



Journal of the International Society for Teacher Education

Volume 16 Issue 2

Cultural and Country-Based Concerns for
Teacher Education –
Insights for a Global Society



**Journal of the International Society for Teacher
Education**

Cultural and Country-Based Concerns for Teacher Education –
Insights for a Global Society

Editor: Karen Bjerg Petersen, Denmark
Associate Editor: Peggy J. Saunders, USA

Editorial Board

Sybil Wilson, Canada; Anna Hugo, South Africa; Nasir Mahmood, Pakistan; Josephine Agnew-Tally, USA; Jacky Pow, Hong Kong; Johan Borup, Denmark; Catherine Sinclair, Australia; Cornelia Roux, South Africa; Helene Muller, South Africa; Janet Powney, UK; Joyce Castle, Canada; Lam Siu Yuk, Hong Kong; Rabab Tamish, Palestine; Wally Moroz, Australia

ISfTE Officers and Elected Members

Secretary General, Forrest Crawford, USA; Treasurer, Johan Borup, Denmark; JISTE Editor, Karen Bjerg Petersen, Denmark; Nasir Mahmood, Pakistan; Leanne Taylor, Canada; Oupa Lebeloane, South Africa, Marta Luz Sisson de Castro, Brazil; Peggy Saunders, USA; Ikechukwu Ukeje, USA

Ex-Officio Members

Newsletter Editor, Ray Wong, USA; Leora Cordis Trust, Bob O'Brien, New Zealand;
Seminar Conveners: 2012, Kezang Tshering and Kezang Sherab, Bhutan
2013, Jacky Pow, Hong Kong

Reviewers

We are indebted to the following individuals who gave their time and expertise to review the manuscripts for this issue. We could not do this job without their reviews.

Sybil Wilson, Brock University, Canada; Anna Hugo, University of South Africa; Lotte Rahbek Schou, Aarhus University, Denmark; Donald Sharpes, Arizona State University, USA; Marta Luz Sisson De Castro, Pontificia Universidade do Rio Grande do Sul (PUCRS), Brazil; Nasir Mahmood, University of the Punjab, Pakistan; Josephine Agnew Tally, Missouri State University; Jacky Pow, Hong Kong Baptist University, Hong Kong; LDM Oupa Lebeloane, University of South Africa; Peggy Saunders, Weber State University, USA; Karen Bjerg Petersen, Aarhus University, Denmark

JISTE is an official, refereed publication of ISfTE. The goal of ISfTE is to publish six to eight articles in each issue. Using the seminar theme, articles in the first issue of each volume are based on papers presented at the previous seminar. Articles in the second issue are non-thematic or have special themes. Points of view and opinions are those of the individual authors and are not necessarily those of ISfTE. Published manuscripts are the property of JISTE. Permission to reproduce must be requested from the editor.

JISTE is issued twice yearly by the International Society for Teacher Education. The subscription price of \$75.00US is included in the annual membership fee. Additional copies of the journal may be purchased for \$25.00US. Institutional subscription to JISTE is \$100.00US per year.

Copyright © 2012
by the International Society for Teacher Education
ISSN 1029-5968

JOURNAL OF THE INTERNATIONAL SOCIETY FOR TEACHER EDUCATION

Volume 16, Number 2

From the Editors:

Karen Bjerg Petersen and Peggy J. Saunders 5

Articles

Effective Teacher Attributes: A Comparison of American and Chinese Secondary Teacher Candidates' Perceptions <i>Minghui Gao & Qinghua Liu</i>	9
Creating and Sustaining Action Learning in Physics Classroom <i>Folashade Afolabi & Akinyemi Olufunminiyi Akinbobola</i>	22
Teacher Candidates' Perception on Harsh Discipline and the Future of Bahraini Schools <i>Nina Abdul Razzak</i>	34
Hocus Focus: Evaluating the Pedagogical Implications of Integrating Magic Tricks in Classroom Instruction <i>Kevin Spencer</i>	45
Social Justice in Parental Choice of Secondary Schools in Hong Kong: Insights for Teacher Education <i>Tat Heung Choi</i>	55
The Impact of One-To-One Computing on Students' Academic Excellence at Kuwait University <i>Ammar H. Safar</i>	68
International Student Teacher Exchange: A Program Evaluation of Georgia Southern University and Placement Sites in England <i>Hsiu-Lien Lu & Lina Soares</i>	79
Gender Imbalance in Science Education: Implications for Improving Female Participation in Science in Akwa Ibom State of Nigeria <i>Folashade Afolabi & Akinyemi Olufunminiyi Akinbobola</i>	90
Instructional Strategies and Word Problems of English Language Learners <i>Shirley Leali, David R. Byrd, & Mongkol Tungmala</i>	98
The Role of Management and Governance in Effective School Based Management in South African Schools <i>RJ (Nico) Botha</i>	110
The Course-Embedded Community Outreach Event and Its Value in Promoting High Quality Teacher Candidate Reflection <i>Shannon Melideo</i>	125
Publication Guidelines.....	130
Future Submissions.....	131
Submission Requirements.....	132

Editors' Note

This open issue of JISTE – Volume 16.2 of the Journal of International Society for Teacher Education – presents how educational researchers throughout the world are able to present their research findings and concerns about teacher education and teaching for a broader audience. This issue also shows how research findings often derived from locally and country based contexts by being published in a common issue can add to insights of teacher education and teaching concerns in a globalised world.

As editors we are proud that the global character of the International Society for Teacher Education is reflected in this open issue. We are presenting articles written by authors from different continents and countries. On one hand hence, common to the articles is a concern about conditions of teaching and teacher education in the locally, often single country based context. On the other hand however, by reading and seeing the articles in this issue as a whole, we as editors hope that you will find it interesting to gain knowledge, insight, and information at a global level about local concerns in teacher education and teaching in different areas of the world. After reading the articles you may reflect upon and even derive some general concerns for teaching and teacher education independently of the local contexts presented in this issue. The subjects addressed in this issue of JISTE based on culturally and locally country based contexts e.g. democracy, gender aspects, equity, cultural diversity, discipline, different approaches in teaching and teacher education seem to be of concern for teacher education and teaching all over the world.

The theme of this issue hence is called *Cultural and Country-Based Concerns of Teacher Education and Teaching – Insights for a Global Society*. In this issue

we are presenting concerns in teaching and teacher education from perspectives of Middle East, African, Asian, European, and American countries.

We begin with an article by M. Gao from Arkansas State University, USA, and Q. Liu from Beijing Institute of Fashion Technology, China witnesses a co-contribution and co-research covering two of the biggest countries in the world: China and USA. In the article *Effective Teacher Attributes: A Comparison of American and Chinese Secondary Teacher Candidates' Perceptions* the authors set out to investigate similarities and differences between a cohort of 80 American and 75 Chinese teacher candidates. The authors have investigated and found six common categories of characteristic attributes for effective teachers – excluding gender which they found had no significant influence. They found no differences between Chinese and American teacher candidates' perceptions of the categories (a) importance of knowledge, (b) classroom performance, and (c) motivating students for the teaching profession. They have however found differences in the three other common categories. While American teachers value (d) professional attitude as very important, but (e) rapport establishing, and (f) personality charms as less important; the opposite is the case for Chinese teachers. The authors in their concluding remarks emphasize that differences in socio-cultural expectations for teachers are particularly embodied in socially or morally rather than cognitive oriented categories of effective teacher attributes.

Folashade Afolabi, University of Ibadan and Akinyemi Olufunmiyi Akinbobola, University of Uyo from Nigeria investigated how methods of action learning can be implemented in physics classrooms, and to a certain degree, outscore the method of problem-based

learning. In the article *Creating and Sustaining Action Learning in Physics Classroom* the authors present a study of students' academic achievement in Nigerian senior secondary school physics in which both methods are used. Despite the findings that action learning to some extent enhances the students' achievements more than problem-based learning strategies the researchers emphasized the importance of students being allowed to discover problems and working together cooperatively in a small group to find solutions.

Nina Abdul Razzak from the Teacher College of the University of Bahrain on the other hand is very much concerned about 'the current existence of harsh discipline in schools' in Bahrain and in her research she investigates if teacher candidates' perceptions on harsh discipline could possibly influence the future of Bahraini Schools. In the article *Teacher Candidates' Perceptions on Harsh Discipline and the Future of Bahraini Schools* she analyses how female freshman students from the Bahrain Teacher College (a key player in the kingdom's national education reform project) perceive harsh discipline. Based on her findings revealing that the way the female students themselves were disciplined at home while growing up – often in rather punitive conditions – influences their perceptions on the use of harsh discipline in schools, she advocates for the necessity of educating and training current teacher candidates in Bahrain in 'alternative methods of discipline so that when they work in the classrooms as teachers, they do not unconsciously fall into the trap of applying a generational model of discipline. Furthermore Razzak suggests that comparative studies – not only on male students in Bahrain – but at a broader scale in other parts of the world where similar trends could be found, may identify the possibilities of alternative models of discipline in terms of adequate classroom

management training in contexts where harsh discipline seem to be more of a rule than an exception.

Kevin Spencer, a world world-renown magician, adjunct professor at University of Alabama, and a certified autism services professional, has combined all of his knowledge in developing a strategy called, **Hocus Focustm**. His research focuses on how the strategy of magic can help students with disabilities in the classroom gain the knowledge they need to pass state mandated testing as well as improving teachers' efficacy in working with students with disabilities. He first presented this paper at the seminar of the International Society for Teacher Education in Kristiansand, Norway, in May, 2011.

In another place of the world in Hong Kong, Tat Heung Choi is investigating how social context, educational level, income and ways of living influence parental choice of secondary schools for their children and hereby reproduce social inequality. In her article *Social Justice in Parental Choice of Secondary Schools in Hong Kong: Insights for Teacher Education*, Choi presents her research findings from a comprehensive quantitative study on parents' choice of secondary school and concludes that 'despite policy-makers' increasing concern with equity and education' 'the educational market remains a middle-class mode of social engagement'. The insights for teacher education are the relevance and necessity of social justice education to initial teacher preparation.

Ammar H. Safar from the College of Education at Kuwait University is concerned about how ICT and the use of computers may increase the learning and academic skills of students. In his article *The Impact of One-to-One Computing on Students' Academic Excellence at Kuwait University* Safar presents a study about the effect and usefulness of the application of

one to one computing that has evidenced the positive impact on 50 female students' learning and achievement in terms of improvement in test scores, final grades, quality of work and heightening motivation of students in the local country based context of Kuwait. Similar to a number of studies from the United States Safar's results show that students being able to use laptops outscore their peers in classrooms without one to one laptops. Safar concludes that the decision of the Kuwaiti Government, as in many other countries, to reform the educational system through integrating ICT resources into education is in the right track.

In the article *International Student Teacher Exchange: A Program Evaluation of Georgia Southern University (USA) and Placement Sites in England* Hsiu-Lien Lu and Lina B. Soares from the Georgia Southern University, USA present the results of qualitative interviews with teacher candidate students from the USA who, as part of their education, have been teaching abroad in schools in England. The authors mention a number of critical components, benefits, and recommendations for teacher exchange programs. Besides outlining the importance of gaining intercultural knowledge and competence for American teachers facing increasingly diverse classrooms by experiencing different cultural settings and teaching, the authors emphasize that a number of institutional and supervisory conditions must be present in order to obtain a sufficient teacher exchange program.

A second article from Folashade Afolabi, University of Ibadan and Akinyemi Olufunminiyi Akinbobola, University of Uyo in Nigeria, pose the question of gender imbalance particularly in science teaching and among science teachers in *Gender Imbalance in Science Education: Implications for Improving Female Participation in Science in Akwa Ibom*

State of Nigeria. Based on quantitative data including the cohort of all science teachers in secondary schools in the Akwa Ibom State, the researchers conclude that there are 'more male than female science teachers' in the state; the relation corresponds a ratio of 6 to 4. When it furthermore comes to the question about the enrollment of male and female science education students in the period from 2000 to 2006, the imbalance is even bigger. The ratio here is 7 to 3. The researchers conclude that Nigeria, despite intentions in the Nigerian Constitution, has not been able to 'achieve equal opportunities for male and females,' and they suggest a number of recommendations in order to repeal the gender imbalance. The findings and suggestions of the authors can give insight at a global level as well.

The next three articles though not based on original research offer important insights for teacher educators, teacher candidates, and teachers around the world. Each article is specific to the country of origin, but the information can be generalized to other countries and other contexts.

David Byrd & Shirley Leali, Weber State University, and the late Mongkol Tungmala, Northern Arizona University, USA, address another increasingly important local concern well-known, however, in many European countries as well. In an American educational teaching context a big concern is the growing number of students in the classrooms with cultural and language backgrounds other than English. In his article *Instructional Strategies and Word Problems of English Language Learners*, Byrd addresses the question about how the teaching of mathematics, despite a general assumption that 'mathematics is a universal language that crosses boundaries', may cause not only cultural, but also language difficulties for non-native English language learners especially with word based problems preventing them from learning

mathematics adequately. The author suggests instructional methods with the aim bridging these issues for both teachers and students. Byrd's recommendations could be taken up by teachers in other countries facing similar problems.

Nico Botha from the University of South Africa addresses recent decades' political demands of democracy through decentralisation, school-based management, and involvement of parents, learners, and other stakeholders on local school boards in South African schools. In the article *The Role of Management and Governance in Effective School Based Management in South African Schools*, Botha highlights the complexity of the democratisation and empowerment process and outlines a number of conditions which are in need to be taken seriously in order for South African schools to be run appropriately and efficiently. In a country, as Botha quotes 'where there has been no tradition of political participation for the majority of the population,' this task is complex. The role of school based management structures 'extending democracy to grass roots level' demands not only 'the active involvement of the entire community' but also open, inclusive trustworthy members of the management and the need to involve stakeholders in the total process.

Last in our list of articles is *The Course-Embedded Outreach Event and Its Value in Promoting High Quality Teacher Candidate Reflection* by Shannon Melideo

from Marymount University in the United States. She explains how requiring students in coursework to design then mount two different community outreach programs, Family Math Night and Literacy Luau, helped the students meet the objectives of InTASC standard 10 which reads, "Leadership and Collaboration: The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession" (Retrieved from http://www.ccsso.org/documents/2011/intasc_model_core_teaching_standards_2011.pdf, p. 9). A surprising outcome was the deeper level of reflections achieved by the students who were involved in the programs.

A final note:

We want to acknowledge and thank the reviewers of JISTE, who took their time to review and give comprehensive feedback to the authors. We would also like to thank Forrest Crawford, Secretary-General of ISfTE for his full support of our efforts to create a journal worthy of the ideals of the organization.

