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The Journal for Leadership and Instruction is recognized by AASA as a valuable resource to its members.



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National School Development Council

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Article Submissions

The Journal for Leadership and Instruction is a peer reviewed publication that is published twice each year. To be considered for publication, all submissions should be double spaced, in 12 point characters and accompanied by a disk in Word, or they should be sent by email as a Word document. Authors should follow the APA guidelines. No article will be accepted if it is more than 10 pages (double spaced) long. Suggested changes are the responsibility of the author. For the Spring issue, we ask that all submissions arrive by January 15, 2016.

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About SCOPE

SCOPE Education Services is a not-for-profit, private, voluntary organization permanently chartered by the New York State Board of Regents to provide services to school districts. Founded in 1964 by school superintendents, it is a cooperative venture for sharing resources to deal with common concerns. It is governed by a Board of Directors of school superintendents and college representatives and serves as a regional School Study Council and School Board Institute.

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Future Themes for The Journal for Leadership and Instruction:

- Focus on the "Doctoral Research" of the New Generation
- What is "Special" about Special Education
- Technology and 21st Century Schools
- Reducing Bullying in Schools
- The Next Generation of Superintendents: Assistant Superintendents Speak Up

Editor's Perspective



Last issue I asked for volunteers to serve as Peer Reviewers and/or Editorial Board members. I would like to introduce five new volunteers. Dr. Donald J. Beaudette, Associate Professor, Boston University School of Education, Boston, MA; Dr. Arthur L. Bettencourt, Executive Director, New England School Development Council, Marlborough, MA; Dr. Robert Dillon, District Superintendent, Nassau BOCES; Dr. Eric Shyman, Assistant Professor, Childhood Study, St. Joseph's College, Patchogue, NY. Dr. Jennifer L. Bashant, Associate Professor in School Leadership, Capital Area School Development Association, and Dr. Shyman will be joining the Peer Review Committee. We are still looking for new board members and reviewers. Going from a regional research journal to a national journal requires us to seek a wider range of talent.

Mr. George Duffy, Executive Director of SCOPE, describes the need for a larger and more diverse committee and review board. His description for our journal has dramatically altered purpose and direction. "The National School Development Council, (NSDC), is a confederation of school study or development councils located across the country. The Council embodies the philosophic and operational tenets of the school study and development council movement. Each of these regional, state or county-based councils is, in turn, an association of local school systems that work together - usually in conjunction with one or more institutions of higher learning - on matters of common concern. At a time when education is faced with many complex challenges, the Council remains a cooperative and unifying force, helping all interested educators to seek ways to improve education on all levels. In 2014, the Journal for Leadership and Instruction was selected by NSDC as the publication for distribution to member councils." This gives JLI the opportunity to share with colleges, schools, regional and state institutions nationally.

This brings us to another project. The Journal, published by SCOPE, held the first annual proceedings conference at Dowling College. The conference was well attended and we enjoyed the exchange of presenters and audience. The keynote speaker for the event was Dr. David E. Pritchard, Professor of Physics, MIT. Dr. Pritchard is renowned for having mentored three Nobel prizewinners at MIT. His topic, Mentoring, was well received and supported the proceedings selection. The second annual proceedings conference will be held in the spring of 2016. We invite selected members for the spring conference to present and share the findings with the audience. Remember, we ask that all submissions of articles for publication be received by January 15, 2016. I think we will have a very difficult time topping last year's keynote, but we will try.

Richard L. Swanby
Editor-in-Chief

Is "Effective" the New "Ineffective"?

A Crisis with the New York State Teacher Evaluation System

- by Kenneth Forman, Ph.D., and Craig Markson, Ed.D.

Abstract

The purpose of this study was to examine the relationship among New York State's APPR teacher evaluation system, poverty, attendance rates, per pupil spending, and academic achievement. The data from this study included reports on 110 school districts, over 30,000 educators and over 60,000 students from Nassau and Suffolk counties posted on the New York State Education Department's Data website. The results of this study showed that poverty had a strong negative correlation with performance on the New York State English Language Arts (ELA) and Mathematics assessments among students in grades 3-8. As poverty went up, performance on the State assessments went down. Poverty accounted for over 60 percent of the variance on student performance on both State assessments. The school districts' APPR teacher evaluation ratings had weak to conflicting correlations with student achievement. The school districts' percent of teachers rated "highly effective" had a positive correlation with student achievement. However, the strength of the relationship was weak, accounting for only 12.53 and 10.76 percent of the variance on student success on the English Language Arts and Mathematics examinations respectively. The school districts' percent of teachers rated "effective" had a negative correlation with student achievement. As the percent of teachers rated "effective" went up, student performance on the State assessments went down. The implications of this study suggested that legislators, State education departments, and school districts would better serve students by allocating resources toward programs that alleviate the detrimental effects that poverty has on academic achievement.

I. Purpose

During the 2011-2012 public school year, New York State implemented a revised teacher evaluation system, the Annual Professional Performance Review (APPR). As was the case with other States' teacher evaluation systems, the APPR has been controversial throughout its implementation (National Center for Education Evaluation and Regional Assistance, 2014; New York State Education Department, 2011). Proponents and critics debated the impact the APPR would have on student achievement (Futscher, 2014; Leonardatos, & Zahedi, 2014). Prior studies suggested that other factors such as poverty,

attendance rates, and per pupil spending were more important determinants of student achievement (Arthurs, Patterson, & Bentley, 2014; Hermes, 2005; Jefferson, 2005). As a result, the purpose of this study was to examine the relationship among New York State's APPR teacher evaluation system, poverty, attendance rates, per pupil spending, and academic achievement.

II. Theoretical Framework

Annual Professional Performance Review

On May 28, 2010, New York Governor David Paterson signed Chapter 103 of the Laws of 2010, which added section 3012-c to the Education Law, establishing a comprehensive evaluation system for teachers, requiring classroom teachers to receive an annual professional performance review rating (APPR) from a composite effectiveness score with a score of "highly effective," "effective," "developing," or "ineffective." The composite score was to be determined as follows: (a) 20% based on student growth on State assessments or other comparable measures of student growth (increased to 25% upon implementation of a value-added growth model), (b) 20% based on locally-selected measures (SLOs - student learning objectives or MOSL- measures of student learning) that were rigorous and comparable across classrooms (decreased to 15% upon implementation of value-added growth model) and (c) 60% based on other measures of teacher effectiveness, reflecting observation of teacher performance using a State approved evaluation rubric. For the 2011-2012 school year, the law only applied to classroom teachers of the common branch subjects, English Language Arts or Mathematics in grades 3-8. In the 2012-2013 and 2013-2014 school years, the law applied to all classroom teachers and building principals. The APPR was designed to be a significant factor in employment decisions such as promotion, retention, tenure determinations, termination, and supplemental compensation, as well as a significant factor in teacher professional development. Scoring ranges that determined teachers' performance levels were developed as a result of negotiations between school district and union (NYSED, 2014). Early in 2015, the New York State Legislature passed a law altering the APPR requirement so that student

performance still plays a role in teacher rating. This new law prescribes how teachers might be rated using a matrix (NYSED, 2015). The New York State Board of Regents, the State education governing body, has the charge of defining critical elements for implementation.

Teacher Evaluation and Student Achievement

There are a variety of concerns with using student achievement data on both State and local assessments to evaluate teachers. One of the main problems in tying test scores to teacher evaluation is determining if some teachers are simply more effective at helping students achieve, or if some teachers happen to have more able students in their classroom. Darling-Hammond, Amrein-Beardsley, Haertel, and Rothstein (2012) found that student achievement could be influenced by much more than simply a teacher's effectiveness. Class size, curriculum materials available, availability of learning materials and technology resources, and staffing of specialists in a school building can all affect student achievement. Concomitantly, challenges in student home life, family income, and issues in a community can likewise affect student achievement, as well as individual student needs, attendance, student health, and culture. A student's prior teacher and schooling, differential summer learning loss and assessment type were also factors that can affect student achievement that may be outside of the teacher's control (Darling-Hammond, et al. 2012). In a separate study, Darling-Hammond (2015) reported that teachers became more effective as they received feedback from standards-based observations and as they developed ways to evaluate their students' learning in relation to their practice.

However, there seem to be inaccuracies and potential validity issues with using value-added data regarding how much the value-added portions of composite teacher evaluations should be weighted. Although many States are implementing value-added teacher evaluation systems, there have been alignment concerns between what current research deems best practice and what has been pushed onto many schools because of initiatives that demand more accountability with teacher evaluations (Snyder et al., 2012).

Teacher effectiveness has been linked to instruction by combining them into a single index to balance out the effect of differences in student background. However, there has been little empirical evidence to indicate how this combined index might weight each measure toward a composite teacher evaluation. According to the *Measures of Effective Teaching* (MET), a balanced approach was most sensible when assigning weights to form a composite teaching measure, as too much emphasis on any one piece of a teacher's composite score could be misleading (Bill and Melinda Gates Foundation, 2013). A teacher's composite score was comprised of student achievement gains on State tests, student survey responses and observations using Charlotte Danielson's Framework for Teaching rubric (Danielson, 2007). The MET study

correlated these factors with student achievement; for example, the 2009-2010 composite measure of teaching accurately predicted the 2010-2011 student performance. Additionally, students who were randomly assigned to a teacher previously rated "effective" performed better on State assessments than expected that year based on individual students' past exam scores. On the other hand, students who were randomly assigned to a teacher that was identified as "less effective" actually achieved a lower grade than predicted based on their own individual past exam scores. Concomitantly, the MET researchers reported that there were a variety of challenges in using test scores to evaluate teachers (Bill and Melinda Gates Foundation, 2013).

Another study in a large western school district analyzed teacher evaluation scores based on Danielson's Framework for Teaching by comparing student achievement measures. Analysis involved reviewing teacher evaluation scores based on an observation rubric with district and State examinations in reading, mathematics, and a composite test on reading and mathematics. This study provided some evidence of a positive relationship between teacher performance, as measured by the evaluation system, and student achievement (Kimball et al., 2004).

Milanowski (2004) conducted a similar study around the same time, analyzing the relationship between teacher evaluation scores and student achievement on district and State examinations in reading, mathematics, and science in another large mid-western school district. The results of this study indicated that scores from a rigorous teacher evaluation system using a value-added framework could be significantly related to student achievement.

Berliner (2013) reported that there were many intrinsic problems with value-added evaluation of teachers, especially issues with the testing process itself. In his discussion on the lack of instructional sensitivity of test items, he reaffirmed that higher social class students had higher passing rates per item and lower social class students had lower passing rates per item, independent of the teacher's ability to teach (Berliner, 2013).

Haertel (2013) explained that no statistical manipulation was able to assure fair comparisons of teachers working in very different schools, with very different students under very different conditions. However, the MET study indicated that teachers had a major influence on student learning, especially when multiple measures helped identify how a teacher contributed to student learning. When teacher actions were unstable, teacher value-added scores were unstable. The researchers found that teacher behavior in classrooms varied because of a variety of factors, including: constantly changing student behavior, the need to teach multiple school subjects each day, daily changes in scheduling, and daily differences in absenteeism by students, teachers, aides and support personnel. The MET study also indicated that composite

evaluations that combined different aspects of teacher evaluation were better than using just one, teacher observers needed rigorous training and teachers should be observed multiple times per year by multiple observers. Additionally, the MET study supported that student gains needed to be adjusted to account for differences in the students. When the researchers found a correlation of student achievement with teacher ratings, that correlation was weak and quite low (Bill and Melinda Gates Foundation, 2013).

Marshall (2013) identified six factors that he felt did not support the relationship of teacher ratings with student achievement and standardized testing. He suggested that standardized tests were never designed to evaluate teachers. Moreover, districts would need to collect three years of value-added scores to reduce “noise” from the data and fear of negative consequences could lead to teachers spending an inordinate amount of time on test prep. Additionally, evaluating teachers on the basis of test results could have a negative effect on collegiality. Finally, he indicated that standardized test data were only available for 20% of teachers and praising or critiquing teachers failed to take into account work done by “pullout” teachers, specialists, tutors, or previous grades. Marshall emphatically concluded it was problematic to use standardized test scores to evaluate teachers (Marshall, 2013).

Poverty and Attendance

Studies by Darling-Hammond et al. (2012) and Darling-Hammond (2015) revealed that students’ achievement and measured gains were influenced by much more than any individual teacher. A multitude of factors were identified and included the effects of poverty, such as: home and community supports or challenges, individual student needs and abilities, health and attendance, peer culture and achievement, differential summer learning loss which especially affected low-income children, and the specific tests used which emphasized some kinds of learning and not others, and which rarely measured achievement that was well above or below grade level (Darling-Hammond, 2015; Darling-Hammond, et al., 2012).

