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Soil Analysis Of The Evacuated Naze Automobile Mechanic Village Of Imo State Nigeria

Margaret Enedoh, Imo State University, Nigeria.
Edbert C. Duru, Imo State University, Nigeria

ABSTRACT

The determination of the levels of contamination by heavy metals on the soil within the recently evacuated Naze mechanic village was carried out to ascertain the suitability of human habitation within that evacuated vicinity. The Energy dispersive X-Ray Fluorescence (EDXRF) was used on randomly collected soil within the area to obtain an overview of heavy metals present in the vicinity. The following heavy metals were highlighted: Pb, Ni, Zn, Cd, Cr, Cu, As and Fe. Using the Atomic Absorption Spectroscopy (AAS), the level of the presence of each heavy metal was confirmed. Using the Pollution Index the concentration of lead in the said soil was hazardously found to fall above the World Health Organization, WHO (2003) standard, with (242.0, 244.8, 262.5, 232.0 and 142.8)mg/kg obtained from five(5) samples collected from five different points within the said area at 10cm depth. This is against the standard which stipulates maximum of 70mg/kg in Nigeria. Some countries maintain zero tolerance of lead. Cadmium also exceeded its permissible level, even nickel and copper were also slightly above the WHO permissible level while the rest heavy metals assessed, fell within the range. An urgent attention therefore, by the government and stake holders is required to maintain quality status of the soil prior to human habitation. Routine monitoring, constant assessment of the soil and adequate soil remediation of lead and cadmium is moreover recommended on yearly bases.

Keywords: Soil, heavy metals, lead, cadmium, hazardously found, pollution index.

Introduction

The main threats to human health from heavy metals are associated with exposure to lead, cadmium, mercury and arsenic. These metals can mostly be found in traces or large quantities in soil exposed to artificial contamination.

One of the commonest sources of such soil contamination in Nigeria is from the automobile mechanic areas where engine oil of different types are indiscriminately released into the soil and environment [1] together with vehicle emission.[2] These occur during servicing and maintenance of vehicles, disposal of spent oil, mishandling of wastes - used engine oil etc [3].

Scientists and other researchers had carried out analysis of heavy metal contamination in similar automobile mechanic areas and most came up with a revelation that some trace metal contamination levels were above the baseline levels. In Anambra State, which is in the South Eastern part of Nigeria, such research carried out in Obosi and Nnewi proves the presence of lead, nickel and cobalt in the automobile repair and junk market area.[4] In Imo state still in the south Eastern state of Nigeria, the quality assessment of borehole water done within Orji mechanic village reveals that the water is of poor quality and so not portable[5].

Another research carried out in Ibadan metropolitan city which is in the western part of Nigeria, done over a period of two months, indicates that the activities in the automobile mechanic workshop had great negative impacts on the soil and ground water in that area[6].

The recently evacuated Naze automobile mechanic village in Owerri had for the past fifteen years been used as a very active servicing and maintenance centre for vehicles together with a junk automobile market. Auto mechanic repairs and indiscriminate waste disposal within the vicinity had led to a lot of release of gasoline, lubricating oil, diesel and
other engine oils into the soil. Recently and when the evacuation of mechanics and their equipments were done, there was an announced by the government that the area would be made a residential area. Plans are already on for the relocation of persons to inhabit the vicinity. No move had been observed so far for any type of assessment of the environment- the soil, ground water, etc, or conditional remediation prior to inhabitation.

This work therefore, tends to analyze the soil within the area, checking in particular, the presence of hazardous heavy metals and their levels of contamination. The result of which would be sent to the appropriate quarters if found wanting, for adequate attention.

Materials and Methods

Naze mechanic village was in the Owerri North local Government area of Imo state..

Sample Collection

The need to spread sample site over the entire area was considered. The collection for the preliminary analysis was done from the five points with different coordinates marked out, but using a random sampling design both in depth and width. The points marked scattered all over the interested area. Next, five samples were discriminately collected from the five points chosen. Each sample was collected from each point at a depth of 10cm with width of 5cm each.

Fig 1 Map of Nigeria, Imo state and the study area.

Preliminary analysis

The soil samples collected randomly from the five points of the study area were subjected to Energy Dispersive X-ray Fluorescence (EDXRF), to have an overview of the heavy metals present and their concentration. The result is as shown in table 1. The metals that appeared highlighted include Pb, Ni, Zn, Cd, Cr, Cu, As & Fe.

Main sample Analysis:

The soil collected discriminately, was subjected to Atomic Absorption Spectrophotometric analysis (AAS) using AAnalyst 400 Atomic Absorption Spectrophotometer to analyze and assess the levels of the heavy metals highlighted.

Risk assessment indices

The pollution index (PI) is defined as the ratio of element concentration in the study to the background content of the abundance of chemical elements in the continental crust.[7] This was used to access pollution levels by considering the joint effect of all the polluting metals in the soil was obtained by calculating the ratio of the average metal concentration with the permissible/ tolerable level. It was revealed that cadmium exceeded the permissible level of 7ug/kg body weight, while lead was hazardously present.

Result and Discussion

The results of the Energy dispersive X-Ray Fluorescence (EDXRF) for the randomly collected soil sample and the Atomic Absorption Spectrophotometer (AAS) for the main samples are as shown in Figures 2, 3, 4, 5 & 6 and tables 1 and 2.
EDXRF SCANS OF SOIL SAMPLES AT THE STUDY AREAS

Fig 2. Sampling Point A

Fig 3. Sampling Point B

Fig 4. Sampling Point C

Fig 5. Sampling Point D

Fig 6. Sampling Point E
Table 1.0

(EDXRF) RESULTS OF RANDOM SOIL SAMPLES FROM THE STUDY AREA

<table>
<thead>
<tr>
<th>Elements</th>
<th>(%)/Percentage of Elemental Component in the Soil</th>
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<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Mg</td>
<td>0.0000</td>
</tr>
<tr>
<td>Al</td>
<td>6.6757</td>
</tr>
<tr>
<td>Si</td>
<td>37.6573</td>
</tr>
<tr>
<td>P</td>
<td>0.1470</td>
</tr>
<tr>
<td>S</td>
<td>0.3543</td>
</tr>
<tr>
<td>K</td>
<td>0.1756</td>
</tr>
<tr>
<td>Ca</td>
<td>0.3239</td>
</tr>
<tr>
<td>Ti</td>
<td>0.1916</td>
</tr>
<tr>
<td>V</td>
<td>0.0090</td>
</tr>
<tr>
<td>Cr</td>
<td>0.0204</td>
</tr>
<tr>
<td>Mn</td>
<td>0.0296</td>
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<tr>
<td>Co</td>
<td>0.1143</td>
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<tr>
<td>Fe</td>
<td>7.4892</td>
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<tr>
<td>Ni</td>
<td>0.0654</td>
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<tr>
<td>Cu</td>
<td>0.0802</td>
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<tr>
<td>Zn</td>
<td>0.2734</td>
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<tr>
<td>As</td>
<td>0.0047</td>
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<tr>
<td>ssPb</td>
<td>0.0630</td>
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<tr>
<td>W</td>
<td>0.4971</td>
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<tr>
<td>Au</td>
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<tr>
<td>Ag</td>
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<tr>
<td>Rb</td>
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<td>Nb</td>
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<tr>
<td>Mo</td>
<td>0.1710</td>
</tr>
<tr>
<td>Cd</td>
<td>0.0002</td>
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<td>Sn</td>
<td>1.7312</td>
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<tr>
<td>Sb</td>
<td>1.5372</td>
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Table 2.0

AAS RESULTS OF THE MAIN SOIL SAMPLES FROM STUDY AREA AT 10cm DEPTH.

<table>
<thead>
<tr>
<th>Elements mg/kg</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Sample C</th>
<th>Sample D</th>
<th>Sample E</th>
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<td>1. Lead (Pb)</td>
<td>242.0</td>
<td>244.8</td>
<td>262.5</td>
<td>232.0</td>
<td>142.8</td>
</tr>
<tr>
<td>2. Nickel (Ni)</td>
<td>118.0</td>
<td>112.0</td>
<td>112.0</td>
<td>102.4</td>
<td>103.8</td>
</tr>
<tr>
<td>3. Zinc (Zn)</td>
<td>14.0</td>
<td>52.0</td>
<td>24.0</td>
<td>44.0</td>
<td>44.5</td>
</tr>
<tr>
<td>4. Cadmium (Cd)</td>
<td>2.0</td>
<td>2.8</td>
<td>2.9</td>
<td>3.6</td>
<td>3.0</td>
</tr>
<tr>
<td>5. Chromium (Cr)</td>
<td>30.4</td>
<td>220.0</td>
<td>322.0</td>
<td>410.0</td>
<td>324.0</td>
</tr>
<tr>
<td>6. Copper (Cu)</td>
<td>28.0</td>
<td>40.0</td>
<td>60.0</td>
<td>70.0</td>
<td>40.0</td>
</tr>
<tr>
<td>7. Arsenic (Ar)</td>
<td>2.0</td>
<td>0.8</td>
<td>0.9</td>
<td>0.6</td>
<td>0.0</td>
</tr>
<tr>
<td>8. Iron (Fe)</td>
<td>14.0</td>
<td>13.2</td>
<td>13.0</td>
<td>12.2</td>
<td>11.0</td>
</tr>
</tbody>
</table>
Table 3.0

WORLD HEALTH ORGANIZATION (WHO) STANDARD [8]

<table>
<thead>
<tr>
<th>Element</th>
<th>Permissible value in soil (mg/kg) WHO 1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cd</td>
<td>0.8</td>
</tr>
<tr>
<td>Zn</td>
<td>50</td>
</tr>
<tr>
<td>Cu</td>
<td>36</td>
</tr>
<tr>
<td>Cr</td>
<td>100</td>
</tr>
<tr>
<td>Pb</td>
<td>85</td>
</tr>
<tr>
<td>Ni</td>
<td>36</td>
</tr>
<tr>
<td>As</td>
<td>4.5</td>
</tr>
</tbody>
</table>

3. Discussion and conclusion

Using the Pollution Index which is given by:

\[ \text{Pollution index (PI)} = \frac{1}{n} (M_{1}/T_{L1} + M_{2}/T_{L2} + M_{n}/T_{Ln}) \] [9]

And considering the tables 2.0 and 3.0, it was revealed that lead is very much above the permissible level, cadmium also exceeds while nickel and copper slightly exceed the permissible level.

Conclusion

One concludes that cadmium metal and lead metal concentration was high in the soils around the Naze automobile mechanic village. This poses risk to the proposed inhabitants of the mechanic villages. It also causes significant environmental concern on the level of soil contamination which can be leached to nearby water sources used for domestic activities. Even edible plants if grown within the study area would absorb a lot of the heavy and toxic metals from the polluted soil and would be toxic to the inhabitants and other individuals if consumed.

It follows that the evacuated Naze mechanic village consists of rather toxic soil which would have adverse effect on human, animal and plants.

The government therefore, is called upon to urgently work towards the remediation of these heavy metal contaminated soils prior to inhabitation to prevent illness and loss of life amongst the proposed inhabitants of Naze auto mechanic village.

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The Influence Of Family Violence And Age On The Manifestation Of Depressive Symptoms Among Women
Mary Nicolette Ihenacho, Nwafor Orizu College of Education, Nsugbe, Nigeria

ABSTRACT
The study investigated the influence of family violence and age on the manifestation of depressive symptoms among women. The sample for the study comprised 200 married women (100 battered and 100 non-battered) who were selected from Onitsha North Local Government Area, Anambra State, Nigeria. Marital Conflict Behaviour Checklist (MCBC) was used to serve as an indicator of conflict behaviour spouses engaged in, during conflicts. The Centre for Epidemiological Studies Depressive Scale (CESD) Radloff, (1977) was used to measure the levels of depressive symptoms manifested by the participants. Data were analysed using 2x2 Analysis of Variance (ANOVA). The results showed that there was significant difference, between battered and non-battered women on the report of depression, $F(1,196) = 16.06, p<.01$. There was a statistically significant age difference in the manifestation of depression $F(1,196) = 37.49, p<.01$. Young battered women reported higher depression than old battered women. There was interaction effect between battering and depression. The finding suggest that depression was as a result of battering. Correlation was significant at $r = p<.01$. The findings were discussed, implications and limitations highlighted and recommendations were made.

Keywords: Family violence, Battered women and Depressive symptoms
Kuwait University Students’ Awareness, Usage, Perceptions, And Satisfaction Pertaining To E-Books
Ammar H. Safar, Kuwait University, Kuwait

ABSTRACT
This study aims to analyze Kuwait University (KU) students’ awareness, use, attitudes, and satisfaction pertaining to e-books. Students’ views and perceptions were measured using an online survey questionnaire that was distributed in KU’s colleges during the spring semester of the 2017-2018 academic year. The research design that was newly proposed by this study—information and communication technology acceptance model (ICTAM)— revealed several interesting results such as the following: (1) almost three-fourths of the students were aware of e-books and their uses in education; however, only approximately one-fourth were aware of KU’s e-books service; (2) more than one-third of students believed that e-books are broadly adopted into education whether as an alternative/companion medium to printed textbooks/books or supplementary materials for the classroom, and more than three-fourths of them had used e-books earlier; yet, only approximately one-quarter had previously used KU’s e-books service; (3) almost three-fourths of students from among those who had used e-books earlier and one-third of students from among those who had not used e-books ever perceived its ease of use; (4) approximately three-fourths of students from among those who had experienced using e-books previously and almost one-half of students among those who had not used e-books at all perceived its usefulness and effectiveness for education; (5) more than one-half of students from among those who had used e-books earlier; and more than one-third of students from among those who had not used e-books ever perceived its importance/significance for education and work; (6) almost two-thirds of students from among those who had used e-books before reported being satisfied with their experience of using e-books; and (7) more than two-thirds of students from among those who have already used e-books have confirmed that they will continue to use e-books in the future, and almost one-half of students from among those who have not used e-books of any kind reported their intention and motivation to use e-books in the future.

ACKNOWLEDGMENT
This Project was Financed by Kuwait University, Research Project No. (TT01/18)

REFERENCE
Liberating Tanzania From The Chains Of Neoliberalism: The True Generosity Of Swedish And Danish Education Aid

Macleans A. Geo-JaJa, Brigham Young University, USA

ABSTRACT

This article is about culture and ownership in development aid. It focuses on Swedish and Danish development cooperation contribution to ownership, human rights, and cultural principle considered drivers of guanine development cooperation in Tanzania. The empirical material consists of an in-depth study of their approach to development cooperation relative to neoliberalism intervention. This study reveal that both countries robust non-imperialist culture-led cooperation in Tanzania, unlike the false generosity of neoliberalism, a project of cultural adjustment, emptied of its concreteness that suffocates culture and lived experiences, refute the myth that “barbaric” culture is corrosive to development. I submit, therefore, that aid scaling-up which has failed to catalyze development is an outcome of “new neoliberalism” approach that is guided by colonialist kind disruptive and dysfunctional practices that fail to unlock development aid’s “wider human purposes and right to self-determination. Sweden and Demark cooperation rooted in cultural pluralism and local insights created vibrant voices that mitigated imperialism reasoned education.
Translation And Adaptation Of The Infant & Toddler Environment Rating Scale (ITERS-3) For The Saudi Context

Nahla Gahwaji, King Abdul-Aziz University, Saudi Arabia

ABSTRACT

This paper explains the process of translating and adapting an international tool, so that it can be utilized for quality evaluation of nurseries at the Saudi context. The case study approach was used where the translated and adapted tool: The Infant & toddler Environment Rating Scale (ITERS-3) was applied to test its utility to the Saudi settings. The paper makes recommendations for policy and practice improvement for nursery services in Saudi Arabia, besides it will help caregivers and nursery’s supervisors and directors to turn out to be more professionally skilled and competent.

Keywords: Quality, evaluation, Nursery, ITERS, Translation
The Dark Triad And Professional Skepticism
Douglas M. Boyle, The University of Scranton, USA
Daniel Buzzerio, The University of Scranton, USA

ABSTRACT

Over the past two decades, several historic regulatory and oversight initiatives were implemented by legislators and the accounting profession to counter occupational (corporate) fraud. In response to prominent financial fraud cases at Enron, Tyco, and WorldCom in the early 2000s, efforts such as the passage of Sarbanes Oxley, the creation of the Public Accounting Oversight Board, as well as the 2002 Statement on Auditing Standards 99 (SAS 99), “Consideration of Fraud in a Financial Statement Audit” were adopted. These initiatives were later followed by the passage of the Dodd–Frank Wall Street Reform and Consumer Protection Act.

The theory of the Fraud Triangle identifies three components that enable individuals to commit fraud: opportunity, pressure, and rationalization. Opportunity represents the chance an individual has to commit fraud, often resulting from the amount of clearance and authority the position held by the individual offers. Pressure (or incentive) represents the reasons why an individual would want to commit fraud, such as bonuses or pressure to increase a company’s earnings. Lastly, rationalization describes an individual’s justification for financial fraud.

Regulatory and oversight initiatives have mainly attempted to limit an individual’s opportunity to commit fraud. While these efforts have improved the quality of financial reporting, their impact on reducing occupational fraud has been limited. Over the past two decades, the frequency and magnitude of occupational fraud has continued to occur at an alarming rate. Since C-suite executives have ultimate responsibility over internal controls they are often in the position to override or ignore such controls. Thus, efforts to limit the opportunity for fraud through internal controls may be ineffective in reducing occupational fraud involving the C-suite. Sridhar Ramamoorti and Barry Epstein have argued that a new approach should be taken, focusing on the rationalization of fraud rather than the opportunity to commit fraud. Ramamoorti and Epstein suggest that external auditors should look for certain personality traits in executives and increase skepticism when these traits are detected.

The traits Ramamoorti and Epstein refer to are collectively called the Dark Triad, and this consists of Machiavellianism, Narcissism, and Psychopathy. Machiavellianism is characterized by a tendency to manipulate and exploit others, a lack of interest in morality, and the use of deception. Individuals with narcissistic tendencies can be egotistic, grandiose, and lack empathy for others. The psychopathic personality type exhibits antisocial, selfish, callous, and impulsive behavior.

In our study we survey accounting professionals to investigate how often they recognize traits in Chief Financial Officers (CFOs) that are closely associated with the three personality types of the Dark Triad. These professionals are also asked whether and how their professional skepticism is impacted when they identify these traits in executives. We will analyze how prevalent these traits are among CFOs, what type of employee is more likely to identify these traits in his or her superiors, and what type of employee is more likely to alter his or her professional skepticism based on detection of these traits. In conducting this study we will gain an understanding on Dark Trait traits in CFOs and the effect on professional skepticism to make policy and audit procedure recommendations.

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Benevolence In The Workplace
Toni DiDonna, Carlos Albizu University, USA
Hillary Hixon, Carlos Albizu University, USA
Priscila P. Garcia Garcia, Carlos Albizu University, USA
Zulia Mojica, Carlos Albizu University, USA
Dylan Sankar, Carlos Albizu University, USA

ABSTRACT
Organizations are comprised of individuals whose behaviors range from the least possible contribution to maintain an affiliation with the organization to others who go above the requirements and engage in extra-role behavior for the benefit of themselves and the organization (Saradha & Patrick, 2011). The purpose of this study was to determine the correlation between benevolence, integrity, and desire for status with organizational citizenship behavior (OCB). The sample consisted of 221 participants 18 years of age or older and employed. The participants for the survey, which was created through Google Forms, were selected using a combination of nonprobability sampling methods, such as convenience and snowball sampling. The collected data was analyzed using SPSS software to run a Pearson’s correlation test for each of the main variables or constructs—benevolence, integrity, and desire for status—against OCB. The findings indicated that benevolence, integrity, and desire for status showed a positive correlation that was statistically significant with OCB. The implications of these findings suggest that all three constructs impact an employee’s engagement of organizational citizenship behaviors within the workplace.

Keywords: benevolence, integrity, desire for status, organizational citizenship behavior (OCB), Pearson’s correlation test
Engagement Strategies For Enhancing Face To Face Classes
Belinda Dunnick Karge, Concordia University Irvine, USA

ABSTRACT
The traditional college classroom is changing. Faculty are spending more time on inquiry and problem-solving activities and less time lecturing. Online discussions and activities create a hybrid type of environment, where a percentage of the course is online. Several engagement strategies that can be used for enhancing face to face classes will be demonstrated in this workshop.

The strategy Think-Write-Pair-Share (Lyman, 1981) builds in accountability and a personal response prior to discussions with peers. Tell-Help-Check (Archer & Gleason, 1994), Magic Wand (Karge, 2015), and Give One – Get One (Guillaume, Yopp & Yopp, 2007) are excellent review strategies. They can be used to review for a test, or to review a chapter or reading that was specifically important. Team-Pair-Solo (Karge, 2015) and Scaffolding (Guillaume, Yopp & Yopp, 2007) are excellent product development strategies that can be used just prior to a large assignment where production or design of something is going to take place.

Come learn to become a facilitator of learning (Crockett, Jukes, & Churches, 2011) using grouping strategies that foster student engagement. Quality instruction leads to understanding of knowledge and student achievement (Johnson, 2012). Making sure adult learning strategies (Knowles, Holton, & Swanson, 1998; 2005) are used will enhance your teaching. Your teaching evaluations will rise and you will feel more confident in your own instruction after participating in this workshop and learning how to use these strategies.

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Johnson, J. (2012). High Quality Instruction that Promotes Learning and Achievement for African American Male, Students, Schools Moving Up, Concord, CA: WestEd.
Saudi English Language Teachers: How Communicatively Oriented Are They?
Ayedh Dhawi Mohammed Al-Mohanna, King Khalid Military Academy, Kingdom of Saudi Arabia

ABSTRACT

After nine years of formal instruction in English as a foreign language, most Saudi students fail to use English language communicatively. This could be ascribed to numerous reasons, for instance, learning and teaching settings, inadequate English language teachers’ pre-service and in-service education, lack of appropriate materials, learners’ attitudes towards English language or all of the above reasons together. It is my conviction that every reason of the above ought to be inspected and investigated independently so as to touch base at a superior standard in English Language Instruction in the Saudi Arabian context. The examination, we propose here, will be centred around the English language instructor as a possible contributor to the problem.

The government (Ministry of Education) supervises language teaching in Saudi Arabia at all levels. The government also supervises teacher training which takes place at Faculties of Education. The latter grant BAs in English and Education after four years of teacher training. The graduates occupy positions at elementary, intermediate and high schools as language instructors and start dealing with materials that were designed to teach language communicatively. Do language teachers in Saudi Arabia have a Communicative Orientation to Language Teaching? The present study aims at investigating the theoretical background that trigger Saudi teachers’ classroom practice.
Country Effects, Industry Effects And The Effectiveness Of International Diversification Within The GCC Region

Sulaiman Al-Jassar, Kuwait University, Kuwait
Imad A. Moosa, RMIT, Australia

ABSTRACT

A hedging approach is used to examine the effectiveness of international diversification within the Gulf Co-operation Council (GCC) region. By using data covering the six GCC countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE) and various sectors, we find that diversification across whole markets is more effective than diversification across sectors, irrespective of whether the constructed portfolios contain two or more assets. The results also reveal that diversification amongst several markets or sectors is more effective than diversification amongst two markets or sectors.
Psychodidactic Strategies To Facilitate The Flow Of Logical Thinking In The Preparation Of Academic Documents

Dení Stincer Gómez, Universidad Autónoma del Estado de Morelos, Mexico
Zuraya Monroy Nasr (Facultad de Psicología, Universidad Autónoma del Estado de Morelos, Mexico)
Luis Pérez Álvarez, Universidad Autónoma del Estado de Morelos, Mexico
Ricardo Magos Núñez, Universidad Autónoma del Estado de Morelos, Mexico

ABSTRACT
The preparation of academic documents such as thesis, articles and research projects is one of the requirements of the higher educational level. These documents demand the implementation of logical argumentative thinking which is experienced and executed with difficulty. To mitigate the effect of these difficulties we designed a thesis seminar, with which we have seven years of experience. It is taught in a graduate program in Psychology at the National Autonomous University of Mexico. In this seminar we use the Toulmin model as a mental heuristic and for the application of a set of psychodidactic strategies that facilitate the elaboration of the plot and culmination of the thesis. The efficiency in obtaining the degree in the groups exposed to the seminar has increased by 94% compared to the 10% that existed in the generations that were not exposed to the seminar. In this article we will emphasize the psychodidactic strategies used. The Toulmin model alone does not guarantee the success achieved. A set of actions of a psychological nature (almost psychotherapeutic) and didactics of the teacher also seem to contribute. These are actions that derive from an understanding of the psychological, epistemological and ontogenetic obstacles and the most frequent errors in which thought tends to fall when it is demanded a logical course. We have grouped the strategies into three groups: 1) strategies to facilitate logical thinking, 2) strategies to strengthen the scientific self and 3) strategies to facilitate the act of writing the text. In this work we delve into each of them.

