as well as the more insidious examples of antisemitism which continue to be exhibited here at home and abroad.

As the genesis for her commendably reasoned and splendidly argued thesis in her book, Lipstadt employs a series of letters written to a fictitious Jewish college student of hers, Abigail Ross, and an imagined non-Jewish law professor and colleague at her university, Joe Wilson, who raise questions and concerns about the recent spate of anti-Semitic rhetoric and incidents. The letters amongst Abigail, Joe, and Lipstadt, as indicated in the preface, are composites of several individuals Lipstadt has deliberated with in recent years, and as a self-identified Jew, Lipstadt conveys her very personal views of the modern revival of anti-Semitism and its grim truths.

Although Lipstadt has written extensively on the historical perspectives of the Holocaust throughout her career, her new book challenges readers to consider how—if at all—antisemitism has changed from the past to the present. Through her conversational correspondences

with Abigail and Joe, she speculates if antisemitism is the same or different from events we have seen in the past and questions whether contemporary antisemitism is coming from the left, the right, or both. The thoughtful letters of inquiry additionally ponder the perception that we may be seeing antisemitism in places where it is not, while others perhaps refuse

to see antisemitism where it clearly is. To begin, Lipstadt admirably shares her notion of the delusional, irrational, and conspiratorial perspectives of antisemitism, along with her definition and explanation of the spelling of

“antisemitism,” and then provides a brilliant taxonomy of the anti-Semite, ranging from the anti-Semitic extremists and enablers to what she terms the “Dinner Party” and “Clueless” anti-Semites—each laden with exceptional examples and spot-on descriptions.

The latter half of Lipstadt’s text focuses on incidents of antisemitism from the late 20th century and into the new millennium, including the case of Salmon Rushdie and his 1988 novel, *The Satanic Verses*, the Charlie Hebdo tragedies in Paris in 2015, anti-Semitic attacks in Denmark, the Netherlands, Great Britain, and Germany, and finally, the neo-Nazi march in Charlottesville, Virginia in 2017. Additionally, Lipstadt touches upon issues relating to Holocaust Denial and anti-Semitic acts, which have inverted victims and perpetrators and have also branded victims as collaborators. Lipstadt further presents examples of the latest hostility toward Jews on college campuses, which toxify the state of Israel and perpetuate “Campus Groupthink,” placing some college students in a “not-so-safe” zone.

Lipstadt’s keen understanding and perceptive treatment of these meaningful issues and cases throughout her book is not simply a list of outrage and assaults; rather, she throws back the curtain to unveil the malice of antisemitism and concludes by offering hope, seeking to balance a persistent fight against hatred with a desire to celebrate and rejoice in the Jewish faith, customs, and tradition, and as she relays from Hebrew Scriptures, to “be strong and of good courage.”

Correspondence regarding this book review should be addressed to Shawn Schumacher at sschumacher@devry.edu

DEVRY UNIVERSITY JOURNAL OF SCHOLARLY RESEARCH

CALL FOR PAPERS, SPRING 2020 ISSUE

The *DeVry University Journal of Scholarly Research* (DUJOSR) continues to expand its pages to include a variety of publishing opportunities for faculty. Academic scholarship remains a staple for the journal, but new categories include Case Studies, Book Reviews, Letters to the Editor, and a “From the Classroom” section, in which faculty can share vital experiences and best practices. These categories of submission are fully described below. Specific deadlines and instructions for submission conclude this “Call for Papers.”

ACADEMIC SCHOLARLY ARTICLES

For the Spring 2020 issue, we continue to solicit “working papers” (3000 to 5000 words) in our scholarly article category.

Papers of all types are welcome including theory, empirical, or methodology papers, as well as literature reviews, from both positivist and naturalistic traditions. Research- and evidence-based papers emphasizing practical relevance that resonate with our readers are preferred. We regard submissions as “working papers” that can be submitted to other journals for consideration (but have not been previously published elsewhere).

The review process requires that each paper is coded and blind reviewed by two peer reviewers with expertise in the author’s discipline. Faculty volunteers (for whom profound gratitude is expressed) comprise the peer review board. Final publication decisions are made by the editorial board, consisting of College and Managing Editors.

Authors who have previously submitted academic scholarly papers for past issues are encouraged to re-submit their revised papers. Papers should be sent with an additional document that specifies detailed responses to reviewers’ and editors’ feedback.

CASE STUDIES

DUJOSR solicits case studies (ranging from approximately 500-word short cases, to 1000 to 3000-word long cases) that have not been published elsewhere, but are considered “working papers.” The purpose of this initiative is to create a repository of case studies that can be used by faculty to teach DeVry University graduate and undergraduate courses. Our aim is to provide students with a unique and valuable learning experience that has been generated by our faculty.