Hershberg et al., (2004) indicated that it was impossible to fully separate out the influences of students’ other teachers as well as school conditions on students’ reported learning. No single teacher accounted for all of a student’s learning. Prior teachers had lasting effects both positive and negative on students’ later learning. By following individual students over time, value-added assessment was influenced by student background characteristics over which schools had no control and that tended to bias test results (Hershberg et al., 2004).

Linda Darling-Hammond (2015) reported that the US educational system was one of the most segregated and unequal in the industrial world because of our high rates of childhood poverty and homelessness and food insecurity that were not randomly distributed across

communities. Moreover, schools and districts have unequal funding so that teachers working in lower income communities often have fewer resources to serve concentrations of students with greater need (Darling-Hammond, 2015).

In a study of value-added teacher effectiveness by Newton et al., (2010), the researchers found that even though three of the five models controlled for student demographics as well as students’ prior test scores, teachers’ rankings were nonetheless significantly and negatively correlated with the proportions of students they had who were English language learners, free lunch recipients, or Hispanic, and were positively correlated with the proportions of students they had who were Asian or whose parents were more highly educated. The researchers’ findings highlighted the challenge inherent in developing a value-added model that adequately captured teacher effectiveness when teacher effectiveness itself was a variable with high levels of instability across contexts (i.e., types of courses, types of students, and year). Even in models that controlled for student demographics as well as students’ prior test scores, teachers’ rankings were nonetheless negatively correlated with the proportions of students they had who were English language learners, free lunch recipients or Hispanic. Rankings were positively correlated with proportions of students who were Asian or whose parents were more highly educated. The default assumption in the value-added literature was that teacher effects were a fixed construct that was independent of the context of teaching (e.g., types of courses or student demographic compositions in a class) and stable across time. The researchers found that empirical exploration of teacher effectiveness rankings across different courses and years suggested that this assumption was not consistent with reality. Correlations indicated that even in the most complex models a substantial portion of the variance in teacher rankings was attributable to selected student characteristics (Newton et al., 2010).

Per Pupil Spending

The New York State Department of Finance conducted a study toward better understanding of the relationships among instructional expenditures per pupil, district need, and educational performance. This study examined expenditures, district need and academic performance from different perspectives to develop some insights and a better understanding of these relationships. The department concluded: (a) adjusting expenditures per pupil for need and cost was a productive approach to understanding the relationships among expenditures, student need and academic performance; (b) after accounting for cost and need, expenditures per pupil can make a difference in academic performance; and (c) perhaps the greatest challenge was to improve educational effectiveness in high needs districts. High needs districts need to increase instructional expenditures on a per pupil basis to improve academic performance (NYS Department of Finance, 2004).

III. Data Sources

The data from this study were obtained from the New York State Education Department Data Site (2015) for the 2013 to 2014 school year. State reporting on 110 school districts from Nassau and Suffolk Counties, New York were included in this study. There were 15 school districts located in Nassau and Suffolk Counties that were excluded from this study for having a population of less than 50 teachers. The New York State Education Department Data Site (2015) was the source of the following data: (a) the number and percent of students collecting free and reduced lunch; (b) the percent of average daily student attendance; (c) the numbers of educators and their APPR teacher rating percentages; and (d) grades 3-8 student achievement as indicated by levels 3 and 4 on State English Language Arts and Mathematics examinations. The source of data to determine per pupil spending was the tax levy portion of the 2014 school district budgets obtained from the *Newsday* website ("Long Island school districts' tax plan," n.d.).

IV. Method

Student achievement was measured by performance on standardized State examinations in English Language Arts and Mathematics, grades 3-8. There were 4 reporting levels. Level 1 was considered exceedingly below grade level expectations. Level 2 was

considered students' performance approaching grade level, and Levels 3 to 4 were students performing on grade level and above. Student achievement was the dependent variable and measured by the percent of students obtaining Levels 3 to 4 on the English Language Arts and Mathematics State examinations. Poverty was identified as the percent of students receiving free and reduced lunch district-wide. Attendance was indicated as the percent of average daily attendance for the entire school district. Teacher Performance included the percent of teachers rated on each category of the district's Annual Personnel Performance Review. The Annual Personnel Performance Rating (APPR) evaluation system categorizes teacher effectiveness according to four performance levels: Level 1 - "ineffective," Level 2 - "developing," Level 3 - "effective" and Level 4 - "highly effective." Per pupil spending was determined by dividing by the tax levy school district budget by pupil population. The tax levy was the amount of funding available to districts through direct taxation of its residents, not influenced by a variety of other funding sources, and thus provided a clear per pupil spending amount.

Two correlation analyses were conducted to determine if school districts' free and reduced lunch (poverty), attendance rate, teacher rating - "highly effective," "effective," "developing," and "ineffective" APPR percentages, and per pupil spending were related to the percent of its students scoring Level 3 and/or 4 on the English Language

Table 1

Correlations with ELA Level 3 or 4 Achievement Percentage (N = 11 - 110)

		ELA Level 3 or 4	Free & Reduced Lunch	Attendance Rate	Highly Effective APPR	Effective APPR	Developing APPR	Ineffective APPR
Free & Reduced Lunch	r	-0.777**						
	r ²	60.37%						
Attendance Rate	r	0.469**	-0.456**					
	r ²	22.00%	20.79%					
Highly Effective APPR	r	0.354**	-0.265**	0.158				
	r ²	12.53%	7.02%	2.50%				
Effective APPR	r	-0.331**	0.241*	-0.142	-0.987**			
	r ²	10.96%	5.81%	2.02%	97.42%			
Developing APPR	r	-0.113	0.127	-0.079	-0.421**	0.2		
	r ²	1.28%	1.61%	0.62%	17.72%	4.00%		
Ineffective APPR	r	-0.667*	0.679*	-0.651*	-0.188	-0.169	0.288	
	r ²	44.49%	46.10%	42.38%	3.53%	2.86%	8.29%	
Per Pupil Spending	r	0.562**	-0.4**	0.21*	0.134	-0.119	-0.009	-0.329
	r ²	31.58%	16.00%	4.41%	1.80%	1.42%	0.01%	10.82%

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Arts and Mathematics examinations. A Pearson Product-Moment correlation analysis, with a two-tailed test of significance with alpha set at .05, was used to analyze the relationships between the variables.

V. Results

Table 1 illustrates the results for the correlations with ELA Level 3 or 4 achievement.

The percent of students receiving free and reduced lunch had a statistically significant relationship with the percent of students achieving Level 3 or 4 on the ELA assessments. There was an inverse relationship, accounting for 60.37 percent of the variance: as the percent of students receiving free and reduced lunch increased, the percent of students achieving Level 3 or 4 achievement substantially decreased. The attendance rate also had a statistically significant relationship with the ELA assessment rate. Here, there was a positive correlation, accounting for 22 percent of the variance on the percent of students receiving Level 3 or 4 on the ELA assessments. The percent of teachers rated “highly effective” had a statistically significant and positive correlation with student ELA scores, accounting for 12.53 percent of the variance. The “effective” teacher rating also had a statistically significant but negative correlation with the ELA assessments, accounting for 10.96 percent of the variance.

The “developing” APPR rating did not have a statistically significant relationship with ELA assessments, $p > .05$. The “ineffective” APPR rating had a statistically significant and negative correlation with the ELA assessments, accounting for 44.49 percent of the variance. Finally, the districts’ per pupil spending had a statistically significant and positive correlation, accounting for 31.58 percent of the variance.

Table 2 displays the results for the correlations with Level 3 or 4 achievement on the Mathematics assessments. The percent of students receiving free and reduced lunch had a statistically significant relationship with the percent of students achieving Level 3 or 4 on the New York State Mathematics assessments. There was an inverse relationship, accounting for 62.57 percent of the variance: as the percent of students receiving free and reduced lunch increased, the percent of students achieving Level 3 or 4 achievement substantially decreased. The attendance rate also had a statistically significant relationship with the Mathematics assessment rate. Here, there was a positive correlation, accounting for 23.91 percent of the variance on the percent of students receiving Level 3 or 4 on the Mathematics assessments. The percent of teachers rated “highly effective” had a statistically significant and positive correlation with student Mathematics scores, accounting for 10.76 percent of the variance. The “effective” teacher rating also had a statistically significant but negative correlation with the Mathematics assessments, accounting

Table 2

Correlations with Mathematics Level 3 or 4 Achievement Percentage (N = 11 - 110)

		Math Level 3 or 4	Free & Reduced Lunch	Attendance Rate	Highly Effective APPR	Effective APPR	Developing APPR	Ineffective APPR
Free & Reduced Lunch	r	-0.791**						
	r ²	62.57%						
Attendance Rate	r	0.489**	-0.456**					
	r ²	23.91%	20.79%					
Highly Effective APPR	r	0.328**	-0.265**	0.158				
	r ²	10.76%	7.02%	2.50%				
Effective APPR	r	-0.295**	0.241*	-0.142	-0.987**			
	r ²	8.70%	5.81%	2.02%	97.42%			
Developing APPR	r	-0.202	0.127	-0.079	-0.421**	0.2		
	r ²	4.08%	1.61%	0.62%	17.72%	4.00%		
Ineffective APPR	r	-0.634*	0.679*	-0.651*	-0.188	-0.169	0.288	
	r ²	40.20%	46.10%	42.38%	3.53%	2.86%	8.29%	
Per Pupil Spending	r	0.496**	-0.4**	0.21*	0.134	-0.119	-0.009	-0.329
	r ²	24.60%	16.00%	4.41%	1.80%	1.42%	0.01%	10.82%

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

for 8.76 percent of the variance. The “developing” APPR rating did not have a statistically significant relationship with Mathematics assessments, $p > .05$. The “ineffective” APPR rating had a statistically significant and negative correlation with the Mathematics assessments, accounting for 40.2 percent of the variance. Finally, the districts’ per pupil spending had a statistically significant and positive correlation, accounting for 24.6 percent of the variance.

VI. Conclusions

The Annual Professional Performance Review (APPR) rating that had the strongest correlation with student success, Levels 3 or 4, on both the English Language Arts and Mathematics examinations was the “ineffective” category, accounting for 44.49 and 40.2 percent of the variance on the assessments respectively. Predictably, this had a negative correlation with students’ performance on both State assessments. However, only 11 of the 110 districts included in this study had reporting in the “ineffective” category. The other 99 districts had zero percentage reporting. While the “highly effective” category had all 110 districts reporting various percentages of its teachers in this category, it only accounted for 12.53 and 10.76 percent of the variance on student success on the English Language Arts and Mathematics examinations respectively. The “effective” category also had all 110 districts reporting various percentages of its teachers in this category. However, what was surprising was the inverse relationship that the “effective” APPR category had with the student achievement success rates, Level 3 and 4. With only 11 school districts reporting “ineffective” and the inverse relationship that “effective” had with student achievement, “effective” has become the new “ineffective.” This was probably caused from the underreporting of “ineffective” and “developing” categories, which had only 53 school districts reporting some percentage of its teachers in these categories and as such, the results were skewed.

The real crisis with the New York State teacher evaluation system was that it overshadowed the most important problem of poverty and its harmful effects on student achievement. The percent of students receiving free and reduced lunch, which was used to measure poverty, accounted for a whopping 60.37 percent of the variance on student success on the English Language Arts examinations and 62.57 percent on the Mathematics examinations. The correlation analyses also revealed that as poverty went up, attendance rates went down. Lower school attendance also put downward pressure on student success on the State assessments. There was a positive correlation of student attendance and student achievement. The results of this study showed districts that had a high average daily attendance also evidenced higher levels of student achievement. Finally, there was a positive correlation of student achievement with per pupil spending. The higher the per pupil spending by district, the greater the student achievement.

VII. Implications of the Research

As a result of Race to the Top federal funding, New York State (along with other RTT award recipient States) adopted a paradigm for teacher evaluation involving multiple measures for determining teacher effectiveness. Likewise, with the pending renewal of the federal Elementary and Secondary Education Act (ESEA) policy makers will face an important question: Can teacher effectiveness be reliably measured using value-added metrics to evaluate teachers and hold them accountable? This dilemma is not easily resolved, but after looking at the data from 110 school districts across Long Island with over 67,000 students and 32,000 teachers there are some obvious suggestions.

Use enhanced teacher observation protocols with multiple trained evaluators and downplay the importance of testing for teacher evaluation since value-added metrics have proven to be unreliable and an inaccurate predictor of teacher performance. Rather than relying on these metrics for determining growth in student achievement, other evidence should be considered. Perhaps using formative English Language Arts or Mathematics assessments or looking at growth in students’ written work according to a defined rubric might have greater value. For English Language Learners, perhaps looking at growth over the school year on vocabulary acquisition might prove more worthy.

As more demands are placed on principals to evaluate their teachers in an objective and standardized format, principals will be forced to lean on their teachers to perform other important duties, such as curriculum and professional development, and to lead work in different structures within the school, such as professional learning communities or instructional rounds. A new breed of teachers will evolve, “teacher leaders” who would assume responsibility as leading learners for their schools, leading their colleagues collaboratively to maximize student achievement.