We hope that the readers will get new insights by reading this issue of JISTE with the theme: *Cultural and Country-Based Concerns of Teacher Education and Teaching - Insights for a Global Society!*

Karen Bjerg Petersen, Editor of JISTE and Peggy J. Saunders, Associate Editor of JISTE

EFFECTIVE TEACHER ATTRIBUTES: A COMPARISON OF AMERICAN AND CHINESE SECONDARY TEACHER CANDIDATES' PERCEPTIONS

by Minghui Gao
Arkansas State University, USA
and
Qinghua Liu
Beijing Institute of Fashion Technology, China

Abstract: *This study compared attributes of effective teachers between America and China. Eighty American and 75 Chinese secondary teacher candidates each reported a real-life story about their own effective teacher. Data analyses generated six categories of effective teacher attributes, including teachers' knowledge, professional attitude, classroom performance, rapport establishing, student motivating, and personality charms. ANOVAs yielded significant country effects on socially- and morally-oriented categories, but no significant country effects on cognitively-oriented categories. Americans showed a significantly greater concern with teachers' professional attitude but less concern with teachers' rapport-establishing capability and personality charms compared to their Chinese counterparts. American and Chinese preservice teachers did not differ substantially in the emphases placed on teachers' knowledge, classroom performance, and student-motivating capability. In revealing the commonality and socio-cultural relevance of effective teacher attributes between America and China, this study helps readers appreciate the cross-cultural character of effective teachers.*

Key words: cross-cultural comparison, effective teacher attributes, teacher candidates, narratives

Introduction

Teacher effectiveness has been considered an essential ingredient in student academic achievement and other school outcomes. The word *effective*, stemming from the Latin word *effectivus*, means creative or productive. When something is deemed effective, it means that it has brought about an intended or expected result. Teacher effectiveness, in the sense of being able to produce a desired result, can be defined as teachers' capability of engaging students in the learning process to maximize student academic achievement and other learning outcomes.

Since the 1920s, educational researchers worldwide have been exploring the factors that make a teacher effective in the

classroom. In general, teachers who are considered effective demonstrate strong

personal qualities and possess knowledge of the subject. They usually get right down to business, teach at a fast pace, use a variety of instructional strategies, stay with their subjects, use humor, have command of their classes, interact with students, provide a warm classroom environment, and use non-verbal cues to enhance classroom management. They are also characteristic of strong communication ability, have high expectations for all their students, are demanding and not taking excuses for not completing assignments, and show affinity toward their students. A preliminary review of the literature suggests that attributes contributing to teacher effectiveness fall into the following major categories.

Attributes Contributing to Teacher Effectiveness

First and foremost, content and pedagogical knowledge is fundamental to teacher effectiveness. Effective teachers demonstrate expert knowledge in the subject matter and instructional strategies (National Council for Accreditation of Teacher Education, 2006). However, previous studies revealed gender differences in teacher knowledge, indicating that male preservice teachers are two and a half times more likely than females to endorse content knowledge as more important for effective teaching (Minor, Onwuegbuzie, Witcher, & James, 2002).

Professional attitude toward teaching and students also contributes to teacher effectiveness. Effective teachers come to class well prepared, and students can turn to them for help in and outside of class (Aranas, 1985; Zhang, 2004). They are dedicated to and accountable for student academic performance (Liu & Meng, 2009). They provide fair assessment, conduct ongoing reflection on their experiences, and are active members of learning communities, interested in continuing their own professional development (Minor et al., 2002).

Versatile classroom performance is considered critical for engaging students. Effective teaching processes involve various factors such as lesson planning, time management, classroom organization, communication, and content delivery (Reynolds & Teddlie, 2000). Effective teachers use various instructional strategies, stay with their subjects, have command of their classes, provide a warm classroom climate, and use non-verbal cues to enhance classroom management (Ebro, 1977). They are articulate (Zhang, 2004) and demanding (Garcia, 1991).

Charming personality traits help inspire students. Instructional quality correlates significantly with the personality trait of agreeableness (Kneipp, Kelly, Biscoe, & Richard, 2010). Caring is another essential personality trait that characterizes effective teachers (Baumann, 2006-2007; Norlander-Case, Reagan, & Case, 1999). Sense of humor is a valuable teaching tool for conveying course content (Kher, Mostad, & Donahue, 1999), establishing a classroom climate conducive to optimal student learning (Ferguson & Campinha-Bacote, 1989), and facilitating attention (Bandes, 1988; Wandersee, 1982). The previous findings reported gender difference, although controversial, with regard to the use of humor. Bryant, Comisky, Crane, and Zillman (1980) observed that male instructors who frequently used humor were rated as better teachers compared to those who did not use humor, whereas female instructors who frequently used humor were rated as less effective compared to those who did not use humor. By contrast, Gorham and Christophel (1990) did not find the association between humor use and the evaluations of female instructors.

Teachers who are considered effective are able to motivate students. Enthusiasm is a common characteristic of effective teachers (Cruickshank, Jenkins, & Metcalf, 2003; Lowman, 1994). Teachers' expectations can positively influence both the quantity and quality of a student's learning experience (Jussim & Eccles, 1992). Teachers who have high expectations for student success are often cited as effective teachers (Malikow, 2005-2006) as they are able to challenge students to achieve (Gill & Reynolds, 1999).

Teacher-student rapport has been a major focus of interest. Recently, the notion of *rapport* has been used to explain the nature of effective teacher-student interaction. Establishing effective rapport enables

students to operate at levels of cognitive and affective functioning that are higher compared to those they could otherwise achieve (Wray, Medwell, Fox, & Poulson, 2000). Effective rapport requires that teachers be friendly, respectful, connected with students, and trustworthy (Garcia, 1991; Zhang, 2004).

In addition, the research literature is replete with evidence of the effects of teacher classroom behaviors on student learning. As Nussbaum's (1992) review has indicated, more than 1000 articles have been published during the last several decades that concentrate upon some aspect of teacher behavior. To name a few, effective teachers encourage student participation and provide positive learning situations. They extend a cordial invitation to their students to enter into a dialogic relationship with them and the subject matter, and they influence students through expert and referent power but never coercive power. Effective teachers probe, prod, ask incessant why questions, pose problems, throw curves, stimulate frustration and conflict, all in an attempt to plant seeds of curiosity and exploration. They change strategies, techniques, texts, and materials to provide a substantive learning experience for their students, and they help students to improve on their skills and insights. Effective teachers provide an environment of intellectual safety in which opposing ideas can be aired without fear of censure or retribution, and they place a high value on collegiality.

The American and Chinese Educational System

The list above certainly does not exhaust attributes that contribute to teacher effectiveness. Nonetheless, important questions remain unanswered: Are effective teacher attributes universal or culturally specific? To what extent would effective teacher attributes valued in one culture still hold true in another culture?

The answers to these questions rely on cross-cultural studies. While the existing studies have been conducted across the globe, only few have been done cross-culturally. In one of them, Liu and Meng (2009) first explored Chinese perceptions of effective teacher attributes, and then went on to check whether these attributes were consistent with those that other researchers had reported of effective teachers in America. The researchers concluded that high consistency exists between Chinese and American perceptions of effective teacher attributes.

However, consistency does not mean homogeneity. Both Americans and Chinese may emphasize teachers' personality traits, but their emphasis may differ in magnitude. Actually, many differences exist between American and Chinese education. American classrooms, for instance, incorporate multiple instructional models, valuing primarily student-centered instruction (Minor et al., 2002). American teachers and students are equal participants in teaching-learning processes, and students are encouraged to be critical thinkers and to question the authority of teachers. On the contrary, in Chinese classrooms, teacher-centered instruction is dominant, and lecture is the major form of content delivery. Chinese teacher-student interaction is hierarchical with teachers overseeing the students (Chan & Chan, 2005). Chinese students seldom question the authority of teachers (Biggs, 1996; Bond, 1991). Therefore, it is necessary to explore this area further.

The Research Project

This study took a narrative approach to generate data based on real-life stories of effective teachers. According to Wei, den Brok, and Zhou (2009), a discrepancy exists between ideal and actual effective teachers. A narrative approach would produce a true picture of actual—rather than ideal—effective teachers. Narrative

ascribes a meaningful and coherent order to discrete activities and events and exists in the recollection of life events and other forms of communication (Nash, 1994). Narrative research involves representation of the multiple constructions of events (Lincoln & Guba, 1985). A narrative approach provides a lens to understand the “subjective mapping of experience, the working out of a culture, and a social system” (Behar, 1990, p. 225).

This study focused on preservice teachers. Before entering teacher education programs, teacher candidates have acquired a set of beliefs about teaching based on their own schooling experiences (Kagan, 1992). This situation challenges educators who are striving to improve the training of prospective teachers. This challenge occurs because, in human learning, it is more difficult to unlearn existing beliefs than it is to learn new beliefs (Bransford, Brown, & Cocking, 2000). Novice teachers may teach the way they were taught rather than using strategies and skills learned in teacher education programs (Ginsburg & Newman, 1985). To assess what teacher candidates need to learn, it is important to understand their pre-existing knowledge and beliefs (Decker & Rimm-Kaufman, 2008).

Research Questions

The authors hypothesized that effective teachers in America and China share a wealth of common characteristic attributes. They also hypothesized that culture influences specific effective teacher attributes. In addition, because the literature reported gender difference in teachers’ knowledge and personality traits, the authors hypothesized that gender impacts perceptions of effective teachers. To test the hypotheses, the current study investigated the following research questions:

1. Is there any common category of effective teacher attributes represented in the narratives of American and Chinese teacher candidates?
2. Does culture have an effect on teacher candidates’ perceptions of effective teacher attributes? If yes, what specific attribute(s) does it affect?
3. Does gender have an effect on teacher candidates’ perceptions of effective teacher attributes? If yes, what specific attribute(s) does it affect?

The Research Design

This study features a mixed-method research design by combining qualitative data collection and quantitative data analysis.

Participants

Eighty American and 75 Chinese secondary teacher candidates ($N = 155$) participated in the study. The American participants included 44 females and 36 males. The gender difference was non-significant, $\chi^2(1, N = 80) = .80, p > .05$. They were recruited from a four-year public university in the southern United States of America. They were taking an *Introduction to Secondary Education* course. The Chinese participants were 51 females and 24 males. The gender difference was significant, $\chi^2(1, N = 75) = 9.72, p = .002$. They were recruited from two four-year public universities located in Beijing. They had studied English for at least 6 years and were taking a *Teaching English as a Foreign Language* course.

Procedures

To obtain narrative data, an open-ended survey was created asking participants to write a two-scenario essay. Scenario 1 aimed to establish the mental imagery of an effective teacher. The participants recounted their own effective teacher following guiding questions such as: (a)

who the teacher was, (b) what kind of person he/she was, and (c) what the most impressive thing about him/her was. Scenario 2 sought to elicit a real-life classroom event that occurred to the teacher. Some guiding questions included: (a) what happened, (b) what the teacher did, (c) how he/she conducted him/herself as a teacher, and (d) what caused him/her to act the way he/she did. Noteworthy is that the Chinese participants completed this task in English, as did their American counterparts.

Data Coding and Analysis

To code the data, a codebook was developed by consulting previous works (e.g., Kneipp et al., 2010; Liu & Meng, 2009; Reynolds & Teddlie, 2000; Zhang, 2004) on attributes of effective teachers in America and China. Following the codebook, two research assistants coded all the essays independently. The interrater reliability was high ($r = .92$). They also discussed and resolved any disagreements. To find salient attributes of effective teachers, the authors conducted content analysis of the coded narrative segments by “systematically and objectively identifying specified characteristics of messages” (Holsti, 1969, p. 608).

Six composite categories of salient attributes were coded by counting the number of occurrences of their related componential themes across all the stories. These categories included: (a) *Knowledge*, indexing teachers’ content knowledge (e.g., knows the materials and concepts) and pedagogical knowledge (e.g., really knows how to teach); (b) *Professional Attitude*, indexing teachers’ sense of responsibility (e.g., being accountable for student learning), preparedness (e.g., coming to class well prepared), and dedication (e.g., being focused on student achievement); (c) *Classroom Performance*, indexing teachers’

classroom practices (e.g., classroom management, communication, adaptation, and patience); (d) *Rapport Establishing*, indexing teachers’ capability to create trust with students (e.g., approachable, friendly, respectful, and fair); (e) *Student Motivating*, indexing teachers’ capability to motivate students to learn and achieve (e.g., high expectations, inspiring, and passion/enthusiasm); and (f) *Personality Charms*, indexing teachers’ charming personality traits (e.g., agreeableness, caring, and sense of humor).

The data were analyzed in SPSS. The analyses focused on examining whether participants’ perceptions of effective teacher attributes were a function of culture and gender. To do so, the authors relied on comparing mean scores and examining F values, statistical power ($1-\beta$), and effect size measures (η^2). An alpha level of .05 was used for all statistical significance tests, and an 80% power ($1-\beta \geq .80$) was employed to detect a significant effect.

Results

Participants reported 155 stories of effective teachers. The overall mean narrative volume per story was 443.86 words ($SD = 260.41$). A 2 (country) \times 2 (gender) analysis of variance (ANOVA) revealed that English proficiency had an effect on participants’ narrative volume, $F(1, 151) = 201.25, p < .001$. This study had sufficient power ($1-\beta = 1.00$) to detect a significant English proficiency effect on narrative volume, and the effect ($\eta^2 = .571$) accounted for 57.1% of the variability in narrative volume. Overall, American participants wrote significantly longer stories ($M = 633.30, SD = 201.02$) than did the Chinese ($M = 241.80, SD = 133.46$). The results revealed no main effect of gender, $F(1, 151) = .93, p > .05$, indicating that no substantial difference existed in narrative volume between females ($M = 431.94, SD = 252.36$) and

males ($M = 462.75$, $SD = 273.77$). The interaction was non-significant, $F(1, 151) = 2.55$, $p > .05$. American females and males did not differ substantially in narrative volume, nor did Chinese females and males.

The overall mean number of effective teacher attributes per story was 6.12 ($SD = 2.47$). The same two-way ANOVA indicated no main effect of country, $F(1, 151) = .011$, $p > .05$, and gender, $F(1, 151) = 2.02$, $p > .05$, suggesting that American and Chinese participants, regardless of gender, did not differ significantly in the mean number of effective teacher attributes. Moreover, the interaction was non-significant, $F(1, 51) = 1.90$, $p > .05$. American females and males did not differ significantly in the mean number of effective teacher attributes, nor did Chinese females and males.

A multivariate analysis of variance (MANOVA) was conducted to examine whether the content of narratives (represented by the six categories of effective teacher attributes) was a function of country and gender and revealed only a main effect of country, $F(6, 146) = 6.78$, $p < .001$. The study had sufficient power ($1 - \beta = .999$) to detect a significant country effect on participants' narrative content. The country effect ($\eta^2 = .218$) accounted for 21.8% of the variability in narrative content. Further, six separate 2 (country) \times 2 (gender) ANOVAs were performed across the six categories to examine whether culture and gender had an effect on participants' perceptions of effective teacher attributes. Table 1 shows the means and standard deviations of the variables. Table 2 presents the F -ratios and p values of two-way ANOVAs. Power statistics and effect size measures were

reported only for significant effects. The following sections review the results.