INTRODUCTION
At the higher educational level, one of the professional academic demands for students is the preparation of academic documents such as: thesis, research projects, articles for publication and essays. They are often constituted in large institutional requirements because they allow the accreditation of a degree and / or even the financing of a project.

The elaboration of these documents implies putting into practice a logical - argumentative thought. As this involves certain difficulties, the students seem to resist this elaboration or they go through it with great hardship.

In the case of theses at the undergraduate level. in Mexico only 10% of students choose it as the option to obtain the degree and of that 10%, 39% complete it. The degree qualification in the postgraduate systems, where the thesis is the mandatory requirement for the degree, shows that less than 50% concludes it and less than 10% does so in prudent times, that is, at least in two years after the completion of the credits of the program.

The low degree levels are related to: 1) the high workload involved 2) poor communication with the advisors 3) students' difficulties in academic writing, 4) little certainty in the students about what they want to investigate, 5) inadequate planning of the process from the institution, 6) arbitrary assignment of tutors, 7) disengagement between research seminars and student work, and 8) insufficient forums in which the student has the opportunity to present their work in front of an audience (Rodríguez (2006), Luna (2011), Medina Otero (2008), Villagra and Casa (2010), Fernández, Mendoza, Rodríguez and López (2013)).
From our perspective, another possible factor is related to a "background" issue, of a cognitive nature. Doing a degree thesis implies: getting involved in an epistemological-methodological process, getting involved in an argumentative dialogue and, in a general way, in experimental and / or probatory activities. Its product is an extensive discourse where a hypothesis must be tested, the evidence made clear, appeal to the best arguments, design a method and require counterarguments and / or criticism. All this must also be exposed orally and in writing. It is an intellectually and emotionally complex process because it requires putting into action the most complex thought: the logical and the creative.

Psychodidactic strategies that contribute to the construction of an argument

For seven generations of postgraduate students we have carried out an intellectual and affective accompaniment in the elaboration of their theses of degree during two semesters. This accompaniment is based on the use of Toulmin's argumentative model that we use as a heuristic that allows us to organize the different mental representations in the place of the model that corresponds to the construction of the plot of the document in question and also, a set of actions of the teacher towards the student which seems to function effectively in the accomplishment of this task.¹

They are actions of a psychological and didactic nature. This is why we call it psychodidactic strategies. They stem fundamentally from an understanding of psychological, epistemological and ontogenetic obstacles and the most frequent errors in which thought tends to fall when a logical discourse or the construction of a scientific argument is demanded. In this work, this will be emphasized. We have grouped them into three groups 1) strategies to facilitate logical thinking, 2) strategies to strengthen the scientific self, and 3) strategies to facilitate the act of writing the text.

Strategies to facilitate the logical flow of thought

The Toulmin model as any other argumentative model demand the flow of logical thinking. This means paying more attention to the relationships between the statements we create, in which some are premises and others are conclusions \((p \implies q)\). Logical thinking would require that relations between \(p\) and \(q\) are coherent, relevant and congruent (Vega, 2003). Assuming the architecture of the mind proposed by De Sousa (2008) on the existence of two systems of mental functioning, one intuitive and another analytical, the logical course implies a leap from the intuitive to the analytic system. The intuitive system operates under the principles of natural logic and allows us to function "comfortably in our daily lives"⁴, and although an erroneous reasoning is not necessarily derived (Eraña, 2003), it tends to this because of the primacy of what is immediately available for our perception. In analytical or logical thinking, a thorough analysis of what is immediately perceptible is expected, assessing its necessity and sufficiency and attending, in most cases, to less perceptible and phenomenological properties. It also allows, as Piaget (1991) argues, the ability of the mind to operate with mental representations that are not available, that is, to work with statements whose empirical referent may not exist. This jump implies for the intellect, a computationally more expensive discourse. Analytic discourse involves more time and a break with the apparent relevance of what is immediately perceptible.

Toulmin puts data and inference as the first components of his model. One implies the other, it is the logical structure \(p \implies q\). In this structure \(p\) is either the premises (evidence, data, facts) and \(q\) the inference that results from it or them. The inference must be contained in the data and the data must be necessary and sufficient to sustain the inference that was made of them. In this first intellectual elaboration that the students do (make the data explicit and build an inference) we have detected a set of obstacles but also a set of psychodidactic strategies that facilitate this elaboration.

With regard to the evidence, it is necessary:

1) To insist on the need to make explicit all the possible evidences that can sustain the inference made. Emphasize that the evidence comes from two sources, those that come from the own experience and those that come from other authors and investigations that have inferred something similar before the same data. This implies stimulating putting the data that were not made explicit before, in the document as they are necessary.

¹ One of the observations to the results of the article by Stincer and Blum (2017), in which emphasis is placed on the power of the model in the construction of the thesis scheme of the thesis, is that too much functional power was attributed to the model and the teacher's style One of the most interesting hypothesis that resulted from this criticism was that the model by itself did not explain the success of the degree's efficiency but the didactic used by the driver of the course.
2) Show that the evidence is of a different nature. Depending on the way that our discipline is understood where we live, we must go to the evidence that our community accepts as such. It can be words, statistical data, objects, drawings, images, actions, vestiges, experimental tests, concrete facts, photographs, video recordings, etc.

3) Engage the student with the grammatical form \( p \rightarrow q \). This translates into reading the data suggested by the student and his inference and to note that there is this grammatical congruence between them. When this congruence does not exist, it is necessary to correct or eliminate it.

4) Submit relationships between data and inference to a group analysis whose members share similar conceptual and theoretical frameworks and can, therefore, validate the need and sufficiency of the available data, as well as the plausibility of the inference made.

5) To insist on the search for unavailable but probable evidence or support the inference only on the evidence that is available. For the first case the facts can be explained if there is evidence pointing to it, but sometimes it is not available. In the abductive reasoning at least that probable evidence is linguistically elaborated and taking it as such generates the scientific commitment to find it; we must look for it until it is available. Otherwise, it can only be considered as probable and the inference must specify this dimension "Assuming \( p \) exists then \( q \), but \( p \) does not appear yet then \( q \) is not yet valid". If the student does not intend to search for the probable \( p \) then it is necessary to infer or sustain an inference only with the available evidence. It must be recognized that if the evidence is not directly perceived, it is not a reason to discard its existence. For instance, as we explain certain physical phenomena such as gravity by a force that is not perceived by our senses. In the first instance it is necessary to consider its existence because with it the phenomenon is explained, then it is necessary to prove its existence.

With respect to inference:

Returning again the structure \( p \rightarrow q \), and that previously we discussed what it is advisable to say and do about the \( p \), now we will focus on the \( q \), which is the inference, also known in scientific methodology, as hypothesis and assumption. The fundamental quality of an inference is that its content can be perceived in the premises that give rise to it. In most cases, inference is a rational and linguistic construction of the epistemic subject in which it makes its representations explicit about the possible relationships that exist between the available data (which may not be easily discernible by others) and that would explain the phenomenon as a whole.

In this case, it is important to "make the students see" that the inference is a statement that he would build from the way the data are being shown and in the way he represents them. Given this, the orientation is as follows: According to these data that you have in front of you, what do you dare to affirm? What do you conclude about them? Being in a context of building knowledge and having encouraged them to think about a topic that they like, there will always be something to say. Here the strategy is very simple: express what you think of the data you perceive. Build it with your own words, it must be an affirmation. Grammatically it is a sentence with subject, verb and predicate and in general, it reflects a causal relation.

To guarantee the logical course of thought in this case, the strategy is, first of all, to complete the formula \( p \rightarrow q \). If we already have a set of premises then it is time to construct the inference. Then we proceed to an exhaustive review of the sufficiency and necessity of the premises to infer \( q \). The questions addressed to the group: “do you consider that the evidence points adequately to the inference made? Who does not agree with the inference made and why?” In this case we appeal to the Aristotelian plausibility and to the criteria of coherence, pertinence and congruence defined above.

Strategies to strengthen the scientific self

Toulmin's model as a heuristic requires students to have three intellectually complex phases: 1) the construction of a hypothesis or assumption to defend, 2) the specification of the evidence, 3) giving reasons that explain the "causal" relationships established in the hypothesis, for this last one they must resort to the theory and finally, 4) to think about the refutations of its assumption or hypothesis.
In general, students show, first of all, fear towards the task of thinking with the rigor of logical thinking, towards what it implies to construct their own scheme with the elements of the model. Expressions like "Aw, teacher, let’s see if I can do it!", "this is a very complex job", "that's scary", not only are manifested in a verbal manner, but in a gestural one. Some make the gesture of "biting the nails," "tremble," "laugh with nervousness," and the decision of who will be the first to develop its scheme and expose it in front of the group is a dilemma. This suggests that the requirement to put logic thinking into practice tends to generate anxiety and fear. The strategy that in these cases we thought is appropriate to apply is to recognize, together with them, that it is indeed a complex but not impossible task. They are told that the mind, in their case, is ready for this task, that the analytical system is there and it is a matter of getting it going with the help of the others. That is to say, a deceitful discourse will be rectified by the non-fallacious discourse of the others. This part is interesting because here we assume that the significance of the logical principles and their rules will be imposed either in one or in another, facilitating and accustomed the other to correct reasoning.

Another strategy is to warn them that this process of constructing the plot is not a situation of evaluation of the intellect, nor a persecutory situation of the self. It is, first of all, an epistemological situation, where knowledge is built to establish a proposal with value for the discipline. To provide knowledge helps warning that who does not pursue this intention, is very likely to run from failure to failure. They are warned that in an epistemological situation, errors are valid. Incorrect reasoning, ambiguous proposals: "nothing happens". They are natural and the prelude to a more sophisticated, probable thought; "something must be started", the normal thing is start from something rough, inelegant, intuitive, no matter what we will refine, it can be epistemologically relevant. We try to make the fear of the crude and intuitive of the beginnings lose, “nothing happens”, “our lives will not go away”, “somewhere we have to start”. At this time the teacher should lead the individual and group thinking processes towards a fundamentally analytical listening and through it decipher what the proponent wants to defend and translate it, make it more explicit, help the proponent to a "more metabolized" elaboration of his proposal. We can represent it this way "according to what I hear and the evidence that you are presenting, it seems to me that what you want to defend is ...". These points are punctual translations of the "possible and true" proposal of the student. Frequently this strategy works, the student feels listened to and understood. This diminishes the uncertainty and the impossibility of explaining his representations. We approach the certainty, as affection, to intervene empowering the mechanisms of thought that allow to spin representations and turn them into verbal statements with coherent relationships with each other. It is necessary, a confidence on the part of the teacher in what the student is trying to produce internally, imagine his/her representations and help him/her to order the initial chaos. The depiction of this representations by the other induces the student to endorse them with his own ones, trying to understand with the other. This is nothing more than sharing the own representations with the greatest possible similarity. Most likely, the translation of the other does not faithfully reflect his/her representations and it is necessary to make its own translation. The objective of a proponent, is that its own representations are shared with their interlocutor, in a plausible Aristotelian sense.

At this moment it is very important to detach the student from the deep-seated belief that these academic tasks are fundamentally evaluative events of their intellectual potential, which are persecutory of their academic self or its ideal. They are not trying to prove how smart and academically capable they are, but how close to a plausible knowledge fundamentally evaluative events of their intellectual potential, which are persecutory of their academic self or its ideal.

In Phase 1, which consists in developing the hypothesis, one of the manifestations of the most frequent behavior, in them, is the presence of a feeling of uncertainty as producers and builders of knowledge. Students have expressions such as "it is very complex to affirm something because it is likely that I am wrong", "to affirm is a thing of the authors, I lack a lot for that". This is surprising as they are graduate students. Other expressions are "surely my advisor will not...".
like what I propose and I will bounce, so I will stick to what he says, as she has more experience than me", "I dare not say anything, I better ask my advisor and what she suggests I will accept." That is why the strategy consists in strengthening the epistemic subject.

**Strategies to facilitate the act of writing the text.**

Once each representation is located in the scheme attached to the Toulmin model and the inference is correct and technically raised, it is appropriate to derive the content of the theoretical framework, the problem statement and the method to verify or prove the inference. The importance of inference is crucial here. The theoretical framework is a development of the categories involved in it, also the established relationships and method, as well as the procedure to verify it.

Once the index and method have been developed, the strategies to facilitate writing consist of 1) assigning a number of realistic sheets per section, 2) granting a fair and equally realistic time for the completion of each section, which is agreed between the teacher and the students, 3) grant freedom to fulfill this commitment. From that moment provide individual advice to those who need it, it is necessary to give certainty and encourage confidence in themselves, 4) assign to each section the working condition of evaluation of the subject, and 5) respect the writing style of each student.

From our point of view these are actions that benefit the processes of knowledge production and the preparation of academic documents. They are strategies that allow the development of a complex, logical thinking from the understanding of the nature of the obstacles that prevent it and from certain forms of relationship with the other that allows "to get the best out of them".

**ACKNOWLEDGEMENT**

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**REFERENCES**

Do Student Learning Styles Impact Successful Completion Of Online Course Assignments?
William Hey, University of Louisiana Monroe, USA
Katerina Svecova, University of Louisiana Monroe, USA

ABSTRACT

Educators should be aware students possess certain learning traits and prefer certain learning methods. These traits, or learning styles, from a student’s learning inclination and help classroom instructors plan appropriate online assignments. An ideal learning environment for online students maybe dependent on identifying their learning styles. Since styles vary between online learners, faculty awareness of the differences is imperative for assignment preparation. Successful online students are self-motivated, self-disciplined, and committed to meeting course expectations. They manage time wisely and have the necessary computer skills, reading and writing skills, and meet the requirements of an online course. (Diaz and Carlin, 1999).

Research by Kumar and others (2005) concluded with an ever increasing diverse (non-traditional, international students) online student population, an awareness of students’ learning styles will help expedite designing effective online assignments for which a student’s learning style is suitable. The conscious design of instruction and dissemination of information can lead to greater student satisfaction and achievement in online courses without compromising course integrity.

Additionally, the question still remains, how should instruction be presented in cyberspace to optimize the learning for each individual student? A study by Murray and Perez (2015) compared an adaptive learning system with a traditional objective assessment approach to instructional content delivery and assessment in a digital literacy course. Results indicated student learning did not vary significantly across the courses based upon instructional delivery approach. It was concluded sound pedagogy, rather than technology, must drive the evolution of advanced learning systems (Murray and Perez, 2015).

The purposes of this presentation are to a) Align class assignments with student learning styles in online courses, b) Discuss various ways to assess student learning styles and their impact on success in online courses, and c) Identify strategies for creating assignments that compliment student learning styles.
Practices And Trends Of Evaluating Software Prices In Procurement – An Empirical Study

Frank Bodendorf, University of Erlangen-Nuremberg, Germany
Manuel Lutz, Technical University of Munich, Germany
Jörg Franke, University of Erlangen-Nuremberg, Germany

ABSTRACT

Procurement decisions are particularly affected by the digital transformation in many industries. Purchasing, whose position shifts from pure procurement to value creation, has to deal more and more with digital components. These digital components, by their nature and economic characteristics, differ from conventional ones and therefore rise the cost analysis of purchasing to new challenges. Many companies are having great difficulties, especially with software, in verifying the procurement costs of such components. Evaluation of software prices becomes a more and more important part of cost engineering in companies. In theory and scientific literature, a distinction is made in software evaluation procedures between cost-, value- and license-oriented approaches. This paper presents the design and results of an empirical study to find out which of these approaches are currently being pursued and which ones are eyed for the future by companies in different industries.

Keywords: software procurement, value analysis, cost engineering, empirical study
New Approach To The Measurement Of Shadow Activity In The Production Sectors Of The Russian Economy

Natalia Abroskina, The Russian Presidential Academy of National Economy and Public Administration, Russia
Alexander Abroskin, The Russian Presidential Academy of National Economy and Public Administration, Russia

ABSTRACT

The proposed approach to the construction of estimates of the shadow activity scales in the production sectors of the Russian economy is an example of using alternative methods for measuring the components of the non-observed economy. Estimated indicators of growth in the scale of shadow activity in the sectors of the Russian economy based on the modification of the classical method of physical input are presented. Absolute and structural estimates of the shadow activity scales were developed for selected sectors of goods and services production; corrected estimates of gross value added and GDP of the Russian Federation for the year of 2017 are presented, taking into account updated estimates of the shadow activity scales.

Keywords: Mixed Production Costs, Outrunning Coefficients, Physical Input Method, Methodical Approaches, Non-observed Economy, Industry Estimates, Supply and Use Tables, Shadow Activity.

METHODOLOGY FOR MEASURING SHADOW ACTIVITY IN INTERNATIONAL STATISTICS

The recognition at the expert level the significance of the shadow turnover of resources in the Russian economy requires the inclusion the shadow segments of the Russian economy sectors in the sphere of macroeconomic analysis and forecasting. The absence of the sectorial statistics in this area has a negative impact on the reliability and accuracy of the macroeconomic and industry indicators developed by Federal State Statistics Service (Rosstat) and limits the possibilities for effective management of the Russian economy in the context of balancing resource flows.

At the present time, despite the availability of a significant number of publications on the issues of measuring and analyzing shadow activity in the Russian Federation, the relevant segment of the Russian economy remains insufficiently studied. Also, the developed estimates are characterized by significant variation, problems of interpretation and the lack of descriptions of methodological approaches to their construction. It results in absence of significant practical recommendations and proposals on key aspects of the shadow activity in the Russian economy.

For example, Rosstat estimated the share of the shadow economy in Russia in 2016 at the level of 15-16% of GDP, which is 2 times lower than the corresponding IMF estimates (33.7%). According to the estimates of the Association of Chartered Certified Accountants (ACCA), the scale of the shadow economy in Russia in 2017 reached 39.3% of GDP and in was one of the highest in the world with the share of the shadow economy in global GDP in 2017 - 22.5%, for example, in the USA the value of the corresponding indicator was 7.7%, in Japan - 9.9%, in China - 10.2% (Emerging from the shadows. The shadow economy to 2025. ACCA, 2017) [1].

This variation in the estimates for the Russian economy is primarily explained by the complexity of the measured object, which includes components that differ by economic factors that determine the scope and dynamics of shadow processes, motivation of the subjects to participate in shadow economic operations and the possible consequences of the shadow activity growth for social and economic development of the Russian Federation, etc. Therefore, the practice of applying to this object universal methods with the construction of aggregated estimates seems to be unreasonable and the developed estimates can’t be used for analytical purposes without additional adjustments.
In international statistics shadow activity is considered as an element of more general object of measurement, defined as “non-observed activity”, which also in addition to shadow includes illegal activity and activities carried out in the informal sector and by households for the production of goods and services for own final consumption. Other types of non-observed activities are defined as unrecorded and associated exclusively with the problems of programs development and the collection of primary statistics.

Nowadays in Russian statistics in GDP calculations the special element defined as "Gross value added adjustments for economic transactions not observed by direct statistical methods" is taken into account. Among other things it takes into account adjustments to shadow operations of legal entities, operations of the informal sector of the economy and adjustments to the production of households for their own final consumption. By analogy with international practice, it does not include transactions related to illegal production. Nevertheless, most information on the methodology of such adjustments carried out by Rosstat, as well as all intermediate information on the conducted calculations is not publicly available, which does not allow for assessing the correctness of the developed estimates.

CLASSICAL METHODS FOR MEASUREMENT THE SHADOW ACTIVITY SCALES IN THE ECONOMY

The specifics of the shadow activity as an object of measurement determine the special requirements for the selection of methodological approaches, used in the construction of relevant estimates. With a variety of existing methods in the modern scientific literature there are no specific recommendations on their choice and practical application. At the same time, each of the approaches is the object of criticism, which concerns the consistency of the used hypotheses, quality of the developed estimates, limitations associated with the requirements for the information base used, etc.

The main disadvantages of the direct measurement methods are typical for all approaches, which information base is developed using voluntary surveys results with uncontrollable reliability and accuracy, largely depended on the motivation of respondents. Other disadvantages of direct measurement methods in their classical versions are: the limitation of the measured object mainly by the units of the household sector, exclusion from its composition a significant part of commercial structures, problems of the primary data quality and the inadequacy of the methodology for transforming the survey results into macroeconomic indicators (Feld, L. P. and F. Schneider. 2010. Survey on the shadow economy and undeclared earnings in OECD countries, German Economic Review, 11(2) [2].

Using indirect methods causes the obtaining indicators that are biased towards overestimation of shadow activity scales. This situation is explained, primarily, by the lack of reliability and accuracy of the used indicators – the probability of double counting, direct errors, statistical errors, etc. Therefore, this group of methods is associated with estimates of shadow activities defined within broader boundaries, including illegal activities, activities not recorded by statistics due to inadequate statistical tools, etc.

This thesis, in particular, is applied to the method based on estimates of the discrepancy between income and expenses statistics (national expenditure and income statistics). According to experts, the estimates developed on the basis of this approach are characterized by relatively low reliability and accuracy due to the impact on the calculated indicators of cumulative errors that occur both in the process of collecting primary data and in the process of balancing macroeconomic indicators.

In international practice the most widely used approach to measuring the shadow activity scales, based on measurement of the employment dynamics in the official sector of the national economy, is also characterized by significant disadvantages. With regard to this method (in the scientific literature defined as “Italian”), experts confirm the conventionality of the underlying hypothesis, according to which the negative dynamics of employment in the formal sector of the economy in all cases are interpreted as a phenomenon, associated with parallel processes of transition of labor resources to the shadow sector.

The main disadvantages of the approach, based on the analysis of the demand for cash (currency demand approach) are the following: exclusion from accounting of shadow economic transactions, carried out without using cash, the scale of which in the shadow sector, according to some estimates, is about 20 %; incorrect accounting of demand deposits as an element of cash, the increase or decrease in which volumes is not in all cases determined by shadow transactions; conditionality of the hypothesis concerning the equality of cash circulation velocity in the official and

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Transactions approach is another common in international practice of constructing estimates of shadow activity scales in the economy. Its main disadvantages are:

- conventionality of the basic hypothesis about fixed ratio between total value of economic transactions and GDP, and the relation of changes in its value exceptionally with the change in the shadow activity scales in the economy;
- probability of subjective choice of the base period;
- problems of estimates for money supply circulation velocity, which in accordance with the classical approach are developed on the basis of conditional components accounting – the estimated value of the cash turnover in the form of notes of certain value for the period before their withdrawal from circulation.

According to experts, estimates obtained on the basis of transaction approach due to accounting for total non-observed economic operations volumes (including operations in the illegal sector of the economy) can be attributed to shadow activity only in accordance with its extended interpretation. (Feige, E.L. 1990. *Defining and estimating underground and informal economies*, World Development, 18, 7) [4].

The physical input method in its classic version is also characterized by a number of disadvantages, the most significant of which are:

- recognition of electricity consumption as a key indicator of real production scales;
- lack of accounting for changes in production technologies;
- instability of the elasticity coefficients of the GDP and electricity consumption dynamics.