Moreover, if the results of this study remain consistent with future studies, legislators, State education departments, and school district leaders throughout the country should focus more of their attention on developing programs that alleviate the detrimental effects that poverty has on student achievement. A variable that accounts for over 60 percent of the variance on student achievement should not be ignored.

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Workers Can't Find Jobs, Jobs Can't Find Workers: Solving The Talent Paradox

- by Harika Rao

PURPOSE OF THE STUDY

The purpose of the research was to understand the latest job skill requirements for undergraduates from the real world as perceived by the students themselves and their career counselors at a university in South Florida. The study intended to provide relevant inputs to enhance the marketability of the undergraduate students by seamless transformation of students from 'learning to earning' stage in life by using two interventions, de Bono's Six Thinking Skills and Covey's 7 Habits.

Hypotheses and Research Questions:

The researcher utilized the questions for this study relevant to problem, hypotheses and the target population.

H1: There is a positive relationship between having future work skills, namely, critical thinking and teamwork and the perceived marketability of undergraduate students for a successful navigation through the employment market.

RQ1: What are the curriculum and the non-academic interventions offered by the university from the employability perspective as perceived by the students and the career counselors?

RQ2: What are the skills students and career counselors perceive as lacking, to succeed in today's dynamic and competitive world, and why?

H2: There is a positive relationship between use of components of de Bono's thinking skills and Covey's 7 habits and improvement of the future work skills of undergraduate students in bridging the skill gap.

RQ3. What are the relevant components of de Bono's thinking skills and Covey's 7 habits that help students improve their marketability in the competitive job market by reconnecting their academics to the employment?

RQ4. What needs to be modified in the curriculum to remove employment barriers faced by the undergraduate students and equip them with future work skills?

Research questions 1 and 2 are related to hypothesis 1, that there is a positive relationship between having future work skills and improved marketability of undergraduate students for a successful navigation through the employment market. Research questions 3 and 4 are related to hypothesis 2, that there is a positive relationship between uses of components of de Bono's thinking skills and Covey's 7 habits and improvement of the future work skills of undergraduate students in bridging the skill gap. Research questions 1, 2 and 3 are meant for both the selected undergraduates and the career counselors, whereas research question 4 is specifically meant for the career counselors.

Significance of the Study

The study sought to understand the perceptions and practices of the undergraduate students and the career counselors in relation to the de Bono (1985) thinking skills and Covey's 7 Habits (1989) and the extent to which such awareness would help in their lives after college graduation. The study may provide useful insights into the nature of self-development not only to the students but also to the educators and the program developers in developing appropriate pedagogical reform initiatives.

Assumptions

The research was based on responses from a sample of undergraduate students at a private university and therefore, the conclusions drawn will or cannot be generalized. While efforts would be made to minimize subjectivity of responses from the target population, it could not be totally avoided.

Delimitations

The variables affecting college graduates' unemployment were both micro and macro in nature. The study addressed the micro level issues involving the students and career counselors, which were relatively controllable. Macro level issues like the state of the economy, labor policies of the government, and inflation were out of the scope of this study.

REVIEW OF RELATED LITERATURE

The literature review would help provide relevant inputs from the different research studies conducted in order to enhance the marketability of the undergraduate students by seamless transformation of students from 'learning to earning' stage. The literature review started with the broader aspects of the problem, that is, unemployment among college graduates, progressively narrowed down by employability skills and the skill gaps, and finally the effect of interventions of de Bono's Six Thinking Skills and Covey's 7 Habits.

Conceptual Framework:

Two major skill gaps, thinking skills and self and team management have been identified as the potential barriers to employment for undergraduate students after graduation. The researcher proposed to formulate the solution strategy based on two conceptual models as discussed here. **de Bono's Six Thinking Hats** model and **Covey's 7 Habits** for improving critical thinking skills and self and team management respectively are the recommended tools.

Edward de Bono's Thinking Skills (Six Thinking Hats model)

Six Thinking Hats is a useful technique for decision-making and problem solving. It makes a person look at a problem from different perspectives and think out of the box. It thus opens up issues and opportunities which otherwise would have been missed in conventional thinking. The perspectives of thinking are differentiated by assigning imaginary colored hats. A person mentally wears and switches hats of different colors to stimulate different ideas.

Stephen Covey's 7 Habits of Highly Effective People

"Habit is the intersection of knowledge (what to do), skill (how to do), and desire (want to do)." (Covey's "The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change," 1989).

METHODOLOGY

Mixed Design Approach

According to leading experts such as Merriam (1988), Eisner (1991), Bogdan and Biklen (1998), and Creswell (1998), some of the characteristics shared by most qualitative studies are the following: a) natural setting, b) researcher playing a key role in data collection, c) data collected in words or pictures, d) research outcome seen as a process, not a product, e) inductive analysis of data, f) focus on individual participant's perspective, g) use of expressive language, and h) persuasion by reason. Case method was used in this study.

Philosophical Assumptions

The researcher chose interpretive philosophy for investigation in this research study. The landscape of the social and business world is too complex to be described or formulated into one-word fixed theories. According to this philosophy, the nature of observed facts or truths is dynamic and situational. So, the philosophy is suitable for most situations and research problems (Johnson & Christensen, 2004). The emphasis is on the human interpretations of the sensory perceptions.

Setting

The university is an American independent, non-profit, coeducational, residential university in southern Florida. The university is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate's, baccalaureate, master's, and doctoral degrees. The university offers undergraduate and graduate curricula built on individualized attention and an international focus. The university enrolls more than 2,000 students representing nearly all 50 U.S. states and approximately 90 nations in four academic colleges and three specialty programs. Approximately 25 undergraduate degrees and 10 graduate degrees are offered in the four colleges.

Selection Criteria

Eighteen students from the university pursuing their undergraduate degree were selected based on their years spent in the university, gender, program and program major. Two career counselors from the Center for Career Connections were selected. Career counselors were included in the sample for the reason that they were more knowledgeable about the employers' expectations and thus they would act as the bridge between the students and their prospective employers. All participants were older than 18 years with no known psychological or physical disabilities.

Data Collection Tools and Procedures

Interviews

Individual interviews and semi-structured observation, complemented by extensive one-on-one interviews with the student group and the career counselor group separately were the primary data collection instrument for this study. In addition to the interviews, data from documents in various sources, either direct or online, were utilized.

Interview Plan and Interview Process

Each interviewee was emailed to set up a mutually convenient time for a meeting. The interviews began with mutual introduction of the researcher and participants. All participants were given a consent form to get permission for participation in the study.

A copy of Covey's 7 Habits and de Bono's Six Thinking Hats was shared, to give participants enough background information towards the research questions. The majority of the questions were open-ended and qualitative in nature, seeking responses as perceived by the interviewees.

All participants of each group were asked the same basic demographic questions. If, during the interview, the participant moved to another question, or moved away to another topic during the course of one's remarks, then the interviewer explored with follow-up questions. Moreover, the questions were worded in an open-ended way to allow for a broad spectrum of answers. The time taken for the interviews was two weeks.

SUMMARY OF FINDINGS

Hypothesis 1

Hypothesis 1 stated that there is a positive relationship between having future work skills, namely, critical thinking and teamwork and perceived marketability of undergraduate students for a successful navigation through the employment market.

Almost half (46%) of the students and the counselors agreed and 26% of them strongly agreed to the tough job market situation and the lack of employability skills demanded by the employers. Again, creativity and innovation, critical thinking, leadership, prioritizing, interpersonal/intercultural skills and team work were the top ranked employability skills identified by the students and the counselors. To a question on the comparative effectiveness between independent working and working with others in an organizational setting, a majority of the students opted for group working as the more appropriate mode of working in an organization.

Hypothesis 1, Research Question 1

The research question one addressed in the study was: "What are the curriculum and the non-academic interventions offered by the university from the employability perspective as perceived by the students and the career counselors?"

Most of the students agreed that the non-academic interventions were helpful to make them work-ready. To the question, "Do you think that you have the opportunity to get exposure to the skills in demand by the employer?"

Figure: de Bono's 6 Hats

The Six Thinking Hats



The White Hat
White Hat thinking focuses on data, facts, information known or needed.



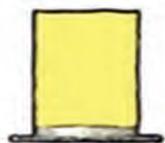
The Black Hat
Black Hat thinking focuses on difficulties, potential problems. Why something may not work.



The Red Hat
Red Hat thinking focuses on feelings, hunches, gut instinct, and intuition.



The Green Hat
Green Hat thinking focuses on creativity: possibilities, alternatives, solutions, new ideas.



The Yellow Hat
Yellow Hat thinking focuses on values and benefits. Why something may work.



The Blue Hat
Blue Hat thinking focuses on manage the thinking process, focus, next steps, action plans.

Note: Edward de Bono's Six Thinking Hats model, from de Bono (1985).

the responses from the students were mixed. While eight students recognized the existence of such opportunity, seven students gave 'qualified yes' responses. This indicates that some opportunities do exist within the campus to learn work-ready skills but they need to be supplemented to ensure that all students benefit. All the students affirmed the benefit of classroom projects to improve their thinking process. Both counselors opined that fortifying the existing non-academic interventions would address the skill-gaps faced by the students.

Hypothesis 1, Research Question 2

Research question two asked: "What are the skills students and career counselors perceive as lacking, to succeed in today's dynamic and competitive world and why?"

The majority of the students said that they knew the reasons why some undergraduates did not get hired and went further to cite those reasons which ranged from personal development issues such as lack of professionalism, lack of individuality, lack of ambition to macro-issues such as competitive job market, and too many people graduating from colleges. However, when questioned about the issues presented in recent employment surveys on the lack of employability skills, the majority of students (12) were either in full or partial agreement with the survey findings. As to the three most important reasons for the difficulty in employability of undergraduates, the students' responses were wide-ranging, from economic issues such as sluggish economy, mechanization of jobs, to personal issues such as lack of interpersonal skills, lack of experience, lack of creativity. As to the counselors, one of them did not agree

with the researcher's proposition that critical thinking and team work were the two important personal skills demanded by the employers and the other counselor was not sure. On the skill gaps that needed to be addressed, the counselors mentioned professionalism, communication and confidence as those that needed attention.

Hypothesis 2

Hypothesis two stated that there is a positive relationship between uses of components of de Bono's Thinking Skills and Covey's 7 Habits, and improvement of the future work skills of undergraduate students in bridging the skill gap.

de Bono's Six Thinking Hats:

Almost all students came to know of de Bono's *Six Thinking Hats* only during their interviews. They did not have an opportunity to discuss or share the concept with others earlier, as they were unaware of the 6 hats. However, some students, despite not being consciously aware of the thinking hats concept, were able to relate their personal experiences to the various thinking hats. One of the two counselors knew about the concept in the 1990's and the other counselor heard about it 'just now.' The top three thinking hats ranked by the participants were green (creativity), blue (action) and yellow (values) hats.

Covey's 7 Habits:

The majority of students (14 out of 18) had not heard about *Covey's 7 Habits* earlier and only a few

Figure: Covey's 7 Habits



Note: From Stephen Covey's 7 Habits of Highly Effective People, (1989).

discussed or shared the concept with others. Some students were able to identify some of their actions and relate them to the 7 habits. The dominant habits perceived by the students were: Habit 1 (be proactive), Habit 2 (begin with the end in mind), Habit 4 (think win-win) and Habit 5 (seek first to understand and then be understood). Both counselors were aware of the 7 habits and also shared it with others. Both of them identified Habit 2 (begin with the end in mind) as their dominant habit. The students and the counselors ranked Habit 1 (be proactive), Habit 3 (First things first) and Habit 5 (seek first to understand and then be understood) as the top desirable habits.

Hypothesis 2, Research Question 3

Research question three asked: "What are the relevant components of de Bono's thinking skills and Covey's 7 habits that help students improve their marketability in the competitive job market by reconnecting their academics to the employment?"

All students agreed that training in the two models, namely de Bono's thinking hats and Covey's 7 habits would improve their transition from college to work. Similarly, both the counselors supported the view that training in both the models would be useful and relevant to the students, educators and colleges. While agreeing that additional skills or attributes were needed for the undergraduates, the counselors felt that these two training programs would be more useful if companies would conduct training programs on the campus.

Hypothesis 2, Research Question 4

Research question four asked: "What needs to be modified in the curriculum to remove employment barriers faced by the undergraduate students and equips them with future work skills?"

Half of the student respondents mentioned that the existing curriculum was up-to-date and relevant whereas seven students said that the curriculum was not very relevant due to non-availability of real world experience, and too much emphasis on institution-centric knowledge rather than student-centric knowledge. On a similar but differently phrased question (Is the current curriculum not adequate enough to address the skill gap?), there was a mixed response. To another question on the need for any additional inputs to improve job preparedness, the students favored training in job-oriented skills, more CEO speaker series and mock interviews. One of the counselors said that more role models were needed to walk the talk. The other counselor felt that the skill gaps were being addressed by the university through initiatives such as internships.