Knowledge

ANOVA yielded no main effect of country, $F(1, 151) = .009$, $p > .05$, and gender, $F(1, 151) = .48$, $p > .05$. Both American and Chinese teacher candidates, regardless of gender, emphasized the importance of strong content and pedagogical knowledge as one critical indicator of teacher effectiveness. Moreover, the results indicated no significant country by gender interaction effect, $F(1, 151) = .63$, $p > .05$. American females and males did not differ in valuing teacher knowledge, nor did Chinese females and males.

Professional Attitude

ANOVA revealed a main effect of country, $F(1, 151) = 8.34$, $p = .004$. The study had sufficient power ($1 - \beta = .82$) to detect a significant country effect on professional attitude. The country effect ($\eta^2 = .052$) accounted for 5.2% of the variability in professional attitude. American participants overall showed a significantly greater concern with teachers' professional attitude ($M = .90$, $SD = .84$) compared to their Chinese counterparts ($M = .53$, $SD = .60$). The results revealed no significant gender effect, $F(1, 151) = .74$, $p > .05$. Both females and males stressed that professional attitude has implications for teacher effectiveness. Moreover, the country by gender interaction effect was non-significant, $F(1, 151) = .92$, $p > .05$. American females and males did not differ in emphasizing teachers' professional attitude, nor did Chinese females and males.

Table 1

Means and Standard Deviations of Content Analysis Variables by Country and Gender (N=155)

Variable	America (n = 80)		China (n = 75)		Male (n = 60)		Female (n = 95)	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Knowledge	0.94	.80	0.96	.69	0.90	.71	0.98	.77
Professional Attitude	0.90	.84	0.53	.60	0.68	.75	0.75	.76
Classroom Performance	1.63	.85	1.39	.07	1.47	.87	1.54	.94
Rapport Establishing	0.74	.78	1.05	.94	0.93	.90	0.86	.86
Student Motivating	0.96	.95	0.75	.86	0.73	.88	0.94	.92
Personality Charms	0.88	.88	1.53	.94	1.08	.96	1.26	.95

Classroom Performance

ANOVA yielded no main effect of country, $F(1, 151) = 3.54, p > .05$, and gender, $F(1, 151) = .61, p > .05$. Overall, American and Chinese participants, regardless of gender, stressed the role of excellent classroom performance in enhancing student achievement. Moreover, the country by gender interaction effect was non-significant, $F(1, 151) = .89, p > .05$. American females and males did not differ in emphasizing classroom performance to enhance teaching effectiveness, nor did Chinese females and males.

Rapport Establishing

ANOVA revealed a main effect of country, $F(1, 151) = 4.01, p = .047$. However, the study had insufficient power ($1-\beta = .512$) to detect a significant country effect. Readers should interpret this

country effect on rapport establishing with caution. The country effect ($\eta^2 = .026$) was small and accounted for a mere 2.6% of the variability in rapport establishing. Chinese participants showed a greater concern with teachers' capability to establish rapport with students ($M = 1.05, SD = .94$) compared to their American counterparts ($M = .74, SD = .78$). The gender effect was non-significant, $F(1, 151) = .47, p > .05$. Both female and male participants emphasized the importance of teachers' capability to establish rapport with students. In addition, ANOVA yielded no significant country by gender interaction effect, $F(1, 151) = 1.51, p > .05$. American females and males did not differ in emphasizing teachers' capability to build mutual trust with students, nor did Chinese females and males.

Table 2

Two-way ANOVAs among the Six Categories of Effective Teacher Attributes (N = 155)

Variable	Country		Gender		Interaction	
	<u>F(1, 151)</u>	<u>p</u>	<u>F(1, 151)</u>	<u>p</u>	<u>F(1, 151)</u>	<u>p</u>
Knowledge	0.01	.93	0.48	.49	0.63	.43
Professional Attitude	8.34	.004	0.74	.39	0.92	.34
Classroom Performance	3.54	.062	0.61	.44	0.89	.35
Rapport Establishing	4.01	.047	0.47	.50	1.51	.22
Student Motivating	2.99	.086	2.59	.11	0.15	.70
Personality Charms	16.04	.000	0.53	.47	1.52	.22

Student Motivating

ANOVA revealed no main effect of country, $F(1, 151) = 2.99, p > .05$, and gender, $F(1, 151) = 2.59, p > .05$. Both American and Chinese participants, regardless of gender, stressed teachers' capability to motivate students to learn and achieve. Additionally, no significant country by gender interaction effect was found, $F(1, 151) = .15, p > .05$. Overall, American females and males did not differ in recognizing teachers' capability to motivate students, nor did Chinese females and males.

Personality Charms

ANOVA yielded a significant country effect, $F(1, 151) = 16.04, p < .001$. The study had sufficient power ($1 - \beta = .978$) to detect a significant country effect on teachers' personality charms. The effect size ($\eta^2 = .096$) accounted for 9.6% of the variability in personality charms. Chinese participants showed a significantly greater concern with teachers' personality charms ($M = 1.52, SD = .94$) compared to their American counterparts ($M = .88, SD = .86$). There was no significant effect of gender, $F(1, 151) = .53, p > .05$. Both females and males emphasized the importance of personality charms to enhance teacher effectiveness. The country by gender interaction effect was non-significant, $F(1, 151) = 1.52, p > .05$. No substantial difference existed in emphasizing teachers' personality charms between American females and males, nor between Chinese females and males.

Discussion

The current study provides evidence confirming the hypothesis in the first research question that common categories of effective teacher attributes exist in the narratives of American and Chinese preservice teachers. This cross-cultural commonality is especially noticeable,

considering that American and Chinese participants differed substantially in English proficiency and narrative volume. In particular, participants in the two countries suggested six common categories of attributes that conjure up the true picture of actual effective teachers. They believe that effective teachers demonstrate strong content and pedagogical knowledge, professional attitude toward teaching and students, versatile classroom performance, rapport-establishing, student-motivating capabilities, and charming personality traits. These categories may not be exhaustive, but they are consistent with those emerging from the relevant literature. This finding leads the authors to conclude that teachers who have good command of these common categories of attributes, regardless of country and gender, are more likely to be (perceived as) effective compared to those who do not.

This study also confirms the hypothesis in the second research question that culture has an effect on American and Chinese teacher candidates' perceptions of effective teacher attributes. In particular, the effects of culture are significant in categories such as teachers' professional attitude, rapport-establishing capability, and personality charms. American teacher candidates showed a significantly greater concern with teachers' professional attitude toward teaching and students and less concern with teachers' rapport-establishing capability and personality charms compared to their Chinese counterparts. American and Chinese teacher candidates did not differ significantly teachers' knowledge, classroom performance, and student-motivating capability, with very small or marginal effects of culture.

Reflecting upon the finding regarding the cultural effect, the authors noted that the cross-cultural differences diminish in

cognitively oriented categories, such as teachers' knowledge and classroom performance but become significant in socially or even morally oriented categories, such as rapport-establishing capability, personality charms, and professional attitude. This finding is based on the nature of individual category and its relation to specific socio-cultural expectations of teachers. In this era of globalization, cognitively oriented qualities an effective teacher needs in general tend to be universal and less culturally specific. Regardless of the country, for instance, a teacher will not be effective unless he or she has mastered the subject matter and relevant skills and strategies necessary for planning, presentation, classroom management, and assessment.

When it comes to socially or morally oriented qualities of an effective teacher, however, it immediately becomes a socio-culturally specific issue, for every culture has tremendous, peculiar socio-cultural expectations for its members. Individual members of the culture are expected to accommodate to and assimilate these expectations. For instance, America is generally considered an individualistic, low-context society, at the core of which is the belief in the freedom of the individual (Rosenberg, 2004). American teachers are expected to demonstrate commitment to creativity and ingenuity, conduct on-going reflection on professional development, improve student sense of efficacy, and reach out to other professionals and parents for student success. However, China is usually regarded as a collectivistic, or interdependent, high-context society, with a long history of emphasizing harmonious interpersonal relationship through attending to and fitting in with others (Markus & Kitayama, 1991). Chinese teachers are mainly evaluated in terms of student test scores on high-stake achievement tests, and those who have a record of, or are dedicated to,

improving student test scores are considered most effective (Liu & Meng, 2009). Thus, differences in socio-cultural expectations for teachers are particularly embodied in socially or morally oriented categories of effective teacher attributes.

However, this study lends no support to the hypothesis in the third research question that gender has an effect on teacher candidates' perceptions of effective teacher attributes. Female and male participants, within or between country, did not differ substantially in recognizing the six common categories of attributes that comprise the perceptions of effective teachers. This finding should be interpreted with caution, though. Remember that each common category is a composite variable, which includes two or more componential attributes. For example, the category of personality charms consists of agreeableness, caring, and sense of humor. Although gender may not affect teacher candidates' emphasis on personality charms as a whole, it does not necessarily mean that it holds true with individual componential attributes, such as sense of humor. The current finding should not be interpreted as refuting the existing literature (e.g., Bryant et al., 1980; Gorham & Christophel, 1990).

Conclusion and Implications

This study showed that effective teachers demonstrate six common categories of characteristic attributes and that a category valued in one culture was emphasized in another culture. The magnitude of emphasis on an individual category may vary to some extent with the cognitive, social, and moral relevance of the category and its relations to specific socio-cultural expectations. Furthermore, any category was no more than a composite of multiple componential attributes. Interpreting the effect (or lack thereof) of culture or gender should be confined to the category per se and should not be extended to individual

componential attributes. In addition, each componential attribute (i.e., caring) is generic in nature, and its designated component may vary with socio-cultural settings, so may its construct.

The implications of this inquiry are many. Firstly, in contrast with similar studies, the current inquiry took a narrative approach to generate data and inquired about participants' personal experiences of actual—rather than ideal—effective teachers. Secondly, the analysis examined not only whether effective teacher attributes are universal or culturally specific, but also how teacher candidates in different cultures conceptualize effective teachers, and how culture and gender may or may not affect their

conceptions. Thirdly, the study identified cross-cultural categories of effective teacher attributes and charted their cognitive, social, or moral relevance. Teacher educators and policy makers, by learning from practices prevalent in other countries or cultures, can be better informed of alternative strategies for improving teacher preparation in their home countries. Last but not least, this study conducted quantitative analysis of textual data, which is a bold but careful mixed-method attempt in cross-cultural research. In quantifying the commonality and differences of effective teacher attributes between America and China, this study helps readers appreciate the subtle, cross-cultural character of effective teachers.

References

- Aranas, D. A. (1985). *Perceived effective teaching personality traits in three selected ICM schools in Region I*. Master degree thesis, Saint Louis University. Available: <http://dspace.slu.edu.ph/bitstream>.
- Bandes, B. (1988). *Humor as motivation for effective learning in the classroom*. Doctoral dissertation, Columbia Teachers College.
- Baumann, E. K. (2006-2007). All are called: Personality and effective teaching. *CSE*, 10(3), 10-11.
- Behar, R. (1990). Rage and redemption: Reading the life story of a Mexican marketing woman. *Feminist Studies*, 16(2), 223-259.
- Biggs, J. B. (1996). Learning, schooling, and socialization: A Chinese solution to a Western problem. In S. Lau (ed.), *Growing up the Chinese way: Chinese child and adolescent development* (pp. 147-67). Hong Kong: The Chinese University Press.
- Bond, M. H. (1991). *Beyond the Chinese face: Insights from psychology*. Hong Kong: Oxford University Press.
- Bransford, J., Brown, A., & Cocking, R. (Eds.). (2005). *How people learn: Brain, mind, experience, and school*. New York: National Academy Press.
- Bryant, J., Comisky, P. W., Crane, J. S., & Zillman, D. (1980). Relationship between college teachers' use of humor in the classroom and students' evaluations of their teacher. *Journal of Educational Psychology*, 72(4), 511-519.
- Chan, K. L., & Chan, C. L. W. (2005). Chinese culture, social work education and research. *International Social Work*, 48(4), 381-389. doi: 10.1177/0020872805053461
- Cruikshank, D. R., Jenkins, D. B., & Metcalf, K. K. (2003). *The act of teaching*. New York, NY: McGraw-Hill.
- Decker, L. E., & Rimm-Kaufman, S. E. (2008). Personality characteristics and teacher beliefs among pre-service teachers. *Teacher Education Quarterly*, 35(2), 45-62.
- Ebro, L. (1977). *Instructional behavior patterns of distinguished university teachers*. Doctoral dissertation, The Ohio State University.
- Ferguson, S., & Campinha-Bacote, J. (1989). Humor in nursing. *Journal of Psychological Nursing*, 27(4), 29-34.
- Garcia, E. E. (1991). Effective instruction for language minority students: The teacher. *Journal of Education*, 173(2), 130-141.
- Gill, S., & Reynolds, A. (1999). Educational expectations and school achievement of urban African American children. *Journal of School Psychology*, 37, 403-424.

- Ginsburg, M. B., & Newman, K. K. (1985). Social inequalities, schooling, and teacher education. *Journal of Teacher Education, 16*(8), 811-826.
- Gorham, J., & Christophel, D. M. (1990). The relationship of teachers' use of humor in the classroom to immediacy and student learning. *Communication Education, 39*, 354-368.
- Holsti, O. R. (1969). *Content analysis for the social sciences and humanities*. Reading, MA: Addison-Wesley.
- Jussim, L., & Eccles, J. S. (1992). Teacher expectations II: Construction and reflection of student achievement. *Journal of Personality and Social Psychology, 63*(3), 947-961.
- Kagan, D. M. (1992). Implications of research on teacher beliefs. *Educational Psychologist, 27*, 65-90.
- Kher, N., Molstad, S., & Donahue, R. (1999). Using humor in the college classroom to enhance teaching effectiveness in "dread courses." *College Student Journal, 33*(3), 400-406.
- Kneipp, L. B., Kelly, K. E., Biscoe, J. D., & Richard, B. (2010). The impact of instructor's personality characteristics on quality of instruction. *College Student Journal, 44*(4), 901-905.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.
- Liu, S., & Meng, L. (2009). Perceptions of teachers, students, and parents of the characteristics of good teachers: A cross-cultural comparison of China and the United States. *Educational Assessment, Evaluation, & Accountability, 21*, 313-328. doi: 10.1007/s11092-009-9077-z
- Lowman, J. (1994). Professors as performers and motivators. *College Teaching, 42*, 137-141.
- Malikow, M. (2005-2006). Effective teacher study. *National Forum of Teacher Education Journal-Electronic, 16*(3E). Retrieved May 30, 2011 from <http://www.nationalforum.com/Electronic%20Journal%20Volumes/Malikow%20Max%20Effective%20teacher%20Study.pdf>.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98* (2), 224-253.
- Minor, L. C., Onwuegbuzie, A. J., Witcher, A. E., & James, T. L. (2002). Preservice teachers' educational beliefs and their perceptions of characteristics of effective teachers. *The Journal of Educational Research, 96*(2), 116-127. doi: 10.1080/00220670209598798
- Nash, C. (1994). *Narrative in culture*. London, UK: Routledge.