The main disadvantages of using econometric models as the basic tools for measuring the shadow activity scales, and in particular the most common in international practice MIMIC model (multiple indicators, multiple causes), are associated with the representative sampled populations formation and the dependence of generated estimates quality on the used information base. By analogy with a number of other methodological approaches estimates of the shadow activity scales obtained on its basis can be interpreted as their upper boundaries, due to activities of the official sector of the economy can also be taken into account.

MODIFIED VERSION OF THE PHYSICAL INPUT METHOD

The classical physical input method, despite its rather extended use in international practice, can be applied only to production sectors with a high share of electricity costs in the total production costs.

In production of goods in the Russian economy, according to statistics for the year of 2015, such kinds of activities particularly include: production, transmission and distribution of electricity, gas, steam and hot water (50.5%); collection, purification and distribution of water (38.1%). The industries of production of goods with a relatively low share of electricity costs in intermediate consumption include: mining of metal ores (16.7%); manufacture of other non-metallic mineral products (12.4%); other mining and quarrying (11.1%); manufacture of basic metals (10.4%); extraction of crude petroleum and natural gas (less than 10% of total intermediate consumption); manufacture of pulp, paper and paperboard (8.9%); manufacture of chemicals and chemical products (8.6%); manufacture of made-up textile articles (5.6%).

In other industries the share of this component in intermediate consumption was insignificant. For example, in agriculture the share of electricity costs in total production costs was 3.3%, in manufacturing of electrical machinery and apparatus - 2.8%, in manufacturing of food products and beverages - less than 2%, in extraction of crude petroleum - less than 2%, in manufacturing of motor vehicles - 1.9%, etc.

In fact, only in six sectors of the Russian economy engaged in the production of goods, the share of electricity costs in total production costs exceeded 10 per cent.
In the service sector the most significant share of this component in total production costs was recorded only in such sectors as education (21.8%) and real estate activities (12.8%). In other kinds of activities, its share was less than 10%. For example in health and social work the share of electricity in intermediate consumption was estimated at the level of 9.7%, in land transport - 9.3%, retail trade – 6.5%, construction -1.1%, wholesale trade - less than 1%.

On average, the share of electricity, gas, steam and hot water costs in intermediate consumption in the Russian economy according to official statistics for the year of 2015 was less than 8%, which also confirms the inadequacy of the basic hypothesis of the physical input method classical version - possibility of using electricity consumption as a representative indicator of the level and dynamics of production costs.

The proposed modified version of physical input method by analogy with its classical version is based on the following basic hypotheses:

- scale of shadow production in the economy is determined by the outrunning dynamics of production costs relative to output;
- strong relationship between production costs and output;
- in retrospect availability of reliable estimates of shadow activity or recognition of its scales insignificant;
- in the structure of production sectors intermediate consumption can be specified a limited set of components that dominate in the total production costs;
- lack of significant changes in the structure of production costs within the accounting period.

Compared to the classical version the proposed approach is oriented to resource costs combination in contrast to using single input component – electricity consumption. As production indicator, compared with production inputs gross value added (GVA) indicator is used. Selection of this indicator is explained by its more adequate reflection of real production results as compared, for example, with the output indicator which includes the intermediate consumption.

The universality of the proposed approach is determined by the possibilities of its application to almost all production sectors of the national economy, including services. In addition, this method is consistent with the information base, developed in national statistics in the form of supply and use tables in national accounting.

DESCRIPTION OF THE CALCULATION ALGORITHM

The general algorithm for the construction of shadow activity scales estimates for production sectors of Russian economy on the basis of the proposed methodological approach includes the following main stages:

- definition of the observation period for which production inputs and value added volume indices are developed;
- selection of dominant elements in the total cost of intermediate consumption for production sectors of the economy;
- construction of cumulative (relative to the base period) volume indices of production inputs and value added for production sectors of the economy;
- calculation for observation period outrunning coefficients for the volume indices of inputs relative to value added;
- updating of the calculated coefficients for the periods not covered by the observation;
- transformation of the calculated coefficients into absolute indicators of the shadow activity scale in the analyzed production sectors of the national economy.

Experimental calculations using the modified physical input method for the Russian Federation were carried out on the example of selected production sectors, including the production of goods and services (7 and 5 kinds of activity, respectively). In selection of production sectors for experimental calculations, the priorities and problems of Russian economy and international experience in measurement of shadow activities were taken into account.
In Russian statistics in retrospect the only reliable estimates of shadow activity in production sectors were published for the year of 2003, which was selected as basic period in calculations.

RESULTS OF EXPERIMENTAL CALCULATIONS

In accordance with calculated estimates for all analyzed industrial sectors (except for manufacturing of chemicals and chemical products) within the calculation period (2003-2015) the outrunning dynamics of volume indices of inputs relative to value added were observed. The most significant advance in dynamics was revealed for such kinds of activities as manufacture of coke; manufacture of refined petroleum products (2.87). Significantly lower values of the outrunning coefficients for the compared indicators were obtained for other analyzed types of economic activity:

- Manufacture of wood and of products of wood and cork, except furniture – 1.72;
- Manufacture of wearing apparel; dressing and dyeing of fur – 1.39;
- Agriculture, hunting and related service activities – 1.27;
- Manufacture of food products and beverages – 1.22;
- Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction -1.19.

For the production of services sector the calculated values of the outrunning coefficients were:

- Hotels and restaurants -1.55;
- Wholesale trade – 1.45;
- Construction – 1.18;
- Land transport – 1.13;
- Retail trade - 1.08.

ESTIMATES OF THE SHADOW ACTIVITY

For actualization of shadow activity estimates the dynamics of compared indices were prolonged in accordance with common statistical procedures. For 2017 corresponding estimates for production sectors were based on absolute estimates for the year of 2003 and outrun coefficients for the period of 2003-2017.

To express the absolute estimates in 2017 prices, GVA deflator indices developed by official statistics over the period 2003-2017 were used.

Estimates of the shadow activity scale in the analyzed production sectors of the Russian economy in 2017 are presented in Table 1.

As follows from calculated data, the most significant absolute indicators of the shadow activity scale in the group of analyzed production industries of the Russian economy were observed in the activity “Manufacture of coke, refined petroleum products” (about 700 bln. rub.). Significant shadow activity scales were also recorded in “Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction” (about 400 bln. rub.) and “Manufacture of food products and beverages” (more than 300 bln. rub.) (Figure 1).

In the service sector, its most significant scale was recorded in trade: in wholesale - about 3 trln. rub., in retail - about 1.4 trln. rub. (Figure 2).
Table 1 - Estimates of the shadow activity scales in production sectors of the Russian economy in 2017 (bln. rub.)

<table>
<thead>
<tr>
<th>№</th>
<th>Kinds of activity</th>
<th>Shadow activity scales in 2003</th>
<th>Outrunning coefficient</th>
<th>Cumulative GVA deflator indices</th>
<th>Shadow activity scales in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agriculture, hunting and related service activities</td>
<td>28.5</td>
<td>1.603</td>
<td>4.15</td>
<td>189.6</td>
</tr>
<tr>
<td>2</td>
<td>Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying</td>
<td>29.9</td>
<td>1.606</td>
<td>8.30</td>
<td>398.6</td>
</tr>
<tr>
<td>3</td>
<td>Manufacture of food products and beverages</td>
<td>34.0</td>
<td>2.167</td>
<td>4.62</td>
<td>340.4</td>
</tr>
<tr>
<td>4</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>2.1</td>
<td>1.600</td>
<td>4.62</td>
<td>15.5</td>
</tr>
<tr>
<td>5</td>
<td>Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials</td>
<td>4.3</td>
<td>2.129</td>
<td>5.58</td>
<td>51.1</td>
</tr>
<tr>
<td>6</td>
<td>Manufacture of coke, refined petroleum products and nuclear fuel</td>
<td>27.3</td>
<td>5.295</td>
<td>4.69</td>
<td>678.0</td>
</tr>
<tr>
<td>7</td>
<td>Manufacture of chemicals and chemical products</td>
<td>13.1</td>
<td>0.918</td>
<td>4.80</td>
<td>57.7</td>
</tr>
<tr>
<td></td>
<td>Production of goods, total</td>
<td></td>
<td></td>
<td></td>
<td>1730.8</td>
</tr>
<tr>
<td>8</td>
<td>Construction</td>
<td>116.0</td>
<td>1.413</td>
<td>3.9</td>
<td>644.2</td>
</tr>
<tr>
<td>9</td>
<td>Wholesale trade</td>
<td>634.7</td>
<td>1.801</td>
<td>2.60</td>
<td>2972.0</td>
</tr>
<tr>
<td>10</td>
<td>Retail trade</td>
<td>312.5</td>
<td>1.427</td>
<td>3.09</td>
<td>1377.9</td>
</tr>
<tr>
<td>11</td>
<td>Hotels and restaurants</td>
<td>29.2</td>
<td>2.054</td>
<td>5.00</td>
<td>299.9</td>
</tr>
<tr>
<td>12</td>
<td>Land transport</td>
<td>54.6</td>
<td>1.119</td>
<td>4.36</td>
<td>266.4</td>
</tr>
<tr>
<td></td>
<td>Services, total</td>
<td></td>
<td></td>
<td></td>
<td>5560.4</td>
</tr>
<tr>
<td></td>
<td>Total production sectors</td>
<td></td>
<td></td>
<td></td>
<td>7291.2</td>
</tr>
</tbody>
</table>
The highest value of the shadow activity share in the structure of gross value added in the analyzed production of goods sectors (about 30%) was observed in “Manufacture of coke, refined petroleum products”. Also, relatively high values of this indicator (about 20% of GVA) were recorded in “Manufacture of wood and of cork, except furniture; manufacture of articles of straw and plaiting materials” and “Manufacture of food products and
“beverages” (Figure 3).

![Figure 3 - Share of shadow activity in GVA in industrial sectors of Russian economy (2017), %](image)

In the service sector the activities with the most significant share of shadow activity in GVA (about 30%) were: hotels and restaurants, wholesale and retail trade (Figure 4).

![Figure 4 - Share of shadow activity in GVA in service sectors of Russian economy (2017), %](image)

On average, in the production of goods sector in the analyzed industries of Russian economy, the share of shadow activity in total sector GVA in 2017 (17.1 trln. rub.) was estimated at 10.1%. In the service sector its share in total GVA of analyzed services (25.3 trln. rub.) was estimated at 22.0%.

The average share of shadow activity for the analyzed production sectors of Russian economy in 2017 was estimated at 17.2%.
ADJUSTMENTS TO MACROECONOMIC INDICATORS FOR NON-OBSERVED COMPONENTS

The obtained estimates of shadow activity scale for selected production sectors of Russian economy differ significantly from the corresponding estimates developed by Rosstat. In particular, calculated estimates differ from the updated (the latest published data refer to 2016) GVA correction indicators for economic operations, non-observed by direct statistical methods, according to which the adjustments of GVA for shadow operations of legal entities were estimated at 5.1%.

In recognition the group of analyzed production sectors as a representative sample of the whole types of economic activities in Russia and the correctness of Rosstat updated estimates on informal sector activities and on the production of households for their own final consumption (9.9%), the adjusted GVA value for the Russian Federation in 2017 will be 92.7 trillion rubles. Accordingly, for 2017, the value of gross value added, developed by official statistics (83.1 trillion rubles), should be adjusted taking into account updated estimates of the shadow activity scale upward by 9.6 trillion rubles.

For GDP indicator, based on the overall ratio between GDP and GVA, the corresponding upward adjustment of its official value for 2017 is 10.7 trillion rubles.

Promising areas of research in this sphere are associated with the construction of corresponding estimates for other components of the non-observed economy. In this part, as a priority, the adjustments of GVA, developed by Rosstat, to the operations of the informal sector of the economy and to the production of households for their own final consumption need to be clarified. For example, Rosstat estimated this component at 9.9% in 2016, which does not correspond to alternative estimates, developed for Russia by international organizations and experts, the values of which exceed the official values for the Russian Federation in 2-3 times.

Similarly, approaches to assessing the illegal activities scale, which are not currently included in the components of non-observed activities, should be developed in Russian statistical methodology.

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The Populist Right And The Future Of The European Union

Marcus Stadelmann, The University of Texas at Tyler, USA
Jill Carter, The University of Texas at Tyler, USA

ABSTRACT

On May 25, 2019, European parliamentary elections were held across 28 states in Europe. While the populist right did not win a majority of seats in the European Parliament in Strasbourg, it did win the elections in France and Italy, two of the most powerful states within the European Union.

This paper will first present a brief overview of the two populist parties coming in first in France (National Rally) and Italy (The League) and their respective leaders, Marine Le Pen and Matteo Salvini. Then the paper will analyze the changes to the European Union proposed by both parties and attempt to predict their chances of succeeding.
Writing To Think; Thinking To Write: Integrating Critical Thinking Into The Teaching Of Writing

Margot Kinberg, National University, USA

ABSTRACT

Much recent research has focused on the need to support students’ critical thinking development. In the US, for instance, recent Common Core standards for Kindergarten through Grade Twelve include the development of critical thinking skills (National Governors' Association, 2010). College and university students, too, need to develop their ability to think critically and analyze information (e.g. Liu, 2019). With this increasing emphasis on critical thinking skills, it is important for professional educators to integrate those skills into the curriculum. That includes the writing curriculum (e.g. Zhang, 2019).

Research supports a relationship between improved overall critical thinking and writing instruction that emphasizes those skills (e.g. Lieu & Xie, 2019). Students whose writing includes critical thinking and problem solving have been shown to use more diverse language in their writing, as well as create a more broadly informed final product (Liu & Stapleton, 2018). This workshop is designed to help writing instructors infuse critical thinking skills into their writing assignments. The focus will be on creating journal and other writing prompts, essays, and research assignments that focus on critical thinking skills. Participants will leave this workshop with a practical set of approaches to integrating critical thinking skill development into their writing assignments.

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Teachers As Masseuses: Giving Low Socio-Economic Students With Learning Disabilities The “Cognitive Massage” They Need To Achieve
David Rago, National University, USA

ABSTRACT

Like tool sheds, workshops have a foundation. The foundation for this workshop is an initial understanding of ecobiodevelopmental (EBD). EBD is supported by three scientific strands: (1) neurodevelopmental science; (2) epigenetics; and (3) ecological science. The first strand, neurodevelopmental science, is knowledge of neuronal development and function to explain the cognitive and biochemical processes that influence child development (Shonkoff & Garner, 2012). The second strand, epigenetics, is the molecular biological processes and their interactions with ecological systems that influence gene expression without changing an individual's DNA sequence (Herman-Smith, 2013; Shonkoff & Garner, 2012). The third strand, ecological science, considers the interactions people have with different life systems (Herman-Smith, 2013). All these processes and interactions are vulnerable to stress (i.e., poverty, low socioeconomic status). Continued exposure to stress adds to the development of ongoing epigenetic changes (National Scientific Council on the Developing Child, 2010). There are strategies teachers can integrate into their instruction that may minimize the stress these factors (i.e., poverty, low socioeconomic status) put on the EBD framework, giving students the “cognitive massage” they need to achieve.

Slightly less than half of the students who go to high poverty high schools will not graduate. There are many definitions for poverty (Cuthrell, Stapleton, & Ledford, 2010; Jensen, 2009; Payne, 2005) and these will be shared during the workshop, in addition to how poverty may be considered a toxic stress factor that impacts ongoing epigenetic changes and cognitive development. Stress considered toxic (i.e., poverty, low socio-economic conditions) may change a child’s learning and behavior. Sometimes these changes are permanent (American Academy of Pediatrics, 2012). Students with a learning disability (LD) already have cognitive challenges. Toxic stress (i.e., chronic exposure to poverty) may further influence executive functioning. School-wide and classroom level strategies may improve the learning of low-socioeconomic status (SES) students (Jensen, 2009), and may help low-SES students who also have learning disabilities. In this workshop, different strategies will be discussed that may improve learning outcomes for special education students who live in poverty, along with various ways teachers may integrate them into their instructional practice.

This workshop is an extension of a book chapter written by the presenter. “Teaching Writing to Low Socio-Economic Students with Learning Disabilities and Autism Spectrum Disorder” in Preparing Pre-Service Teachers for the Inclusive Classroom, edited by Patricia Dickenson, Penelope Keough, and Jennifer Coudruff, 2017, Pennsylvania: IGI Global.

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Correlations Between Couple Relations, Social Support, And Subjective Well-Being Of Parents

Vered Shenaar-Golan, Tel-Hai Academic College, Israel
Hadas Doron, Tel-Hai Academic College, Israel

ABSTRACT

This study examines the influence of parenthood on subjective well-being (SWB). The findings from recent studies are complex and contradictory, indicating that parenthood has both negative and positive effects on parental SWB. For a deeper understanding, this study examined two potential mediating factors – spousal relationships and perceived social support. Participants were 611 parents, 489 women (80%) and 122 men (20%). Most were married or living with a partner. Participants were asked to complete three questionnaires, the Personal Well-being Index, Sternberg's Triangular Love Scale, and the Multidimensional Scale of Perceived Social Support. A logistic regression was used to evaluate the extent to which the different variables were related to the probability of being classified in the normative range of SWB. Findings show that two-thirds of the participants were classified in the normative range of SWB and one-third below normal. Significant and meaningful differences for all subscales of couplehood and social support and for years of education and socioeconomic status were found between the two groups. The findings suggest that spousal relationship, support of friends and family, education, and economic status are meaningful resources that enable parents to cope with the demands and challenges of parenthood.

Key words: parenthood, subjective well-being, social support, couplehood, Sternberg’s Triangular Theory of Love

Background

Parenthood is considered one of the most meaningful roles in a person's life. Though experienced as enjoyable and rewarding, it involves an enduring commitment and is also one of the most stressful and challenging personal roles, precipitating a large range of psychological outcomes (Gerson, Berman, & Morris, 1991; Kenrick, Griskevicius, Neuberg, & Schaller, 2010). Parenthood shapes life experiences and significantly affects psychological and physical well-being, influencing multiple domains of parents’ lives (Umberson, Pudrovská, & Reczek, 2010; Vanassche, Swicegood, & Matthijs, 2013).

The present study addresses the gap in the literature with regard to the influence of parenthood on subjective well-being (SWB). The findings from current research are complex and contradictory, indicating that parenthood has both negative and positive effects on parental SWB. In order to deepen understanding of the effect of parenthood, this study examined two potential mediating factors – spousal relationships and perceived social support.

Methods

Participants were 611 parents, 489 women (80%) and 122 men (20%), between the ages of 20 and 69. Most were married or living with a partner for up to 42 years. Participants had up to 9 children with the oldest being an average of 14 years-old and the youngest an average of 10 years-old.

Results

Findings show that two-thirds of the participants were classified in the normative range of well-being and one-third below normal. Significant and meaningful differences for all subscales of couplehood and social support and for years...
of education and socioeconomic status were found between the two groups. Romantic love was found to differ by the number of children. The findings may be explained by Resource Theory, which suggests that spousal relationship, support of friends and family, education, and economic status are meaningful resources that enable parents to cope with the demands and challenges of parenthood.

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The Future Is Electric
John Buzza, Monmouth University, USA

ABSTRACT

This paper will discuss and help understand the different options to accumulate energy and use it to power automobiles. As technology continues to advance, the consumer is given more options to accumulate energy and use it to power automobiles. These advances in technology allow new electric vehicles and other alternative energy powered vehicles to flourish on the market and become more and more accessible and affordable to the general public rather than just to high-end users. Tesla is the prime example of a company that is beginning to invest in the future of clean energy and technology as they begin to produce economy versions of their famous all-electric cars. The end game is to become a household name in the process. As Asian and other American markets strive to keep up, Tesla continues to lead the market by creating luxury and now economically affordable cars that are more efficient, safer, and overall a better investment. Electric vehicles are the future of modern transportation and Tesla (among others) is the pioneer leading the way to an alternative energy consuming tomorrow's transportation industry.
Has The Shifting Of Unrealized Gains And Losses On Equity Investments From The Balance Sheet To The Income Statement Compromised The New Revenue Recognition Standard?

Clemense E. Ehoff Jr., Central Washington University, USA

ABSTRACT

FASB Update 2016-1 has revised the accounting treatment for investments in equity securities. After December 15, 2017, unrealized gains and losses will be included in net income and will no longer be reported on the Balance Sheet as part of other comprehensive income. This study suggests that the revised accounting treatment is somewhat troublesome and compromises the requirements of the new Revenue Recognition Standard.
Object Inquiry: Leveraging Museum Collections In Art History Survey Courses

Dena Gilby, Endicott College, USA

ABSTRACT

Endicott College is located near several museums with excellent collections in terms of the teaching of foundational art history courses in that the Museum of Fine Arts, Boston and the Peabody Essex Museum are easily accessible by public transportation. Hence, whenever possible art history courses incorporate assignments that employ objects from these collections. Moreover, in day-to-day activities and discussions, I integrate objects that are at hand to our students as often as I can. In this talk I will address not only the roles that museums play in Endicott College’s foundational courses, but also provide specific examples of designing and implementing assignments and field experiences that develop skills and support student attainment of learning objectives across the studio program curriculum.
Leveraging Local Employers As A Student Success Initiative
Yvonne Phelps, University of Phoenix, USA
Summer Van Pelt, University of Phoenix, USA
Michelle Palaroan, University of Phoenix, USA

ABSTRACT

Objective: Increase student engagement and persistence through connection with degree relevant local employers.

Problem Statement: An opportunity exists for Universities to partner with local employers to help support strategic student career choices and uncover employment laddering options to lay the foundation for students to upskill in select occupational career categories. Studies indicate that students often lack the skills, knowledge or opportunities to strategically align career goals with educational aspirations and relevant job pathing.

In prior work the researchers conducted a literature review and solicited limited qualitative feedback and experience from educators within the University system. This expanded research triangulates information through the use of surveys which target academic directors, campus leaders, and community partners. Survey results will be collected and analyzed by the end of September, 2019. The goal is to uncover opportunities, options and perceptions of the potential value of linking students to relevant local career options within their community.

Many people opt to attend college with the idea that college will lead him or her to a future career. According to Rotrosen, Nantz, and Nunn (2017), “many students with the same college major explore a variety of occupations and career paths, which can impact their probability of employment as well as earnings for decades to come” (para 1). Not all students are focused on what that future career may be, while others are focused; however, are unable to break through their chosen career field or obtain a job after graduation. As stated in University Wire, 2014, “for some students it’s tough to find jobs after graduation” (para 1).

Professors and University administrators alike realize that the path to employment can be uncertain and are struggling with the challenge on how to increase student’s connections to employers, either during or after graduation. To address this issue, The City College of New York created a program that “combines an academic foundation and hands-on projects with four weeks of training plus 12 weeks of work and mentorship at a digital ad agency” (University Wire, 2014, para 2). The objective of this particular program is to “help its students come out of it fully prepared to finally begin their careers” (para 2). While this is one example, the challenge still remains how to assist students to connect to employers and career options.

Similarly, Osterman and Weaver (2016) conducted a study on the connection between community colleges and employer partnerships. At the community college setting, they are known to identify and refine skills for students to be ready for the workforce. Osterman et. al, (2016) noted that despite all the training and academic preparedness for students, there is a lack of documented interactions with employers as they hire their employees (p. 524).

REFERENCES

The researchers plan to triangulate information by conducting qualitative research to address these concerns using an open-ended survey to multiple audiences addressing the following questions:

1. How can Universities adapt to the changing workforce needs to support students in career readiness and career choices?
2. What role could a University campus play in exposing students to career options and local market employers?
3. What role could a University faculty member play in exposing students to career options and local market employers?
4. How could a University campus support local employers?
5. How can market employers leverage partnerships with University campuses?
6. What tools or techniques can Universities employ to help support student career advancement?
Advancing Scholarly Collaboration Through Interprofessional Teaching And Learning

Kent L. Willis, The University of Texas Health Science Center at Tyler, USA
Carson Perry, Winona State University, USA

ABSTRACT

Collaborative practices benefit emerging scholars across disciplines in tackling real-world challenges requiring interdisciplinary approaches. Developing the skill set necessary to collaborate across sectors to solve common issues requires communication and leadership. Further, instructors must be intentional in the development of course components that provide students with the opportunity to engage meaningfully with the broader community of scholars through innovative assignments and course objectives that compel students to work with a diverse group and solve interdisciplinary challenges. This succinct review of literature exposes recent evidence on interprofessional teamwork and writing as a primer for educators preparing graduate and professional students for leadership roles in the 21st century.