CONCLUSIONS AND IMPLICATIONS

Based on the findings and the discussions the following conclusions are drawn:

1. Hypothesis 1 has been accepted evidencing the positive relationship between future work skills, mainly critical thinking, and teamwork and perceived marketability of the undergraduate student for successful navigation through the employment market.
2. Hypothesis 2 has also been accepted confirming a perceived beneficial use of the de Bono's thinking hats and Covey's 7 habits in bridging the skills-gap of undergraduate students.
3. In addition to reinforcing the existing body of knowledge on the need for future work skills as discussed in the literature review, the research brought into focus the most popular yet underutilized models of de Bono's Six Thinking Hats and Covey's 7 Habits in the context of higher education. Interestingly, these models have been in existence for decades but their application was predominantly in the corporate world. For some reasons, higher education rarely uses them for the benefit of students except in a few stray cases. The literature on the use of these models in higher education is scant and the researcher hopes that this study would become a catalyst by evoking interest for the college administrators.
4. The need for continual monitoring of the ever-changing employers' demands to keep the students' skills up-to-date is an important outcome of this study.
5. Sharing of ideas among the students, the faculty and the career counselors goes a long way in formulating appropriate pedagogical interventions.

Recommendations for Practice

Based on the findings of this research, the following recommendations are offered:

1. The university career counselors may initiate the process of identifying the future dynamic work skills on a continual basis and collaborate with the prospective employers and the recruitment agencies.
2. Equipped with awareness and sensitization of employer-centric work skills, the administrators, and faculty may evaluate the academic curricula to assess the extent of skill-gaps faced by the students.
3. The administrators and faculty may design appropriate pedagogical interventions that can integrate the future work skills into the traditional teaching.

4. The students should be sensitized to the need for upgrading their skills and offered the opportunities to learn and practice those skills while on campus.

5. Partnering with industry is a viable option to ensure that the students leave the college with work-ready skills. It is even advisable to include some generic work-related needs such as internships and field trips into the curricula.

6. Finally, the university administrators may find it worthwhile to arrange training programs in the two interventional models mentioned in the hypothesis, namely, de Bono's Six Thinking Hats and Covey's 7 Habits, which the participants of the survey endorsed.

Recommendations for Future Research

The recommendations for further research in related areas are given based on the data analyzed, methodology employed, and inherent limitations of this study.

1. This study found that many students were unaware of the de Bono's Six Thinking Hats and Covey's 7 Habits models. Perhaps a pilot study coupled with a reasonable exposure to these two models be given to students before actually embarking on the main study. This enables the students to understand and appreciate the implications of the models and to respond to the survey questions more meaningfully.

2. The findings of this study support the hypothesis that there is a positive relationship between use of components of the two interventional models, namely, de Bono's Six Thinking Hats and Covey's 7 Habits, and bridging the skill-gap of undergraduate students. However, the application of these two models at the undergraduate level has been an exception rather than a rule. Thus, there is a scope for further exploring the need for use of these models in other colleges.

3. Given the dynamic nature of the work skills, especially due to the disruptive elements such as technology and globalization, a series of longitudinal studies will be helpful in documenting the trends over a period of time.

4. The perceptions of the students on this research topic varied from those of the career counselors, in some areas. This variation between the two groups warrants further study to find out the reasons, and their possible reconciliation.

5. The faculty who are in close touch with the students on a daily basis should also be included as participants.

6. The study can be extended to the public universities and to other geographical areas, as the employment conditions differ from place to place.

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Self-Directed Learning: College Students' Technology Preparedness Change in the Last 10 Years

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Abstract

This study compares a sample of approximately 44 first year college students in 2005 and 2015 on Long Island, New York, in their technology preparedness and self-directed instruction. The researchers used a survey instrument including demographic information focused upon students' preparation for classroom technology in high school and college. First, the study compared the extent to which students use self-directed instruction relative to proficiency in technology in 2005 and 2015. Second, the study examined the technology preparedness in high schools and colleges. Third, the study compared the difference in technology preparedness in high school and college between students in 2005 and 2015.

The 21st century high school and college student tends to favor a more independent, autonomous learning style that makes them more assertive information seekers and shapes how they approach learning in the classroom (Carlson, 2005). Over a decade since then-President of the Massachusetts Institute of Technology (MIT), Charles Vest, first made all courses available for free use online, the educational world has changed drastically. (Sheu, Lee, Bonk & Kou, 2013). Currently, students are increasingly utilizing online environments for their learning needs as they not only seek professional growth and development, but also to pursue their learning interests (Bonk, Miyoung, Kou, Xu & Sheu, 2014). Open educational resources, (OER), open courseware (OCW), massive open online courses (MOOCs), hybrid (or blended courses), and flipped (or inverted) classrooms offer self-directed learners the technologies to be able to acquire a skill or study an endless array of topics. Other educators, however, feel that by incorporating greater autonomy in learning, the higher education system will suffer and that although students may be digital natives, they do not necessarily understand how their use of technology affects their literacy or habits of learning (Barnes, Marateo & Ferris, 2007; Oblinger & Oblinger, 2005). Therefore, as society seems to be shifting towards a more free and open educational platform, advances in self-directed learning technology are disruptive forces to the traditional higher education environment, forcing learning institutions to embrace these trends for their future success.

Purpose of the Study

The purpose of this study is to compare the extent to which first-year college students in 2005 and 2015 use self-directed instruction relative to proficiency in technology on Long Island, New York. Data for this study was drawn from the initial study of Perceptions of Recent High School Graduates on Educational Technology Preparedness for College (Brachio, 2005). In this study, Brachio defined educational technology competency through the following concepts: Spreadsheet, General Computer Use, Advanced Word Processing, Share Information, Power Point Presentations, Basic Word Processing, and Ethical Use of Computers. The 2015 study adds the additional concept of Social Media, and examines the difference in which high schools and colleges prepare first-year college students for proficiency in technology. Lastly, the study compares the difference in technology preparedness in high school and college between students in 2005 and 2015.

Theoretical Framework

In today's fast-paced world, students can access information anywhere and anytime thanks to mobile devices such as smartphones and tablet computers. The attitudes and perceptions of digital learners towards the use of computer technology is essential to better understanding the relationship between technology preparedness and self-directed learning.

First, it is necessary to define what self-directed learning entails. Knowles (1989) defined self-directed learning as a "process in which individuals take the initiative, with or without the help from others, in diagnosing their learning needs, formulating goals, identifying human and material resources, choosing and implementing appropriate learning strategies, and evaluating learning outcomes" (pg. 18).

According to standards developed by the International Society for Technology in Education (ISTE), students should be able to demonstrate personal responsibility for lifelong learning by demonstrating a sound understanding of technology concepts, systems, and operations. This included a student-centered learning model as an essential condition for planning, teaching, and assessment based on the needs and abilities of students (www.iste.org).

In 2000, Ben-Jacob, Levin, and Ben-Jacob believed that the student of the new millennium would be more academically independent, self-motivated, and better able than their educational predecessors. The authors also opined that the typical student would be technologically astute and prepared to tap into the vast potential for technologically assisted learning. Now in 2015, with the evolution of OER, OCW, and MOOCs, today's student must effectively manage the endless array of learning resources available; often with little or no guidance (Sheu et al., 2013).

High School Level Perspectives

Kahveci (2010) investigated high school students' motivation to use technology for learning comparing varying personal characteristics such as gender, grade level, content area of interest, and previous experience in using technology for learning. The study suggested that students in grades 9-12 had a positive attitude towards the use of technology for their learning and recommended that educators should integrate technological components to foster student learning and motivation to learn. In a similar study conducted in 2014 by Demir, Yasar, Sert and Yurdugul, the researchers examined Turkish students' self-directed learning attitudes towards computers in either a public middle or secondary school. They found that as students adopted computers more, they used them more often for self-directed learning. This learning typically occurred outside of schools and was related to computer self-efficacy through e-learning environments.

In a 2009 teacher survey of technology conducted by the National Center for Education Statistics, 78 percent of high school teachers reported using independent learning as the most effective means for preparing them for educational technology in the classroom. The following year, in a Speak Up 2010 survey of K-12 students, parents, and educators regarding the role of technology for learning, while 74 percent of high school teachers, 72 percent of high school principals, and 62 percent of parents of high school aged children said that they felt their school was "doing a good job using technology to enhance learning and/or student achievement," only 47 percent of high school students agreed (www.tomorrow.org/speakup, pg. 15).

College Level Perspectives

In a 2014 MIT study by Bonk et al., the researchers surveyed the learning preferences, motivations, achievements, obstacles, and possibilities for life change of self-directed online learners. The results of their survey revealed that nearly 85 percent of students used self-directed online learning to learn a new skill or competency whereas 70 percent used self-directed online learning for self-improvement or curiosity. The most common reason for such self-directed learning included intrinsic motivation with lack of time being the most significant obstacle for using the resource.

Identifying second year college students' attitudes and self-efficacy towards m-learning (mobile and smartphones, tablets), Yang (2012) identified that the students' computer self-efficacy and attitudes were core factors which affected the success of m-learning in the classroom.

The Educator's Perspective

Although most educators would generally agree that 21st century competencies demand fundamental changes in how student learning will occur, there seems to be a divide in teacher preparedness as well as perceptions of how classrooms should change in order to better prepare young people to be educated for careers that do not yet exist.

Newby, Stepich, Lehman and Russell (2000) stated that due to learner-centered instruction allowing students to engage with various sources of potential information to gain insights into a problem, the teacher's role would "shift to one of guide and facilitator who assists learners in achieving their learning goals" (pg. 7). Christensen, Horn and Johnson (2008) believed that by acting as learning coaches and tutors, teachers would spend more of their time assisting students individually, helping students find the learning approach that makes the most sense for them. This decentralized view of teaching learning was not to be viewed as an abandonment of instructional responsibility, but rather as an embracing of the core skills and capacities that students needed to be successful (Zmuda, 2009).

Li (2007) reported limited participation from students when schools made technology initiatives. Instead, his findings reported that many teachers did not share the same beliefs about technology due to a fear of being replaced by computers. Some teachers had even described reluctance to structure technology-enhanced learning projects with students whom they felt were more technologically savvy than they were since they did not grow up with using the Internet as much as today's learners (Greenhow, Walker & Kim, 2009). However, in order to take advantage of a technology-supported learning environment, good teaching and learning required an awareness of students' level of understanding, dynamic adjustment of delivery and content, and the active engagement of students in their learning (Lv, 2014). Mehaffy (2012) recommended hybrid courses (blending a traditional course with face-to-face and online instruction) and flipped classrooms (content is delivered as homework with class time reserved for collaboration, discussion, and addressing misperceptions) as an entry point for teachers to see the power of an Internet portion of a course, making them more open to including online portions in their courses for the future.

Johnson (2006) encouraged a faculty-led movement to embrace technology through the use of professional development taught internally by faculty members,

computer information system faculty, or by acknowledged experts or "technology gurus" within the school. Similarly, Eickelmann (2011) believed that strong leadership, school-wide adoption of computer technology, a focus on the implementation process, collaboration with external partners and with other schools as essential for promoting sustainable implementation of 21st century skills in the classroom.

In 2015, Lai studied the influence of teacher behaviors on undergraduate foreign language students regarding learners' self-directed use of technology outside the classroom. Using three conceptual models of teacher support including affection, capacity, and behavior, the researcher noted the importance of raising teachers' awareness of the different roles they played in enhancing the abilities to perform a combination of roles to promote student self-directed use of technological resources for learning outside the classroom. Thus, it was important for professional development programs to stress teachers' responsibilities for, as well as the various ways they could influence students' self-directed technology use outside the classroom.

In contrast, some research has found that although students recognized the potential and significant role of technology in teaching and learning, the recognition was limited to the use of technology as an instructional medium, but not a key determinant of learning. Instead, the student-teacher relationship was the primary factor for engaging students in a way that helped them find education satisfying. Students were not as concerned with technology specifically, but rather the autonomy, relevance, and connectedness that it often provided (Ali and Elfessi, 2004; Lemley, Schumacher and Vesey, 2014).

Overall, the research indicates a need for educators in the 21st century to recognize the more self-directed learning style of today's students while creating improved professional development opportunities in technology for teachers in order to maximize the potential of emerging technologies in the classroom, designing a 21st century learning experience to better prepare students for the future (Ben-Jacob et al., 2000; Bonk et al., 2014; Christensen et al., 2008; Demir et al., 2014; Eickelmann, 2011; Johnson, 2006, Newby et al., 2000).