- National Council for Accreditation of Teacher Education. (2006). *What makes a teacher effective? A summary of key research findings on teacher preparation*. Washington, DC: Author.
- Norlander-Case, K. A., Reagan, T. G., & Case, C. W. (1999). *The professional teacher: The preparation and nurturance of the reflective practitioner*. San Francisco, CA: Jossey-Bass Publishers.
- Nussbaum, J. F. (1992). Effective teacher behaviors. *Communication Education, 41*(2), 167-180. doi: 10.1080/03634529209378878.
- Rosenberg, S. (2004). Face. In G. Burgess & H. Burgess (Eds.), *Beyond Intractability*. Conflict Research Consortium, University of Colorado, Boulder. Available from <http://www.beyondintractability.org/essay/face/>
- Reynolds, D. & Teddlie, C. (2000). The process of school effectiveness. In C. Teddlie & D. Reynolds (Eds), *The international handbook of school effectiveness research*. London: Falmer Press.
- Wandersee, J. H. (1982). Humor as a teaching strategy. *The American Biology Teacher, 44*, 212-218.
- Wei, M., den Brok, P., & Zhou, Y. (2009). Teacher interpersonal behaviour and student achievement in English as a foreign language classrooms in China. *Learning Environment Research, 12*, 157-174.
- Wray, D., Medwell, J., Fox, R., & Poulson, L. (2000). The teaching practices of effective teachers of literacy. *Educational Review, 52*(1), 75-84.
- Zhang, L-F. (2004). Thinking styles: University students' preferred teaching styles and their conceptions of effective teachers. *The Journal of Psychology, 138*(3), 233-252. doi: 10.3200/JRLP.138.3.233-252

Authors

Minghui Gao earned his doctorate from Harvard University and is Associate Professor of Education at Arkansas State University, USA. He studies effective teaching, adolescent development, and critical thinking skills.

Qinghua Liu earned an Ed.M. in Comparative Education and is Lecturer of English at Beijing Institute of Fashion Technology, China. She studies effective teaching and metacognitive awareness in TESOL settings.

CREATING AND SUSTAINING ACTION LEARNING IN PHYSICS CLASSROOM

by Folashade Afolabi
University of Ibadan, Nigeria
and
Akinyemi Olufunminiyi Akinbobola
University of Uyo, Nigeria

Abstract: *The study was conducted to find out the effectiveness of action learning strategy on students' academic achievement in Nigerian senior secondary school physics when appropriately used by teachers. A sampling technique was used to select the sample schools. A total of 280 students took part in the study. A Physics Achievement Test (PAT) with coefficient of internal consistency of 0.82 using Kuder Richardson formula 21 was the instrument used to collect the data. The result showed that action learning strategy enhances students' achievement in physics more than problem-based learning strategy. Also, gender has no significant effect. When students are allowed to discover problems and work together cooperatively in a small group to find solutions to them through joint intellectual effort, resourcefulness, innovation, creativity, student-centeredness, respect for other people's view, problem solving skills, initiative, curiosity and critical thinking can be created, developed, and sustained in physics classroom.*

Keywords: action learning, problem-based learning, achievement, physics.

Introduction

Science has played a dominant role in the developmental efforts of nations. It has been identified as a potential instrument for solving socio-economic problems such as unemployment, hunger, poverty, population explosion, and environmental degradation, which are problems facing developing nations like Nigeria (Afolabi & Akinbobola, 2009). However, Nigeria has been making frantic efforts with a view to create scientific and technological awareness in her citizenry (Afolabi, 2009). Thus, the major aim of teaching science in schools is to facilitate students' acquisition of science process skills and to promote the understanding of the concepts being taught with a view to applying them to real life situations. Therefore, an average science teacher in a classroom in Nigeria is confronted with the problem of using appropriate instructional strategies to disseminate idea to the students and how to make curriculum more relevant to the

lives and experiences of the learner which are serious hindrances for effective teaching and learning of science (Akinbobola, 2009).

According to Akinbobola (2006), the selection of the appropriate and most effective strategies of instruction is very important to the success of any lesson. In Nigeria, Akinbobola (2008) affirmed that the changes in the aims and objectives of physics curriculum have not been accompanied by corresponding changes in the teachers' educational practices. A critical look at the contents of physics curriculum in Nigeria indicates that the traditional teacher-centered approaches are not relevant and appropriate to promote efficient learning of the content of the programme. However, there is a need for strategies that will not only maximize meaningful understanding of concepts in physics but would provide students the opportunity to interact with their environment and also students and their

teachers to clarify their misconceptions. Examples of such strategies include action learning and problem-based learning strategies.

Action learning is an educational process whereby the participant studies their own actions and experience in order to improve performance (Kramer, 2007). This process is done in conjunction with others, in small groups called action learning sets. It is proposed as particularly suitable for all learners, as it enables each person to reflect on and review the action each has taken and the learning points arising; this should then guide future action and improves performance. Weinstein (1995) defined action learning as a process of underpinning a belief in individual potential and a way of learning from their actions and from what happens to them and around them by taking the time to question, understand and reflect, to gain insights and consider how to act in future.

Marsick (1987) supported that action learning sets creates the environment which can enable participants to critically reflect on their own personal development which is in line with the physics curriculum objectives. Marquardt (2004) described action learning as a strategy which prepares to explore peoples' areas of ignorance with suitable questions. Robinson (2001) discovered that principles and practices of action learning have helped in developing students' involvement in learning, reflection, and autonomy.

According to O'Hara, Bourner and Webber (2004), action learning sets are collectively based on the premise that participants are willing to share; whereas, traditional learning is based on an individualistic approach. Therefore action learning sets can be a powerful vehicle for introducing students to collaborative learning, tapping into knowledge, and learning together through shared experience. Action learning strategy

increases employs learning capacity within an organization while responding to a real world challenge in a cross-departmental team. What exactly is action learning? Mumford (1994) described it as a dynamic process that involves a small group of people solving real problems, while at the same time focusing on what they are learning and how their learning can benefit each group member, the group itself, and the organization as a whole. Perhaps action learning's most valuable capacity is its amazing, multiplying impact to equip individuals, especially leaders, to more effectively respond to change. Learning is what makes action learning strategic rather than tactical. Fresh thinking and new learning are needed if we are to avoid responding to today's problems with yesterday's solutions while tomorrow's challenges engulf us.

The principles of action learning sets as outlined by Smith and O'Neil (2003) include (a) participants bring a problem to the set; (b) participants meet in small groups called 'set'; (c) participants meet regularly usually over a fixed period of time; (d) problems are relevant to each person; (e) a supportive sharing learning environment is created within the set sometimes with the aid of a facilitator in the early stages; (f) the process includes questioning, reflection, discussion and debate; and (g) participants carry out action between set meetings.

Revans (1983) used the equation $L = P + Q$ to illustrate the process of action learning, where learning (L) is acquired through programmed knowledge (P), otherwise known as traditional method or formal instruction and questioning (Q) to generate insight and full exploration of unknown so that it becomes known. The Q uses four major questions: what? who? when? where? and three minor questions: how much? how many? why?

Maloney (1994) defined problem based learning as a strategy that consists of carefully selected and designed problems that demand from the learner acquisition of critical knowledge, problem solving proficiency, self-directed learning strategies, and team participation skills. It reduces teacher's instruction where learners are seen as active listeners and passively involved in classroom activities as in the case of conventional method. Problem based learning is an example of constructivist learning strategy which poses significant contextualized real world situations and providing resources, guidance, and instruction to learning as they develop content knowledge and problem solving skills (Yager, 1991).

According to Merrill (2007), problem-based learning is organized with small cooperative groups of learners accompanied by a teacher, instructor, or facilitator. During this process, a series of problems (starting with introductory problems) with guidance from the teacher are provided to learners, and then later, guidance is faded as learners gain expertise. Guidance reduces as group members feel more confident with the subject matter and become more competent with learned procedures.

In problem-based learning, the teacher starts by guiding the students to identify the problems and helps them to link tasks with previous knowledge. Thereafter, the students discuss the problems cooperatively among themselves in a small group, explain what they know, pose research questions, generate hypotheses, develop initial plans, organize their knowledge, attempt to solve the problems with several modifications, derive learning goals, and organize further work. Finally, the results are presented to larger groups through the guidance of the teacher, and the students are allowed to reflect on the learning that has taken place. Problem-based learning is also a form of inquiry

based learning which explains the environment in which learning is driven by a process of inquiry constructed by the students.

Twomey-Fosnot (1989) defined problem-based learning by reference to four principles: (a) learning, in an important way, depends on what already know; (b) new ideas occur as we adapt and change our old ideas; (c) learning involves inventing ideas rather than mechanically accumulating facts; and (d) meaningful learning occurs through rethinking old ideas and coming to new conclusions about new ideas which conflict with our old ideas. A productive, problem-based learning classroom consists of learner-centered with active instruction. In such a classroom, the teacher provides students with experiences that allow them to hypothesize, predict, manipulate objects, pose questions, research, investigate, imagine, make inquiry, reflect, interact, and invent. The teacher's role is to facilitate this process. Hence, it can be used to create learners who are autonomous, inquisitive thinkers who question, investigate, and reason. The environment is democratic, the activities are interactive, and the students are empowered by a teacher who operates as a facilitator or consultant (Afolabi & Akinbobola, 2009). Bruner (1990) provides the following principles of problem based learning: (a) Instruction must be concerned with the experiences and contexts that make the student willing and able to learn (readiness); (b) Instruction must be structured so that it can be easily grasped by the student (spiral organization); and (c) Instruction should be designed to facilitate extrapolation and or fill in the gaps (going beyond the information given).

Based on the discussion above, what then is the difference between problem-based learning and action learning? In problem-based learning, the teacher guides or

fashions out the problem to the students. That is, the teacher helps the students to identify the problem while the students provide solution to the problem. In action learning, both the problem and solution are discovered by the students.

Statement of the Problem

In spite of all the advantages derived and the recognition given to physics as one of the core science courses and as a pivot to technological and economic development, there are wider gaps between curriculum planner, the implementers, that is, physics classroom teachers and what goes on in the classroom. This has led to the perception of students that physics is a difficult subject. This perception of students has affected learners' interest and led to declining rate of students' achievement in physics in West African Senior Secondary School Certificate Examination (WASSSCE) conducted by West African Examinations Council (WAEC) and National Examinations Council (NECO) in Nigeria (Akinbobola, 2008). Hence, could action learning be used to create and sustain students' interest and enhance their achievement in physics?

Purpose of the Study

The purpose of the study was to investigate the effect of action learning strategy on students' academic achievement in physics. Specifically, the study was designed to achieve the following objectives:

1. To compare the achievement of physics students taught with action learning strategy and those with problem-based learning strategy.
2. To ascertain the effects of gender on students' achievement in physics when taught using action learning and problem based learning strategies.

Research Hypotheses

Based on the purpose of this study, three hypotheses were formulated and tested at the .05 level significance.

H₀1: There is no significance difference between the academic achievement of students taught with action learning strategy and those taught with problem-based learning strategy.

H₀2: There is no significant difference between the academic achievement of male and female physics students taught with action learning strategy.

H₀3: There is no significant difference between the academic achievement of male and female physics students taught with problem-based learning strategy.

Research Method

A quasi experimental design was adopted for the study. The population for the study comprised of all 680 senior secondary two (SSII) physics students in all the eight (8) secondary schools in Obudu Local Government Area of Cross River State of Nigeria. The sample for the study was 280 senior secondary two (SSII) students registered in physics in the four secondary schools used for the study. Criterion sampling technique was used to select the schools used for the study from the population. The criteria were (a) Schools with standard physics laboratory with the basic materials and equipment for conducting required practicals (labs); (b) Schools that have at least two university-graduated physics teachers with five years and above teaching experience; and (c) Schools that are currently presenting candidates for the Senior Secondary School Certificate Examination (SSSCE).

Six schools met the above criteria. Four schools were randomly selected from the schools that met the above criteria through

the use of hat and draw-method. The four schools were randomly assigned to experimental and control groups.

The instrument used for the collection of data was Physics Achievement Test (PAT) which comprised of 50 multiple-choice item test questions drawn from the concept of waves. Each item had five options (A-E) with only one correct answer. The instrument (PAT) was validated by a physics educator and a seasoned physics teacher. To further strengthen the suitability of the instrument, the PAT was administered to a group of 30 students who did not participate in the main study, but who were found equivalent in all respects to the students used for the main study. The data obtained was analyzed using Kuder Richardson formula 21 and a coefficient of internal consistency of 0.82 was obtained. The average difficulty and discrimination indices of PAT items were 0.58 and 0.52 respectively. Based on this, the instrument was found suitable for the study.

In order to ensure teachers quality variables, the research assistants (physics teachers used in the selected schools of study) were trained for two weeks on how to use action learning strategy and problem-based learning strategy to teach the selected subjects for the study. The research assistants were given detailed instructions with well-organized lesson plans on the concepts of waves. After the training of the research assistants, the PAT was administered to the two groups as pretest, and the scores obtained were used to account for possible pre-existing differences in the initial ability between the two groups. After the administration of the pretest, treatments were given to the two experimental groups.

The experimental group 1 was taught the concept of waves with action learning strategy. The researchers adopted the work of Marquardt (2004). According to

Marquardt, steps in action learning involve the following processes.

1. **Clarify the objective:** The objective of the action learning must be identified, following the presentation of the problem or the task to the set. A set may handle more than one problem.
2. **Group formation:** The teacher helps in the formation of the action learning sets in their intact classes. The sets are grouped based on their performances in the pre-test, and each set comprises of five students of mixed ability. Action learning sets will meet twice daily to discuss the problem based on the time available for its resolution.
3. **Analyze the issue(s):** This involves identification of action learning for resolving them.
4. **Presentation of the problem:** The initiator for the problem among the set presents the problem briefly to the set and awaits the group's recommendations.
5. **Reframe the problem:** After a series of questions, the sets, often with the guidance of the action learning teacher, will reach a consensus on the most critical and important problem the sets should work on. The sets establish the crux of the problem, which might differ from the original problem.
6. **Determine goals:** Once the key problem or issue has been identified, the set seeks consensus for the goal. The achievement of the goal would solve the restated problem for the long term with positive rather than negative consequences on the individual and team.
7. **Develop action strategies:** Much of the time and energy of the sets will be spent on identifying and pilot testing of possible action strategies. Like the preceding stages of action learning, strategies are developed via reflective inquiry and interaction.