Key words: collaborative practice, interprofessional teamwork, interprofessional writing
Successful Teaching Strategies Workshop
For Higher Education
Sharry Kimmel, Broward College, USA

ABSTRACT

1. Paideia Discussion: Developed in the 1980’s by Mortimer Adler, the Paideia discussion is a way to provoke critical thinking, group discussion and interaction, and introspection as well as cover core curriculum. The first step is to find a piece of literature that relates to a major philosophical theme such as truth, justice, love, peace, etc…. Examples of literature are the classics, speeches such as “I Have a Dream” or Chief Seattle’s speech. Next the students arrange their desks into an oval and open-ended questions are asked about the literature. The students debate and discuss their answers and as they do so they discover themselves. The material covered becomes meaning and relevant through the Paideia discussion. I use this form of instruction to teach this form of instructions in my introduction to education class, as “instruction methodology and pedagogy” is one of the topics covered in that course.

2. Aaronson’s Jigsaw II: This is a form of cooperative learning that can be used to teach any concept or piece of literature that has segments. The segments are divided and so are the students. First, the students are divided into homogenous groups and each group learns one of the segments of the concept or piece of literature. They all become “experts” on that one segment. Next the students are heterogeneously grouped. Each student is responsible for teaching each other student in the second group about their segment as well as learning all of the other segments from the rest of the group. At the end, the students give an oral presentation to the class along with the rest of their first (homogeneous) group based on the concept or piece of literature that they have become “experts” about. The entire cooperative learning activity can be followed by some type of authentic assessment or a test.

3. Think-Pair-Share: This constructivist method of instruction can be used to teach concept that is presented in a journal article that is shared with the class or a dvd/video that is viewed by the class. At the end of reading the article or viewing the dvd/video the students are asked a series of open ended and thought provoking questions one at a time. After each question is asked and “thinking” time is provided, the students are asked to find a partner and discuss their thoughts/answers regarding the question. Next, pairs volunteer or are called upon and each partner shares their partner’s thoughts/answers with the entire class. It’s a great ice breaker and a way for the students to get to know each other in addition to learning the material and thinking critically.

4. Test preparation: As a creative way for my students, who are future teachers, to prepare for their mid-term and final exams, I have students create a list of questions that they would ask on the test if they were me. They list questions and answers consisting of multiple-choice, fill-in-the blank, true/false, and essay. This experience gives students an interesting way to review for their test, one that is meaningful and they are more likely to remember.

5. Field Trips: Whenever possible, I bring my students out into the field. When I teach about urban schools, my teaching diverse populations class may meet at North Fork Elementary School on Broward Boulevard for a tour. North Fork is an Urban Academy and one of the best examples of success defying poverty in our school district. When I teach my introduction to technology students about broadcasting and distant learning, I meet them at BEACON (Broward Education and Communications Network (next door on College Ave.) for a tour. BECON is the home of Broward Public School’s production studio and is where all distance learning courses are developed and taught.

6. Concentric Circles: I have students stand in two circles, one inside of the other. The inner circle faces the outer circle. I ask open-end questions about the meaning of the material covered and the students answer and discuss with the person they are facing. After each question, the inner circle moves so that each person is facing a new partner for the next question.

7. Technology: Clickers, PowerPoint Presentations, D2L, DVD’s, YouTube, and email all make class engaging,
meaningful, rich, and memorable.

8: Other: It is important to create a trusting and positive class culture, always engage students with an opening and closing brain buster, include guest speakers, and encourage students to research/read!

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A Study Of Vertical Writing Surfaces
At West Point
Raymond Kimball, United States Military Academy at West Point
Christopher Fuhriman, United States Military Academy at West Point
Jack Cooperman, United States Military Academy at West Point
Eric Simpson, United States Military Academy at West Point

ABSTRACT

This study was commissioned by the Vice Deans for Academics and Resources at West Point and led by Colonel Raymond Kimball, director of Faculty Learning, Innovation, Collaboration, and Research. The study assessed current Vertical Writing Surface (VWS) use throughout the institution. This study can inform classroom design decisions to facilitate student learning and provide faculty with the best resources to relay ideas to students. The study also compares VWS preference by academic discipline, STEM vs. non-STEM, and faculty vs. student. Finally, the study considers resource constraints with respect to cost, time, and maintenance efforts.

The study was conducted in two parts. First, cadets in the upper two classes and teaching faculty members received an anonymous online survey asking for their VWS preferences. As part of the survey, participants provided their assessment of each VWS they had used or seen used, to include strengths, weaknesses, best practices, and common mistakes. Participants then indicated the VWS that they believed to be most effective for their department and explained why. Participants also had the opportunity to participate in focus groups, where they could experiment with different VWSs in the same classroom space. 401 cadets and 235 faculty responded in some form to the survey, with 216 cadets and 189 faculty completing the entire survey by indicating a specific preference for a VWS. Less than 10 participants participated in the focus groups.

Quantitative results from the survey indicated a strong difference in VWS preference by discipline. Cadets indicated a raw preference for chalkboards and whiteboards in equal number, which makes sense given the widespread use of both surfaces. Cadets with STEM majors expressed a greater numerical preference for chalkboards; cadets with non-STEM majors expressed a greater numerical preference for whiteboards. Among cadets who had used them, glassboards were significantly more popular. Similar preferences for chalkboards and whiteboards emerged from faculty responses, including STEM and non-STEM preferences. Glassboards did not have a significantly higher preference among faculty who had used them.

Qualitative responses for the survey revealed passionate feelings about all four VWSs. Chalkboards were praised by some as simple and effective, but were panned by others as dirty and antiquated. Whiteboards and glassboards were identified as having similar strengths and weaknesses, such as use as projection surfaces and challenges with cleaning and keeping markers on hand. Interactive whiteboards were viewed as having potential, but could be difficult to use due to network issues and lack of technical training.

Finally, the study makes recommendations for planning factors with respect to VWS installation. The study recommends clearly identifying which academic departments are likely to use classrooms when making choices about VWS installation to ensure the highest possible correlation between student preference, faculty preference, and VWS. Next, the study recommends ensuring that total costs of VWS use are identified up front, including the costs of high-quality writing implements and cleaning/maintenance supplies. Finally, the study recommends that academic departments include a plan for maintenance of VWSs and purchase of ancillary supplies in their VWS requests for classrooms.
A Possible Relationship Between The English Language And Our Numbering System

Jack A. Fuller, West Virginia University, USA

ABSTRACT

This current research effort will explore one perceived mathematical relationship between the English language used in the United States and the Hindu-Arabic Numeral System. The examination looks at two identified factors to determine if they are in correspondence and the nature of the relationship. The two factors are the number of syllables necessary to enunciate each cardinal number in American English and the Hindu-Arabic number itself. The analysis examines in detail the denoted relationship in lower-valued sets of numbers from one through 100 and randomly-selected higher valued sets of ten-digit numbers in the thousands and millions. The outcome identifies the algorithm that ties the two factors together. The purpose of the research is to examine one aspect of the mathematical architecture upon which the American English system is structured.
Cannabis Research: Lessons From The Classroom

Shelley M. Rinehart, University of New Brunswick Saint John, Canada

ABSTRACT

Cannabis, weed, marijuana, pot – no matter what the moniker the interest, excitement, fear and confusion are all the same. Regulation for medical cannabis by prescription was introduced in Canada in 2001. While the medical community was not united on the effectiveness nor safety of cannabis as a pharmaceutical, some physicians began to specialize in the area becoming experts in their own right. These physicians were sought out not only by patients, but also by legal producers as well as medical dispensaries who seemed to be looking for both expertise and an affiliation to boost their credibility. Research is focused on the medicinal properties of the plant, efficient and effective processes and distribution systems that met the requirements of the law as well as the needs of the client.

Fast forward to 2018 and cannabis becomes legal in Canada for recreational use by those 19 years of age and older. What should have been a well planned, well executed introduction left more questions than answers. While research was focused on the science side of the house, the actual implementation was not given the attention it deserved. While cannabis for medicinal use had been mainstream for a few years, and of course the black market for recreational cannabis has existed for decades, it seems that regulatory bodies, entrepreneurs and investors, the legal system and the business environment were not prepared for the legalization of a previously illegal, feared and often scorned substance. Where was the research on determinants of intoxication, the identification of testing protocols, the development of effective and efficient supply chains from producer to retailer, packaging, branding, human resource policies? It wasn’t there.

The outcome – many unintended consequences of legalization of cannabis have opened many opportunities for the academy. A number of North American universities have introduced classes focused on cannabis. These courses include a variety of topical areas from the history of cannabis through to financial valuation within the cannabis industry. The author was part of a 6 person team who developed and delivered a survey course on cannabis within a business context and what became very clear from that class is that the opportunities for the academy to have an impact on the future of the cannabis industry is huge. The purpose of this presentation is to explore these opportunities with a goal of encouraging the broadening of interest in cannabis related research and maximizing the impact the academy has on future regulation, value added industries, innovation and business development.

Keywords: Pension, shared risk, human resources, employee benefits

BIOGRAPHY

Dr. Rinehart is a Professor of Marketing and Director of Graduate Studies in the Faculty of Business at the University of New Brunswick Saint John. During her tenure at UNB she has served as Director of Cooperative Education, Director of the Electronic Commerce Research Centre and Dean of the Faculty of Business. Dr. Rinehart has also worked with the Provincial Government in a policy development capacity during a 4 year secondment from UNB. Her research interests combine her Psychology and Business backgrounds most recently focusing on perspective in effective communication. She has received a UNB merit award in recognition of her contributions to the institution, named as one of 10 people powering the new economy and an IT hero by Industry Canada. An active member of the community, Dr. Rinehart currently serves as Chair of including RPC, a research and technology organization, and has served as Chair for a variety of other Boards and Commissions including Saint John Energy, Enterprise Saint John and the Saint John Regional Y.
Investigating The Key Issues Of Sustainability Education In Taiwan

Hao-Yun Kao, Kaohsiung Medical University, Taiwan, ROC
Chun-Wang Wei, Kaohsiung Medical University, Taiwan, ROC
Wen-Hsiung Wu, Kaohsiung Medical University, Taiwan, ROC

ABSTRACT

In the recent two decades, the sustainable development is still progressing in the world and influencing all of industries. This trend is inspired the researchers in the educational field as well. Regarding the development of sustainability education issues, past studies provided the valuable results, such as policy, teaching and learning in the educational context. However, some important issues still need to further explore and analyzed. For example, the key issues in the single country are seldom to be investigated. Importantly, through the exploration and analysis from related articles, the crucial directions can be presented based on the three dimensions of sustainable development—environment, economy, and society. Hence this study selects Taiwan in the Asia as a base due to government, industry, and university are devoted deeply to the sustainable development. Via the systematic literature review approach, this study searches the related articles using the Google Scholar and ERIC. The searching period is from 2010 to 2019 with keywords such as sustainability education, environment, and Taiwan. The main results and its findings are as below. First, a few related articles are included based on the criteria (i.e., excluded the proceeding and book). For example, all of papers from peer-review journals. Some of renowned journals are Environmental Education Researchers, International Journal of Sustainability in Higher Education, and Journal of Cleaner Production. Second, two key issues consist of environmental protection and sustainable campus. The former stresses marine environmental awareness, energy literacy, and assessment tools. The latter focuses on policy, consciousness of green, and indicators. Third, most of studies concern about the environmental dimension based on the three dimensions of sustainable development. In sum, the results and findings of this study can provide insightful implications for the issue of sustainability education.

Keywords: Sustainability education, Research issues, Systematic literature review, Taiwan
Generational Perceptions Of Innovation – Definition, Meaning, And Application

Gregory C. McLaughlin, Park University, USA
Owen O. Roach, Saint Leo University, USA
Heidi M. McLaughlin, Park University, USA

ABSTRACT

This research proposes to explain and quantify how individuals perceive the meaning of the word innovation. This research builds upon Zhuang, Williamson, & Carter’s (1999) work as well as a study conducted by Caraballo and McLaughlin in 2012 which defined three unique constructs that describe innovation as either new, improved, or changed. The sample group for the 2012 study included a relatively large and homogenous cultural group (Hispanic IT Professionals pursuing further educational advancement). In that study, there was a definitive difference between generational cohorts (Millenials, Gen X, and Baby Boomers) in how each perceived innovation. This updated study selects a group of culturally diverse MBA students to determine if the differences remain between three generational cohorts.

Innovation is traditionally defined as the process to create a new or novel (distinct) product or service. This general definition is insufficient to describe how people perceive innovation generationally. This study intends to validate that generational differences affect how subjects perceive and define innovation. This paper confirms earlier findings (Caraballo & McLaughlin, 2012) that redefine innovation, as a multi-dimensional construct, in agreement with the Zhuang et al. (1999) research.

The 2019 research validates that Millenials perceive innovation from a new perspective. That is, it must be new to be innovative. Other generations have a broader and more accepting view of what is innovative. The 2019 research demonstrated differences in how innovation is perceived (defined) between those with and without a technical background. The findings further reiterate the need for continued research to market and sell directly to various consumers who perceive innovation differently.

Keywords: Innovation, Generations, Definition, Perception

Introduction

Innovation is driven initially by need, wants, or desires. Businesses use innovation because it adds value and sustains competitive advantage (Baregheh, Rowley, and Sambrook, 2009, p.1323) and expands the opportunities for growth. A need exists for many organizations to continuously innovate (McLaughlin, McLaughlin & Preziosi, 2004) given their dependence on wealth creation (De Waal, Maritz, & Shieh, 2010). It is essential to involve employees in innovation projects, as they bring both their creativity and inventiveness. The competitive edge that businesses pursue should encompass clear innovative strategies that reflect the cultural values of the organization (Subbotina, 2015). For instance, multinational companies such as Apple, Starbucks, Honda, Toyota, and Procter and Gamble derived profit and growth by integrating innovation into the company’s corporate culture and organizational and operational strategies. Innovation is not confined to just developed nations but is also integral to the progress of emerging economies (Prahalad, 2012). No one country has a “hold” or “lead” in innovation.

Innovation is a concept that derives from ideas/concepts to become products, processes, and services that meet a need. Innovative companies can quickly mitigate market risks, develop sustainable strategies that equip the organization to achieve long term growth, and align the company with the organizational culture (Kumar, 2014). Although often associated only with new technology, innovation begins with a need, want, or desire. The need drives the innovation, which is often individually perceived from a generational perspective.
A Definition of Innovation

Given its critical function and contribution, the concept of innovation should be readily identified and communicated throughout the organization. Flight, Allaway, Kim, and D'Souza (2011) suggest that organizations, marketers, and researchers need the ability to define how individuals perceive innovation generationally based on knowledge and experience. Baregheh et al. (2009) identified numerous and different definitions of innovation based on disciplines such as management, finance/economics, technology (IT, scientific or engineering), and marketing.

Historically, Thompson defined “innovation as the generation, acceptance, and implementation of new ideas, processes, products, and services.” (1965, p. 2). An updated definition by Wang, Guidice, Tansky, & Wang states that “innovation begins with a novel idea and concludes with a market introduction” (2010, p. 767). Therefore, one could say that innovation begins with a new idea and ends with a marketable product or service. According to the Conference Board of Canada, innovation disrupts the status quo by radical change and incremental improvement of products/services and processes (2019). Instead, innovation is more than radical change; it involves new technology, new ways of processing, and a new model of management. According to Baregheh et al. (2009), the method and choice of words to define innovation today contain fundamental concepts that overlap and may be contradictory. The result of these many confusing definitions of innovation is that no standard or authoritative definition of innovation exists (Baregheh et al., 2009, p. 1324). Therefore, to better understand how an individual perceives innovation, a definition must include:

1. How the idea originated;
2. Involve a transformation of some kind; and
3. Meet a need which satisfies.

In general, innovation begins when people use a creative or rational process to meet a particular need; therefore, innovation begins with human ideas and creative possibilities.

In order to clarify how an individual perceives innovation, the authors decided to go beyond the definition and examine the “means of innovation” (Baregheh et al., 2009, p. 1334). The means of innovation explains how the individual perceives the function, essential qualities, or outcome of the innovation. Innovation is now characterized as the process of transforming ideas into “new, improved or changed entities” (Baregheh et al., 2009, p. 1334). Individuals can now perceive how a specific innovation will uniquely add value.

Mangelsdorf (2011) posited that individual demands influence companies to switch, integrate, or form other business relationships that create new products or services. Individuals drive innovation through purchases that meet their need. Finally, a group of innovation experts defines innovation (Figure 1).

Figure 1: Keywords to describe Innovation

Adapted from (Skillicorn, 2016).
The main terms are ideas and value, yet ideas are conceptual and have no physical form. There are more detailed definitions, ones that take into account the user and their perceptions.

A better and more distinctive way of understanding innovation derives from the work of Zhuang (1995) and Zhuang, et al., (1999), whose definition simplifies innovation to be:

1. “An invention, i.e., the creation of something entirely new;
2. An improvement, i.e., a refinement of what presently exists;
3. The diffusion or adoption of innovation developed elsewhere” (i.e., change) (Caraballo and McLaughlin, 2012, p. 554),

Innovation is more method than a single or unique act (Baregheh et al., 2009, p. 1334) involving people, process, and technology. Therefore, an understanding of innovation should be specific as to the need and intent of the desired outcome. Individuals perceive innovation as a multi-dimensional set of characteristics, unique to the product or service. A "one size fits all" approach is insufficient. According to Zhuang (1995), the definition of innovation is outcome dependent. That is, one must consider the need and the desired outcome to generate its definition. The desired outcome, according to Matwiejczuk (2013), is a response factor based on the demands of individuals. Individuals are, therefore, at the epicenter driving the innovation process. Therefore, one must understand the individuals perspective to identify a more unified definition or meaning.

An individual’s ability to innovate is based on their knowledge, skills, and attitude (Caraballo & McLaughlin, 2012, p. 554). These characteristics to initialize the innovation process. Zhuang (1995) created ten survey statements that measure how individuals perceive innovation. Respondents used a 5-point Likert scale of agreement or disagreement to evaluate each statement. Zhuang’s 1995 study did not show any significant mean differences but did encounter a diversity of responses. Given these results, Zhuang did not pursue any further or more sophisticated analysis.

However, the Caraballo and McLaughlin 2012 study modified Zhuang’s survey slightly (with his permission) and examined a Factor Analysis to determine survey question alignment. Although there were times when the definition was less clear, there was a distinctive “new” “improve,” and “change/replacement” element in all generational groups tested.

Previous research with like cultural groups (US Hispanics IT Professionals, South American IT Professional, Nurse Professionals, Chinese businesspeople) also demonstrate generational differences (Caraballo & McLaughlin, 2014; McLaughlin & Richins, 2015; McLaughlin & Kennedy, 2016). In all groups tested, there was a difference between the three generations, and the results were more similar than different between cultural groups. With this new study, where culture is not a limiting factor, the authors will attempt to answer the following research questions:

1. Does an individual perception of innovation continue to vary between generations?
2. For each generational cohort, is there a difference between individual perceptions of innovation for gender or those employed in a technical role?

Additional Research

McAdam and McClelland (2002) extended the initial research using Zhuang (1995) by using his definition of individual innovation. McAdam and McClelland focused their research on creativity generation at the individual and team levels. They found that three critical elements necessary for innovation: expertise, creative thinking, and task motivation (Caraballo and McLaughlin, 2012). Research on the “source of ideas” (McAdam and McClelland, 2002, p. 95) remains limited. However, when considering the individual as the source of innovation, McAdma and McClelland’s research becomes valuable.

The 2019 results are both replication and expansion of previous (Caraballo & McLaughlin, 2012) research. The authors continue to examine the perceptions of innovation, but this time, the majority of respondents are non-technical MBA students. Two reasons for choosing this group: 1) to examine if a less homogeneous group provides similar answers; 2) to examine if perceptions have changed over the last 5-6 years.
We will begin by exploring a possible understanding of innovation generated from an individual’s perception, given their status as an MBA student, any generational cohort differences or similarities, and whether a technical versus non-technical background similarly perceive innovation for each generational group.

Selection of Sample

The goal of this research was to recruit a heterogeneous group to determine if the perceptions of innovation remain relevant in 2019. MBA students are a favorite sampling group for business research. The sample consists of MBA students enrolled in several different universities. Students were sent an e-mail to encourage them to participate. Participation was voluntary, and the sample considered random. The goal is to determine if there are changes in the perceptions of innovation and the generational difference observed previously. One hundred fifty-one respondents participated in the survey, and one hundred forty-five were useable for analysis.

Innovation Perception Survey Instrument

A slight modification of the Zhuang survey resulted in less need for clarification. There are several independent variables in the 2012 study (generation, technical profession status, gender, location). Generation, gender, and professional status yielded significant differences.

Although Zhuang et al., (1999) research did document both validity and reliability for the instrument, the authors re-ran a Factor Analysis for validity and a Cronbach alpha for reliability. Factor analysis has three critical assumptions: normality of the data, linearity, and conceptual linkages (Hair, Anderson, Tatham, & Black, 1995). The most important assumption is that a conceptual linkage exists which the statistical analysis confirms. 66% of the total variation explained (versus 57% previously) is an improvement from the 2012 Caraballo and McLaughlin study. Cronbach alpha of .75 (versus .675 previously) is an improvement. The survey is useful in capturing perceptions and differentiating these perceptions into the three categories which take on aspects of new, improve, and change.

Analysis – Innovation Assessment Survey

Statistical software consisted of both SPSS 25 and Minitab 18. A significance level of 0.05 determines significant differences. Scores are summed for statistical analysis and identified as the dependent variable. Table 4 lists the ten Innovation Perception Survey statements.

Survey responses use a five-point Likert Agreement scale from Strongly Disagree to Strongly Agree. Table 1 identifies the four independent variables, along with sample sizes and numerical indicators.

Table 1 – Independent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Descriptions</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation</td>
<td>Millennials, Generation X, Baby Boomers</td>
<td>85, 38, 22</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Technical</td>
<td>Yes, No</td>
<td>20, 124</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Gender</td>
<td>Female, Male</td>
<td>80, 64</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Education</td>
<td>HS, Some College, Bach, Masters, PhD</td>
<td>5, 29,59,37,21</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

Figure 2 displays a box plot of the summed scores classified by gender, generations, education and those with or without a technical background and how they perceive innovation from a composite standpoint – the higher the score, the more positive the perception. Interestingly, those with a technical background have a lower overall perception of innovation (except Gen X). These results indicate that these individuals deal with innovative products and services on a more frequent basis. Previous research confirms that Millennials behaved similarly in the 2012 research (although Millennials were a much smaller sample in the 2012 Caraballo and McLaughlin research).

For these sums of each of the ten Innovation Perceptions statements, there are no noticeable statistical differences between age, gender, and technical position (Figure 2). The sum of scores test to be normally distributed (Figure 3). There are no apparent significant statistical differences overall (Figure 2). However, the ten statements do factor into
three (or occasionally four) distinctive groups or dimensions (sometimes called concepts) (Table 4). Each concept measures a different aspect or meaning of innovation.

Figure 2 – Box-Plots of Generation (in Age), Education (5 levels), technical position (Yes/No) and Gender (F/M)

Figure 3 – Normality Test

Factor Analysis of the Innovation Perceptions Instrument

The initial Factor Analysis (Figure 4) indicated the presence of four distinctive factors or subscales without sorting by dimension, gender, or technical profession. However, further analysis indicated a difference between generational cohorts (Table 5) and professional classification. The analysis describes how the respondents best perceive (understand) innovation as a multi-dimensional construct.
As with the 2012 survey instrument, there are generally three (some with four) observed dimensions, factors, or subscales. The dimension or factor identifies a particular characteristic of innovation (such as new, improved, or changed). The 2019 sample of MBA students will provide for a more homogeneous group but with more non-technical personnel than the 2012 study. Only the analysis will provide an answer as to whether there is commonality or differences between the 2012 and 2019 study.