Sample and Instrument

The sample includes 44 first-year college students from the years 2005 (n=29) and 2015 (n=15) on Long Island, New York from two colleges. Brian Brachio's 2005 study had a sample of 134 college students responding. Twenty-nine first-year college students were selected to be contrasted with the students from a similar setting in 2015. In 2015, the researchers surveyed 18 students as a convenient sample, looking to match demographics of the 29 first-year college students in the Brachio 2005 study. Fifteen were first-year college students. A 74-item survey instrument was applied including demographic information focused upon students' prepa-

ration of classroom technology, measured on a five-point Likert Scale (Strongly Disagree -1, Disagree -2, Neutral -3, Agree -4, and Strongly Agree -5). Survey participants selected applicable technology items on the survey based on the categories: high school preparation, college usage, and whether or not each skill was acquired through self-taught learning. Sixty-five items on the survey were designed by Brian Brachio (2005, p. 143) and was constructed using survey questions from Sormunen, Ray and Harris (2005); Ali and Elfessi (2005); Gupta and Houtz (2000); and Long (2003) with an additional nine social media items designed for this study by Caravello, Jiménez and Kahl in 2015. In the Brachio study, Cronbach's alphas were .89 for spreadsheet, .89 for general computer use, .84 for advanced Word processing, .85 for share information, .82 for Power Point presentations, .73 for basic Word processing, and .67 for ethical use of computers. Cronbach's alphas for the additional nine social media items for high school were .96 and .95 for college.

Data Sources

Data from 2005 was taken from a larger study conducted by Brian Brachio (2005) entitled, "Perceptions of Recent High School Graduates on Educational Technology Preparedness for College" at Dowling College in Oakdale, New York. Additional data was collected in 2015 at Dowling College in Oakdale, New York and Stony Brook University in Stony Brook, New York. All participants were anonymous. The data analysis included eight factors, including the seven concepts from the 2005 study (**Tables 1 - 1.7**) with the addition of Social Media for the 2015 study (see **Table 1.8**).

Research Questions and Method

This study asks the following research question: To what extent do first-year college students use self-directed instruction relative to proficiency in technology in 2005 and 2015? The researchers used frequency analysis.

Results

Results of the study indicate a significant amount of students utilize self-directed instruction to obtain proficiency in the use of technology.

Tables 1.1 - 1.8 display forty questions from the survey that resulted in changes between 2005 and 2015 in self-directed learning items along with nine questions regarding self-directed learning in regard to social media. The three items with the greatest differences between 2005 and 2015 were creating a bookmark (51 percent), opening and navigating between one or more browsers at a time (62 percent), and accessing email (52 percent). The dimensions of the greatest differences between 2005 and 2015 were Spreadsheet (up 32 percent), Advanced Word Processing (up 46 percent), Power Point Presentations (up 25 percent), and Ethical Use of Computers (up 25 percent). Also important is that Dowling College, which was the sole institution in the 2005 study, was one of the two institutions surveyed in 2015.

Table 1*Averages between 2005 and 2015 first-year College students for self-directed learning*

Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
Spreadsheet	47.00%	78.80%
General Computer Use	59.18%	63.63%
Advanced Word Processing	44.02%	89.98%
Share Information	54.43%	74.43%
PowerPoint Presentations	54%	79.48%
Ethical Use of Computers	56%	81.20%
Social Media		97.77%

Table 1.1*Differences between 2005 and 2015 first-year College students for self-directed learning in Spreadsheet*

Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
I do not try to bypass content filtering systems	55.20%	69.20%
I can demonstrate general computer use skills in the classroom or in the computer lab	56.70%	93.30%
I know the difference between "save" and "save as"	50%	85.70%
I can demonstrate presentation skills in the classroom or in the computer lab.	43.30%	56.70%
I can use a URL to locate a specific Web site address	41.40%	66.70%
I can make a bookmark	35.70%	86.70%
I can create folders for my mail	46.70%	93.30%
2005 versus 2015 Averages	47.00%	78.80%

Table 1.2*Differences between 2005 and 2015 first-year College students for self-directed learning in General Computer Use*

Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
I copy and paste internet pages into my documents	46.70%	53.30%
I do not use the school system to access material that is profane or obscene	46.70%	53.80%
I report irresponsible access so that inappropriate sites may be blocked	56.70%	61.50%
I use appropriate language	76.70%	76.90%
I can have more than one program open at a time and move between them	70%	53.80%
I am familiar with basic computer components (monitor, floppy drive, and CD Rom)	63.30%	61.50%
Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
I can save my document on a disk or other storage devices	60%	61.50%
I can use the find function to find a specific file	53.30%	86.70%
2005 versus 2015 Averages	59.18%	63.63%

Table 1.3*Differences between 2005 and 2015 first-year College students for self-directed learning in Advanced Word Processing*

Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
I can format a document using page numbers	33.30%	80%
I can copy a picture from the Internet and paste it into a document	44.80%	80%
I can demonstrate internet skills in the classroom or in the computer lab	60%	93.30%
I can access my e-mail account	41.40%	93.30%
I can send an e-mail	46.70%	93.30%
2005 versus 2015 Averages	44.02%	89.98%

Table 1.4*Differences between 2005 and 2015 first-year College students for self-directed learning in Share Information*

Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
I can format a page using tabs and margins	43.30%	73.30%
I can format a page using bullets and numbering	56.70%	73.30%
I can change the row height and column width	63.30%	80%
I can set the desired print range	63.30%	60%
I can add background color or change the color scheme of my presentation	53.30%	73.30%
I can print handout copies of my presentation	46.70%	86.70%
2005 versus 2015 Averages	54.43%	74.43%

Table 1.5*Differences between 2005 and 2015 first-year College students for self-directed learning in Power Point Presentations (Ppt)*

Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
I respect the rights of copyright owners	63.30%	76.90%
I can use the insert command and place graphics into a document	33.30%	73.30%
I can use different text styles (bold, italic, etc)	66.70%	80%
I can demonstrate how to use digital camera and scanner in the classroom or in the lab	58.60%	66.70%
I can copy information from one e-mail, paste it into a new message, and send it	51.70%	93.30%
I can group images	50%	86.70%
2005 versus 2015 Averages	54%	79.48%

Table 1.6*Differences between 2005 and 2015 first-year College students for self-directed learning in Basic Word Processing*

Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
I can use a spreadsheet to make a chart	53.30%	73.30%
I can sort a row of cells	56.70%	73.30%
I can add visual effect to the slides in my presentation	60%	60%
I can create folders for my mail	46.70%	93.30%
2005 versus 2015 Averages	54.18%	74.98%

Table 1.7*Differences between 2005 and 2015 first-year College students for self-directed learning in Ethical Use of Computers*

Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
I can open a computer program	70%	76.90%
I can create a basic slide presentation with text and graphics	55.60%	86.70%
I can rearrange the slides in my presentation	41.40%	80%
2005 versus 2015 Averages	56%	81.20%

Table 1.8*2015 first-year College students for self-directed learning in Social Media (2005 survey did not include these items)*

Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
I can view a video on YouTube		100%
I can set up a social media account		100%
I can store photos on social media		93.3%
I can follow someone on Twitter		100%
I use social media for networking		100%
I can use social media for academic purposes		100%
I can communicate with my teachers through social media		93.3%
I am familiar with how to start a group page on Facebook		100%
I am aware of how to adjust my privacy settings on social media		93.3%
2015 Average		97.77%

Table 1.9*2005 versus 2015 Averages on combined dimensions (see tables 1.1-1.7) between 2005 and 2015 first-year College students for self-directed learning*

Self-Directed Learning Questions	2005 Self-Directed Learning (N=29)	2015 Self-Directed Learning (N=15)
2005 versus 2015 Averages Combined (All Dimensions)	52.69%	76.99%

In the 2015 survey, 97.77 percent of students reported having used self-directed learning for social media. The notable increases can be attributed to current students learning technology at an earlier age with more at-home technological devices coupled with more elementary and secondary schools increasing technology instruction.

In summary, the results of the study indicate a significant amount of students utilize self-directed instruction to obtain proficiency in the use of technology.

Conclusion

Today's college students are comfortable satisfying their immense curiosity in a self-directed manner. Even when educators are not involved, students are naturally creating personalized learning spaces where they choose their own trusted information sources; develop their use of networking, communication, and creativity tools; and manage their time and self-image (Zmuda, 2009). This capacity for independent learning is essential to their future well-being, since they are likely to have multiple careers and will need to continually learn new skills they were not taught in college (Brown, 2006).

This study compared the extent to which first-year college students in 2005 and 2015 used self-directed instruction relative to proficiency in technology. Comparing the difference on technology preparedness in high school and college between students in 2005 and 2015, the results indicated that in 2005, 53 percent of students utilized self-directed instruction to obtain proficiency in the use of technology versus 77 percent in 2015. Similar to results collected by Kahveci (2010), suggesting that students in grades 9-12 had a positive attitude towards the use of technology for their learning; Demir et al. (2014) finding that as students adopted computers more, they used them more often for self-directed learning; and Bonk et al. (2014), revealing that nearly 85 percent of students used self-directed online learning to learn a new skill or competency, the current study found a notable difference in how students perceive their use of technology in the classroom.

This study was limited to two four-year colleges on Long Island, New York with only a small sample participating in the 2015 study. If this study were to be replicated, the researchers would recommend surveying a larger sample, either comparing colleges from different geographic locations or across multiple institutions.

With educational institutions shifting towards more open resources such as OER, OCW, and MOOCs as well as hybrid and flipped courses, there is a pressing need for secondary schools and higher education to better understand how to foster students' innate ability towards self-directed learning and find ways to reinforce learning outside of the classroom. If educators do not embrace social media technology in their teaching, this will

lead to a considerable disconnect between educators and students. To secure their relevance in the future, educators will also be faced with the unique challenge to guide students in their self-directed learning pursuits. By helping students to evaluate the viability of an endless array of resources available to them, educators can assist students to become more responsible, critical information seekers.

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The Role of 21st Century Skills in Two Rural Regional Areas of Public Education

By Sean B. Fox, Ed.D., and Carrie L. McDermott, Ed.D.

Abstract

Budgetary shortfalls and excessive layoffs have left public schools with a deficiency of professional innovation as well as modern theory and practice. It is imperative that educators identify the exemplary school systems that are engaging students and adults in 21st century education, and broadcast those patterns of success to schools in need of reform. These researchers presented comparative, qualitative case studies on engagement in work in two regional areas in Suffolk County, New York. The purpose of these studies was to investigate how school systems and educators engage students and adults in 21st century education.

Public Education

Over the course of the past few decades, technology has shaped the way people interact, work, learn, retrieve, and disperse information. The advent of the 21st century includes new forms of knowledge and information, requiring tools and skills previously unseen by generations of learners. New tools are used for expansion of knowledge rather than replacement, and 21st century schools must equip students with these skills in order for them to be competitive in the new global workforce. Twenty-first century skills have altered the landscape of education, in that they demand competent, knowledge-based leadership, which values the role of knowledge creation.

Historically, public schools have not fit the criteria outlined in constructivist models; they have been determined to be predominantly technical in nature. According to Smith (2008), technical schools are characterized by limited collaboration with an emphasis on individual isolation, focus on and enforcement of official rules and proper behavior, a restricted public agenda, and unrelated school functions both inside and outside school. These schools are often noted as traditional in nature. Constructivist schools are characterized by collaboration and reflection with a focus on the development of knowledge by students and adults, evaluations professionally monitored toward growth, and performance-driven school activities. Recent

standards reform was designed to continue this type of schooling. However, changing needs in society have led to the implementation of 21st century skills to provide opportunities to engage students in learning.

Statement of the Problem

President Barack Obama launched the Race to the Top Campaign “to improve schools by holding students to higher standards, paying bonuses to teachers whose students excel [specifically] with prize money from a stimulus fund of at least \$4 billion, [of the] \$100 billion [set] aside for education in the stimulus bill” (Clark, 2010). According to *The New York Times*, in the first round of competition for federal funds, New York finished second to last in the competitive grant known as Race to the Top, leaving the State with an estimated \$9 billion budget shortfall, laying off as many as 8,500 teachers in certain domains (Medina, 2010). This loss of teachers yields a shortage of professional innovation, particularly modern theories and practices that recent graduates would supply to the classrooms of the 21st century. As Gibson (2004) states, technology in the classroom is essential to student learning through enhanced teaching. Without the integration of technology, students may be ill equipped in academic and professional endeavors. The potential long-term ramifications of on-the-job success are directly connected to the skills attained in school.

Purpose

The purpose of this research was to investigate how educators and school systems engaged school adults and students in 21st century education. Using Smith’s Advocacy Design Center (ADC) (1990) model, investigators conducted interviews, observations, focus groups, and collected artifacts related to school practices that best prepared students for the 21st century. Research examined the level of engagement in patterns of organization, governance, and accountability related to adult work and the patterns envisioned for 21st century schools.