8. **Take action:** Between action learning sessions, the whole sets and individual members collect information, identify the support status, and implement the strategies developed and agreed to by the sets.
9. **Repeat the cycle:** Repeat the cycle of action and learning until the problem is resolved or new directions are determined.
10. **Capturing learning:** Throughout, and at any point during the sessions, the action learning teacher may intervene. The teacher will ask questions from the set members, which will enable them to clarify the problem, find ways to improve their performance as a set and identify how their learning can be applied to develop themselves and the team.

After a period of time, all the sets are reconvened to discuss progress, lessons learned, and next steps. They document the learning process for future reference and record the concept after each phase of learning. This process is repeated until the entire set of problems is solved and learning is affected.

The experimental group 2 was taught the concept of waves with problem-based learning strategy. The researchers adopted the study of Alexandria and Larson (2002). Alexandria and Larson classified the steps involve in problem-based learning as follows.

Investigation

1. **Contextualizing:** The teacher explains the process to the whole class, and then works with students to help them connect their previous experiences to the task at hand.
2. **Clarifying:** The students discuss the problem among themselves, and the teacher facilitates students as they determine what they need to know in order to complete the task.
3. **Inquiring:** Students begin the process of acquiring the necessary knowledge

and skills they might need to complete the task; teachers facilitate by asking questions and helping students identify and understand credible resources.

Invention and Initial Implementation

4. **Planning:** Students in each group begin to organize their knowledge and develop some initial plans as to how to approach the problem.
5. **Realizing:** Students develop a first draft or beginning product that will meet the stated criteria for the problem. Each small group will develop an original approach and no two will look exactly alike.

Further Implementation and Evaluation

6. **Testing:** The students check their problem against the criteria to see if it meets the specifications. It is expected that the first attempt will need some or several modifications.
7. **Modifying:** Students rework their problem in terms of deficiencies they may have identified. They then retest and modify until they have a finished task that meets the stated criteria.
8. **Interpreting:** Students describe the value of the problem solved relative to their backgrounds and experience.
9. **Reflecting:** Students broaden their evaluations of the problem solved and put it in larger context.

Celebration

10. **Celebration:** Students present their problem solved to the larger group while the large group acknowledges the value of the effort and results of the group.

The two groups were taught the concept of waves for eight weeks using the same content outline. The posttest was administered to the two groups after the treatment. The researchers scored the instrument immediately after its administration. Each correct answer was scored 2 marks. The maximum mark for all the fifty item questions was 100 marks.

The data collected were analyzed using t-test. All hypotheses were tested at the .05 level of significance.

Results

The analysis in Table 1 shows that the calculated t-value of 0.83 is less than the critical t-value of 1.96 at P<.05 alpha level. The result shows that there was no

significant difference in the background knowledge of the students in the two groups used for the study. The reason for this might be due to the fact that the topics of this study were found to be relatively new to the students. Any significant change in the course of the experiment would be attributed to the treatment.

Table 1

Analysis using t-test of pre-test scores of physics students taught with action learning and problem-based learning strategies

Strategy	N	\bar{X}	S.D	DF	t-cal	t-critical	Decision
Action Learning	235	24.96	6.84	278	0.83	1.96	NS
Problem-Based Learning	245	25.63	6.62				

NS = Not significant at P<.05 alpha level

Table 2

Analysis of Hypothesis 1

Strategy	N	\bar{X}	S.D	DF	t-cal	t-critical	Decision
Action learning	235	74.50	8.54	278	4.83	1.96	-
Problem-Based Learning	245	67.72	7.69				

* = Significant at P<.05 alpha level

Hypothesis One

There is not significant difference between the academic achievement of students taught with action learning strategy and those taught with problem-based learning strategy. The analysis is as shown in Table 2.

The result in Table 2 shows that the calculated t-value of 4.83 is greater than the critical t-value of 1.96. Therefore, the null hypothesis which stated that there is no significant difference between the academic achievement of students taught with action learning strategy and those taught with problem-based learning strategy is rejected. The table also shows that physics students taught with action learning strategy achieved significantly

better than those taught with problem-based learning strategy.

Hypothesis Two

There is no significant difference between the academic achievement of male and female physics students taught with action learning strategy. The analysis is as shown in Table 3.

The results in Table 3 show that the calculated t-value of 0.71 is less than the critical t-value of 1.96. Therefore, the null hypothesis which stated that there is not significant difference between the academic achievement of male and female physics students taught with action learning strategy is retained. This implies that male physics students are not significantly better

than their female counterparts when they are taught with action learning strategy.

Hypothesis Three

There is no significant difference between the academic achievement of male and female physics students taught with problem-based learning strategy. The analysis is shown in Table 4.

The result in Table 4 shows that the calculated t-value of 1.06 is less than the critical t- value of 1.96. Therefore, the null hypothesis which stated that there is no significant difference between the academic achievement of male and female physics students taught with problem based learning strategy is retained. This implies that male physics students are not significantly better than their female counterparts when they are taught with problem based strategy.

Table 3

Analysis using t-test of post-test scores of male and female physics students taught with action learning strategy

Action learning	N	\bar{X}	S.D	DF	t-cal	t-critical	Decision
Male	114	74.90	8.89	233	0.71	1.96	NS
Female	121	74.1\$0	8.22				

Ns = Not significant at P<05 alpha level

Table 4

Analysis using t-test of post-test scores of male and female physics students taught with problem-based learning

Problem based	N	\bar{X}	S.D	DF	t-cal	t-critical	Decision
Male	118	70.18	6.90	243	1.06	1.96	NS
Female	127	69.27	6.34				

Ns= not significant at P<05 alpha level

Discussion

The result from Table 2 is a clear indication that action learning strategy has a significant effect on students’ academic achievement in physics. This might be due to the fact that in action learning, students study their own actions and experiences in order to improve achievement. It focuses on research into action taken and as a result, knowledge emerges which lead to the improvement of skills, achievement, self-understanding, self-development, and systematic learning occurs which become self-sustaining in the long term.

This study is in agreement with the findings of Dilworth (1996) that action learning is a way to improve performance, promote learning, and position groups or organizations to adapt better in turbulent

times. It is also a way to develop the capabilities of individuals, groups, teams, and overall organizations. The study is also in line with the findings of Mumford (1994) that action learning has the potential of offering opportunities to promote shared learning, small self supporting groups, the reinforcement of a set of value and behaviors linked to attendance and retention, and a process for reflective learning whilst providing a social network for students. Mumford states further that action learning offers an interesting perspective on the preferences people have for different learning behaviours. That is, if every member recognizes their preferences and how individuals differ from one another, then it enables sets to recognize individual strengths. Although, physics students

achieved higher in action learning (74.50%) than problem-based learning (69.72%), problem-based learning strategy can equally be used to teach various concepts in physics because the strategy exposes the students to more realities of life and tendencies to work as scientist through acquiring knowledge by themselves in which the teacher only corrects their misconceptions (Afolabi & Akinbobola, 2009).

Table 3 analyses showed that there is no significant difference in the academic achievement of male and female physics students taught with action learning strategy. The non-significant gender related difference in achievement could be explained on the fact that action learning emphasizes learning by doing. The environment that the action learning created can allow students to learn in variety of different ways. Students (males and females) carry out actions on an individual basis and give the feedback to the set at their next scheduled meeting with observation, new knowledge acquisition from applying action, and new insights which are shared. This is ensured in all students without regard to gender. Hence, the boys' and girls' exposure to the same treatment enhanced their achievement with equal margin. This result also showed that the action learning is non-sex discriminatory especially in terms of enhancing students' achievement in physics. Therefore, it can be used for both boys and girls in physical classrooms. This result is in line with the findings of Onwioduokit, Akinbobola, and Udoh (2009) that gender has no effect on the academic achievement of physics students when they are taught with good and motivating instructional strategies. The result is also in agreement with the findings of Ikitde (2008) and Afolabi (2009) that any good instructional strategy does not discriminate between sexes in science teaching and learning.

The result of the analysis in Table 4 showed that male physics students are not significantly better than female counterparts when they are taught with problem-based learning strategy. This might be due to the fact that both male and female students interact with each other freely in a set, and this has led to developing problem solving skills, increasing the depth of understanding, enhancing motivation, and generating greater involvement of both male and female students with the concept. This is in line with Akinbobola (2008) and Afolabi (2009) that if both sexes learn the same thing under the same condition, they are likely to achieve in the same way. This research study is in support of Afolabi and Akinbobola (2009) that problem-based equalizes interactions between male and female physics students.

Conclusion

In the light of the findings of this study, the researchers concluded that action learning strategy enhances students' achievement in physics more than problem-based learning strategy. Also, gender has no significant effect on the academic achievement of physics students taught with action learning and problem based learning strategies.

As used in the context of this study, the teacher guides or fashioned out the problem to the students in problem-based learning. That is, the teacher helped the students to identify the problem while the students provide solution the problem. In action learning strategy, both the problem and solution are discovered by the students. The study reveals that action learning provides a way of bringing learners together to work in a small group to solve problems. Through this joint intellectual effort; resourcefulness, innovation, creativity, student-centered activities, reflection, construction of knowledge, respect of other people's view,

problem-solving skills, initiative, curiosity and critical thinking can be created, developed and sustained in physics classrooms.

Recommendations

In view of the implications of the findings from this study, the following recommendations are made

1. Without regard to sex difference, physics teacher should make effective use of action learning strategy in the classroom.
2. Publishers, federal, and states ministry of education should organize conferences, seminars, and workshops for physics teachers to acquaint them with the use of action learning strategy in teaching various concepts in physics.

3. The use of action learning strategy should not be limited to physics as a subject, but should be incorporated in other science subjects.
4. Textbooks authors should emphasize action learning strategy as an instructional procedure that should be adopted by physics teachers for effective teaching and learning of the subject.

Efforts should be geared towards the provision of science equipment necessary for enhancing the new strategy (action learning) by the government of Nigeria (state and federal), philanthropists, non-government organizations, private sectors, and organizations.

References

- Afolabi, F. (2009). The effects of inquiry-based and competitive learning strategies on academic performance of senior secondary school students in physics. *International Journal of Social and Management Sciences*, 2(2), 4-10.
- Afolabi, F., & Akinbobola, A. O. (2009). Constructivist problem-based learning technique and the academic achievement of physics students with low ability level in Nigeria secondary schools. *Eurasian Journal of Physics and Chemistry Education*, 1(1), 45-51.
- Akinbobola, A. O. (2006). Effects of teaching methods and study habits on students achievement senior secondary school physics, using a pictorial organizer. Unpublished Ph.D dissertation, University of Uyo, Uyo, Nigeria.
- Akinbobola, A. O. (2008). Facilitating Nigerian physics student attitude towards the concept of heat energy. *Scientia Paedagogica Experimentalis*, XLV(2), 353-366.
- Akinbobola, A. O. (2009). Enhancing students' attitude towards Nigerian senior secondary school physics through the use of cooperative, competitive and individualistic learning strategies. *Australian Journal of Teacher Education*, 34(1), 1-9.
- Alexandria, K., & Larson, L. (2002). Teachers bridge to constructivism *The Clearing House*, 75(3), 118-121.
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Dilworth, R. L. (1996). Action learning: Bridging academic and workplace domains. *The Journal of Workplace Learning*, 8(6), 48-56.
- Ikitde, G. A. (2008). Comparative effect of riverine and upland schools' location on biology students' achievement. *Scientia Paedagogica Experimentalis*, XLV(2), 267-280.
- Kramer, R. (2007). Leading change through action learning. *The Public Manager*, 36(3), 38-44.
- Maloney, D. P. (1994). Research on problem solving in physics. In D.L. Gabel (Ed.), *Handbook of research in science teaching and learning*, (pp. 327-354). New York: Macmillian.
- Marquardt, M. J. (2004). Harnessing the power of action learning. *T & D*, 58(6), 26-32.
- Marsick, V. (1987). *Learning in the workplace*. London: Croom Helm.
- Merrill, M. D. (2007). A task-centred instructional strategy. *Journal of Research on Technology in Education*, 40(1), 33-50.
- Mumford, A. (1994). *Authors and authorities in action learning*. England: MCB University Press Ltd.

- O' Hara, S., Bourner, T., & Webber, T. (2004). Practice of self managed action learning. *Action Learning Research and Practice*, 1(1), 29-45.
- Onwioduokit, F. A., Akinbobola, A. O., & Udoh, M. D. A. (2008). Sporting equipment and students academic performance in the concept of projectile in Nigerian senior secondary school physics. *African Research Review*, 2(1), 1 – 8.
- Revans, R. (1983). *ABC of action learning*. Kent, England; Chartwell-Bratt, Ltd.
- Robinson, M. (2001). It works but is it action learning? *Education and Training*, 43(2), 64-71.
- Smith, P. A. C., & O'Neil, J. (2003). A review of action learning literature, 1994 – 2000: Part 1-bibliography and comments. *Journal of Workplace Learning*, 15(2), 63-69.
- Twomey-Fosnot, C. (1989). *Enquiring teachers, enquiring learners: A constructivist approach for teaching*. New York: Teachers College Press.
- Weinstein, K. (1995). *Action learning: A journey in discovery and development*. London: Harper Collins Publishers.
- Yager, R. E. (1991). The constructivist learning model. *Science Teacher*, 58(6), 52-57.

Authors

Folashade Afolabi is a lecturer in the University of Ibadan, Nigeria and specializes in science education (physics).

Akinyemi Olufunminiyi Akinbobola specializes in science education (physics) in the University of Uyo, Nigeria.

TEACHER CANDIDATES' PERCEPTION ON HARSH DISCIPLINE AND THE FUTURE OF BAHRAINI SCHOOLS

by Nina Abdul Razzak
Bahrain Teachers' College—University of Bahrain

Abstract: A discussion with a focus group of assistant principals working in the public school system about harsh discipline in Bahraini elementary schools acted as a spark for this research project. This study focused on Bahraini childrearing practices implemented on young girls at home. Its purpose was to assess if the type of discipline subjected to youngsters at home as possibly being reflected in Bahraini teachers' disciplinary and classroom management practices at school and to discover whether a need exists to change the mindset of prospective female teachers in relation to the implementation of harsh discipline. The results indicated some need for such a change and a need for a future follow-up investigation of the studied group.

Key words: classroom management, corporal punishment, discipline, teachers, parents

Introduction

The Kingdom of Bahrain, an archipelago of islands in the Arab Gulf region, has a population that is distributed over three main types of communities: tribal, rural, and urban as identified by the anthropologist Khuri (1980). The poorer, rural areas in Bahrain are inhabited by the Shiite Muslims; the urban centers are inhabited by the wealthier Sunnis. Despite the economic, social, and cultural developments currently taking place in Bahrain, the distinction between Shi'i and Sunni Muslims remains to be – as Khuri (1980) had discovered – a pervasive factor influencing the different Bahraini communities as well as almost all other social entities in the kingdom. Despite these developments, the Bahraini public school system also appears to still be in need of major reforms, which explains the national education reform project underway in the kingdom. Bahraini public schools have been primarily shaped by the British educational system and in them students receive direct instruction, sit for exams from a very young age, and are obliged to wear uniforms. Discipline in such schools, as in the traditional British educational system, is a serious matter, and maintenance is a priority. The

question, however, is under what conditions is discipline being maintained in these schools?