The results of this research will help in identifying a better, more intricate definition of innovation. With this new sample, there is a more sophisticated understanding of innovation. To better understand these the intricacies of innovation, additional factor analysis will provide the mechanism for examining these sub-scales.

The Instrument was shown to be valid (Table 3) and reliable (Table 2) in tracking perceptions and generally aligning these to the dimensions of New, Improve, and Change (2012). However, more subtle differences and nuances exist with the 2019 data.

Table 2 – Reliability Coefficients

<table>
<thead>
<tr>
<th>Reliability</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>0.75</td>
</tr>
<tr>
<td>Millennials</td>
<td>0.72</td>
</tr>
<tr>
<td>Generation X</td>
<td>0.79</td>
</tr>
<tr>
<td>Baby Boomers</td>
<td>0.74</td>
</tr>
<tr>
<td>Technical Personnel</td>
<td>0.77</td>
</tr>
<tr>
<td>Non-Tech Personnel</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Understanding how a selected group of individuals (MBA students) perceive innovation and how these perceptions relate to generations, gender, and technical position is the main focus of this research. Factor Analysis (using Principal Components Analysis) is a reduction technique which aligns statements with similar responses to form a new variable (or dimension/subscale) which is both descriptive and can act as a wholly new dependent variable.

Figure 4 – Factor Analysis

For the overall analysis, there are four distinguishable factors or dimensions (sub-scales) – Figure 4. The variation explained (Cumulative Variation) by the dependent variables equals 67%, which is acceptable. Table 4 describes the factor loadings (which statements align to each factor). A numerical value in the Component column (Table 3) indicates the strength of the relationship. Large values indicate proper alignment with a rule of thumb suggesting that a value of .5 or higher (or -.5 or lower) indicates statement alignment forming a new dependent variable.

A Factor Analysis examined the independent variable contributions (Table 4). The Variance Explained for each iteration is all acceptable. The Significance column identifies if Education is a contributing variable (see Figure 6).

Only for Millennials is education important or a contributor (those with the most education being the most precise
with their definition of innovation).

Table 3: Factor Loadings (Rotated)

<table>
<thead>
<tr>
<th>Survey Statement</th>
<th>Comp 1</th>
<th>Comp 2</th>
<th>Comp 3</th>
<th>Comp 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Inventing something entirely new</td>
<td>0.668</td>
<td>0.778</td>
<td>-0.177</td>
<td>0.359</td>
</tr>
<tr>
<td>B. Generating new ideas</td>
<td>0.172</td>
<td>0.056</td>
<td>0.164</td>
<td>0.889</td>
</tr>
<tr>
<td>C. Improving something that already exists</td>
<td>-0.003</td>
<td>0.089</td>
<td>0.916</td>
<td>0.174</td>
</tr>
<tr>
<td>D. Following the market leader</td>
<td>0.122</td>
<td>0.765</td>
<td>0.347</td>
<td>-0.130</td>
</tr>
<tr>
<td>E. Attracting innovative people</td>
<td>0.448</td>
<td>0.374</td>
<td>0.052</td>
<td>01.160</td>
</tr>
<tr>
<td>F. Performing an existing task in a new way</td>
<td>0.573</td>
<td>0.079</td>
<td>0.511</td>
<td>-0.054</td>
</tr>
<tr>
<td>G. Implementing new ideas</td>
<td>0.758</td>
<td>0.016</td>
<td>0.090</td>
<td>0.255</td>
</tr>
<tr>
<td>H. Adopting something that has been successfully tried elsewhere</td>
<td>0.384</td>
<td>0.566</td>
<td>0.359</td>
<td>-0.386</td>
</tr>
<tr>
<td>I. Seeing something from a different perspective</td>
<td>0.810</td>
<td>0.067</td>
<td>-0.042</td>
<td>-0.005</td>
</tr>
<tr>
<td>J. Introducing change</td>
<td>0.692</td>
<td>0.251</td>
<td>0.081</td>
<td>-0.025</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Components
Rotation Method: Varimax with Kaiser Normalization

The Factor Analysis indicates a different pattern of alignment between the technical and non-technical respondents and the three generational cohorts. Male and Female differences are minimal but do indicate a unique set of perceptions regarding innovation. The 2019 findings confirm and expand the 2012 findings. The differences in alignment further reinforce the concept that different generations with and without a technical background view innovation differently. These results continue to confirm the Zhuang (1995;1999) conclusion that innovation is perceived uniquely by individuals.

Table 4 – Factor Analysis of Survey Results

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Factors</th>
<th>Varimax Rotation - % of Variation Explained</th>
<th>Significance at P=0.1</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millennials</td>
<td>4</td>
<td>66%</td>
<td>Education D, H, J</td>
<td>E, G, I</td>
<td>C, F</td>
<td>A, B</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>4</td>
<td>67%</td>
<td>Education C, D, F, H, J</td>
<td>E, G, I</td>
<td>B</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4</td>
<td>77%</td>
<td>No</td>
<td>D, E, H</td>
<td>F, G, I</td>
<td>A, J</td>
<td>B, C</td>
</tr>
<tr>
<td>Tech - Yes</td>
<td>2</td>
<td>76%</td>
<td>Education A, B, C D, H, J</td>
<td>E, F, G, I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech - No</td>
<td>4</td>
<td>65%</td>
<td>None</td>
<td>D, E, H</td>
<td>C, F, J</td>
<td>G, I</td>
<td>A, B</td>
</tr>
<tr>
<td>Gen X</td>
<td>3</td>
<td>69%</td>
<td>None</td>
<td>B, F, G, I, J</td>
<td>C, D, H</td>
<td>A, E</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3</td>
<td>71%</td>
<td>None</td>
<td>B, F, G, I, J</td>
<td>A, D, E</td>
<td>C, G</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>3</td>
<td>78%</td>
<td>None</td>
<td>B, F, G, I, J</td>
<td>C, D, H</td>
<td>A, E</td>
<td></td>
</tr>
<tr>
<td>Tech - No</td>
<td>3</td>
<td>70%</td>
<td>None</td>
<td>B, F, G, I, J</td>
<td>C, D, H</td>
<td>A, E</td>
<td></td>
</tr>
<tr>
<td>Tech – Yes</td>
<td>2</td>
<td>83%</td>
<td>None</td>
<td>B, C, E, F, G, I, J</td>
<td>A, D, H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baby Boom</td>
<td>3</td>
<td>73%</td>
<td>None</td>
<td>C, F, G, H</td>
<td>B, D, I, J</td>
<td>A, E, H</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>2</td>
<td>74%</td>
<td>None</td>
<td>B, C, F, G, I, J</td>
<td>A, D, E, H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech - No</td>
<td>3</td>
<td>76%</td>
<td>None</td>
<td>C, F, G, H</td>
<td>A, B, D, I, J</td>
<td>A, E</td>
<td></td>
</tr>
</tbody>
</table>
Figure 6: MANOVA Analysis - Millennials

MANOVA Tests for Education

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Test Statistic</th>
<th>Approx F</th>
<th>DF Num</th>
<th>DF Denom</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilks’</td>
<td>0.56323</td>
<td>1.666</td>
<td>16</td>
<td>128</td>
<td>0.061</td>
</tr>
<tr>
<td>Lawley-Hotelling</td>
<td>0.65558</td>
<td>1.659</td>
<td>16</td>
<td>162</td>
<td>0.060</td>
</tr>
<tr>
<td>Pillai’s</td>
<td>0.50739</td>
<td>1.634</td>
<td>16</td>
<td>180</td>
<td>0.064</td>
</tr>
<tr>
<td>Roy’s</td>
<td>0.40806</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$s = 4    m = -0.5    n = 20.0$

It is used to test whether the independent variables contribute to the results. Only Education tests for differences.

Results

The diversity of response indicates that innovation is not a simple concept in the respondent’s mind, nor will it be with their purchase behaviors. Table 5 contains a summary of the results.

Technical personnel, as expected, are innovation aware (and have higher scores). The result of this study confirms the need to market (sell) innovation to each generation differently. One size does not fit all! The sample of individuals understands innovation as a multi-dimensional concept. The 2019 data identified three or four distinctive factors of innovation. Disconnects between how a concept is understood and how applied (or defined) continues to cause problems to arise. What one person determines to be new another may understand to be an improvement. The younger the respondent, the more they are attracted to unique and inventive innovations.

Innovation begins at the human level and is critical for success. If everyone in an organization perceives innovation differently, no alignment of perceptions will occur, and innovation efforts will be less successful.

Table 5: Results and Interpretation

<table>
<thead>
<tr>
<th>Generation</th>
<th>How Innovation is Perceived</th>
<th>Practical Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millennials</td>
<td>▪ Millennials mix Change with Improvement and finally, New (New stands out).</td>
<td>▪ Sell innovation as a concept – why is the product innovative?</td>
</tr>
<tr>
<td></td>
<td>▪ Millennials perceive innovation as being unique.</td>
<td>▪ New Innovation is perceived and should be stressed. New results in breakthroughs.</td>
</tr>
<tr>
<td></td>
<td>▪ Technical personnel has a comprehensive view of innovation.</td>
<td>▪ Innovation should change the perspective – seen in a different context.</td>
</tr>
<tr>
<td>Generation X</td>
<td>▪ Factor 1 Combines change mixed with some elements of new.</td>
<td>▪ Gen X understands the concept that improve and change is innovative.</td>
</tr>
<tr>
<td></td>
<td>▪ Factor 2 is Improve-driven.</td>
<td>▪ An innovative culture is important.</td>
</tr>
<tr>
<td></td>
<td>▪ Factor 3 is Innovation culture (invention and people).</td>
<td>▪ Technical personnel’s definition of innovation is a combination of new and change</td>
</tr>
<tr>
<td></td>
<td>▪ Technical Gen X has a comprehensive view.</td>
<td>(replacement) – innovation results in a change.</td>
</tr>
<tr>
<td>Baby Boomers</td>
<td>▪ Broadly understands innovation. No change from the 2012 study.</td>
<td>▪ Baby Boomers consider a broad definition of what is innovative.</td>
</tr>
</tbody>
</table>

Limitations

The fact that the sample group was diverse may be the reason for some divergence between the original study and this
iteration. Most respondents (non-technical personnel) were not expected to have a refined vision of understanding of innovation. Both groups shared much in common. The results are not transferable to all individuals, within a generational cohort, but would be familiar to those who experience, describe, and use innovation on a more frequent basis.

Conclusions and Recommendations

The authors continue to recommend further research on understanding innovation from a more complex perspective. Now it is time to examine how the alignment varies (and agrees at times) between the generational cohorts and technical proficiency. By further refining the definition of innovation for each group, the result would be of interest to marketers, researchers, developers, and designers. It would facilitate a more focused approach and a change from the present process that calls everything innovative. Also, it moves innovation from a disruptive influence to a preferred and supported strategic element that executives can use to become more competitive. Use disruptive innovation only when faced with maximum competitive pressure or survival issues.

The definition of innovation is not only critical to understand how individuals perceive this concept, but how generations recognize its meaning. Although new, or creative products and services offer a great opportunity, improvements are just as innovative (consider the Dyson vacuum and how it changed the home cleaning industry). Change or replacement innovation may also spark new products, new services.

Finally, by understanding innovation, management can effectively communicate strategies and policies to the organization. The tragedy would be to develop a standard (and accepted) definition of innovation and then fail to transfer that information to the organization. Without this understanding: developing a culture of innovation would be next to impossible. Innovation is not just an engineering or research function; it is the responsibility of the organization to meet or exceed customers needs and requirements.

REFERENCES


Doctoral Cohort Engagement Through Strategic Onboarding: Student Perspectives On The Academic Residency Experience

Dennis Westbrooks, Winona State University, USA
Nichelle Guillaume, Winona State University, USA
Samantha M. Jones, Winona State University, USA
Kara De La Fosse, Winona State University, USA

ABSTRACT

This paper presents the results of participatory action research survey responses from doctoral students regarding strategic onboarding activities. Twelve first-year doctoral students in an inaugural doctoral program cohort responded to Likert Scale and open-ended questions during the first week of a two-week on-campus residency. Resulting student perspectives highlight the importance of faculty mentorship and cohort engagement during residency to clarify roles and responsibilities, build academic support and collaboration networks, and alleviate anxieties about doctoral program expectations. Specific recommendations for academic residency include providing increased opportunities for one-on-one conversations with faculty and administrators, and cohort socialization activities to identify peer strengths and alliances.

Keywords: Strategic onboarding; Academic residency; Cohort model; Online doctoral program

INTRODUCTION

Academic residency, as a component of strategic onboarding, fosters an active community of learners (Radda, 2012). Holmes et al. (2016) posits that strategic onboarding provides a foundation for students to matriculate successfully through an online doctoral program. Additionally, student perspectives should be considered when devising and developing an online doctoral program (Sahin & Shelley, 2008). Strategic onboarding is defined as academic socialization, cohort engagement, and outlining expectations of graduate study (Holmes et al., 2016). Academic socialization in the form of residency provides a platform for face-to-face interactions with faculty and cohort members, as well as access to technology and library resource training, equipping students with the necessary tools for the doctoral journey (Radda, 2012). For the purpose of this study the focus was on academic residency and cohort engagement.

PURPOSE STATEMENT

The purpose of this participatory action research study was to explore inaugural doctoral student perspectives of the initial strategic onboarding process in an online program at a Midwestern university in southeastern Minnesota.

RESEARCH QUESTIONS

The research questions guiding this inquiry include:
1. What are doctoral student perspectives on academic residency?
2. What are doctoral student perspectives on the cohort model?
BACKGROUND

Strategic onboarding originated in business but has found its way into academia (Holmes et al., 2016). Martin et al. (2016) contend that academic program designers “are interested in academic productivity, especially in accelerated graduate programs” (p. 2). The onboarding process is critical in improving performance, efficiency, engagement, and understanding (Grillo & Kim, 2015). Strategic onboarding applied to doctoral programs consist of various orientation activities including academic residency and cohort engagement.

Academic residency assists in fostering relationships with cohort members, connects students to the institution, and enhances connections with faculty (Torres & Statti, 2018). Faculty use these enhanced connections to promote collaborative scholarly engagement which further develops trust and cooperation, thus strengthening relationships (Holmes et al., 2014). Additionally, Radda (2012) asserts that academic residency fosters a sense of inclusion and collaboration creating a safe-space to work toward dissertation research. Furthermore, clear communication of expectations during residency regarding roles and responsibilities of doctoral students contribute to persistence, allowing self-assessment of skills, abilities, and resources necessary to succeed (Sverdlik, Hall, McAlpine, & Hubbard, 2018).

Cohort engagement is an important contextual factor influencing doctoral student persistence (Holmes et al., 2016). An estimated 50% of social sciences, humanities, and educational doctoral students do not graduate, with those in non-traditional formats such as online programs experiencing an additional 10-15% lack of persistence (Kennedy, Terrell, Lohle, & Kennedy, 2015). The average doctoral student is over the age of 30 and balancing academic and family obligations (Rockinson-Szapkiw, 2019). Berry (2017) suggests that “online doctoral students are interested in making social and academic connections” (p. 33). Increased engagement of the cohort model contributes to a support network that promotes degree completion (Radda, 2012).

METHODOLOGY

Participatory action research is well suited for this study because it is a “systematic collection and analysis of data for the purpose of taking action and making change” by producing tangible knowledge (Gillis & Jackson, 2002, p. 264). Participatory action research is defined as a form of qualitative research where participants guide transformative change (MacDonald, 2012). The methodology enables participants to engage in both research activities and the phenomenon of study which empowers informed decision-making throughout all aspects of the process (MacDonald, 2012).

This participatory action research study analyzed doctoral student perspectives through an anonymous survey administered week one of a two-week academic residency. Students were given 24 hours to complete a survey that consisted of five Likert Scale rating statements and seven open-ended questions. Likert Scale statements related to the importance of five major topic areas: on-campus face-to-face residency, cohort model, online synchronous sessions, academic socialization, and technology training. An additional seven open-ended questions addressed topics of initial concerns/anxieties, administrator interaction, start-up changes, current challenges, residency relevance, university improvements to graduate-level training, and connectedness to the main campus.

Setting

This study was conducted during academic residency at a doctoral degree-granting public institution with a total enrollment of nearly 8,000 students, situated within a micropolitan region of southeast Minnesota. Doctor of Education is the second of two doctorate degrees offered at the university which supports numerous undergraduate and graduate programs. Importantly for doctoral study, residency activities were hosted in the library to provide access to, and familiarity with, university research resources.

Sample

Purposeful sampling was used during the first week of the two-week doctoral program residency to collect student perceptions of the experience. The entire cohort consisting of twelve doctoral students responded to the survey.
providing demographic data on employment, age, race/ethnicity, sex, marital status, and number of children (Table 1). All students were practitioner-scholars employed fulltime in education, education administration, or social work. Race/ethnicity and age range composition of participants were: ten Caucasian (age range 25-54), one Native American (age range 45-54), and one African American (age range 45-54). Five of the seven females were married with children, the other two female participants, one married and one single, had no children. Similar family dynamics existed among male cohort members. Three of the five males were married with children, two were single; one with children and one without. Rationale for the purposeful sampling was to use information rich participants and specifically gather perceptions of residency experience from the entire doctoral student body (Lochmiller & Lester, 2017).

Table 1: Participant demographics (N = 12)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPLOYMENT</td>
<td></td>
<td></td>
<td>PROFESSION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fulltime</td>
<td>12</td>
<td>100</td>
<td>Education (teaching)</td>
<td>9</td>
<td>75</td>
</tr>
<tr>
<td>SEX</td>
<td></td>
<td></td>
<td>Education (administration)</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
<td>58</td>
<td>Social Work</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Male</td>
<td>5</td>
<td>42</td>
<td>RACE/ETHNICITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE CLASS</td>
<td></td>
<td></td>
<td>Caucasian</td>
<td>10</td>
<td>83</td>
</tr>
<tr>
<td>25-34</td>
<td>3</td>
<td>25</td>
<td>African American</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>35-44</td>
<td>5</td>
<td>42</td>
<td>Native American</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>45-54</td>
<td>4</td>
<td>33</td>
<td>CHILDREN</td>
<td></td>
<td></td>
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<tr>
<td>MARITAL STATUS</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>25</td>
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<tr>
<td>Married</td>
<td>9</td>
<td>75</td>
<td>1-3</td>
<td>8</td>
<td>67</td>
</tr>
<tr>
<td>Single</td>
<td>3</td>
<td>25</td>
<td>&gt;3</td>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>

LITERATURE REVIEW

Academic residency provides an environment for academic socialization which is essential to online doctoral student success (Radda, 2012). Two invaluable components of academic residency are faculty mentorship and peer relationships (Gardner & Barnes, 2007). Faculty mentorship during residency is intentional, and “deliberately promotes doctoral students’ development as a scholar in small group settings, acting as a guide, role model, teacher, and sponsor to the student” (Anderson, Cutright, & Anderson, 2013, p. 198). This is further supported by Savage et al. (2004) who stated “the evidence and critical need for faculty mentoring has longstanding support in higher education research” (p. 23). Doctoral students report that academic residency strengthens the connection with peers, creating a sense of community (Berry, 2017). The academic rigor of doctoral study underscores the importance of establishing faculty and peer relationships early in the program that support a distributed group of learners during the coursework and dissertation processes (Terrell, Snyder, Dringus, & Maddrey, 2012).

The cohort model is widely used to promote strong community among doctoral students, enhance the learning environment, and reduce attrition rates (Lowery, Geesa, & McConnell, 2018). Holmes et al. (2016) contend that cohort benefits include “creating strong relationships and bonds, peer-reviewing assignments, offering support and encouragement to stay the course, networking, and developing long lasting friendships” creating unassailable relationships amongst peers (p. 4). Cohort collaboration enhances the learning environment through collective generation of ideas, collegial support, and increased access to the professional knowledge of colleagues and peers (Page, Etmanski, & Agger-Gupta, 2017). Furthermore, Santicola (2016) posited cohort models minimize doctoral student attrition attributed to feelings of isolation, thus, providing support throughout the program.

THEORETICAL FRAMEWORK

“The purpose of a theoretical framework is to demonstrate the interaction and relationship among a set of concepts, which, as a whole, describe a more complicated phenomenon” (Heale & Noble, 2019, p. 36). Three learning theories comprise the theoretical framework of this study: Situated Learning Theory, Social Cognitive Theory, and Constructivist Learning Theory.
Situated Learning Theory

Lave and Wegner (1991) argue that learning is fundamentally a social process by which new knowledge is acquired through interaction within a learning community, not just the transmission of information. Learners participate in the sociocultural practices of a community under the mentorship of established practitioners. Knowledge is co-constructed as new practitioners move toward full participation in the community (Lave & Wegner, 1991). Transparency of community organization, and its associated content and tangible outcomes, are important to sustaining learner motivation and participation. Furthermore, engagement with the discourse of practice is essential to learner formation of identity as a member within the community of practice (Lave & Wenger, 2012). Residency provides a situated learning community for the academic socialization of doctoral students.

Social Cognitive Theory

Bandura & Cervone (1986) asserts that learning occurs in a social context of dynamic and reciprocal interaction among person, environment, and behavior. Further, social cognitive theory posits that learning transpires in social contexts through observing and modeling the behavior of others to shape future learning (Devi, Khandelwal, & Das, 2017). Learning occurs through evaluation of one's conduct in relation to behavioral standards and environmental context (Bandura, 1991). Learning vicariously through observation of others. Social cognitive theory thus offers a basis for examining various levels of social phenomena including intrapersonal development, interpersonal transactions, and interactive functioning of social systems (Bandura & Cervone, 1986).

Constructivist Learning Theory

Bruner’s Constructivist Learning Theory is based around the idea that interactions with others assist in constructing new knowledge in an active way (Bruner, 1996). Current knowledge and past experiences facilitate discovery of new facts and connections (Bruner, 1979). Structure of the curriculum is an important part of learning (Bruner, 1960). Bruner (1960) explains that when the curriculum is developed it should continually “revisit these basic ideas repeatedly, building upon them until the student has grasped the full formal apparatus that goes with them” (p. 13). Revisiting past experiences and sharing knowledge create the base of a constructivist learning environment. Intentional reflection during residency demonstrates the process and value of making meaning of experience.

FINDINGS

Responses on the five Likert Scale survey questions are represented in Table 2, and Figures 1 and 2. Table 2 shows the mean and standard deviation of the responses, and Figures 1 and 2 present the student responses by percentage. Question numbers 1, 3, and 5 pertain to academic residency and question numbers 2 and 4 relate to the cohort model. Table 2 lists the questions in order by importance. Results showed a unanimous conclusion on the importance of the on-campus face-to-face residency while the mean of the cohort model was slightly smaller but still represented the importance. The mean of the five questions regarding topics of face-to-face residency, synchronous sessions, academic socialization, cohort model, and technology training all ranked between very important and important.

<table>
<thead>
<tr>
<th>Table 2: Likert Scale question responses.</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>How important is the on-campus, face-to-face residency to your doctoral learning?</td>
<td>12</td>
<td>5.00</td>
<td>0</td>
</tr>
<tr>
<td>How important was starting the doctoral program online with synchronous sessions with the course instructors?</td>
<td>12</td>
<td>4.83</td>
<td>.38926</td>
</tr>
<tr>
<td>How important was academic socialization in your on-boarding process?</td>
<td>12</td>
<td>4.67</td>
<td>.49238</td>
</tr>
<tr>
<td>How important is the cohort model to your doctoral learning?</td>
<td>12</td>
<td>4.67</td>
<td>.65135</td>
</tr>
<tr>
<td>How important is technology training preparing you for a successful doctoral experience?</td>
<td>12</td>
<td>4.58</td>
<td>.90034</td>
</tr>
</tbody>
</table>
The academic residency survey consisted of seven open-ended questions (questions 6-12). This study was delimited to survey questions 6, 7, 10, 11, and 12, which relate to academic residency and the cohort model.