Methods

Two qualitative case studies were conducted and subsequently published investigating how educators and school systems engage school adults and students in 21st century education. Focusing on two regional districts on Long Island, these researchers examined the levels of engagement in patterns of organization, governance, and accountability in relation to adult work and the patterns envisioned for 21st century schools. The methodology used in these studies involved conducting site visits to the selected schools in each regional district as individual and parallel case studies. Each researcher reported on one regional district, while serving as an assistant researcher in the second comparable regional district for the parallel study.

Setting

These researchers randomly chose four schools in each of the two regional districts. A regional district is not a designated government unit; it refers to a cluster of school districts in a specific geographic location. The leaders in these school districts meet several times each year as a region. It is important to note that each of these school districts has its own superintendent and is governed by an independent Board of Education. The regional area of the schools discussed in these studies is Long Island, New York. The schools and research participants are anonymous.

Analytic Framework

The framework for this study was adapted from "A Case Study of How Four Presumed 21st Century Schools Utilize Information Systems to Engage Students and Adults in Work," by F. Simmons, 2011. These researchers used the framework to ascertain the instruction, organization, governance, and accountability (IOGA) systems in each school. According to Simmons (2011), "Instruction refers to the key notions from the Popkewitz et al. explanation of three different school cultures; namely, what it means to know and work in a particular school" (p. 66). These researchers analyzed the IOGA of each school to determine the degree to which each school supported 21st century skills. Steinberg's (1998) 18 design questions were used as a component of the framework to determine if project-based learning addressed the essential elements of authenticity, rigor, applied learning, active exploration, adult relationships, and assessment practices. Finally, the culture of each school (technical, illusory, and/or constructivist) was determined.

Research Questions

1. What instructional pattern, 21st century-oriented constructivist or 20th century-oriented technical, do teachers report as being predominant in the instructional system in the district?

2. What patterns of organization, 21st century-oriented constructivist, collaborative, or inclusive or 20th century-oriented traditional, are predominant in the district?

3. What patterns of governance, 21st century-oriented constructivist, collaborative, or inclusive or 20th century-oriented traditional, are predominant in the district?

4. What patterns of accountability, 21st century-oriented constructivist, collaborative, or inclusive or 20th century-oriented traditional, are predominant in the district?

Findings

The data collected show a discrepancy in understanding of 20th and 21st century learning. Participants identified 21st century skills to be more student-centered with increased emphasis on using computers, strengthening skills such as problem solving, collaboration, effective utilization of content, and information creation. Others believe that there are limited differences in learning because the integration of skills, interdisciplinary assignments, and group work were found to be ordinary and executed through traditional delivery methods, i.e. textbooks, workbooks, worksheets, paper and pencil, etc. The use of technology was evidenced as a tool rather than an instrument of creation and innovation. Although most schools were equipped with white boards, most were used traditionally with limited evidence of collaboration and interactive applications. The majority of participants felt hindered from integrative and innovative instruction due to state and federal mandates coupled with an increased focus on testing. The organization of each school was identified as traditional in nature. Students follow a bell schedule and rotate from class to class throughout the day. Student scheduling is long and tedious with limitations to course offerings and school focus. Classrooms were identified as teacher-centered and driven. The general flow was academic and interrupted by various activities throughout the day, week, and year. The teacher is located at the front or center of the room with student workspace (desks or tables) in rows facing the teacher. Although various group and project-based learning initiatives were noted, data show these were conducted by shifting the traditional setting to accommodate the needs of the project or assignment, not the students. Data revealed some collaboration within disciplines and limited cross-curricular alignment.

Governance in both regional districts were evidenced as top-down authority. The building principal(s) worked with the superintendent(s) to identify school initiatives at the discretion of the school board(s). The implementation of the initiatives was the responsibility of the building leader. Data revealed there was minimal collaboration with staff and stakeholders.

New accountability measures were implemented in 2011-2012 for teachers and school building leaders under Education Law §3012-c and the Commissioner's regulations.

The purpose of this evaluation system was to ensure schools and classrooms are equipped with effective leaders and teachers. Under this system, effective scale ratings are determined through state assessment scores, comparable measures of growth, locally selected methods, and community involvement.

Data evidenced the schools as predominantly technical in nature with developing constructivist characteristics. Throughout the research, "there are several indications of student-centered learning and the attempt toward the promotion of 21st century skills," however several traditional components are still in place (McDermott, 2013). Limited amounts of freedom were evidenced in the instruction, organization, governance, and accountability of these regional districts. The structure was therefore found to be traditional in nature.

Conclusions

Over the course of recent times, standard-based reform has entered mainstream culture at a rapid speed. While carefully planned and calculated change is integral to any institution, a reform of this magnitude and momentum indelibly and irrevocably alters the communities of our schools as it directly impacts vision and leadership, and a district's foreseeable or unforeseeable scholarship. This "political pesticide of teacher-proof standardization" has repercussions that have proven deleterious to students, teachers, and virtually all other stakeholders (Hargreaves & Fink, 2006, p. 14). Several other factors explore the need for competent administration and leadership. School building leadership must respond to the increasing diversity of students' cultural, linguistic, economic, and learning differences to properly implement the common core initiatives, curricular expectations, achievement thresholds, program requirements, and state and national mandates.

In addition to the aforementioned tasks, teachers and stakeholders in general will "need new tools including first-hand knowledge of the 21st century high performance workplaces" (<http://www.p21.org>, Partnership for 21st Century Skills, 2009). Consequently, it is imperative that the leaders of school communities assess the current climate of pedagogy, specifically the mechanics of change, its adjoining mandates, and the ramifications of an otherwise invaluable education.

Historically, standardization has been prevalent since the mid 1990s, long before the time of No Child Left Behind (Hargreaves & Fink, 2006). It was at the conclusion of this pre-millennium period, however, that standards-reform underwent an informal renovation. Hargreaves and Fink (2006) refer to the concept of narrowing the curriculum and destroying classroom creativity, maintaining that much of the knowledge now taught in our schools is strictly ephemeral; desultory facts and figures that are retained for exams and soon forgotten thereafter. Many educators would venture to say that this current form of teaching is not teaching at all, but simply testing.

Crockett et al., (2011) explain how students need to move past information recall toward interpretation and application because digital content is growing in quantity and complexity. Students will need to apply higher-order thinking and cognitive skills to real-world, real-life, and real-time tasks (Crockett et al., 2011).

Only recently have policymakers started to view this current period in education as a foundation for greater learning. Maurizio and Wilson (2004) note, "The Partnership [for 21st Century Skills] believes that states can use the current convergence of the federal requirements and the nationwide public and private focus on education to craft visionary state educational policies. Such policies would integrate a suite of 21st century knowledge and skills into education" (p. 28).

Modern technologies are changing the way individuals produce, consume, communicate, and think, in addition to having a profound impact on the social, political, and economic realms of society. According to Crockett et al., (2011), schools were designed for a time of agriculture and manufacturing where over 75% of the population worked. Today, this same percentage of the workforce is working in creative- and service-class professions. This explosive growth of change and innovation is leading into a new era of education for the 21st century. According to Pink (2005), "we are entering a new age animated by a different form of thinking and a new approach to life" (p. 2).

As society enters this new age, replete with new forms of thinking and a focus on global competition, leaders must recognize the shift, and prepare youth for a future where success is measured by the ability to critically think, analyze, investigate, and innovate competitively.

Conclusions of Research

The schools examined within the regional districts revealed an attempt to engage students in work which links them to the adult world. It was determined that these schools did not meet the criteria for Smith's (1990) framework of the ADC model, the level of engagement in the patterns of organization, governance, and accountability in relation to adult work and the patterns envisioned for 21st century schools, and as a result are not considered 21st century schools. Although the responses of participants through interviews and focus groups were more constructivist in nature with an emphasis on student-centered learning, there were many traditional elements at the core of the systems which prevented them from fully embracing the notion of 21st century schooling. The schools reported to an outside authority, which set forth a system of mandates and initiatives. There was a leadership hierarchy and schools were held to specific obligations and standards, which were primary indications of a technical school culture.

Data collected in both regional areas were identified by technical schools of a traditional nature with developing constructivist characteristics. Although the majority of the participants attempted to engage students in creating environments which focused on critical thinking, problem solving, technological proficiency, depth of knowledge, and project-based work, these researchers determined they did not meet the criteria of the framework. These researchers found respondents in each of the regional areas to feel confident among constituents as they reflected individual thought processes when answering questions. In some instances, participants used common answers, but in others they built on each other's responses and they often used the same terminology when responding to questions. In this type of inquiry, this characteristic is inherent and assisted these researchers in determining the type of culture in each school and regional area.

Although there were several indications of student-centered learning and the attempt toward the promotion of 21st century skills, there were traditional tenets still in place. There were limited amounts of freedom in instruction, organization, governance, and assessment due to both the requirements of state and national mandates. These mandates require a top-down type of structure for each of the domains researched. This structure was traditional and did not reflect those of a constructivist nature.

In summary, the schools were identified as predominantly 20th century traditional/technical across the domains of instruction, organization, governance, and accountability, and were cited as deficient in the areas of project-based learning and 21st century skills, as outlined in Steinberg's (1998) criteria and the Partnership for 21st Century Skills.

Implications for Change

Schools of today must be the change agents, preparing future generations for jobs of tomorrow. Educational facilities on a global scale are charged with the need to educate children to be members of a sophisticated workforce, well-versed in a multitude of skills and situated in a world beyond school. Students must be ready to contact a designer in Dubai for something being made in Mexico and shipped by a service in Australia. School leaders and educators must investigate how to blend traditional and contemporary modes of communication in a modern context. Interaction between schools, businesses, leaders of government, and other entities needs to be fluid and seamless. Students of today were born into a world of technology; they are digital natives, and the system of education is not accommodating or understanding their needs. The current system of education is deficient in preparing our students for these essential life skills. There needs to be a greater emphasis on new and innovative technology and how learners interact with these applications in a millennial environment.

Although attempts have been made to accommodate for 21st century skills, the resiliency of existing school culture, state mandates, and testing criterion limits these skills from being a sustainable priority. Knowledge of 21st century skills and project-based learning are becoming more ubiquitous throughout these school systems, yet further allowances must be made in order to embrace these concepts as a conduit for a formidable 21st century education. District and school leaders in conjunction with teachers, community members and staff only increase 21st century skills when they have a clear understanding of what these skills are, how they effectively impact student learning both today and in the future, and how students will apply this knowledge to real life situations. Educators must provide opportunities and access for students to interact, communicate, and partner with their peers, mentors, and other professionals through various cross-curricular, project-based, and digital-age literacy instructional models. Successful practices of 21st century skills will allow students to become highly productive, creative, culturally sensitive, collaborative, adaptive, problem solving, thought inspired citizens of our global society.

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Student Deep Learning In Bachelor English Programs Within Pakistani Universities

By Khazima Tahir, Ed. D

Abstract

The purpose of this study was to contrast undergraduate students' descriptions about transformational teaching practices, and student deep learning in bachelor English programs in selected universities within Pakistan. This study utilized a survey to gather responses from five hundred and twenty three students. A paired sample t test was utilized to examine student differences on these variables in the English language and literature classes. The findings of this study revealed that there were significant differences among undergraduate students on deep learning in the English language and literature classes. The implications for the improvement of English education are considered.

Introduction

As an official language, English is used in civil administration, bureaucracy, the legal system, and education in Pakistan (Abbas, 1993; Khalique, 2006; Mansoor, 2004). According to Khalique, English is considered a tool to acquire knowledge and skills related to a higher quality of life for people in Pakistan. He indicates that students should have access to good quality English language education (Khalique, 2006). In Pakistan, many projects are in progress to improve English education. Educators and researchers call for changes in the English language teaching for better learning and teaching outcomes. Many studies (Mansoor, 2004; Rahman, 2005; Siddique, 2007) report poor learning and teaching outcomes in the existing system to teach English. Researchers indicated that English language teaching needed improvement to promote quality learning and teaching outcomes.

Rahman (2005) stated:

The level of competence attained is low and students are unable to understand and write, let alone speak English. English is taught through grammar-translation method. Students memorize a large number of rules without acquiring real understanding of the language. They also translate passages from Urdu to English and vice versa. As books are not changed for many years, people write guide books to help students. Thus, students cram lessons such as essays,

from the guide books and get passing grades without acquiring any real competence in English. (Rahman, 2005, p. 9)

Tahir and Qadir (2012) reported that passive learning environments in the English language classroom resulted in student dissatisfaction and poor performance.

Research studies (Biggs, 1978; Trigwell, Prosser and Waterhouse, 1999; Economos, 2013) reported that deep learning approaches are associated with higher-quality teaching and learning outcomes. Deep learning has pedagogical value because students who adopt deep learning approaches develop metacognition in the subject and greater love and passion for learning (Hay, 2007; Nelson-Laird, 2005). These research studies suggest that deep learning approaches have the potential to improve English education in Pakistan.