The Bahrain Teachers' College (BTC) – a teacher preparatory college – is a key player in the kingdom's national education reform project. A formal discussion at BTC with a focus group of thirteen experienced assistant principals from the Bahraini public school system, centering on the topic of harsh discipline and the extent of its implementation in their elementary schools, resulted in a number of serious concerns for the researcher. Harsh discipline, or as is it is sometimes called corporal punishment, is defined as “an act carried out with the intention of causing a child to experience physical pain, but not injury, for purposes of correction or control” (Straus, 2001, p. 4). For the purposes of this study, the definition of harsh discipline extends to include not only harsh physical discipline but also harsh verbal discipline. In a way, both represent adults' ways of expressing their authority to children (Lawrence & Smith, 2008) and in their extreme forms, they both seem to do only harm and no good. One concern resulting from the assistant principals' discussion was about the short-term and long-term effects of

such discipline on children in general. For although to use or not use corporal punishment with children has been a controversial issue for years (Firmin & Castle, 2008), ample research has shown a strong association between harsh discipline and child internalizing and externalizing problems (Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004; Strauss & Field, 2003; Strauss & Stewart, 1999). The latter referred to behavior problems, while the former referred to psychological troubles (McKee et al., 2007). For example, corporal punishment in particular, has been found to increase antisocial behavior (Strauss & Donnelly, 1993); decrease relational trust and develop depression (Gershoff 2002); stimulate physical aggression (Huesmann & Podolski, 2003); and lead to detrimental adolescent behavior problems (Lansford et al., 2004). These effects are in addition to its adverse effect on cognitive ability, like limited or incorrect coding and weakened elaboration (Heuer & Reisberg, 1992; Perry, 2006) and its association with adverse changes in brain structure (Tomoda et al., 2008). Another more important concern that resulted from the discussion with the focus group of assistant principals was about the effects of such discipline particularly on public school graduates who enroll at Bahrain Teachers' College (BTC) as teacher candidates and who are to become integrated in the Bahraini schools, where there is a chance that they may replicate the same forms of harsh discipline they were subjected to at home as youngsters at the hands of their parents. What helped give rise to this concern were the several research findings supporting the transgenerational theory of punishing styles. For example, Blount and Robinson (1997) had concluded in a study that children having experienced different forms and levels of punishment were at a significantly high risk of approving that type of punishment and implementing it upon adult development. In an older study

by Dubanoski, Inaba, and Gerkewicz (1983), results indicated that teachers who were punished by their parents and who had been beaten in school were more likely to use corporal punishment on their students more often than those who were not. Similarly, another study of teachers by Lee and Weis (1992) showed that those who had experienced restrictive consequences at home were more likely to select aversive interventions for their students. Such concerns gave rise to a couple of important questions:

- What if such forms of harsh discipline have had detrimental effects on these teacher candidates' (i.e. BTC students') psychosocial development and may have similar effects on their future students?
- How such forms of harsh discipline at home may have shaped BTC students' perceptions on disciplining children, in general, and on classroom management in particular and may there be a need to try to change these perceptions to ensure a brighter future for Bahraini students?

Background and Purpose of the Study

Prior to touching upon these concerns and questions, it is important to report on the following main aspects of the focus group's (assistant principals') discussion:

- There is a general law issued by the Ministry of Education (MOE) in the Kingdom of Bahrain that prohibits harsh discipline in schools.
- This law is generally abided by in the Bahraini elementary schools, but there are cases of violation and the violations are more common in schools located in rural areas than in schools located in the urban centers; they are also more prevalent in the boys' schools than in the girls' schools.
- The violations are manifested in two forms of harsh discipline: verbal and physical, with the verbal existing at a higher scale than the physical. The

common types of verbal discipline in schools are yelling, name-calling, and negative criticism; while, the common types of physical discipline are slapping, pinching, hair-pulling, ear-pulling, and beating with a ruler.

- There is a general consensus among the elementary school assistant principals that harsh discipline needs to be completely eliminated from Bahraini schools because of the emotional scars it can sometimes leave in students; they all agree that an alternative needs to be found for more effective classroom management on the part of some Bahraini teachers guilty of resorting to such harmful discipline methods.

These key points of the formal discussion with the assistant principals, as well as the concerns and questions resulting from them, encouraged further investigation on the researcher's part that took the form of a research study of a group of newly enrolled BTC freshman students, the purpose of which was to assess: (a) how they were disciplined at home while growing up; (b) how the type of discipline they were subjected to as youngsters may have shaped their perceptions of ways of dealing with and managing young children (specifically of elementary school age) in the classroom; and (c) if there is a need to modify their perceptions, in order to ensure a future for students brighter than the current state of disciplinary affairs existing in Bahraini schools.

Students in BTC's Bachelor of Education program are all Bahraini nationals and descend from different origins (Arab Bedouins, Persians, East Africans, Indians, and Pakistanis). They are also adherents of Shi'i and Sunni Islam and belong mainly to Bahrain's rural and urban communities. Most of them, however, are Shi'i Muslims, and many of them inhabit the poorer, rural areas in Bahrain—the areas whose schools, according to the assistant

principals' report, witness more cases of harsh discipline than schools in other areas. In Bahrain, generally speaking, great value is placed on respect for elders and their authority (Bradley & Corwyn, 2005). This tends to make the child-rearing practices and views of its people more traditional than modern. In other words, child-rearing adults in the Bahraini society lean towards being less responsive and more punitive than in other societies (Bradley & Corwyn). Bahrain also, like all other cultures and societies in the world, is witness to not only cases of harsh discipline in school and at home but also cases of child maltreatment or abuse (Al-Mahroos, Abudulla, Kamal, & Al-Ansari, 2005). The two are significantly different in that child maltreatment or abuse involves non-accidental injury while harsh discipline, in the great majority of cases, does not (McKee et al., 2007). However in many cases, there is a mix between what is considered as adult-inflicted violence that leads to child abuse or maltreatment, on the one hand and harsh discipline on the other. This is especially true because in many parts of the Arab World, physical violence is viewed as an effective and normal child-rearing practice (Makhoul, Shayboub, & Jamal, 2004).

Knowing these facts and being aware of the research findings on the possible adverse effects of harsh discipline, this study was necessary as a potential tool for social change by (a) assessing the pervasiveness and scope of this phenomenon through BTC students' experiences and perceptions; (b) if need be, helping raise their awareness of such a problem; and (c) suggesting to them more positive alternatives of behavior correction and control through both informal methods as well as more formally structured courses of study. Research studies have found effective and positive discipline/parenting to be such an alternative (Lawrence & Smith, 2008). Positive discipline can be described best as

warm supportive relationships between adults and children and the goal of those relationships, especially in the school context, is to invite children to "... see themselves as capable of tackling tough challenges, overcoming obstacles, accomplishing great things, and behave accordingly" (Purkey & Strahan, 2002, p. 4).

Conceptual Framework

This study was guided by a conceptual framework based on:

- the principle expressed by the Generational Theory that adults discipline children according to practices earlier used by their own parents/caregivers (Firmin & Castle, 2008);
- the view supported mainly by Straus, Sugarman, and Giles-Sims (1997) regarding the need to abolish corporal discipline and replace it with more positive alternatives; and
- Baumrind's (1968) Parenting Styles Model and the conception that the authoritative style of parenting (i.e. being firm and strict but also encouraging interaction and dialogue with one's children is superior to all other styles.)

Methods and Materials

This study involved 82 female freshman students from BTC who participated in filling a questionnaire only after giving their formal consent to do so. Only females were selected for this study simply because the majority of BTC students in all programs of study and cohorts are females. The participants were deliberately selected for this study mainly because they had not yet completed any educational foundations courses like educational psychology or classroom management. Their views on parenting and discipline were therefore still intact and primarily the result of their own experiences and

upbringing without the influence of any formal presumptions or conceptual backgrounds. A face-to-face interview with each of the candidates would have been the ideal method of data collection in this qualitative study; however, because of the relatively large number of participants, a questionnaire was selected as an alternative.

The questionnaire (see Appendix A) that was used for data collection consisted of sixteen main items: eight of which (Questions 1-8) concentrated on the students' experiences of how they were disciplined as children, while five (Questions 9, 10, 14, 15, and 16) focused on the students' current views, as adults and prospective teachers, on harsh discipline practices, and three (Questions 11, 12, and 13) centered on the students' future plans for applying harsh discipline as parents and teachers and also required the students to provide justifications for their responses. The sixteen questionnaire items were rated on a frequency scale of one-to-five where 1=always, 2=frequently, 3=sometimes, 4=never, and 5=not applicable.

Results

Questionnaires were distributed to 82 females; 80 were completed and returned. The collected data were organized into the following 4 groups: students who received only harsh physical discipline; students who received only harsh verbal discipline; students who received both harsh verbal and physical discipline; and students who received no type of harsh discipline. Table 1 (see Appendix B) displays the findings in number of responses and these indicate several important interpretations organized into the following three categories.

Category 1: Students' Experiences of How They Were Disciplined as Children (Questions 1-8)

Less than half of the women (32) reported having been disciplined in a reasonable way and receiving an explanation for why they were being punished. The majority of them (22) were always or frequently reasonably disciplined, and some (10) were only sometimes reasonably disciplined. Of those who received some kind of harsh discipline (a total of 48), the majority of them (26) were subjected to only harsh verbal discipline; some (17) reported receiving both verbal and physical discipline; and a few (5) received only harsh physical discipline. The rate of harsh discipline in most cases was mainly occasional. In a few cases, it was frequent and only in the case of one woman it was constant. This woman was constantly subjected to both harsh verbal and physical discipline. The harsh physical discipline was done almost equally by the mother and the father in the group of women who were subjected to physical discipline alone and also in the group who received both harsh physical and verbal discipline. In the case of harsh verbal discipline, it appears to have been implemented more frequently by the mother than the father for those women who received this type of discipline.

The majority of those who were reasonably disciplined reported that their undesired behavior got corrected as a result. Only one woman reported that her behavior remained the same. A considerable number (38) of those who were harshly disciplined also reported behavior correction, but some (10) reported no behavior correction at all as a result of the harsh discipline to which they were subjected.

Category 2: Students' Current Views on Harsh Discipline Practices (Questions 9, 10, 14, 15 and 16)

Concerning the women's views on the effectiveness of harsh physical discipline, the majority (62) consider it as never being effective in correcting the undesired behavior of children. Some (13), however, believe that it can be sometimes effective, and a few (4) regard it as being always effective. More than half of the women (43) consider harsh verbal discipline as never being effective in correcting undesired behavior. A considerable number (24), however, think that it sometimes is effective, and some (7) see it as being frequently effective. Only a few (6) find it to be always effective. Half of the women (41) believe that avoiding harsh discipline never leads to spoiling a child. A large number (32) believe that it sometimes or frequently does, and a few (7) even believe that avoiding it always results in a spoiled child.

A large number of the women (46) believe that using harsh discipline (whether verbal or physical) with children is never justified; while, some (21) believe it is sometimes justified because, to begin with, it is the children's bad behaviors that lead parents and/or teachers to use harsh discipline practices. A few (13) believe it is always or frequently justified for the same reason. In regards to implementing harsh discipline practices in classrooms, only a few women (4) consider that it always or frequently makes classroom management easier. A considerable number (28) believe that it sometimes makes it easier, and the majority (48) think that it never makes it easier.

Category 3: Students' Future Disciplining Plans as Parents and Teachers (Questions 11, 12 and 13)

Only a few (15) women reported that, as parents, they would most probably never use the same type of discipline with their children that their parents had used with them. The majority of these women (11) had received some form of harsh discipline. However, almost half (39) of the 80 women reported that they, as parents, will most probably always or frequently use the same type of discipline their parents had used with them; a considerable number (26) reported that they would sometimes use it. Unexpectedly, to the researcher, a large number (38) of the women who reported that they would most probably use the same type of discipline as their parents were subjected as youngsters to some kind of harsh discipline.

In regards to using harsh physical discipline in class with students who are misbehaving, almost all of the women (78) maintained that they most probably would never resort to such practices as teachers. Of the two who would, one would do so sometimes and the other would do it always whenever students are misbehaving. The responses to the question *whether harsh verbal discipline would be resorted to in class with misbehaving students* were slightly different: A few (5) reported that they most probably would frequently resort to such type of discipline; some (21) would resort to it only sometimes; and a large number (52) would never resort to it. Surprisingly, among those who would sometimes or frequently use it are women who had been reasonably disciplined as youngsters.

Some of the reasons, which the women who are against using harsh verbal discipline gave for not using it, were (a) harsh verbal discipline would make the

students hate the teacher and hate school; (b) it is not an effective way of dealing with students; (c) it psychologically affects children in a negative way; (d) it hurts students' feelings and does not lead to behavior correction; (e) it is bad role-modeling and is morally wrong; and (f) it ruins the reputation of the teacher. The women who reported sometimes or frequently resorting to harsh verbal discipline in class said that they would use it mainly because it can be an effective tool in keeping students under control and in quickly communicating to them the message that their misbehavior will not be tolerated.

The reasons why some women would not resort to harsh physical discipline were (a) it is not effective and does not help in solving problems; (b) it is old-fashioned and uncivilized; (c) it hurts students; (d) it's not a teacher's right to lay a finger on a child; (e) it creates fear in the students and hatred between the students and the teacher; (f) it teaches children violence; (g) it makes things more complicated; and (h) it is religiously—precisely Islamicly—wrong to hit or beat up a child. The two women who reported sometimes resorting to harsh physical discipline in class said that they would use it mainly because with some misbehaving students, nothing else works.

Discussion and Conclusions

Before this study, the researcher was not sure how the participants were disciplined as youngsters. Research on Bahrain reports that the usual childrearing practices are traditional (i.e. more punitive) rather than using modern practices, especially in the rural areas. Is this tradition portrayed through the results of this study? Considering that more than half of the participants of this study received some kind of harsh discipline as youngsters, it is safe to say that the results are satisfactorily consistent with the research. If we assume

that others in Bahrain, like most of the participants were as children disciplined traditionally, this may explain the current existence of the harsh discipline in schools that the focus group of assistant principals reported. In other words and based on the generational theory, there may be an association between how the existing in-service teachers in Bahraini schools were brought up and disciplined at home, and the type of discipline they are now implementing in their homes and in their schools, probably for the reason that it is the mode of discipline they know best and are used to because of their upbringing.