**Emergent Theme 1: Faculty and Administrator Mentorship During Academic Residency**

Faculty and administrator mentorship emerged as a recurrent theme from survey responses. Faculty included course instructors, research librarians, and the educational technology team. Administrators were comprised of the university president and provost, as well as vice presidents, deans and department chairs as applicable. One hundred percent of respondents ranked face-to-face residency as very important. This was further supported by open-ended survey responses. A majority of participants noted that faculty and administrator mentorship helped alleviate concerns and anxieties, and fostered feelings of connectedness to campus. Likert Scale responses indicated that a majority of the cohort deemed technology and library research training as an important aspect of academic residency, with one student dissenting.

The survey questions associated with the following theme were:

Likert Scale Question #1: How important is the on-campus, face-to-face residency to your doctoral learning?

Likert Scale Question #3: How important was academic socialization in your onboarding process?

Likert Scale Question #5: How important is technology training in preparing you for a successful doctoral experience?

Open-ended Survey Question #6: What activities addressed your initial concerns/anxieties about starting a doctoral program?

Open-ended Survey Question #7: What takeaways do you have from interaction with University administrators?

Open-ended Survey Question #10: What recommendations do you have for making academic residency more relevant for you?

Open-ended Survey Question #11: What can the university do to improve your graduate-level training?

Open-ended Survey Question #12: Describe how connected you feel to the main campus.

Survey responses illustrating faculty mentorship during residency:
1. “They [faculty] are invested in our success and our success is a reflection on the university. They are here to support us.”

2. “Watching the [faculty] dissertation presentations, library research techniques, networking with administrators on campus…”

3. “The passion and excitement of outreach and support was motivating and inspiring. These administrators reinforced the value of this process and represent what we can achieve from this experience.”

4. “The administrators were very supportive of the program and gracious in offering time inside the classroom and out to assist in the student journey.”

**Emergent Theme 2: Cohort Engagement**

Survey responses regarding cohort engagement exemplify the importance of synchronous online meetings with course instructors and peers as well as the cohort model. Eighty three percent of respondents ranked online synchronous sessions with course instructors and peers as very important and 75% percent ranked the cohort model as very important. Cohort members with a prior affiliation to the university played an important role in fostering feelings of connection to the main campus among new students. Within the open-ended survey portion, several students suggested the cohort model provides the moral support to persist.

The survey questions associated with the following theme were:

Likert Scale Question #2: How important was starting the doctoral program online with synchronous sessions with the course instructors?

Likert Scale Question #4: How important is the cohort model to your doctoral learning?

Figure 2: Percentages of student responses from questions 1 and 4 of the Likert Scale.

Open-ended Survey Question #6: What activities addressed your initial concerns/anxieties about starting a doctoral program?

Open-ended Survey Question #12: Describe how connected you feel to the main campus?

Survey responses illustrating cohort engagement:

1. “[The] synchronous online meetings with the instructional team…”

2. “The face-to-face cohort experience has by far been the best confidence booster for me.”

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3. “After receiving a tour from one of our cohort members, and some exploring on my own, I feel comfortable navigating the campus.”

4. “I feel VERY connected to the professors and the other students. This is why I am still in this program. Within the first week, I had numerous times about dropping out, but this connection has helped me pull through.”

RECOMMENDATIONS

Based on the findings of this participatory action research study, the following recommendations are made for strategic onboarding of future online doctoral programs:

1. Increase opportunities for one-on-one conversations with administrators and faculty outside of the classroom environment during academic residency to provide continued mentorship.

2. Increase social cohort engagement to better understand peer strengths and weaknesses. This would help students more efficiently support one another within the cohort.

CONCLUSION

By understanding the ways in which online students create community and by identifying sources of support in online doctoral programs, researchers and practitioners can design programs that promote distance learners’ satisfaction, persistence, and retention. The findings of this study corroborate others in demonstrating the importance of intentional onboarding practices that build academic community. Inclusion of a cohort forming stage (residency) and use of synchronous communication foster productive social interactions that galvanize relationships students feel more comfortable drawing upon once dispersed (McInerney & Roberts, 2004). Academic residency creates an environment which supports development of student-student and student-faculty relationships (Terrell et al., 2012). Through residency immersion “online learning communities evolve from simple cohorts when learners elevate their engagement with each other to an emotional sense of community” (Ke & Hoadley, 2009, p.498). The sense of pride in belonging to this community is vital to student persistence, particularly in online doctoral programs (Berry, 2017).

Dr. Dennis (Wes) Westbrooks is the Director of Part-time Programs at the National Intelligence University located in the Washington, DC metropolitan area and an adjunct faculty at Winona State University, MN. His writing and presentations primarily focus on intelligence studies, but he has researched and written on numerous topics relevant to Higher Education. Wes holds a BS from Hampton University, Hampton, VA, an MS from The George Washington University, Washington, DC, and a PhD from Hampton University, Hampton, VA.

Nichelle Guillaume is a math and computer science teacher at Lourdes High School in Rochester, Minnesota and a student in the Winona State University Doctor of Education program. In 2015 she received her Bachelor of Science degree in Mathematics from the University of Wisconsin - La Crosse. Continuing on, she obtained her teaching license through the Teacher Preparation Collaborative program in 2016, and by 2018, Nichelle had earned her Master of Science in Education degree. She obtained both her license and degree from Winona State University. Nichelle plans to research self-regulated learning strategies in high school students.

Samantha (Sam) Jones is an Assistant Professor in the Center for Sustainability Studies at Bemidji State University and a student in the Winona State University Doctor of Education program. She holds a BS degree in Geography from Bemidji State University, Bemidji MN, and an MS from Ohio University, Athens OH. Sam’s doctoral research interests center on experiential learning and essential skills in field-based education.

Kara De La Fosse is the Director of Nursing Assistant/Home Health Aide Program at Riverland Community College and a student in the Winona State University Doctor of Education program. She obtained her bachelor’s degree in Early Childhood Education from Youngstown State University in 2003, an Associate degree in Nursing from Riverland Community College in 2014, and Bachelor of Science (RN) and Public Health Nursing (PHN) degrees from Winona State University in 2014. In 2016, she earned a Master of Science in Nursing (MSN) from Walden University. Kara is
interested in researching what students need to be successful in Certified Nursing Assistant programs in community colleges for its direct application to her role at Riverland Community College.

REFERENCES


Collaborative Tools Maximized In An Academic Setting
Yvonne Phelps, University of Phoenix, USA
Joni Iglinski, University of Phoenix, USA

ABSTRACT
Collaborative learning has gained traction as research indicates its positive impact on student learning outcomes. Framing effective collaborative learning can be challenging without vibrant resources and tools. This session will delve into leveraging the four principles of cooperative learning (P.I.E.S) (Kagan, 2014) and the Innovators Compass (link below) as faculty support tools to accelerate student outcomes. All session participants, especially those within higher education and training environments, will be able to immediately apply these tools effectively to their instructional approaches to improve effectiveness and student outcomes. These tools will help to provide a structure for learning goals to promote authentic and tangible peer collaboration (rather than just team activities). After attending this session, attendees will be able to leverage P.I.E.S. and the Innovators Compass to maximize positive student outcomes through collaborative learning. In addition, attendees will be able to expand on the research premises that are shared relating to the impact of collaborative learning and these two tools.

REFERENCES

BIOGAPHIES
Yvonne Phelps is Vice President Academic Affairs Campus Services at University of Phoenix (UOPX). She has academic oversight over the campus footprint. She had a PhD from Capella University.

Joni Iglinski is Director of Academic Affairs at the San Diego Campus of UOPX. She has been on faculty since 1996 in various modalities, including online, local, and blended. Joni is responsible for training, developing, engaging, and managing over 300 faculty in a broad variety of disciplines through the faculty lifecycle. Joni enjoys deep satisfaction helping students throughout their higher education to understand how such an education can help them realize not only career potential but also personal fulfillment and social change. Joni has her MA in English from Georgetown University.
An Inclusive Approach To Hiring Underrepresented Faculty
Shari McMahan, California State University San Bernardino, USA

ABSTRACT
There have been tremendous attempts over the last several years to diversify the faculty yet to date the numbers of African American, Hispanic, and Native American (underrepresented) faculty have remained stagnant. Growing political discord and changing student demographics are among many factors that dictate the need to recruit faculty who are similar to and meet the needs of our students from diverse ethnic perspectives and create an atmosphere that supports these relationships. Although this presentation focuses specifically on ethnicity, there is no doubt that diversity in all forms whether it be gender identity, sexual orientation, ability status, etc. contribute to a wide range of scholarly thoughts and ideas that produces better educational outcomes for all our students. This presentation examines the use of best practices at a regional comprehensive university in the west. An approach that focuses not only on the hiring unit (department), but college level, central administration (faculty affairs and provost) and university to support the efforts to diversify faculty. The intentionality of recruitment, training and support have yielded over one-third of our faculty coming from underrepresented ethnic groups.
Akin Economies Within MIKTA: A Comparative Macroeconomic Analysis Between Mexico, Turkey And Indonesia (2000-2019)
Gerardo Reyes Guzmán, La Salle University, Mexico
Marco Antonio Escobar Acevedo, Universidad DelaSalle Bajio, Mexico
Perla Esperanza Rostro Hernández, Universidad DelaSalle Bajio, Mexico
Damaris León Pérez, Universidad DelaSalle Bajio, Mexico

ABSTRACT
This paper aims at proving whether or not the three economies Mexico, Turkey and Indonesia, presently members of MIKTA, are the same in Macroeconomic and socio economic terms. We conduct three ANOVA analysis, the first two to split them from South Korea and Australia by considering income per head and average economic growth and then comparing just the three of them, rejecting the null hypothesis in the first one and accepting the null hypothesis in the second one. Thirdly, we delve into further macroeconomic indicators as well as other socio economic categories to outstand the main differences between the three countries. Finally we run a third ANOVA analysis with all categories accepting the null hypothesis stating that there is no difference between the average indicators considered in this study between Mexico, Turkey and Indonesia. The result is relevant as the three of them prove to be a potential economic driving force for the MIKTA.

Keywords: MIKTA, Macroeconomic indicators, Mexico, Turkey, Indonesia, comparative analysis

Introduction
According to James Rickards (2012; 2014), Western Nations, mainly the USA show severe fiscal problems as a consequence of the 2008 Economic crisis. Besides the increasing public debt, a demographic bottleneck seems to have triggered a Hegemonic reconfiguration of the world economy. It went from a unipolar domination run by the USA after the fall of the Soviet Union in 90’s, to the emergence of several newcomers that challenge the USA leadership. These new actors are organized by economic groups like the G-20, BRICS and MIKTA. These new participants in the world economy struggle to enhance their economic influence on their own, due to the fact that multilateralism failed with the freezing of the Doha round negotiations at the beginning of the XXI century.

Western Nations (G-5), known in the past for their sympathy for free trade and democracy, have now resorted to protectionism and nationalism; whereas most members of the G-20, BRICS and MIKTA pledge for more trade. Mo Jongryn (2015), Andrew Cooper (2015), Choi Heeman (2015) and Richard Gowman (2015) point out that middle power nations play an increasing role in determining economic policy at the international arena. These middle powers (MP) have the means to play as intermediaries in a now multipolar world economy, but mainly between the USA and China. From this MP came a group of nations first dubbed as MIST by Goldman Sachs in 2011, meaning Mexico, Indonesia, South Korea and Turkey. In 2013, the General Assembly of the UN included Australia and MIST turned into MIKTA (Maihold,2014).

The world production’s structure from 1989 to 2015 has changed. The participation of the G-5 (USA, Germany, France, UK and Japan) went from 60% in 1989 to 42% in 2015; whereas that of the BRICS, increased from 9% to 22% and MIKTA from 5% to 7% in the same time span. The outstanding evolution of BRICS can be traced by the power of China and India in the first place; Brazil and Russia in the second, and South Africa just with a marginal
contribution. MIKTA seems to be also growing in a more moderate rate. In spite of the modest two points difference -from 5% to 7%- in terms of world production, those countries seem to be heading upwards.

The purpose of this paper is not only to reassert the economic importance of MIKTA, but to analyze the main economic features of its three members (Mexico, Turkey and Indonesia) and prove that these economies are very similar. We have divided the paper in three sections. In the first one, we conduct an ANOVA analysis to show that Australia and South Korea move in a much higher level of development than Mexico, Indonesia and Turkey, both in terms of income per head and average economic growth. At the same time, this study shows us that only Mexico, Turkey and Indonesia are comparable so we run the same model to prove a null hypothesis assuring that the there is no difference between them regarding their economic performance between 1967 and 2015 based on the World Bank Data. Secondly we delve into further macroeconomic and social indicators to spot the main differences pointing out at some relevant advantages and disadvantages. In the third section we focus on their key foreign trade sectors and partners in order to gauge their competitiveness. Finally we add up all indicators and run a third ANOVA test to prove that these three countries are the same and draw conclusions.

I. MIKTA countries: unequal members

Graph 1 shows the income per head of the MIKTA members. It is clear the South Korea and Australia, represented in bars, overtake the rest of the MIKTA members with an important difference. Therefore, the graph has two vertical axis with two scales. South Korea and Australia had levels in this indicator that go beyond the 50 000 USD per head (left axis) by the end of 2015. Conversely, Mexico, Indonesia and Turkey reached the rank between 3000 and 10000 USD per head (right axis) in 2015. Based this analysis on the World Bank Data, the average economic growth of these last three countries from 1961 to 2015 was 4.0%, 4.5% and 5.2% respectively.

![Graph 1](image_url)

Source: (World Data Bank, 2019)

In order to prove which of MIKTA member countries can be comparable based on their economic average growth form 1967-2015, we conducted an ANOVA analysis. Our null hypothesis is that all members of MIKTA have an equal average economic growth.

\[
H_0 : \mu_{Aus} = \mu_{SK} = \mu_{Mex} = \mu_{Tur} = \mu_{Ind} \\
H_a : \mu_{Aus} \neq \mu_{SK} \neq \mu_{Mex} \neq \mu_{Tur} \neq \mu_{Ind}
\]

The results run in RStudio (RStudio Team, 2015) show a small p-value and an F-value of 9.93 with which, the null hypothesis can be rejected; this means, the member countries are different.
We conducted a Tukey HSD analysis to spot those countries that are not equal and therefore cannot be comparable. The criteria was based on the p-value. Those pairs with a p-value smaller than 0.05 indicate that they are not equal. The results run in RStudio, point out that the following pairs are countries whose economic average growth are unequal: South Korea-Mexico; South Korea and Turkey; Indonesia-South Korea; Australia-South Korea.

Tukey HSD

We can confirm the countries are different by using the 95% confidence interval level presented in graph 2. Those bars that do not touch the zero between its lower and upper value can be interpreted as not equal. Following the order of the aforementioned Tukey HSD, the first bar lays from a lower -1.34 to an upper 2.28 including zero and represents Mexico and Turkey; the second from 1.4 to 5.05, not including zero and represents South Korea and Mexico. The rest of the pairs behave similarly. The bars that don’t include zero represent a couple whose average economic growth is not equal; conversely, those bars that include the zero, are equal. By running a second ANOVA analysis skipping South Korea and Australia, graph 3 shows the confidence interval of the three countries: Mexico, Turkey and Indonesia.

\[ H_0: \mu_{Mex} = \mu_{Tur} = \mu_{Ind} \]
\[ H_A: \mu_{Mex} \neq \mu_{Tur} \neq \mu_{Ind} \]

As we can see, the second ANOVA analysis states that we accept the Ho and conclude that there are no differences in their average economic growth and therefore, these countries can be comparable.
Table 1 shows the economic average growth of these three countries from 1961 to 2015 based on the World Bank Data. The mean for Mexico is 4.04; Turkey: 4.51 and Indonesia: 5.2. The most volatile economy is Turkey with a standard deviation of 3.91, followed by Mexico: 3.60 and Indonesia 3.44. Using the same data, the world economy has an average growth in this period of 3.54 and a standard deviation of 1.625. Thus the probability to find a country with the Mexican average growth of 4.04 or more is 37% which means that almost 4 out of 10 countries in the world have an average economic growth equal or greater than Mexico. In the case of Turkey, the probability to find a country whose average economic growth is equal or greater than the Turkish 4.51% is 27% and finally, the probability to find a country that grows at annual average rate of the Indonesian 5.26% is 14.56%. In this way, we cannot affirm that, neither the Mexican nor the Turkish economic growth are weak. But we can say that the Indonesian average growth has been outstanding since only 14.5% of the countries in the world perform that way or better.

Source: selbst calculations with (World Data Bank, 2019)

Table 1: Economic Growth: Statistical Descriptive Analysis (1961-2015)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>1. Mexico</th>
<th>2. Turkey</th>
<th>3. Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>-5.80</td>
<td>-5.70</td>
<td>-13.10</td>
</tr>
<tr>
<td>1º Quartile</td>
<td>2.55</td>
<td>2.55</td>
<td>4.65</td>
</tr>
<tr>
<td>Median</td>
<td>4.20</td>
<td>5.00</td>
<td>5.90</td>
</tr>
<tr>
<td>Media</td>
<td>4.04</td>
<td>4.51</td>
<td>5.2</td>
</tr>
<tr>
<td>3º Quartile</td>
<td>5.90</td>
<td>7.30</td>
<td>7.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>11.90</td>
<td>11.20</td>
<td>10.9</td>
</tr>
<tr>
<td>Standard D.</td>
<td>3.60</td>
<td>3.91</td>
<td>3.44</td>
</tr>
</tbody>
</table>

Source: selbst calculations with (World Data Bank, 2019)
The data appearing in table 2 compare the three countries in terms of population, nominal GDP, nominal GDP per head and Exports. The total population of the group increased by 30% from 361 million in 2000 to 468 million in 2019, which equals an average annual growth rate of 1.37%. Mexico grew at most with 35% and an annual average growth of 1.6%, followed by Indonesia and Turkey with 28% and 25% or 1.32% and 1.2% respectively. Indonesia is the most populated country keeping a participation of more than 50% in the group during the whole period. Mexico gained one percent going from a population share of 26% to 27%. Turkey dropped slightly from 17.5% to 16.9% in the same time span.

In terms of nominal GDP, Mexico remained as the largest economy, but the slowest average economic growth. Mexico’s GDP tripped from 348 billions USD in 2000 to 1077 billions USD in 2019, with an average growth of 6.12%. However, its participation in the group dropped from 45.3% in 2000 to 38.7% in 2019. Turkey’s economy quadrupled and scored the highest average annual rate of the group: 8%. Its share also increased from 26% to 30%. Indonesia’s GDP also multiplied by four and had an annual average growth of 7.86%. Its share in the group soured from 28.7% in 2000 to 32% in 2019. This performance was also evident by analysing income per head. Turkey’s income per head scored the highest rate of average annual growth with 6.77%, followed by Indonesia: 6.34% and Mexico: 4.44%.

<table>
<thead>
<tr>
<th>Table 2. Basic Macroeconomic Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>2000</td>
</tr>
<tr>
<td>Population in Millions</td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Turkey</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Nominal GDP bn USD</td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Turkey</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Nominal GDP per head USD</td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Turkey</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>


Graph 4 represents the Big Mac Index by which, a currency is over/under valued with respect to the USD from 2002 to 2018. The Big Mac price in the United States increased from 2.46 USD to 5.58 USD, or at an average annual rate of 4.8%. The Turkish Lira kept almost pace with the USD from 2002 to 2006, entering the overvalued segment from 2007 to 2010. From that year on and as a consequence of continuous depreciations, it took a down trend path of undervaluation that placed it as the most undervalued currency of the group in 2018. The Indonesian Rupiah has been the most undervalued currency of the group until 2018, when it gained valued with respect to the Turkish Lira. The Mexican Peso was undervalued the whole period with a stable trend. The fact that these three currencies are undervalued, means that they are competitive in the foreign markets and their trade balances should be moving towards trade surpluses with respect to the USA.

This analysis has important implications, since in nominal terms, these economies are undervalued. Calculating the GDP and Income per head in purchasing power parity (PPP), allows us to see the real size of these economies. According to the Economist data, Mexico’s economy three folded from 765 billion (bn) USD in 2000 to 2367 bn USD or 2.3 trillion (trn) USD in 2016, an annual average of 7.13%; whereas Indonesia did it from 679 bn USD to 3032 bn or 3 trn USD. 4.4 times with an annual average growth of 9.8% and Turkey from 412 billion USD to 1994 bn USD or almost 2 trillion USD, 4.8 times with an annual average growth of 10.36% respectively. Together they represent a region with 7.3 trillion USD, slightly behind India’s GDP in PPP which amounted 8.7 trillion USD in 2016 and ranks

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as the third largest economy of the world.

Now if we translate that numbers in income per head, Mexico ended up in 2016 with 18.63 thousand USD; Turkey with 25 thousand and Indonesia with 11.6 thousand USD per head annually. That turns Turkey into a regional superpower followed by Mexico and Indonesia in the third place. The remarkable performance of Turkey is a result of a productivity growth, even though in the time span its population soured 25.7% followed by Mexico 25.3% and Indonesia 23.4%.

<table>
<thead>
<tr>
<th>Table 3. GDP billions USD in PPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Turkey</td>
</tr>
<tr>
<td>Indonesia</td>
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<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3. GDP per head USD PPP (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Turkey</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
</tbody>
</table>

In order to analyse table 3 regarding the components of the balance of payments, we have to remember some facts. According to the fundamental macroeconomic equivalence, a current account balance deficit (CA) expresses the necessity of foreign currency either through foreign direct investment or foreign debt. This results from a negative difference between domestig savings (S) and total investment (I). Thus, \( CA = S - I \), which means that domestic savings are not enough to finance Investment (Obsdelf, 1996, pág. 16). A current account deficit is the complement of this disequilibria; this means \( S - I = X - M \), where X stands for exports whereas M for imports. As we can see from table 3,
Mexico distinguishes itself by having the most stable components of its balance of payments. Mexico’s CA remains in the rank from -1.1 and -2.1% as a share of the GDP. Investment as a share of GDP is amazingly high in Indonesia, over 30% along the period, followed by Turkey with an average of 25%; Mexico follows suit with the weakest numbers in this indicator with barley higher than 20%. Since investment is the main driving force of economic growth, this scale matches with the average economic growth, being led by Indonesia, Turkey in the second place and Mexico with the slowest pace. Mexico’s foreign debt as percentage of its GDP increased from 32.4% in 2000 to 40% in 2019, which is still manageable taking in account that both, exports and levels of foreign currency are abundant. Moody’s sovereign debt rating for Mexico was A3 negative in 2019; Fitch downgraded Mexico from BBB+ in October 2018 to BBB on June 2019 and S&P gave Mexico a BBB+ with a negative expectations at the beginning of 2019 (Expansión/Datosmacro.com, 2019). Exports, as a percentage of GDP (and bn USD) went from 28.3% (110 bn USD) in 2000 to 38% (373.9 bn USD) in 2019. This strong performance in trade reflects in an amazing increase of its levels of reserves. They went from 28.9 bn USD to 178 bn USD in the same period. That places Mexico in an outstanding position among the three countries. Indonesia showed more volatility in its CA going from -2.2% in 2000 to a 1.2% surplus in 2007 and to a -2.7% deficit in 2015. This matches with the fact the the Indonesian rupiah has been the most undervalued currency. Its Exports as a percentage of GDP and in bn USD went from 27.9% (53.5 bn USD) in 2000 to 19% (145 bn USD). Indonesia has made a remarkable progress in beating its foreign debt by almost 50% going from 65.3% in 2000 to 33.9% in 2019. This positive trend kept pace with growing levels of foreign currency reserves. Official reserves went from 17.5 bn USD in 2000 to 116.4 bn USD in 2019, more than six times more. In 2019, Moody’s gave Indonesia Baa2, medium low grade; S&P: BBB and Fitch: BBB. However this country became an important destination for foreign direct investment (FDI) because of its sound public finances. Turkey has the most unstable CA with a deficit of -5.1 in 2007 and -6.1 in 2015. The Turkish lira was overvalued from 2000 to 2009. Its exports as a percentage of its GDP decreased slightly from 24.3% in 2000 to 22% in 2019, but soared in absolute terms jumping from 26.2 bn USD 142.5 bn USD in time span. Its foreign debt remained in 47% of its GDP for 19 years, but its the levels of reserves fourfolded from 19.7 bn USD in 2000 to 105.9 bn USD in 2019. Moody’s gave Turkey a B1 negative in 2019; S&P: B+ stable and Fitch: BB- in 2018. The country with the soundest public finances is thus Mexico, followed by Indonesia and Turkey in the third place. What the three countries have in common is that they have strengthened their manufacturing export sector becoming important trade competitors world wide. They have become much resilient by building a considerable amount foreign reserves. Furthermore, a manageable foreign debt make them more independent from external shocks in comparison to their respective past.