The purpose of this study is to investigate the attributes of deep learning as they relate to student commitment to master subjects, to perceive connections to multiple experiences and to evaluate their own work in the learning of English as a second language. In addition, this study investigates transformational teaching practices that foster deep learning among students.

Theoretical Perspective

Deep Learning

The construct of a deep learning approach came from the seminal work of Marton and Saljo (1976). According to Nelson-Laird, Shoup and Kuh (2005),

Deep learning is represented by a personal commitment to understand the material, which is reflected in using various strategies such as reading widely, combining a variety of resources, discussing ideas with others, reflecting on how individual pieces of information relate to larger constructs or patterns, and applying knowledge in real world situations. In addition, a characteristic of deep learning is integrating and synthesizing information with prior learning in ways that become

part of one's thinking and approaching new phenomena and efforts to see things from different perspectives. (p.4)

Deep learning resulted in student retention of higher grades and development of high order skills (Biggs, 1988; Hacker & Niederhauser, 2000; Ramsden, 2003). Platow, Mavor and Grace (2013) reported the significance of the deep learning approach construct, and the educational value of promoting deep learning among students. According to Ramsden, (2003) high quality learning outcomes were associated with deep learning. Researchers (Entwistle, 1991; Ramsden, 2003; Weigel, 2001) suggested that promoting student deep learning approaches improved the quality of education when professors empowered students to become an active part of the learning process, and to develop an understanding of the real world.

Biggs, Kember, and Leung (2001) recommended that the most effective way for promoting deep approaches to learning was for teachers to be responsible for ensuring that assessment and other contextual elements were constructively aligned. Gordon and Debus (2002) reported that it was important to construct learning environments to encourage deep learning approaches. English, Luckett and Mladenovic (2004) indicated the value of the learning environment to promote deep approaches to learning English as a foreign language. By implementing Functional Linguistics (Halliday, 1985), researchers reported that teachers were able to improve students' approaches to learning by providing a better learning context with foreign language literature, and involving them in reflective based writing tasks.

Hall, Ramsay and Ravens (2004) suggested that educators could impact student learning approaches by incorporating certain changes in the learning environment among first-year accounting students. They found that the increase in students' deep approach to learning is connected to reading widely, searching for relationships, and integrating with previous knowledge. The findings of this research are consistent with previous research (Biggs, 1987; English et al., 2004; Gordon & Debus, 2002) that reported a correlation between comprehension and student deep approaches to learning.

Nelson-Laird, Shoup and Kuh (2005) examined differences in terms of discipline and deep learning. Nelson-Laird et al. (2005) concluded that deep learning occurred in all the disciplines. In the discipline of physical sciences students experienced low deep learning. Researchers suggested that certain gaps in the teaching practices in those disciplines encouraged and promoted student surface learning approaches, such as passing exams or getting good grades only.

Platow et al. (2013) recommended that student deep learning approaches to learning involved professors' efforts to understand students' prior interests, skills and abilities, learning context, and actual time and resources to

engage in deep learning approaches. Phillip and Graeff (2014) introduced in-class simulation in the accounting class to help students develop deep learning approaches. Phillip and Graeff recommended that active learning strategies like the use of simulation in the classroom exposed students to a concrete, real world experience. They concluded that professors should use active learning strategies to encourage students to understand the abstract concepts and their application in the real world.

Nelson-Laird et al. (2014) concluded that deep approaches to learning influence students to adopt positive attitudes towards a range of literacy activities. They suggested important implications for higher education. Researchers recommended creating developmentally appropriate environments for the students in educational institutions.

To make the cognitive gains suggested by this study, educators of first-year students needed to enact practices that more frequently encourage students to examine the strengths and weaknesses of their own views, and towards a lesser degree, integrate ideas from various sources, including diverse perspectives in their academic work. In short, first-year students made academic gains when asked to engage metacognitive processes, including reflecting on themselves and integrating divergent perspectives into a formative, working epistemology (Nelson-Laird et al., 2014, p.427).

Transformational Leadership

Burns (1978) coined the term transformational leadership that explained leaders' and followers' engagement to higher levels of morality and motivation. Bass (1985) elaborated the conceptualization of transformational leadership and included the following characteristics:

- (a) **Idealized Influence or Charisma:** The leader exhibits certain qualities such as possessing a vision, gaining trust, respect and creating optimism. This charismatic leader inspires and excites his followers. In this way he wins respect and admiration from his subordinates.
- (b) **Inspirational Motivation:** The leader presents himself as a role model for his followers as he clearly communicates a vision. In this way a leader is able to raise the confidence of his subordinates to share leaders' vision and goals.
- (c) **Individual Consideration:** The leader is seen in the role of a coach and a mentor. He focuses on the individual needs of his subordinates, and provides feedback for their personal growth. Overall, a leader using this component of transformational leadership exhibits his concerns for the individual follower's developmental needs.

(d) Intellectual Stimulation: This component of transformational leadership is based on the assumption that transformational leaders stimulate followers to rethink their existing values and beliefs. To intellectually stimulate his followers, a leader provides his followers with interesting and challenging tasks and stimulates them to solve problems (Bass, 1985).

Methodology

Participants

Tahir (2015) conducted a study using a validated survey distributed to 523 undergraduate students across the province of Punjab, Pakistan from seven public and private universities. Consent was obtained through a form letter sent to participants. Participants were 134 male and 355 female students whose ages ranged from 17 to 25 years. All students were enrolled in bachelor English programs. Responses of 490 students were complete, yielding a response rate of 97 percent. Seventy-nine participants were enrolled for less than one year, 106 participants were enrolled for one year, 101 participants were enrolled for two years, 57 participants were enrolled for three years, and 146 participants were enrolled for more than three years in the program.

Survey Instrument

A 47-item survey developed by the author was used in order to collect data regarding student descriptions of English professors' teaching practices and student deep learning in the English language and literature classes in bachelor English programs. Responses to questions were in Likert scale (1 = strongly disagree, 5 = strongly agree) for individualized consideration, intellectual simulation, professorial charisma and deep learning. Considerate Intellectual Stimulation was identified as a new variable as a result of factor analysis using principal component analysis and a rotational method of varimax with Kaiser Nominalization. It merged together two variables of individualized consideration and intellectual stimulation for transformational teaching (see Table 1.1).

Research Question One

How do undergraduate students differ in their descriptions of professorial charisma, considerate intellectual stimulation, and student deep learning in the English language and English literature classes within Pakistani universities?

Table 1.2 reports the paired sample statistical analysis of the variables of considerate intellectual stimulation, charisma, and deep learning in English literature and language classes.

Table 1.1
Scale Reliability Post Factor Analysis, Items, and Sources

Dimensions	Items	Numbers of Items	Alpha Coefficient a	
			Literature	Language
Deep Learning	53, 54, 56, 51, 52, 49, 57, 50, 48, 46, 55	11	.833	.833
Charisma	33, 30, 34, 36, 32, 37, 29, 35	8	.783	.789
Considerate Intellectual Stimulation	40, 41, 47, 39, 43, 44, 38, 42, 45	9	.802	.830

Table 1.2
Paired Sample Statistical Analysis of Variables

Pairs		M	N	SD	SEM	t	df	p
Pair 1	CIS-Literature	33.08	489	4.73	.25	1.02	488	.306
	CIS-Language	32.86	489	5.07	.27			
Pair 2	Charisma-Literature	28.31	490	5.54	.21	.678	489	.261
	Charisma-Language	28.24	490	6.10	.22			
Pair 3	DL-Literature	41.74	490	6.24	.28	2.47	489	.014
	DL-Language	41.17	490	6.63	.29			

The variables were analyzed to see the differences in student descriptions in English literature and English language classes. Overall, **Table 1.2** students indicated that there were no significant differences among the variables except deep learning ($p=.01$). There was a statistically significant difference between the mean scores of deep learning in literature (41.74), and mean scores of deep learning in language (41.17) and $p < .05$. In order to determine which items were different for students in the English language and English literature classes, a frequency analysis was performed for the variables of deep learning.

Table 1.3 presents the frequency analysis for comparing the difference of undergraduate students' descriptions of deep learning in English literature and the English language classes.

There were more students in English literature classes (67.3 percent) than students in language classes (almost 59 percent) who agreed that they tried to relate what they had learned in one subject to what they already knew in other subjects. More students in languages classes did not agree (40.4 percent) than students in literature classes (32.5 percent).

Discussion and Implications

The frequency analysis revealed that *Item 56: I try to relate what I have learned in one subject to what I already know in other subjects*, contributed to the significant difference between the groups. This finding was aligned with recent research. Nelson-Laird et al. (2014) investigated the first-year students' approaches to learning, and found that student integration of ideas from various sources

was significant for student deep learning. In conclusion, if professors prompt students to associate new knowledge with their existing knowledge, students relate the knowledge in one subject to another subject and will adopt deep approaches to learning.

In this study, literature students reported greater levels of deep learning experiences. Researchers (Economos, 2013; Nelson-Laird et al., 2005; Ullah, Richardson & Hafeez, 2013) found that students adopted different learning approaches across subjects. Economos reported that education students experienced greater levels of deep learning as compared to business students. Similarly, Nelson-Laird et al. (2005) found differences in student approaches to learning by discipline areas. They found that students in social sciences scored higher on a deep learning scale compared to business management and science students. Likewise, Ullah et al. stated that students in the arts and social sciences had positive attitudes towards their program of study, and adopted a deep approach to learning as compared to students in science and management groups.

The undergraduate students in English literature classes in this study reported experiencing deeper approaches to learning as compared to the English language group. Findings of this study are consistent with Al-Mahrooqi and Al-Shihi (2012) who examined university students' descriptions of courses (literature, linguistics and language) in English programs in Oman. Forty-two percent of the students who majored in language arts preferred to study just literature courses. Al-Mahrooqi and Al-Shihi argued that the varied material in literature courses such as dramas, novels, poetry, and short stories promoted student deep learning experiences.

Table 1.3 Frequency analysis for Deep learning Item 56

56 - I try to relate what I have learned in one subject to what I already know in other subjects.

English Literature	N	Percent	Valid Percent	Cumulative Percent
1-Strongly Disagree	5	1.00	1.00	1.8
2-Disagree	32	6.5	6.5	7.3
3-Somewhat Agree	123	25.1	25.1	36.9
4-Agree	197	40.2	40.2	77.3
5-Strongly Agree	133	27.1	27.1	100
Total	490	100	100	
English Language	N	Percent	Valid Percent	Cumulative Percent
1-Strongly Disagree	4	.8	.8	1.8
2-Disagree	33	6.7	6.7	7.6
3-Somewhat Agree	161	32.9	32.9	32.7
4- Agree	169	34.5	34.5	72.9
5-Strongly agree	123	25.1	25.1	100.0
Total	490	100	100	

One of the conclusions from this study is that students in the literature group experience deeper approaches to learning as professors in literature subjects encouraged students to integrate ideas from various sources as compared to the language group. Students in literature classes experience deep learning as literature subjects and discussions helped them enhance their critical thinking, develop wisdom and insights, achieve freedom of expression, and exercise diverse world views. Likewise Eastman (2014) finds how literature motivates students to deep learning by exposing them to various arguments, contradictions and complexity in different genres.

Students in language classes report less deep learning experiences and describe language classes as having less room for subject integration as compared to literature classes. The results of this study imply that the structure of language courses needs to be evaluated as there is the possibility that students in languages classes adopt surface learning approaches that promote rote memorization. In addition, professors' teaching practices might be influenced by the structure of the language course that encourages rote memorization. Similarly, Al-Mahrooqi and Al-Shihi (2012) report that linguistic and language courses are more theoretical, and promote student rote learning. Likewise Geer and Wing (2000) indicate that when students are aware of the fact that classroom activities and assignment do not require application and synthesis, they do not develop commitment and passion to learn more.

The study of English language and literature students in Pakistan reveal that deep learning is valuable to promote quality teaching and learning outcomes in BS English programs. The results of this study suggest that there is a need to improve deep learning experiences for language classes in BS English programs. Haggan (1999) posits that students will appreciate literature if they have sufficient proficiency in the English language. The interdependence of the language and literature is highlighted by Cronin (2014). He indicates that teachers of English should encourage the English language learners to enhance their literacy to increase their understanding of literature.

A change in the learning environment for undergraduate students in language classes should maximize student deep learning experiences. Aharony (2006) found that students adopted a deep approach to learning of English as a foreign language when there was a change in their learning environment. Nelson-Laird et al., (2014) labelled this a developmentally appropriate environment that encouraged deeper approaches to learning among students. They postulated that teachers should promote students to think critically, encourage them to combine ideas from different sources and stimulate their metacognitive processes.