Case studies of all types are welcome, including multi-media. We would prefer case studies that emphasize practical relevance that resonate with our faculty and students. Case study submissions must also be supported by a set of directions, i.e., Faculty Teaching Notes. The teaching notes must indicate the relevant courses and TCOs associated with the case study, as well as suggested question strategies and pedagogical practices.

DEVRY UNIVERSITY JOURNAL OF SCHOLARLY RESEARCH

The case study should be, significant, complete, compelling, inclusive of alternative perspectives, qualitative, sufficiently evidenced, aligned with one or more Course Objectives, and written with accuracy and relevance.

The case study should be, significant, complete, compelling, inclusive of alternative perspectives, qualitative, sufficiently evidenced, aligned with one or more Course Objectives, and written with accuracy and relevance.

The review process for case studies is the same as for academic scholarly papers. Case studies will be evaluated on the following criteria:

- Timeliness of case & relevancy (tied to 1 or more Course Objectives)
- Theoretical framework, and practical applications
- Opportunity to expand knowledge,
- Implications to field of studies
- Case notes for faculty
- Writing quality: Clarity, conciseness, and organization, grammar and mechanics,
- APA format, including in text citations and reference page.

There is no submission deadline; case studies will be accepted on an ongoing basis.

BOOK REVIEWS

Book reviews continue to be a regular feature in the journal pages. They are an important part of scholarly life. They alert colleagues to new developments in the academy, foster discussions that can lead to new scholarship, and ultimately provide us with both a broader and deeper view of the world, which we in turn can share with our students.

Reviews of either fiction or non-fiction works should adhere to the following publication guidelines:

1. Reviews should be between 500 to 1000 words in length, double spaced, and include the following: author, title, place of publication, publisher, year, price, page length (including introduction and text), and International Standard Book Number (ISBN).
2. Reviews should include a brief summary of the scope, purpose, content of the work, and its significance in the literature of the subject. Reviews should evaluate the strengths and weaknesses of the work as well as attend to its use of sources, including documentation, methodology, organization, and presentation.
3. Reviews should be fair, balanced, and treat authors with respect.
4. A signed permission form to publish a review is required.

DEVRY UNIVERSITY JOURNAL OF SCHOLARLY RESEARCH

LETTERS TO THE EDITOR

Letters to the Editor are a welcome addition to the journal pages. Letters that reply to or extend academic scholarship published within DUJOSR pages are particularly welcome, as these add rich texture and dialogue to ideas presented. Letters should be professional, well-tempered, and engage with content meaningfully. Letters that do not necessarily attend to previously published work, but are timely and relevant are also welcome.

Letters responding to published articles in DUJOSR should identify the month and year of the article, review, or previous letter on which it is commenting. The full title of the article, review, or letter as well as the author(s) name(s) should be included. Letters should be double-spaced and 500 to 1000 words in length. Letters may express well-tempered opinions, but should include citations in cases where academic integrity requires documentation. Letters should be fair, balanced, and treat authors with respect.

FROM THE CLASSROOM

This section of the journal is newly offered to faculty who have rich pedagogical experiences worthy of sharing with a larger audience. Papers in this category may use research to support ideas, but may also consist of valuable experiences about which research may not have yet caught up. Well-crafted papers that demonstrate increased student engagement in the classroom are particularly prized. In this category, the recommendations for length are 750 to 1000 words, but longer papers of exceptional quality and relevance will be considered. Content should seek to express pedagogies that transcend the commonplace or that provide an interesting new spin on well-trod best practices.

EDITORS' INSTRUCTIONS FOR SUBMISSION AND DEADLINES

All submissions are expected to follow the APA style sheet. Templates and APA source materials are available through the DeVry Commons intranet community site, DeVry University Journal of Scholarly Research, under the following headings:

- Guide to APA Research Writing and Formatting Template Revised Nov 2013
- Guide to APA Research Writing and Formatting Revised Nov 2013
- DeVry University APA Handbook
- APA 6th Guide to Citing Sources

The submission deadline is March 31st, 2020. Please submit work in any category to Managing Editors, Deborah Helman and Michael Bird, at DUJOSR@devry.edu.

The Managing Editors reserve the right to edit all submissions in any category of submission for length, tone, and content, over and above recommendations made by peer reviewers and College Editors.

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DeVry University
1200 E Diehl Rd
Naperville, IL 60563
877.388.3374

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