<table>
<thead>
<tr>
<th>Table 3. Balance of Payments indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td><strong>Current Account Balance/GDP</strong></td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>Turkey</td>
</tr>
<tr>
<td><strong>Investment/GDP</strong></td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>Turkey</td>
</tr>
<tr>
<td><strong>Exports/GDP</strong></td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>Turkey</td>
</tr>
<tr>
<td><strong>Foreign debt/GDP</strong></td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>Turkey</td>
</tr>
<tr>
<td><strong>Level of reserves in USD</strong></td>
</tr>
</tbody>
</table>

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Socioeconomic Indicators. Other indicators worth to be considered as business interest are population size, height, intelligence, temperature, happiness, inequality and freedom. The WorldData.info published statistics on average size of men and women. It states that the taller its residents the wealthier the country. The average height for men in Mexico in 2018 was 1.68 m; weight: 79 Kg and BMI: 27.5; for females: 1.56 m; 69.4 kg and 28.5. Indonesia: 1.63 m; 59.5 kg; 22.4; Indonesia’s females: 1.52 m; 54.8 kg; 23.7. Turkey: 1.74 m; 82.4 kg; 27.2. Turkey’s females: 1.60 m; 73.7 kg and 28.8. The same source uploaded in the web a study of Intelligence quotient based on average between 1990 and 2010: Mexico scored an IQ of 86 points, whereas Turkey 89 and Indonesia 84. Thus, Turkish are taller, more intelligent and wealthier in terms of income per head, followed by Mexicans and Indonesians in the third place. Yearly average temperatures are 29.2 °C in Mexico, 19.9 °C in Turkey and 31.8 °C in Indonesia (WorldData.info). Another source that took data from 2002 to 2006, updated the IQ test with the following ranking: Mexico: 88; Turkey: 90 and Indonesia: 87 (Brainstats.The Benchmark of IQ Test). Here too, the dominance of Turkey prevails, followed by Mexico, but Indonesia seem to be catching up pretty soon. On the other hand, the happiness index places Mexico within the first twenty happiest countries from a total of 156, where Denmark appears in the first place as the happiest country in the world in 2019. Following the happiness index for the years 2013, 2015 and 2016, Mexico takes the position 16o, 14o and 21o respectively; Turkey: 77o, 76o and 78o and Indonesia: 76o, 74o and 79o each. In almost 20 years, life expectancy in females increased in Mexico from 75.5 in 2000 to 80.6 in 2019; Indonesia from 70.6 to 72.6 and in Turkey from 72.1 to 80.4. In spite of the improvements in life expectancy, all three seem to have turned unhappier; although Mexico remains strongly happier than their competitors in this matter (Expansión/Datosmacro.com, 2019).

Gini coefficient measuring a total of 157 countries where the most equal is Faroue Islands with 22.7 and the most unequal Lesotho 63.2, ranks Mexico in place number 24 with 48.2; Indonesia, number 83 with 36.8 and Turkey number 63 with 40.2. (Central Intelligence Agency, 2019). Freedom where Sweeden ranks with 100/100, scores Mexico with 62/100 (partly free/press freedom status: not free); Indonesia 64/100 (partly free/press freedom status: partly free) and Turkey 32/100 (not free/press freedom status: not free) (Freedom House, 2019). In 2018 there were 203,364 prisoners in Mexico (0.15% of the population); 265,079 in Indonesia (0.10% of the population) and 260,000 in Turkey (0.32% of the population). Transparency international measures corruption and places Mexico in position 138/180; Indonesia 89/180 and Turkey 78/180 (Transparency international, 2019). In spite of its remarkable place as uncorrupt country, Turkey scores as the most oppressive and unfree country.

II. Foreign trade and competitiveness

Export, production and trade partners. Mexican exports almost fourfolded from 110 bn USD in 2000 to 373.9 USD in 2019. Mexico appeared in 2017 as the 19th largest exporter in the world. The export sector has shown a stable structure, specializing in manufactures with 86%, 83%, 81% and 90% in the years 2000; 2007; 2015 and 2019 respectively. Crude oil and products have been losing grip falling from 10% in 2000 to 5% in 2019, whereas Agricultural products have kept its share at around 3-4%. But in 2017 the following key producing branches made a dent: According to The Economist World Figures (2020), Mexico took the 12th place in the world with the largest manufacturing output (198 bn USD); 12th in agricultural output (39 bn USD); 9th coffee producer (270,000 tons); 9th sugar producer (6 million tons); 3th orange juice producer (195,000 tons); 10th copper producer (742,000,000 tons); 5th lead producer (241,000 tons); 8th gold producer (130 tons); 1st silver producer (5,394,000 tons); 9th cotton producer (335,000 tons) and the 9th car producer with more than 2 million units. In terms of services and transfers, tourism left revenues of 22.5 bn USD in 2017, taking the 15th place in the world with almost 40 millions visitors. Remittances amounted 30.61 bn USD in 2017, which placed Mexico as the fourth largest world wide in this branch. The main trade partners have increased from three to four, suggesting that exports have slightly diversified. Thus, in 2000, 84% of all exports went to the USA; 2.1% to Canada and 0.9% to Japan and in 2019, exports destination structure was: 80.9% USA; 2.8% Canada; 1.4 China and 1.1% Germany. This means that China and Germany have displaced Japan as main Mexico’s export destinations. The backbone of the Mexican Manufacturing exports is composed by the automovil industry and the assembly lines known as maquiladoras, both leadered by a strong FDI. In 2017; Mexico received 29.6 bn USD in FDI. Manufacturing, tourism, remittances and FDI strongly contributed to a foreign exchange surplus reflected in

<table>
<thead>
<tr>
<th>Country</th>
<th>Height (m)</th>
<th>Weight (kg)</th>
<th>BMI</th>
<th>IQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>1.68</td>
<td>79</td>
<td>27.5</td>
<td>86</td>
</tr>
<tr>
<td>Turkey</td>
<td>1.74</td>
<td>82.4</td>
<td>27.2</td>
<td>89</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1.63</td>
<td>59.5</td>
<td>22.4</td>
<td>84</td>
</tr>
</tbody>
</table>

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176.3 bn USD official reserves in 2017.

In 2017, Turkey took the 33rd place as the largest exporter in the world. Turkey’s exports fivefolded from 26.2 bn USD in 2000 to 142.5 bn USD in 2019. The export structure has been also biased to manufacturing. Textiles and Clothing was the key export product in 2000 but has been losing grip ever since, falling from 35% in that year to 11% in 2019. Iron, steel and metal also fell from 15% in 2000 to 9% in 2019. Transport and equipment, and industrial branch related to the automovil industry, has been gaining share going from 9% in 2015 to 16% in 2019. Agricultural products takes the largest share since 2015 with 17% and 18% in 2019. Almost one third of Turkey’s exports consist of agricultural products and Textiles. As a mayor player in the world economy in 2017, Turkey made a dent in the following branches: 17th place as the largest manufacturing output (149 bn USD); 10th largest agricultural output (52 bn USD); 9th wheat producer (21 million tons); 6th tea producer (234,000 tons); 9th zinc producer (67,400 tons); 15th car producer with almost a million units and 8th cotton producer (792,000 tons) and 12th arms exporter (364 million USD). Turkey is the 13th most visited country, generating 31.9 bn USD in tourism and receiving 37 milion tourist in 2017. Turkey is also a major figure in merchant fleets with 1,522 vessels taking the 12th place above the UK in this branch. Turkey’s main export destinations have also changed. In 2000, 20% of exports went to Germany; 7.9% to Russia; 7.6% to the USA; 5.7% to the UK; 5.3 to Italy and 4.4 to France. In 2019, 9.8%: Germany; 5.4%: Iraq; 5.3%: Italy; 8.2%: UK and 47.9% EU28. It seems that Turkey diversified its trade partners preferring to target the EU28 and skipping the USA and Russia as important export destinations. Turkey received 10.8 bn USD as FDI in 2017 and just 1 bnUSD in remittances. However, Turkey generated a surplus of foreign exchange, allowing it to take the 26th place as with the largest official reserves, 92.41 bn USD in 2018.

Indonesia’s exports threefolded from 53.5 bn USD in 2000 to 145 bn USD in 2019. In 2017 this country appeared as the 35th largest exporter in the world. Export structure has been changing. In 2000 and 2007, petroleum and products made more than 11% of all exports; followed by textile and clothing with 10-11% and natural gas 9-10%. Plywood and rubber products appearing in 2000, fade away in 2007. In 2015, 33% of all exports was mineral fuels and the rest, equally distributed at 12% each, machinery and transport, manufactured goods and animals and vegetables oils. In 2019, again manufactured goods made 74% of all exports, followed by mining and other products with 21% and animal and vegetables oils 4%. In 2017, Indonesia ranked worlwide in the 12th place with the largest manufacturing output with 205 bn USD; 4th agricultural output (134 bn USD); 3rd rice producer (37 million tons); 7th tea producer (139,000 tons); 2nd nickel producer (358,000 tons); 3rd rubber producer (3.4 million tons); 1st vegetable oil producer (41 million tons); 16th car producer with more than half a million units and the 3rd coal producer (323.3 million tons). Indonesia is a naval power with 1948 vessels and took the first place in 2018 in sheep flags registered. Indonesia’s main trade partner is Japan, where 23.3% (2000), 24.3% (2007), 15.9% (2015) and 11.5% (2019) of Indonesia’s exports were sent respectively. Countries that lost their share in 2019 as Indonesia’s export destinations in comparison to 2000 were: the USA and Singapure from 13.3% (2000) to 11.2% (2019) and 10.2%(2000) to 8.2% (2019); South Korea and the Netherland were removed. Conversely, China gained participation from 4.1% in 2000 to 11.6% in 2019. In 2017 Indonesia ranked in place number 16 as the largest FDI recipient (23 bn USD), 16th remittances (9.0 bn USD) and 21st in official reserves (120 bn).

Imports, consumtion and trade partners. Mexico’s imports rose more than three times from 112 bn USD in 2000 to 387 bn USD in 2019. It’s import’s structure has been stable: ¾ intermediate goods; 1/6 capital goods and 1/10 consumer goods along 19 years. Changes have taken place at the origin category. In 2000, 75% of imports came from the USA, 4% from Japan and 3.6% from Germany. In 2019, 49% of Mexican imports came from the USA, and 17% from China. Japan and Germany kept their share, but it is evident that China and other Asian countries like South Korea have been displacing the USA as the main Mexican imports supplier.

Indonesia’s main imports consisted of manufacturing in 2000, like machinery and transport; chemical; fuels; food, drink and tobacco, as well as raw materials. Along the period, Indonesia has developed a powerful manufacturing industry. This has change its import structure radically. In 2019, 70% from its imports were raw materials, 17% capitul goods and 13% consumer goods. Important changes have also occurred at its origin structure. In 2000, 20% of its imports came from Japan; 13% from the US; 8.2% from Singapure; 6.3% from Germany; 5.8% from Australia and 5.6% from South Korea. 19 Years later, 9.6% of Indonesia’s Imports came from Japan; 22% from China; 10.7% from Singapure and 6.4% from Thailand. China has displaced the USA, Germany, South Korea and Australia as Indonesia’s main import suppliers. Japan lost almost half of its participation and Singapure prevailed.
Turkey has been importing manufacturing goods along the time span in question. In 2000, 20% machinery; 13% minerals; 11% vehicles; 10% chemicals and 9% metal. In 2019, 15% chemicals, 11% mechanical equipment; and 10% transport and equipment. Turkey has also become an important player in the car production taking the 15th place with more than 300,000 vehicles in 2017. Thus most of its imports are inputs for the export sector. In regards of its origins, changes have also taken place. In 2000, 17% of its imports came from Germany; 9.3% from Italy; 8.6% from the US; 6.2% from Russia; 5.7 from the UK and 2.2% from France. In 2019, 10.8% of imports came from Germany; 7.6% from Russia; 12.8% from China; 5.5% from the US and 39% from the European Union. China and Russian have been displacing Germany and the US as trade partners, although most of imports still come from the European Union. In the side of imports, China has turned into a major supplier for the three countries.

III. Results and Conclusions

By taking into account 78 categories of Macroeconomic and socio economic character, we gave points according to the place in every variable considering the respective value. For instance, in corruption Mexico obtained 148 points which is bad, so it got one point; Indonesia took the second place with 89 points and got two points and Turkey was the least corrupt of the three so it got three points. Adding up all points derived from the categories, Mexico obtained 191 points, Turkey 140 and Indonesia 137. That doesn’t mean Mexico is better of than the rest. To prove this, we run again an ANOVA analysis using RStudio, setting up the hypothesis that the media of all categories is equal in all three countries.

\[ H_0 : \mu_{\text{Mex}} = \mu_{\text{Tur}} = \mu_{\text{Ind}} \]
\[ H_A : \mu_{\text{Mex}} \neq \mu_{\text{Tur}} \neq \mu_{\text{Ind}} \]

The results we obtained were:

<table>
<thead>
<tr>
<th></th>
<th>Df</th>
<th>Sum Sq</th>
<th>Mean Sq</th>
<th>F value</th>
<th>Pr(&gt;F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ind</td>
<td>2</td>
<td>2.091e+07</td>
<td>10452695</td>
<td>0.014</td>
<td>0.986</td>
</tr>
<tr>
<td>Residuals</td>
<td>231</td>
<td>1.769e+11</td>
<td>765593185</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

By a p-value of 0.986 and F value of 0.014, we accept the null hypothesis affirming that the three countries are the same. Graph 5 shows a 95% confidence interval where all bars cross the zero value and therefore there are no difference between their categories’ mean.

<table>
<thead>
<tr>
<th></th>
<th>lwr</th>
<th>upr</th>
<th>p adj</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tur-Mex</td>
<td>-9754.215</td>
<td>11148.86</td>
<td>0.9864376</td>
</tr>
<tr>
<td>Ind-Mex</td>
<td>-9909.661</td>
<td>10993.41</td>
<td>0.9917878</td>
</tr>
<tr>
<td>Ind-Tur</td>
<td>-10606.984</td>
<td>10296.09</td>
<td>0.9993216</td>
</tr>
</tbody>
</table>

Graph 5. 95% Confidence interval (Mexico, Turkey, Indonesia)

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Qualitative Research: 
The Repertory Grid Technique 
Antonina Bauman, Emporia State University, USA

ABSTRACT

The Repertory Grid technique as a research method is based on the Personal Construct Theory developed by George Kelly in 1955. Every person is compared to a scientist, who forms a perception of the world by actively comparing and contrasting different objects of that world. As the result, every individual develops a set of bi-polar constructs which are used to build a unique subjective model of a world.

Researchers found that the main advantage of the repertory grid technique is that it allows one to collect personal opinions of respondents without interfering with their process of building perceptions. This method attempts to uncover people’s inner thoughts about a specific object that form a basis for that object’s evaluation and as such is considered to be a phenomenological or “bottom up” research approach.

This presentation will describe the Repertory Grid Technique as a research method and reviews how it was and could be used for academic research.

NOTE

This presentation offers updates on the use of this qualitative research method since the following paper was published: Bauman, A. (2015). The Use of the Repertory Grid Technique in Online Trust Research. Qualitative Market Research: An International Journal, 18(3), pp. 362-382.
Spirituality In The Workplace Effects On Motivation And Organization Commitment

Michael A. Alexander Sr., University of Arkansas at Monticello, USA

ABSTRACT

As companies look for innovative ways to increase productivities, spirituality is gaining more attention as a method of increasing employee morale and commitment to the organization. This paper will examine workplace spirituality, as it compares to motivation and organizational commitment.

Introduction

Spirituality

Chen (2013) found out the spirituality as it relates tow work gave employees a different perspective of themselves and group relationships. Additionally, the findings indicate that there is a correlation between spirituality within an organization and profit management, which was higher than earnings management motivation. Pawar (2009) found that there is a correlation between spirituality and ethic.

Marques (2005) findings of spirituality in the environment of work is congruent with an understanding of HRM standards and start with the hiring process, that’s designed to hire the correct person for the job. Jean-Claude and Garcia-Zamor (2005) in their research discovered spirituality in the work environment formulate an environment that foster happiness among workers. And they work better on their jobs. Workers have a since of community and belongingness because of workplace spirituality. The paper will examine the possible correlation between workplace spirituality effects on motivation and organizational commitment. Spirituality is a wide and epic subject with diverse meanings. Spirituality is dependent of activities or values that are in congruency with a person’s life. (Lerner, 2000).

Peter Beck, an Anglican 30-year priest, examine the contrast between spirituality and religion: "many business people want to talk about spirituality, but not necessarily religion" (Weston, 2002, p. 28). "Every organization has a spirituality, whether it realizes it or not," according to Beck. "Spirituality is often expressed in the broadest sense as organizational and personal aspirations and goals, values and ethics; and comments about how the organization should treat people, the environment and the community.” (Weston, 2002, p. 28)

Motivation

Anki & Palliam (2012) found that external motivation can affect internal motivation negatively. Additionally, job satisfaction is arrived when workers use their personality to help them complete the mission. Springer (2011) research indicated a relationship between job satisfaction, performance and motivation. Additionally, the research noted that motivation and job satisfaction were predictors of performance. Finally, by applying managerial strategies to raise motivation and job satisfaction, manager realized and increase in performance.

Organizational Commitment

Allen and Meyer, (1990) describe affective commitment as one of the most prevalent approaches to organizational commitment in the literature. Affective commitment is evident where strongly committed employees identify and enjoys membership in the organization. Workers with strong emotional attachments (affective commitment) are willing to support organizational citizenship than those with weak emotional attachments (Meyer & Allen, 1996).
Normative commitment refers to a worker’s desire to stay with a company positioned on a feeling of obligation. This approach is less common but a viable way of viewing commitment in relationship to one’s belief of responsibility to an organization. This feeling of loyalty causes an employee to feel like staying with an organization and remain committed (Meyer & Allen, 1996). Continuance commitment is associated with the cost of leaving a company.

REFERENCES


Economics Of A Tragedy: Did Duopoly Bring Down The Boeing 737 Max?
Roger Morefield, University of Saint Thomas, USA

ABSTRACT

The Boeing Company and Airbus SE have a combined 88% of the airliner market, making them a global duopoly. Duopolistic behavior is the extreme in oligopolistic mutual interdependence, with both firms typically involved in intensive rivalry for market share. The recent tragic crashes of two Boeing 737MAX airliners and the responses of Boeing, the Federal Aviation Administration (FAA), and the airline industry raise some important questions, which include: Did the duopolistic rivalry between Boeing and Airbus contribute in any way to this situation? Was the FAA’s stubborn reluctance to ground the MAX due to regulatory capture? What is the impact on Boeing as a company and on the airliner manufacturing industry as it strives to repair its damaged reputation? And how can airlines across the globe meet the challenges of an industry that is projected to grow at a compounded annual rate of 3.5% over the next two decades? This paper addresses these and other questions related to the dynamics of the rivalry between Boeing and Airbus and offers an analysis of the possible involvement of duopoly, regulatory capture, market share, market growth, and the airliner manufacturing industry structure as causes of the tragic crashes.

Keywords: Duopoly, regulatory capture, Boeing, 737MAX, FAA, airliner manufacturing industry, industry structure, airline industry, market share, market growth.
Impact Of Teacher Attitude And Administrative Support On The Implementation Of Technology-Integrated Project-Based Learning To Meet The Needs Of 21st Century Learners

Afsaneh Miller, Concordia University Irvine, USA
Belinda Karge, Concordia University Irvine, USA

ABSTRACT

This study examined the relationship between administrative support for teacher-led educational innovation in a private school and students' achievement scores on standardized achievement tests in an interrelated planning process to determine the feasibility of the successful use of technology-integrated PBL in science while attempting to mitigate all the challenges involved in the implementation of technology-integrated PBL. In conducting this study, the researcher tried to build on existing research on the impact of the addition of technology-integrated PBL to the existing science curriculum and instruction. Additionally, the researcher looked at the effect of teacher's attitude and administrative support for the use of technology-integrated PBL in middle school science classrooms on the students' attitude and aptitude, and their levels of academic achievement on the standardized science test (CTP4).

The results of this research support the findings of Falik, Eylon, and Rosenfeld (2008) that showed despite the high positive impact technology-integrated PBL implementation could have for students, teachers require training and support to overcome their misconceptions and reluctance for implementing technology-integrated PBL in their classroom successfully. This study also confirmed that the students participating in PBL treatments showed significant increases in their Science Standardized Testing Scores on CTP4 during the testing cycle following the implementation of the technology-integrated PBL (2018-2019) as compared to the previous two testing cycles (2016-2017 and 2017-2018).

The unique Quasi-experimental (Nested design) ethnographic methodologies used for this study could be useful for the future development of teacher training models and strategies for dealing with issues such as classroom management and assessment when implementing active learning strategies such as PBL in science classrooms at the middle school level and beyond (Falik et al., 2008). The methodology for this study was developed based on the work of Sylvia Chard (Katz & Chard, 2000). In developing each unit of study, the researcher considered students' prior knowledge and curriculum standards before selecting the topic of study that served to organize and drive classroom activities. Students worked collaboratively on cross-curricular academic tasks in small groups, producing an artifact as evidence of learning in a designated amount of time (Cheng, Lam, & Chan, 2008). The students then reviewed and evaluated their final product with help from the teacher before presenting their projects to their community of learners.

The primary sources of data (Figure 3) collected included classroom researcher observations, structured student and staff surveys, classroom, and standardized science testing assessments (CTP4), classroom artifacts, extensive note-taking and developed written forms for recording the information gathered (Creswell, 2013).

Due to small sample size, the data collected from students and staff structured surveys, Science Standardized Test (CTP4), and criterion-referenced tests were analyzed using non-parametric inferential statistical test including Spearman’s Rank Correlation (Spearman Rho), Wilcoxon Signed Rank test found in the Excel 2018 Data Analysis Tool Pack and Real Statistics Resource Pack for Excel 2018 (Zaiontz, 2019). The qualitative portion of this study was conducted using an ethnographic methodology to explore how the implementation of technology-integrated project-
based learning could impact a middle school science classroom culture with the assumption that multiple educational theories such as constructivism, situated learning, the theory of change and the theory of learning and awareness impact of the implementation of technology-integrated project-based learning (PBL) in a middle school science classroom. The researcher utilized triangulation and member check to analyze and confirm the results of the study based on the data collected.

The data collected was examined from an emic perspective to develop themes using axial coding (Creswell, 2013). The Eleven themes identified helped explain the classroom culture as a culture-sharing group. The themes that emerged were: (a) life and social skills; (b) collaboration and teamwork; (c) learning and understanding; (d) leadership and responsibility; (e) communication; (f) academic skills; and (g) real-world experience; (h) benefits of collaboration and teamwork; (i) challenges of collaboration and teamwork; (j) Project-based learning; and (k) use and role of technology in the classroom.