Based on these findings in this study, English professors should enact teaching practices that promote deep learning experiences for students in all English programs. Professors should give curricular experiences in the classes

where students examine the strengths and weaknesses of their views, integrate ideas from different sources, and include diverse perspectives in their assignments. Professors' teaching practices should be based on giving students challenging tasks as students learn to synthesize and integrate information from various sources. One limitation in this study is the lack of input from the professors regarding deep learning experiences. I would recommend that future researchers survey the English professors to determine if their understandings of deep learning are aligned with those of their students.

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From the Field:

Doctoral Assistants = Critical Friends A Simple Yet Complex Equation

**By John Hay, Fabrice Laguerre, Eric Moore, Katherine Reedy,
Scott Rose, and Jerome Vickers**

Introduction

The Carnegie Project on the Education Doctorate (CPED) encourages doctoral candidates volunteering in order to give back and continue their relationship with the university after completing their dissertation. Volunteering can take on many forms, from acting as doctoral assistants to performing the role of critical friends on future doctoral students' dissertations. The third guiding principle of CPED's doctorate in education provides opportunities for candidates to develop and demonstrate collaboration and communication skills to work with diverse communities and to build partnerships (Perry & Imig, 2010; Zambo, Buss & Zambo, 2013).

The authors of this article look at the process of how six doctoral candidates who successfully defended their dissertation provide guidance for two up-and-coming cohorts of doctoral students as they began their first dissertation class at a south Florida university. The first dissertation class occurred during a weeklong Summer Institute. The authors address the process, the experiences and the benefits perceived by the doctoral candidates as a result of mentoring the doctoral students.

The professor teaching the course was the Dissertation Chair for the six doctoral candidates who assisted, which ensured a level of camaraderie and understanding of the process the professor would use when teaching the course. Of the six doctoral candidates who assisted with the class, two of them assisted for the whole week in both the morning and afternoon session, and the other four participated for half-day sessions two days out of the week.

Process

Three weeks prior to the first class one of the assistants reviewed the syllabus with the professor to suggest appropriate changes. The assistant learned the process of writing and revising a syllabus. Additionally, the time spent reviewing the syllabus provided further opportunities to think of potential assignments and conversations the assistants could facilitate and at what points

during this Summer Institute. The professor encouraged the assistant to reflect on her experience and suggest ways to not only improve the syllabus, but also to improve the experience for the students in the course.

Two weeks prior to assisting with the class, the six doctoral candidates started communicating on the phone and via e-mail, bouncing ideas back and forth. A Google document was created for the collaborative process as an outline for the week and what insights the assistants could bring to the class. A week before assisting, the doctoral assistants held an ooVoo (internet based video conferencing tool) meeting to work out the details and discuss the potential roles each member would play in the coming week. The group decided to continue using the Google document during the week as a way to share feedback and observations for those who may not have been able to attend on a particular day.

The team of doctoral assistants created a framework for the points they wanted to present throughout the course of the week in order to enlighten the cohort members about the dissertation in practice process. Important themes the group wanted to discuss included reviewing CPED, writing problem statements, the difference between a dissertation in practice and a dissertation, developing relational trust between the cohort members, the creation of norms in a group Dissertation in Practice (DiP), and the role of critical friends. These themes would all be in concert with the lead professor discussing a traditional five chapter dissertation and how the steps of completing a dissertation support the creation of a DiP. The team anticipated the cohorts would better understand the process of the DiP as a result of facilitating conversations about how to create a DiP. By the end of the week, the team of doctoral assistants' goal was to create relational trust with all the cohort members.

Relational Trust

According to Hargreaves and Fink (2006), if trust is present within an organization, then individuals are willing

to risk vulnerability to take on the mission of a new leader. To begin with, trust is absolutely essential for an organization to be successful. An effective and well-run organization depends and thrives on it (Hargreaves & Fink, 2006). Trust helps improve schools and organizations, increase student achievement as well as boost energy and morale (Hargreaves & Fink, 2006). It is a resource which should never be surrendered at any time. It creates and consolidates energy, commitment and relationships (Hargreaves & Fink, 2006). When one trusts another colleague or group, they are willing to take additional risks because they have confidence in him or her getting the task completed by a specific deadline. Trust is earned as a result of observing people perform a plethora of tasks and activities over a period of time.

Reina and Reina provide a thorough description of the three forms of trust present within an organization or academic institution. They are Contractual trust, Competence trust and Communication trust (Hargreaves & Fink, 2006). Contractual trust requires educational professionals to meet obligations, complete written arguments and keep promises (Hargreaves & Fink, 2006). An educational professional who provides leadership, builds rapport by investing in and embracing all stakeholders as well as maximizing and empowering resources, is demonstrating Reina and Reina's second type of trust which is known as Competence trust (Hargreaves & Fink, 2006). Communication trust is the clear articulation of information, being honest, keeping confidences, and willing to admit error. Educational professionals able to balance and demonstrate these trusts are also able to influence, convince and persuade others of a plan of action to accomplish a goal (Hargreaves & Fink, 2006). A leader needs to be able to clearly express his or her thoughts to other staff members, colleagues and stakeholders. Everyone who is in attendance needs to be able to comprehend what is being conveyed to them without any ambiguity. A leader will be able to motivate individuals as well as a result of clear and continual communication. Reina and Reina state how clear, high-quality, open and frequent communication are the hallmarks of communication trust (Hargreaves & Fink, 2006).

Bryk and Schneider concluded that "trust matters as a resource for school improvement" (Bryk & Schneider, 2004, p. 121). They stated schools, organizations and other groups of professionals working together have a presence which is known as Relational trust which is similar to Reina and Reina's Communication trust. They stated relational trust has positive consequences on a school, organization or group of individuals working together in regards to "more effective decision-making, enhanced social support for innovation, more efficient control of adults' work and an expanded moral authority to go the extra mile" (Bryk & Schneider, 2004, p. 22). Relational trust must be established and maintained by the members of a cohort throughout the coursework as well as the duration of the dissertation process.

Critical Friends

The role of the critical friend in CPED is to support and empower scholarly practitioners by providing informed critiques and analyses of processes and practices (Swaffield, 2005). Critical friends view themselves as learning organizations and realize learning requires assessment feedback (Senge, 1990). This assessment feedback should provide a clear vision about the learning performance in the eyes of the learner (Costa & Kallick, 1993).

First of all, the critical friend builds trust with the educator. Once trust is established, the educator and the critical friend confer with one another. Critical friends listen well and critique the work honestly with the utmost integrity. They provide essential feedback to an individual or a group of people by asking meaningful, thought-provoking questions, and critical friends examine various types of data throughout the dissertation process.

The critical friend and the educator are constantly reflecting and writing about their experiences. Critical friends allow individuals to reflect and reassess their current beliefs and practices in order to improve their craft, providing a powerful tool during the DiP. The team was confident in the professor and knew they could add to the dialogue and discussion of the cohorts. Through the process of assisting with the class, the plan was the cohort members would view one or more of the doctoral assistants as critical friends and how they could guide and mentor throughout the dissertation process. They get the learner to examine and analyze their work from numerous angles and perspectives. Critical friends are a tremendous asset during the dissertation process as well as in a plethora of educational settings.

Presentation of the Framework

Summer Institute classes are in session for four consecutive days, two four hour classes each day. The course is titled "Dissertation in Practice Seminar, Part I the Problem/Profile". During the other half of each day both cohorts studied quantitative and qualitative dissertation practices. A twelve member cohort met during the morning, while a smaller sized seven member cohort met for the afternoon class. All the students are initially shown a CPED video and learn about the 6 CPED principles in the DiP class. Next there is a presentation and discussion on selection of a dissertation topic. The professor mentions regardless of whether they are doing a 5 chapter dissertation or a DiP, students need to decide on a topic and then start reading articles, dissertations, and their textbooks. During the reading of articles, patterns and themes will emerge. In addition, the names of the same theorists will likely keep appearing in their topics. Usually among these, there will be a theorist that especially resonates. Next it is imperative to narrow an idea for a topic so the research has a specific focus. The professor stated:

"Instead of vaguely stating, "My topic is on issues in education in the U.S.", it is vital to narrow it down to

what specific type of issues, what part of the U.S. and what is the population you're studying? When choosing a topic, the simpler the idea the better. Just because the idea may be simple it does not mean finding research or completing the DiP will be easy. The chapters of a dissertation must flow and tell the reader a story. The literature review section is written based on what the theorists 'state. It's not a book report, and it is not written by stating, 'I believe or I think" (Taylor-Dunlop, Class Lecture, 2015).

The professor introduces the next section about the difference between a traditional 5 chapter dissertation (the first 2 chapters) and a DiP. A cohort member interjects by stating she looks forward to the possibility of creating a dissertation which is so important to her school district, it leads to a promotion and/or financial compensation. One of the doctoral assistants replies and offers some pointers about writing a dissertation:

"For your first dissertation, do not seek to write a groundbreaking landmark dissertation. This initial one is meant to acquaint and familiarize students to the practice and art of dissertation writing, while gaining useful experience at completing the entire process in a timely manner, graduating and gaining doctoral status. The student can always attempt the landmark dissertation afterwards when the student has more experience at becoming a professional researcher".

At this point, the doctoral assistants now take over the presentation to discuss components of non-traditional DiP which are a DiP, literature review, executive summary and writing two publishable articles which stand alone, so they build a body of work. If working in either a small group or large ensemble group, they explained and shared examples of the additional components such as accurately collecting qualitative archival data consisting of articles, agendas, emails (including threads), photos, minutes, etc. categorized in a time sequential order by date.

The critical friends discussed the difference between good teams and bad teams - being trust, commitment, and buy-in - and provided examples of five dysfunctions during teamwork. How does a group handle problems arising during the DiP project? These doctoral assistants (critical friends) highlighted the importance to establish norms. Norms must be thought out carefully and agreed upon by everyone in the group. If a norm is listed, you must be willing to follow it. They emphasized the importance of relational trust getting established early on so any constructive criticisms are accepted without resentment. For example, a norm which could be created is "be open to constructive feedback" because often it is important to share with another group member some constructive feedback.

The presentation has dispelled several misconceptions that the students verbalized during the discussion. Some of these are noted below.

- Misunderstood DiP as linear like a 5 chapter traditional dissertation
- Misunderstood DiP unconventional approach and originality
- iBook was the entire doctoral assistants' DiP dissertation
- iBook was an unprofessional marketing piece
- iBook was a glorified homework assignment
- The group DiP can be finished quickly
- A cohort could replicate another cohort's DiP, and then simply add more to it in order to call it their own DiP. "If an earlier cohort could do it, we can do it better!"

Lessons Learned

Part of assisting the doctoral classes necessitates thinking about lessons learned from the experience. Some of these lessons helped clarify and frame the doctoral candidates own DiP, while at the same time creating opportunities for new lessons learned from sharing in teaching how to create a DiP. One of the important lessons learned was the unique group dynamics of each cohort. One of the cohorts exhibited a very aggressive temperament, while the other cohort was more relaxed and open to suggestions.

Departing from the traditional 5 chapter dissertation can be quite difficult to wrap one's head around. Many of the frameworks of a 5 chapter dissertation can be found in a DiP, but the departure from the known to the unknown can be difficult.

Relational trust needs to be established and maintained within a cohort in order for the opportunity for authentic critiques and potential for group DiPs. This relational trust is an outgrowth of class activities which promote respect, acceptance of diverse viewpoints, a democratic learning environment as well as theoretical debates in initial coursework. Developing relational trust among cohort members increases collaboration in both individual and group DiPs. There was no clear evidence of the establishment of positive group relations, and there lacked an atmosphere of individuals' obligation to the group for a shared purpose.

Doctoral students need critical friends to help guide the process of a DiP. These critical friends can take on many roles, from assisting in classes, to reading and critiquing DiPs for future doctoral students.

Through teaching one becomes even more familiar with the DiP process, thus offering insights into the process from topic selection to the actual creation of a DiP. Learning is an activity not done in isolation.

Implications for Education

The doctoral assistants stated significant implications for education as a result of mentoring doctoral students during the four day Summer Institute. Noted below are the implications for education.

- Demonstrating the ability to convey the components of a nontraditional DiP and CPED principles to doctoral students by customizing the presentation to meet the cohort's group dynamics.
- Recognizing the importance of establishing relational trust at the outset of the DiP or 5 chapter traditional dissertation. This will lead to the creation of norms, productive dialogue and successful collaboration on and off campus between cohort members.
- Identifying critical friends who can enhance the quality of the DiP by providing feedback, mentoring and support during the dissertation process.
- The doctoral assistants gained leadership experience through their participation in the Summer Institute. Through this positive pedagogical academic activity, additional leadership opportunities may be provided to offer guidance and teach future doctoral students.

Doctoral assistants have the potential to apply the third guiding principle of CPED's doctorate in education as scholarly practitioners by demonstrating collaboration and communication skills to guide, support, lead and build partnerships with doctoral students who are getting ready to commence their dissertation.

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