If this truly is the case, then the objective would be to try to stop this cycle of harsh discipline implementation. This study is a first step in that direction because it aspires to bring on some kind of social change, especially because its results demonstrate that there are some teacher candidates who somewhat believe in the effectiveness of harsh discipline, the verbal type in particular. In addition, even though, some of the study's participants reported that they most probably would never resort to harsh discipline in their classrooms, there is no guarantee that they would not; for how many people promise themselves when they are young to never repeat the same behaviors of their parents/teachers only to find themselves as adults doing exactly the same things? This pitfall can be avoided through proper education and training. What is needed is to educate and train the current teacher candidates, especially the ones who were brought up traditionally and harshly disciplined, in alternative methods of discipline so that when they work in the classrooms as teachers, they do not unconsciously fall into the trap of applying a generational model of discipline. The education and training should be done both formally and informally: formally, through BTC courses (mainly courses in educational psychology and educational foundations especially classroom management) and informally,

through advising, talks, awareness campaigns, etc. What also needs to be done is a follow-up study in one or two years of the same sample of participants when they are in their second or third year of study, in order to measure the changes and hopefully progress in their disciplinary views and future plans.

As for the teacher candidates who were reasonably disciplined as children and who are familiar with positive forms of discipline, they too would benefit from such education and training as a kind of reinforcement and justification of the practices with which they were brought up.

Strengths and Limitations of the Study

The fact that a triangulated data collection approach was used in this study lends some credibility to its findings. What makes its research findings more credible, though, is the fact that when the researcher returned to the participants to try to gain verification of the data interpretations, all the findings were recognized and agreed on by the participants. However, this study was not free of limitations for the following reasons: (a) the number and gender of students studied was limited, and therefore, with a larger or more diverse sample, different findings may be obtained or better generalizations of this study's findings made; (b) the students' responses may have not been totally honest out of fear of sharing something so personal to their families; and (c) the study focused only on Bahraini public schools, and the situation in the private school sector may be totally different.

Concluding Remarks

This study focused only on Bahraini women and the situation in the public girls' schools. What would be interesting, too, is to conduct a study of Bahraini men and the disciplinary situation present in the Bahraini boys' schools, especially because

it appears that the aspect of harsh discipline exists there at a larger scale. Even if such a study may not be able to generate new results of knowledge of the matter, it may be able to confirm what the situation is like in the Bahraini schools in general and would be able to give us a clearer idea of the scope of the problem. A comparative study between the girls' and the boys' schools, in other words, would probably help in clarifying better at which cost discipline is being maintained in the Bahraini public school system, as a whole, and in outlining what professional development needs on the part of the teachers should be addressed. Such a study

would, as a result, identify the challenges in terms of classroom management training to be expected by a college such as BTC, which is a key player in the reform project of these schools. It is possible that a number of these challenges could be very much similar to those faced by other colleges in different parts of the world and that happen to have within their own international context a mission similar to that of BTC. These other colleges, therefore, could themselves also benefitting from the outcomes of such a comparative study.

Appendix A

Questionnaire

Fill in the blanks with one of these words—always, frequently, sometimes, never, or not applicable.

1. When I was growing up, I would _____ get physically disciplined in a harsh way (*slapped or beaten or kicked or hair/ear pulled, etc.*) for doing wrong things.
2. When misbehaving as a child, I _____ received harsh verbal discipline (*was yelled at, called names, cursed at, negatively criticized or mistreated, etc.*).
3. When I did wrong things as a child, I _____ was reasonably disciplined and received an explanation of why I was being punished.
4. After being harshly disciplined physically, my undesired behaviour would _____ get corrected.
5. After being harshly disciplined verbally, my undesired behaviour would _____ get corrected.
6. After being reasonably disciplined and receiving an explanation of why I was being punished, my undesired behaviour would _____ get corrected.
7. (A) The harsh physical discipline at home was _____ done by my father. AND (B) The harsh physical discipline at home was _____ done by my mother.
8. (A) The harsh verbal discipline at home was _____ done by my father. AND (B) The harsh verbal discipline at home was _____ done by my mother.
9. Now as an adult, I believe that harsh physical discipline is _____ effective in correcting the undesired behaviour of children.
10. Now as an adult, I believe that harsh verbal discipline is _____ effective in correcting the undesired behaviour of children.
11. As a parent, I will most probably _____ use the same type of discipline with my own children that my parents had used with me. Why or why not?
12. As a teacher, I will most probably _____ resort to harsh physical discipline when students are misbehaving. Why or why not?
13. As a teacher, I will most probably _____ resort to harsh verbal discipline when students are misbehaving. Why or why not?
14. As an adult, I believe that avoiding disciplining a child harshly _____ spoils a child.
15. As both an adult and a prospective teacher, I believe that using harsh discipline (*whether verbal or physical*) with children is _____ justified because, to begin with, it is the children's problem behaviours that lead parents and/or teachers to use harsh discipline practices.
16. Implementing harsh discipline practices in class _____ makes managing the classroom easier.

Appendix B

Table 1

Group	Only Harsh Physical Discipline	Only Harsh Verbal Discipline	Harsh Physical and Verbal Discipline	No Harsh Discipline
Total Out of 80 Disciplined + Frequency	5 0 Always 1 Frequently 4 Sometimes	26 0 Always 5 Frequently 21 Sometimes	17 <u>Physical:</u> 1 Always 1 Frequently 15 Sometimes <u>Verbal:</u> 1 Always 5 Frequently 11 Sometimes	32 <u>Reasonably Disciplined:</u> 11 Always 11 Frequently 10 Sometimes
Behavior Correction	2 Always 2 Frequently 0 Sometimes 1 Never	8 Always 7 Frequently 6 Sometimes 5 Never	<u>Physical:</u> 4 Always 5 Frequently 4 Sometimes 4 Never <u>Verbal:</u> 5 Always 3 Frequently 5 Sometimes 4 Never	14 Always 10 Frequently 5 Sometimes 1 Never
Adult Implementing Harsh Physical Discipline	<u>Father:</u> 0 Always 2 Frequently 3 Sometimes 0 Never <u>Mother:</u> 0 Always 4 Frequently 1 Sometimes 0 Never	NA	<u>Father:</u> 2 Always 0 Frequently 8 Sometimes 7 Never <u>Mother:</u> 1 Always 3 Frequently 7 Sometimes 6 Never	NA
Adult Implementing Harsh Verbal Discipline	NA	<u>Father:</u> 0 Always 2 Frequently 17 Sometimes 7 Never <u>Mother:</u> 6 Always 4 Frequently 11 Sometimes 5 Never	<u>Father:</u> 1 Always 1 Frequently 10 Sometimes 5 Never <u>Mother:</u> 3 Always 2 Frequently 8 Sometimes 4 Never	NA
Physical Discipline's Effectiveness	1 Always 0 Frequently 2 Sometimes 2 Never	1 Always 0 Frequently 7 Sometimes 18 Never	2 Always 1 Frequently 1 Sometimes 13 Never	0 Always 0 Frequently 3 Sometimes 29 Never
Verbal Discipline's Effectiveness	0 Always 0 Frequently 0 Sometimes 5 Never	1 Always 3 Frequently 14 Sometimes 8 Never	4 Always 2 Frequently 3 Sometimes 8 Never	1 Always 2 Frequently 7 Sometimes 22 Never
Using Parents' Discipline	1 Always 0 Frequently 3 Sometimes 1 Never	7 Always 5 Frequently 13 Sometimes 1 Never	2 Always 3 Frequently 4 Sometimes 8 Never	13 Always 8 Frequently 6 Sometimes 5 Never
Will Resort to Harsh Physical Discipline as a Teacher	1 Always 0 Frequently 0 Sometimes 4 Never	0 Always 0 Frequently 0 Sometimes 26 Never	0 Always 0 Frequently 1 Sometimes 16 Never	32 Always 0 Frequently 0 Sometimes 0 Never
Will Resort to Harsh Verbal Discipline as a Teacher	0 Always 0 Frequently 0 Sometimes 5 Never	0 Always 2 Frequently 12 Sometimes 12 Never	0 Always 2 Frequently 4 Sometimes 11 Never	0 Always 1 Frequently 5 Sometimes 24 Never
Avoiding Disciplining a Child Harshly Spoils a Child	0 Always 0 Frequently 4 Sometimes 1 Never	5 Always 3 Frequently 7 Sometimes 11 Never	1 Always 1 Frequently 7 Sometimes 8 Never	1 Always 2 Frequently 8 Sometimes 21 Never
Using Harsh Discipline is Justified	2 Always 0 Frequently 1 Sometimes 2 Never	0 Always 5 Frequently 6 Sometimes 15 Never	0 Always 2 Frequently 6 Sometimes 9 Never	1 Always 3 Frequently 8 Sometimes 20 Never
Implementing Harsh Discipline Makes Classroom Management Easier	0 Always 0 Frequently 1 Sometimes 4 Never	1 Always 1 Frequently 11 Sometimes 13 Never	1 Always 0 Frequently 4 Sometimes 12 Never	1 Always 0 Frequently 12 Sometimes 19 Never

*The same woman who was always physically disciplined harshly was also always verbally disciplined harshly.

References

- Al-Mahroos, F., Abdulla, F., Kamal, S., & Al-Ansari, A. (2005). Child abuse: Bahrain's experience. *Child Abuse and Neglect*, 29(2), 187-193.
- Baumrind, D. (1968). Authoritarian vs. authoritative control. *Adolescence*, 3(11), 255-272.
- Blount, J., & Robinson, G. S. (1997). Are punishing styles transgenerational? Exploring the effects of order, gender, and family environment. Unpublished manuscript, North Carolina A & T State University.
- Bradley, R. H., & Corwyn, R. F. (2005). Caring for children around the world: A view from HOME. *International Journal of Behavioral Development*, 29(6), 468-478. doi: 10.1177/01650250500146925
- Dubanoski, R. A., Inaba, M., & Gerkewicz, K. (1983). Corporal punishment in schools: Myths, problems, and alternatives. *Child Abuse & Neglect*, 7(3), 271-278.
- Firmin, M. W., & Castle, S. L. (2008). Early childhood discipline: A review of the literature. *Journal of Research on Christian Education*, 17(1), 107-129. doi: 10.1080/10656210801909715
- Gershoff, E. T. (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *American Psychological Association*, 128, 539-579.
- Heuer, F., & Reisberg, D. (1992). Emotion, arousal, and memory for detail. In S.A. Christianson (Ed.), *The handbook of emotion and memory: Research and theory* (pp.151-180). Hillsdale, NJ: Lawrence Erlbaum.
- Huesmann, R., & Podolski, C. L. (2003). Punishment: A psychological perspective. In S. McConville (Ed.), *The use of punishment* (pp.55-88). Devon, UK: William Pub.
- Khuri, F. I. (1980). *Tribe and state in Bahrain: The transformation of social and political authority in an Arab state*. Chicago: University of Chicago Press.
- Lansford, J. E., Deater-Deckard, K., Dodge, K. A., Bates, J. A., & Pettit, G. S. (2004). Ethnic differences in the link between physical discipline and later adolescent externalizing behaviors. *Journal of Child Psychology and Psychiatry*, 45, 801-812. doi: 10.1111/j.1469-7610.2004.00273.x
- Lawrence, J. & Smith, A. (2008). A place where it is not okay to hit children: The role of professionals. *Social Policy Journal of New Zealand*, 34, 113-123.
- Lee, S. W. & Weis, G. (1992, March). Origins of teachers' selection of aversive interventions. Paper presented at the annual meeting of the National Association of School Psychologists, Nashville, TN. Abstract retrieved from http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_ERICExtSearch_SearchValue_0=ED454183&ERICExtSearch_SearchType_0=no&accno=ED454183
- Makhoul, J., Shayboub, R., & Jamal, J. (2004). The silent determinant of child labor. *Journal of Children and Poverty*, 10(2), 131-147.

- McKee, L., Roland, E., Coffelt, N., Olson, A., Forehand, R., Massari, C., . . . Zens, M. S. (2007). Harsh discipline and child problem behaviors: The roles of positive parenting and gender. *Journal of Family Violence, 22*(4), 187-196. doi: 10.1007/s10896-007-9070-6
- Perry, B. D. (2006). Applying principles of neurodevelopment to clinical work with maltreated and traumatized children: The neurosequential model of therapeutics. In N. Boyd Webb (Ed.), *Working with traumatized youth in child welfare*, (pp.27-52). New York: Guilford Press.
- Purkey, W., & Strahan, D. (2002). *Inviting positive classroom discipline*. Westerville, OH: National Middle School Association.
- Straus, M. A. (2001). *Beating the devil out of them: Corporal punishment in American families and its effect on children* (2nd ed.). New Brunswick, NJ: Transaction Publishers.
- Straus, M. A., & Donnelly, D. A. (1993). Corporal punishment of adolescents by American parents. *Youth and Society, 24*, 419-442
- Straus, M. A., & Field, C. J. (2003). Psychological aggression by American parents: National data on prevalence, chronicity, severity, and duration, in relation to child and family characteristics. *Journal of Marriage and Family, 65*, 795-808. doi: 10.1111/j.1741-3737.2003.00795.x
- Straus, M. A., & Stewart, J. H. (1999). Corporal punishment by American parents: National data on prevalence, chronicity, severity, and duration in relation to child and family characteristics. *Clinical Child and Family Psychology Review, 2*(2), 55-70.
- Straus, M. A., Sugarman, D., & Giles-Sims, J. (1997). Spanking by parents and subsequent antisocial behavior of children. *Archives of Pediatric and Adolescent Medicine, 151*, 761-767. doi: 10.1001/archpedi.1997.02170450011002
- Tomoda, A. et al. (2008, November). *Adverse effects of harsh corporal punishment in childhood on brain gray matter volume*. Paper presented at the Society for Neuroscience, Washington, DC.

Author

Nina Abdul Razzak (Ph.D.), assistant professor of educational psychology at Bahrain Teachers' College (BTC) at the University of Bahrain (UOB), has research interests in best practices in education, technology access and integration in schools, the effects of child maltreatment, and gender-related issues.

HOCUS FOCUS:
EVALUATING THE PEDAGOGICAL IMPLICATIONS OF
INTEGRATING MAGIC TRICKS IN CLASSROOM INSTRUCTION

by Kevin Spencer
Hocus Focus Education

Abstract: *Educators are being asked to teach an increasingly heterogeneous population of students, some of whom face additional learning challenges. Many of these students have – or will have – a significant need to develop not only academic skills but also functional and social skills. However, instruction that addresses these needs is often not a component of the school-wide curriculum. Equipping teachers with new resources and the proper preparation to use them is essential for student growth, development, and success. This project was implemented to determine if learning and performing magic tricks as a part of an educational activity could bring about improvements in specific areas for special learners. Teachers used the **Hocus Focus**[™] curriculum for this project. Results demonstrated that the learning and performing of magic tricks could have psychological, behavioral, and cognitive benefits for students. However, it also demonstrated improvements in teacher efficacy, proficiency, and satisfaction.*

Keywords: learning challenges, academic skill improvement, focus, learners with disabilities, magic

Introduction

It has become critical for teachers to have a continuum of interventions and specialized strategies they can effectively implement in their classrooms while modifying their lesson plans to meet the needs of their students (Schmidt, Rozendal, & Greenman, 2002).