The non-random convenience sampling from a single for-profit school may have made generalization from this study population to other populations more difficult. Many variables outside of the researcher's control such as small class sizes, the level of the technological expertise of the individual teachers and students, the degree of scientific knowledge and ability, availability of technical infrastructure, student aptitude and attitude toward science and school and students' level of English language proficiency could have changed the outcome of the study.

Analysis of the study data supported the study's hypotheses. Despite the study’s limitations, the overall findings support the use of PBL in science instruction since students in PBL treatment groups experienced significantly more growth in Science Standardized Testing Scores (CTP4) and process skills. Moreover, a significant increase for these students suggested that sustained implementation is desirable. PBL is an effective instructional method in science process skills for this population. The study conclusions provided valuable contributions to the understanding of how the culture in a middle school science classroom culture affected the learning of science. This study's unconventional approach to collecting educational research data helped to inform efforts for effective means of monitoring the progress of science education.
Lifestyle In The Fetus, Pregnant Woman And Parents
Hashem Adnan Hilmi Kilani, University of Jordan, Jordan

ABSTRACT

Introduction: Information on the health status in modern society and developed countries depicts an increase of non-communicable diseases (NCDs) such as diabetes, overweight, obesity, and metabolic syndrome. An examination of factors related to this increase shows that there is a shift in the daily practices of the people, and especially children in all ages, as they grow older towards a more sedentary lifestyle. This review handled various research related topics has been selected, extracted, analysed and synthesized that concentrated on the term used to describe lifelong changes in function that follow a particular event in an earlier period of the life span is called programming. These include the lifestyle in the fetus, pregnant woman and parents; all of which affect pronounce metabolic syndrome in later life of adult.

Conclusion: regular physical activity, nutrition and living systematic healthy lifestyle in the prenatal stages are of importance to genetic modification of inherited for future generations.

Keywords: lifestyle, exercise, nutrition, plasticity, pregnant

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Precision Education: An Educational Delivery System For The 21st Century
Ponzio Oliverio, National University, USA

ABSTRACT

Precision teaching is based on making educational decisions more personal and individualized. The model of formal education has traditionally been one of forcing the student to adapt to the teaching modality, but precision teaching adapts the educational delivery to the student. While primary schools have experimented a little with personalized education, institutions of higher education have historically been the most rigid in their delivery systems. This includes the rigidity of holding to a timeline for courses and programs. Despite the lack of personalization, they have still been largely successful, because most institutions of higher education preselect their students based on the likelihood of their success for both academics and the ability to complete tasks in a set schedule. Colleges and universities have used combinations of grade point averages and entrance exams, and selected the students with the best scores, who are the most likely to do well. These institutions can then use a formulaic educational delivery approach because they have chosen a student body which has proven its ability to excel with such an educational modality. But the 21st century demands a more personalized approach to higher education. Traditionally a student completed high school and entered college or university with few responsibilities other than being a successful student. While that traditional student still exists many of today’s students enter college after starting families and careers, and therefore have greater responsibilities which compete against their success in a traditional learning format. More institutions are using an open enrollment format with no entrance exams or other requirements. Thus, there are huge numbers of students who have not been preselected for success, but that does not mean they cannot be successful. It merely means the traditional, rigid educational delivery system must give way for a more individualized approach. Precision education can be individualized not just to the student, but also to the program or course, so that what might work successfully in a math or science class, may not work in a language or social sciences class. Those in higher education, both faculty and administration, fail students if they are not willing to adapt the educational delivery system to a more precision based one. Precision education offers unlimited opportunities, if approached intelligently, and some potential pitfalls if handled incorrectly. This study will examine various precision education modalities, and how they are currently being used successfully, while also discussing mistakes to avoid.
Many Charter Schools Are Operating As Private Schools Using Taxpayers Funding Denying Some Students Access

Jack Crews, University of Phoenix, USA

This paper will address the inconsistencies in the field of special education based and supported by the book I authored in 2008.

The lack of equality for special education has not improved, but has become more deficient with the addition of charter schools run by business rather than academics. Meaning the bottom line is the goal, not the need to provide the least restrictive environment for students of special needs. The bottom line is test scores thus the development of charters to avoid those with low test scores and those that might hinder the opportunity to reach high test scores. I would argue that charter schools are a business due to the fact that initial investment comes from the government or wealthy individuals, and if the business fails the owners are not out a dime however the customers (students) are left sidelined. Good for investors bad for students, public schools are to be open for all. The division is expanding not diminishing.

ABSTRACT

Some research suggests that educators need to consider their impact on students. The comments suggested they must take into account the perceptions of students. Nearly three-fourths of the youth provided at least one response suggesting educators change their behavior or attitude. The comments appear to represent distinct calls for changes that could be readily carried out at little cost. For instance, high school settings could be restructured to encourage teachers and administrators to have more positive encounters with youth in special education. Moreover, such requests seem reasonable if society wants to keep these youth in school until they can graduate. The suggestions reinforce earlier research that suggest the need to help youth to bond with the school setting (Finn, 1989; Wehlage,1983 as cited in Kortering, 1999), get educators to be more responsive to youth (Goodlad,1984; Hamilton & Hamilton,1992; Natriello, Pallas, & McDill, 1986; Wehlage & Rutter, 1986 as cited in Kortering, 1999), reduce student frustration or alienation (Finn,1989; Newmann,1981 as cited in Kortering,1999), facilitate youth success feelings (Livingston, 1959 as cited in Kortering, 1999), and display more care toward youth (Mann, 1986 as cited in Kortering, 1999). A related finding was that only five (11 %) youth indicated that they even talked to teachers or administrators about dropping out of school, whereas nearly half reported talking to a friend or parent. These suggestions cut to the heart of a profession that purports to provide specially designed instruction tailored to the unique needs (many of which may be emotional) of individual learners. (Crews, J. 2008)

If charter schools were designed to allow schools to have less red tape to operate public schools then the funding should follow the same requirements as public schools. The interaction with teachers and administrators seem to be a moot point if these students have been blocked from enrollment. In Arizona 35 charter schools charged for essential course materials like textbooks without giving parents a waiver option. Under state law schools can’t impose fees for essential items only for extracurricular activities. In charging these fees which is illegal might prevent students from low income families from applying, so this practice goes against providing a free education (Polletta, M.2017). If a traditional public school violated enrollment opportunities of students then they would be subject to withholding of funds, the same should be applied to charter schools since they are funded by taxpayers like traditional schools.

It is comforting and reassuring to know that those in an organization you are working with have compassion for one another and their environment. It is so difficult to function if others do not comprehend your situation.

In the short bus (the short bus is the one that in most school districts transports those students with special-needs); it may seem like a chaotic and confusing group of people that have individual needs and no compassion for each other.
However, what is occurring in this bus is no different from the activities in the big bus. Each person on both buses has individual needs and desires. Some are able to express this, and others are fearful of making comments. To have compassion for all those in the short bus is to offer a support that is always appreciated but many times not communicated. It is sometimes difficult to express one’s endorsement of this group of students, but it elicits a positive feeling and a good atmosphere.

The short bus has a culture that is unique in appearance, but it is essentially the same as that of the big bus. Peer pressure is there, as is curiosity as to what the other students are saying or what they did over the weekend or last night. The major difference between those in the short bus and those that are not is that they are viewed from the outside as different, so they are not well accepted and are often avoided. With this onus being laid on those short bus people, in tandem with the burden of a disability, the student develops a unique type of self-acceptance or self-denial. Whatever the term or the definition, these folks are coming into this world with an enormous weight on their shoulders.

We that are without this obstruction seem to be able to justify our actions of avoidance without guilt or thought. We do not need to ride in the short bus, thus we are immune from any activity that would include those students. If they are included in a class designed for socialization for a short while, this is to be tolerated, however, to be included by mandate for socialization almost seems to be an oxymoron, as one in that situation would find the socialization to be moot due to it being mandated.

Inclusion is perhaps another failed attempt to make those in the short bus feel more like those that are not. The student’s conversation after school on the way back home is almost the opposite of how they feel. They boast of being in the regular classes and how it was so “cool,” however, that is just to make the others feel less worthy if they have not yet been mandated to a regular classroom.

So the similarities on the buses are becoming obvious. The compassion the students have for one another is strong, but the need for individual attention is sometimes stronger. The short bus people have an advantage over those on the regular bus, though, because their disability is recognizable and easily identifiable. So they know what the other students need for assistance and will lend support to help, knowing how much they appreciate this same type of assistance given to them.

The conversations of the day continue on their way home, where they resume battling the barriers of their disability. But their struggles are, in many cases, lessened, and there is more compassion from those that understand the limitations further and are not in fear of the disabilities. The dinner table is crafted to accommodate various disabilities so that everyone is included, because they are part of the family and not just there due to the mandate of “family law.” Conversations about their day are initiated by mother, father, or siblings. This is about as normal as it usually gets.

“How was your day?” Or “What did you learn?” These are the normal questions or conversation starters at most tables. They are not, however, always the ones with the short busers. It is my opinion that these should be the questions. However, it would be and is difficult for many parents to view the daily dinner conversation with their special-needs child on the same basis as the others in the family. This might need to be considered though, in order to avoid isolating their child. Sometimes, compassion can be too much and develops into a crutch which interferes with the exit plan that might only be known to the short buser.

The next day is similar to the day before: getting loaded on the bus, the staring by others, the avoidance by most, and the internal optimism that must be embedded to survive these everyday occurrences. A bad day for the students on the regular bus could be because of a poor grade on a test, losing their homework, or not getting invited to sit at the table with the popular kids at lunch. That would be a good day for the short bus people. Not getting a good grade on a paper is a norm, losing a paper is common, and being invited to sit with the popular kids is not even an option. A bad day for those on the short bus might include having a grand maul seizure in the lobby of a school while surrounded by a number of students, or in the cafeteria where food may have spilled on the floor or on other students. A bad day could include being pushed around in the locker room without the ability to defend yourself or being wheeled to a place you did not want to go by other students while others stood around and laughed.

The compassion students’ show for one another on the short bus may be due to the understanding of how difficult each
day can be. I would guess that, if there was a way to measure compassion, we would find a significant difference in those students in the short bus compared to the students in the regular bus in the level of compassion they have for one another. Is it odd that those students with the largest barricades are more compassionate than those who do not have such a burden? Continuing day after day to enter the same type of environment, with the same disability, and showing compassion for others, and hoping to someday be able to ride on the regular bus, not because it is mandated, but because you were like all the rest, might be what allows these students to be so strong and go forward with this hope internalized.

Gilbert (1989, 2000, 2005a, 2005b) suggested that the internal systems humans use to respond to external social cues (e.g., feeling relaxed and supported in response to positive social cues or fearful, inhibited, and submissive in response to threat signals from others). I believe that with this philosophy we might, for example, become submissive and discouraged by our own self-attacks by using the same affect/response systems used when others put us down. The reason for mentioning this philosophical position is to emphasize the need for students to be offered programs that will assist in providing answers to their issues. To deprive special need students a fair and equitable education due to fear that they will lower test scores or interfere with the culture that has been created at a public school is not ethically appropriate, but also it is against the law. If Charter schools use taxpayer’s money then they need to follow the same guidelines as traditional public schools. Later in this paper I reference the ACLU in their findings of some charter schools with special education caps. I have found that other charter schools have avoided the special education students due to capacity levels and other measures to avoid the need to provide this service. The human mind can be powerful in positive and negative ways and needs to be aligned with positive thoughts and practices to keep peace of mind. All students have the right to an education with practices the support a student’s need to increase their knowledge. If we do not include students with the services that assist with a positive outlook that they have a right for, then we are not in the business of education.

I would challenge those charter schools that have outstanding test scores and achievement levels to provide the public with their charter and provide the curriculum that they use with their special education programs. I look forward to receiving this material.

A short buser is a candidate for self-attacks that continue the criticisms they experience every day. That is why it is necessary for others to show compassion for those with disabilities. They have enough self-doubt for everyone. No one in the regular bus is dreaming of someday riding in the short bus in fact, that would not be a dream, but a nightmare. Acknowledging this, would one not think that there would be more compassion shown for the students in the short bus?

It is commonplace for us to avoid being put in proximity to that which makes us uncomfortable. The short bus is a place that is not highly desirable to visit or be placed in, but every day we have a number of students traveling in this means of transportation and hoping one day to travel in the regular bus.

The short busers top ten perceptions of compassion
1. Compassion is necessary for everyone, including the regular busers.
2. Compassion does not hurt.
3. Compassion is not a weakness.
4. Compassion is not inclusion.
5. Compassion is not isolation.
6. Compassion shows acceptance.
7. Compassion is knowledge of the issue.
8. Compassion is appreciated.
9. Compassion displays friendship.
10. Compassion elicits hope.
11. 

Parental support and family involvement are recognized by all stakeholders as critical factors in the development of self-determination for students with disabilities (Field & Hoffman, 1994; Mithaug et al. 1998; Wehmeyer, 1996). Although there is a growing amount of literature on the skills and competencies underlying the development of self-determination in the home (Sands & Doll, 1996; Ward, 1991), as well as personal reflections on self-determination by
people with disabilities or their family members (Ferguson, 1998; Kennedy, 1998; Ward, 1988), there is little research that documents parents' knowledge or perceptions of self-determination. As teachers increasingly infuse self-determination into school curricula, it is important to examine more fully parents' beliefs about self-determination, including how these beliefs are related to different types of disabilities. Undoubtedly, the success of self-determination depends on parents' views of its appropriateness and desirability. (Crews, J. 2008)

The literature is suggesting we do not have enough research on parents' knowledge or perceptions of self-determination. More research will have to be conducted into parents' beliefs on the subject and how they are related to different types of disabilities. What a wonderful direction to take, since we believe the determination by those on the short bus is greater than that of most students. Again, no one from the regular bus is determined to get the opportunity to ride in the short bus. So what is helping those students on the short bus to not give up and become submissive and self-doubting? The students might have an answer, if we would just ask them. In fact, the following are some possible reasons that have been given as to why a student with issues might not give up and accept being a short buser, with little or no hope of exiting.

1. What else do I have to look forward to?
2. I do not want to stay here.
3. I want to have more friends.
4. I do not want people to look at me funny.
5. Do you want to be on the short bus?
6. I do not want to be different.
7. I want people to like me.

Starting with probably the shallowest of reasons, it is necessary to understand special-needs students because there are no guarantees in life, and you might be on the short bus tomorrow, or, if not you, your best friend. At that time, you would be begging for understanding so that it would not hurt so badly. Going to the other end of the spectrum, understanding those students will help get the best productivity from these colleagues in school, with projects, assignments, and assistance with issues that need to be addressed.

Understanding is such a simple word, but it is something many find difficult because it takes time and effort, and most do not see the payoff. There are those who attempt to understand those with special needs, or at least appear as though they are trying to understand, maybe to lessen their guilt.

This sketch should furnish the reader a good perception of the possible issues facing the special need students, parents and the schools obligations. To note and underline the concern regarding charter school disregard for the law, the ACLU found at least six charter schools with special education caps, although state and federal has determined that special education is a right, “not a place or program.”(Polletta,M 2017) Since private schools do not receive funding they are not required to provide special education services, so this sounds like the charter schools not providing services are operating as private schools using taxpayers’ money, taking from schools that are in compliance with the law.

The Governor of Arizona (Ducey) said,” he was aware of multiple reports on how owners for-profit charter schools have managed to enrich themselves with the money they get from state taxpayers”(Fisher, H. 2008) ; This information mentions the owner of an online charter school with a high dropout rate getting an 8.8 million shareholder distribution AND a state lawmaker who runs a charter operation selling off the buildings that were constructed with the cash he got for educating students (Fisher, H.2018). Ducey stated that “he wanted a cautious approach to changes, since there has been a lot of breakthroughs with charters” (Fisher, H. 2018). I was expecting to hear their identity however this seem to be missing, and in assessing his statement I found it included the thought that there a lot of charters that are known nationally, it would have been helpful to provide the reader with substantive information that clarified what the national recognition included. I will presume it was due to high test scores, and with that thought one might be able to surmise that their charter skirted the call for special education programs. I do not recall a time when traditional public schools were scrutinized for possible wrongdoings, and the governor then or now said lets proceed with caution due to a number of nationally recognized traditional public schools. I believe there is a need for investigating Governors and government that are charter supporters. It is my opinion that The Arizona Governor is a strong supporter.
of charter schools, pushing through legislation that has the state guaranteeing the loans taken out by charter owners for the schools they build. Those guarantees enable the owners to borrow money at a lower interest rate. There are certified documents by Capitol Media Services that show that the state has underwritten 142 million of these loans. The Governor of Az has stated that “this arrangement doesn’t violate a constitutional provision against the state lending its credit to private companies” (Fisher, H. 2018). My response to these comments by Ducey is; I wonder if he believes that if the state of Arizona turns all of our traditional schools to charters and let business lead the way that maybe some breakthroughs would happen. I doubt that is what he means but his comments suggest this. It would be a supportive Governor of education if he recognized and publicized the break through and national recognition of our traditional public schools.

With charter schools sparking investigations into illegal and unethical practices, The Secretary of Education calls for more charter schools…WHAT? This certainly speaks to the lack of experience in public education by the top official charged with representing needs of all children, not just the privileged few.

I want to emphasize that this paper in no way condemns those that are working in the classroom of charter schools as teachers, teacher aides and volunteers. Those that are willing to work in a field that is committed to the betterment of our students for the future should be rewarded with compliant administering of their workplace. This blame for discrepancy and illegal activities that may lead to many students not getting an opportunity for an equitable education lies directly with the Governing bodies that are tasked with complying with the constitution and laws of our country that calls for a free and equitable education for all. I am also not totally supportive of dismantling charter schools. I am basing this on my tenure in public education knowing that students and parents need an option if the school that they are going to has proven to be ineffective in providing a student with their needs. I am however making a strong point that if there is an alternative charter school than this institution needs to follow the guidelines set forth for other public schools using taxpayer’s money.

Those that are operating charter schools for their own and investor’s profits without all students having the opportunity to attend the schools that they control should be identified and charged with criminal activity, because we have students at this very moment getting less due to these individuals and groups gaining financially from these student’s losses.

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Keynote:
Time Management Strategies That Work For Busy Professors And Grad Students

ABSTRACT
University scholars—both professors and graduate students—are busy. Really busy. There seem to be a never-ending list of classes to teach, papers to grade, journals to read, scholarly articles to write, grant proposals to apply for, and important meetings to attend. At the same time, scholars need time to have time away from the office desk in order to keep their creativity and energy levels high and maintain healthy relationships with friends, family, and community. How can you do it all? The Busy Professor has easy-to-implement time-saving strategies that really work once you know how to implement them including how to: rule your e-mail, make to-do lists that really matter, automate everything, pre-write letters, committee tasks, and grading comments, and use smart phone apps to build a better, attention grabbing CV.

Biography:
Dr. Tim Slater—better known as “The Busy Professor”—is the University of Wyoming Excellence in Higher Education Endowed Chair of Science Education. As a busy and productive faculty member, he has published more than 100 refereed journal articles being cited more than 2,000 times, co-written 26 books that are widely used by professors and students internationally, and been awarded more than $20 million in grants to support his scholarly work in improving college teaching. He writes columns monthly as the Senior Blogger at the Society of College Science Teachers website, serves as Editor-in-Chief of the Clute Institute published journal, Journal of Astronomy & Earth Sciences Education, and is a frequent keynote speaker and featured scholarly productivity workshop presenter at professional conferences around the world. He has helped thousands of faculty and graduate students and recently published a new book, “The Busy Professor: Ten Easy Time Management Steps for Getting Your Academic Life Under Control.”
Setting The Context: The Six Principles Of IDEA
Matthew Erickson, Slippery Rock University, USA

ABSTRACT

This session will explore the six principles of IDEA and how these principles set the context for educators in public schools. Participants will actively participate in discussion regarding the successful implantation of services in the least restrictive environment, identifying what a free appropriate public education is, explore how parental involvement influences success, and how procedural safeguards provide clarity and direction for schools and families. This session will also review policy change and the impact it currently has and may have on educators.
Emotional Intelligence In Entrepreneurship: The Role Of Self-Efficacy
Erin McLaughlin, Missouri Western State University, USA

ABSTRACT

The purpose of this study was to empirically examine the relationship between emotional intelligence and entrepreneurial success. Entrepreneurial success is further broken down into financial firm success, relative firm success, and personal success. Managerial self-efficacy and entrepreneurial self-efficacy are also addressed as potential mediating variables in the relationship between emotional intelligence and entrepreneurial success. The results of the study provide insight for individuals with entrepreneurial aspirations, academic institutions, as well as government and financial entities that provide resources to entrepreneurial ventures.
Promoting Resilience In Children Post-Disaster: The Critical Role And Influence Of Schools

Caroline McDonald-Harker, Mount Royal University, Canada

ABSTRACT

In the last six years, Alberta, Canada has experienced two catastrophic natural disasters— the 2013 Southern Alberta flood and the 2016 Fort McMurray, Alberta wildfire. These two natural disasters resulted in damages exceeding 6 billion dollars. Following these two disasters, many families experienced numerous challenges as a result of damage to physical infrastructures, such as homes, businesses, schools, and community facilities. Consequently, many families faced economic, psychological, and emotional difficulties. Children, however, were the most severely impacted due to their age-related life stage; limited physical, cognitive, and emotional capacities; and sole dependence on adults for their care, nurturance, and protection. Despite the fact that children are among the most vulnerable in times of disaster, there is a dearth of knowledge in relation to children’s unique experiences of disaster, as well as the characteristics and factors that contribute to their resilience and recovery during and following disaster. Child resilience has often been examined as an individual characteristic influenced by wider social contexts and factors such as family, relationships, community, and culture. As such, the majority of research on child resilience has largely focused on influencing factors like parent-child relationships, peers, and socioeconomic status. One influencing factor related to child resilience that has largely been neglected is that of educational institutions. Children spend a significant amount of time attending school and interacting with teachers, peers, and other school staff members. Schools play a critical role in the life of children that extends beyond classroom learning. This paper examines the unique role and influence that schools play in children’s resilience and recovery following natural disasters. Drawing on qualitative data that was collected through face-to-face interviews with 183 children between the ages of 5-18 years who were residing in the two disaster-affected communities in Alberta, this paper discusses the four main ways in which schools play a critical role in promoting resilience among children post-disaster: 1) positive teacher-student relationships/interactions; 2) peer support; 3) school-based intervention programs; and 4) structured and safe learning environments. This paper discusses the implications that these findings have for better understanding the struggles and difficulties that children experience both inside and outside of school, the school-based factors that influence and promote children’s resilience, and the various ways that schools can support not only the resiliency processes, but also the overall health, well-being, and recovery of children following disaster.
Teaching / Learning Process And Adaptation Of Disabled Students Of Some Faculties In University Of Ngaoundere
Mohamadou Bassirou Arabo, The University of Ngaoundere, Cameroon

ABSTRACT

Integrating disabled students in ordinary classes is useful to improve learning style of these students with handicap. Global education refers to Education for all human beings. This study aims to determine whether the adaptation of teaching styles influence the disabled students Academic Performance during the operation of learning. A survey was applied to the lecturers’ of various Faculties to determine which strategies were used to adapt teaching in task needed necessary gesture skills and getting complex visual informations. Twenty -three students and four lecturers participated in the study. Observations data of students in the task to acquire knowledge and competences, which refers to individual development and social integration (Handiscol, 2001), was collected and analysed, it used to describe needs in adaptation of content and strategy of teaching. In addition, data was collected from interviews with lecturers on situation involve manipulation and iconic activities during teaching/learning process. Our research is based on the qualitative analysis of interview with teachers in some Faculties of the University of Ngaoundere and observation of disabled students during activities in classes. The results highlight that the adaptation of students with particular difficulties in various situations was not proficient in learning. As a result, adaptation of content and teaching style can help disabled students to acquire competences from task needed necessary gesture skills and getting complex visual informations. It lead us to consider the impact of adaptation in teaching disabled students

Keywords: inclusive education, teaching /learning, gesture, disabled, adaptation.