Hocus Focus[™] is an activity-based, student-centered, academic, and functional curriculum that integrates simple magic tricks into classroom instruction. Each lesson is developed to align with U.S. National and Common Core State Standards of Learning as well as achieve specific functional objectives. The focus of this paper will address the findings of how the organized integration of magic tricks in the classroom can empower teachers and students to achieve desired outcomes and improve important learning skills identified in Bloom's Taxonomy of Learning, Levine's Constructs of Neurodevelopmental Function, and Marzano's New Taxonomy of Learning. These skills include organizing tasks and movements, creativity, sequencing, problem-solving, critical thinking, concentration, fine and gross motor skills, observational techniques, communication

and presentation, and social behaviors (Marzano, 2007).

In order to put into perspective the value of the Hocus Focus[™] curriculum as an effective tool educators can use to teach all students in an inclusive classroom environment, one must have an understanding of the changes in student demographics, the impact of current laws regarding the public education of special needs students, and the power of the arts to engage learners.

Literature Review

Legislation and Inclusion. In 1975, the U.S. Congress passed Public Law 94-142 (Education of All Handicapped Children Act), now codified as the Individual with Disabilities Education Act (IDEIA). In order to receive federal funds, states must develop and implement policies that assure a free appropriate public education (FAPE) to all children with disabilities. IDEIA became a major instrument of change in U.S. public schools in the later part of the 20th century. In the 21st century, the No Child Left Behind Act of 2001 (NCLB, Public Law 107-110) has become the instrument of change in U.S. education by

mandating that all states establish academic content and achievement standards.

Globally, the demand for improved access and more effective teaching tools for students with a disability classification are not expected to diminish. A study released by the U.S. Centers for Disease Control and Prevention (CDC) revealed that about one in six children in the United States (15% of American children) have been diagnosed with some type of developmental disorder – an increase of almost 2% from 1997 to 2008 or almost 2 million children (Boyle et al., 2011). The World Report on Disabilities estimates the number of children with disabilities under the age of 18 at 150 million and rising (World Health Organization, 2011).

It is critically important that all children have access to education; they must be able to participate in school life and achieve desired outcomes from their education experiences. “While subject-based academic performance is often used as an indicator of learning outcomes, ‘learning achievement’ needs to be conceived more broadly as the acquisition of the values, attitudes, knowledge, and skills required to meet the challenges of contemporary societies” (United Nations Educational, Scientific, and Cultural Organization, 2009, p. 6).

The Levin Institute (2011) states, “when possible, students should be mainstreamed, schools should be flexible in their curriculum and assessments, classroom specialist should be provided, and education and rehabilitation services should be linked” (§ 21). There is a critical need for educators to work cooperatively with their colleagues in other disciplines, i.e. school psychologists, therapists, guidance counselors, and speech/language pathologists. When activities that are implemented to meet academic objectives also reinforce psychomotor and social objectives, the synergy among professionals can lead to greater achievement in academic and social skills with at-risk and students with learning disabilities.

The global situation demands that we evaluate our present practices and demonstrate a willingness to abandon those that are inefficient for those that have been proven effective (Gable & Hendrickson, 2004). In inclusive classroom environments, methods of instruction that best benefit all students must be implemented in order to serve the needs of every learner. This requires educators to find new methods and tools to support a creative inclusive approach to education.

The Arts in the Classroom. The New Oxford American Dictionary defines art as “the expression or application of human creative skill and imagination” and the arts as “subjects of study primarily concerned with the process and products of human creativity and social life.” Shelley Esaak (2003), a portrait artist, graphic designer, writer, and educator, has written the About.com Art History website. She defines art this way:

Art stimulates different parts of our brains to make us laugh or incite us to riot, with a whole gamut of emotions in between. Art gives us a way to be creative and express ourselves. For some people, art is the entire reason they get out of bed in the morning. You could say, “Art is something that makes us more thoughtful and well-rounded humans.” (§ 2)

Research has demonstrated that the arts ignite student creativity (Burton, Horowitz, & Abeles, 1999; Fisk, 1999), and this can play an important role in supporting the diverse learning needs of students. Evidence indicates that learning through the arts can have a profound impact on learning in other domains including personal and social competencies (Fisk).

A study of over 2,000 students attending public schools in grades 4-8 found a significant relationship between arts programs and creative, cognitive, and personal competencies needed for academic success (Burton et al., 1999). When academic or social objectives are taught through the arts, they provide children and young adults with authentic learning experiences that engage

their minds, hearts, and bodies. These learning experiences are real and meaningful for them, bringing together multiple skills and abilities. When schools prepare students only for academic success (e.g., getting the answer correct), it is “detrimental to creative growth because creative learning involves experimenting, taking risks, making mistakes, and correcting them” (Cote, 2011, p. 129). Eisner (2002) argued that more attention should be given to the cognitive aspects of the arts. Eisner’s position is that arts integration into curriculum can teach students valuable skills that include how to make good judgments about qualitative relationships, problems can have more than one solution, questions can have more than one answer, small differences can have large effects, and there are many ways to see and interpret the world (perspective).

However, research has also demonstrated that arts integration can have an impact of teacher transformation and resilience. In a Lesley University study on arts integration entitled “Voices from the Field” (Bellisario, Donovan, Prendergast, & Stevenson, 2009), researchers found

Almost 66% of teachers responding to the survey report that their participation in the ITA (Integrated Teaching through the Arts) program, and its lasting effects on their teaching practice, have played a role in their staying in the teaching profession. In a time when teacher turnover is a substantial policy problem and when teachers face mounting challenges, such as overcrowded classrooms, testing and Adequate Yearly Progress (AYP – a measure of No Child Left Behind) pressure, and stress in their own and students’ lives, this link between arts integration and teacher resilience is notable (p. 3, ¶ 3).

Magic in the Classroom.

The art of magic has a story as old as recorded history. Almost every society has some recorded form of magic. It may be the oldest and most universal of the performing arts because it easily translates from one culture to another

(Christopher & Christopher, 2005) The Westcar Papyrus, written approximately 3000 BC, records the performance of a magician in the Pharaoh's court. Cave paintings by prehistoric people in southern France and northern Spain contain images of magicians performing their tricks (Doerflinger, 1977). Magicians performed in the streets and marketplaces of ancient Greece and Rome. Magicians of the past were an important part of society and significant players in the world of theatre. The tricks that magicians perform are the very Webster definition of the word “art” – “works produced by creative skill and imagination.” The problem-solving and creative abilities of magicians have made significant contributions to modern civilization including the parachute, vending machines, and the technology used to show movies.

The art of magic has the potential to capture and hold the attention of people of all ages. Children are especially intrigued by the seeming impossibility of a magic trick. Throughout the 1980s and 1990s, a small number of education researchers evaluated the effectiveness of using magic tricks with students with learning disabilities. Each researcher concluded that future research should be done based on their positive results, which include

- Magic tricks offer a creative means for stimulating the senses in special education students (Frith & Walker, 1983).
- Magic tricks enhance the learning experience and encourage creative problem-solving skills, observational techniques, and critical thinking (McCormack, 1985).
- Magic tricks provide a strategy for building teamwork and self-esteem in children with Emotional Behavior Disorders (Broome, 1989).
- Magic tricks in an educational setting can help students with learning differences attain higher self-esteem and self-confidence (Ezell & Ezell, 2003).

Dr. Aubrey Fine is a licensed psychologist who works with children with learning disabilities, and he is also a Professor in the College of Education and Integrative Studies at California

Polytechnic State University (Pomona, CA). Dr. Fine recognizes the value of magic as an intervention. He wrote

The teaching of magic has many therapeutic benefits. Not only does it work on confidence and communication, but it also can be used to teach cognitive and motor skills. It is amazing that people will work hard to learn materials that are intrinsically motivating to them. So often people don't realize that they are enhancing these skills because their primary goal is self-satisfaction and developing the skills to perform the magic. I have been amazed to watch children with ADHD or learning disabilities work slowly and carefully, following the necessary steps, because they want to get the trick or illusion correct. (Personal Correspondence, August 23, 2009)

Incorporating magic tricks into the learning process can be a powerful means of tapping into the creative process and drawing on multiple learning modalities – visual, aural, and kinesthetic – allowing students to learn facts and concepts they can see, touch, manipulate, and talk about. Simple tricks can transform the learning process into a tangible and visible learning experience. It can also provide an appropriate means to build confidence, self-esteem, self-identity, and develop self-determination skills in students (Levin, 2006).

Learning is deepest when students have the capacity to represent what they have learned to others. Helene Illeris, Professor of Arts Education at the University of Agder in Norway, suggests that, in the performative aesthetic learning process, knowledge can be communicated through symbolic forms (Illeris, 2011). The performance of a magic trick is a motivating, skillful, and appropriate way to provide a platform for demonstrating what students have learned.

The Hocus Focustm Curriculum

Hocus Focustm is an activity-based, student-centered educational curriculum that integrates the art of magic into 11 weeks of lesson plans (10 lessons and a bonus lesson) with the flexibility for teacher adaptation based on the abilities of the students and available classroom time (Spencer, 2012). It was developed for two reasons: (a) to tap into the curiosity and intrinsic motivation of children in order to engage them in the learning process, and (b) to provide organized lesson plans that would allow for inter-disciplinary collaborations between educators, psychologists, and therapists to concentrate on and reinforce the desired outcomes (academically and functionally) identified in an Individual Education Plan (IEP).

The curriculum includes the Teacher's Manual, an Instructional DVD, Supplemental CD, and the magic supplies for each lesson. The Teacher's Manual is divided into five sections: Introduction to the Curriculum, Educational Factors, Guidelines for Implementation (assessment, instruction methods, etc.), Assessment Surveys, and Lesson Plans. Each lesson plan contains goals and objectives aligned with at least one National Standard of Learning and Common Core State Standard, activities to support those objectives, step-by-step illustrations for the trick being taught, and assessment tools to evaluate the students' progress. In addition to the academic objective, each lesson also contains cognitive, motor, psychosocial, speech and functional objectives.

The Instructional DVD is for use as a part of the classroom instruction. The DVD menu lists each lesson as a separate chapter. Each lesson contains the demonstration of the trick followed by the step-by-step instructions for students. The step-by-step instructions on the DVD align with the step-by-step illustrations provided to each student by the teacher. The DVD is also English subtitled.

The Supplemental CD contains the illustrated instructions for all the magic tricks in each lesson, copies of the assessment and evaluation surveys to be used, a Certificate of Completion,

the Magician's Code of Ethics, the "Wizard's Book of Secrets," and a letter to the parents introducing them to the concepts and benefits of the curriculum. This curriculum has been reviewed by Mary Beth Noll, PhD, and Kathryn Johnson, PhD (Department of Special Education, St. Cloud State University, MN).

There were several specific questions on which the researchers focused regarding the efficacy of the Hocus Focus™ curriculum. This paper, however, will focus on only one of those questions: How does the use of this curriculum encourage student growth and development, i.e. does it achieve measurable outcomes in the improvement of the previously identified cognitive and psychomotor skills as well as student affect?

Method

Settings and Participants

Three settings were selected with varying demographics in order to assess the effects of the Hocus Focus™ curriculum on diverse populations. These settings comprised nine teachers and seventy-six students.

Setting one included four classrooms at a public school in north St. Louis County, Missouri. Each classroom contained between 8 and 11 students who had been placed within the school via the decision of an Individual Education Plan (IEP) team. The students' diagnoses included autism, emotional behavior disorder, learning disability, ADHD, intellectual disability, and communication disorders (speech and language).

The first classroom was made up entirely of female students, ages 14-18, who had educational diagnoses of emotional disturbance and/or learning disabilities. The second classroom was made up of male and female students, ages 18-21, with educational diagnosis of autism and/or intellectual disabilities. The third classroom was made up of all male students, ages 15-18, with educational diagnosis of emotional disturbance and/or learning disabilities. The final classroom was made up of

male and female students, ages 14-16, with a primary educational diagnosis of learning disability. There were 19 females and 15 males included in the study. The students were predominately African-American from lower socio-economic neighborhoods. One supervisor, working cooperatively with each teacher, was placed in charge of overseeing the evaluation of the curriculum in each classroom. The objective was to determine if the Hocus Focus™ curriculum would positively impact student growth by improving cognitive abilities and influencing behaviors.

Setting two included four separate level IV classrooms containing a total of twenty-seven students in the state of Minnesota (USA). All students were diagnosed as having an emotional behavior disorder and learning disability. The students' ages ranged from 12-14 years old. The evaluation of the curriculum in each classroom was under the supervision of a teacher and one graduate student from the Department of Special Education at Saint Cloud State University (SCSU) in Saint Cloud, Minnesota. The objective was to improve on task behaviors, frustration tolerance, sequencing, and social behaviors.

Setting three included one classroom containing fifteen students, ages 12-14, who were identified as having a learning disability under Minnesota law to receive special education services. The evaluation of the curriculum in this classroom was under the supervision of a teacher and a graduate student from the Department of Special Education at Saint Cloud State University (SCSU) in Saint Cloud, Minnesota. The teacher and graduate student adapted the curriculum by selecting three students who would learn, present, and teach the magic tricks to the remaining twelve students in the class. The objective was to decrease inappropriate behaviors in one student with emotional behavior disorder and increase self-advocacy skills of one student with a Learning Disability and one student with Asperger's disorder (ASD)

Materials and Procedures

Data were systematically collected and evaluated utilizing both qualitative and quantitative data collection methods. These methods included observation checklists, pre/mid/post student surveys, pre/post teacher surveys, teacher observation data sheets, and anecdotal recording by teachers and students. Analyses were conducted across data collected from each of the three settings. In this manner, validity of the emergent themes was ensured.

In setting one, students were given two self-assessment tools to complete at three distinct times throughout the 11-week curriculum. The first assessment tool used was the Rosenberg Self-Esteem Scale. The second assessment tool was the Hocus Focustm Self-Efficacy Scale. This scale was created specifically for this curriculum and is based on the self-efficacy theories of Albert Bandura (Pajares & Urdan, 2006). These were administered on the same timeline as the teachers' surveys, i.e. prior to start of curriculum, week six of curriculum, and after the final week. Students were also asked to keep a *Wizard's Book of Secrets* which contained their thoughts, ideas, and stories for each trick learned through the curriculum. Likewise teachers were asked to keep short anecdotal notes about the ease of use of the curriculum, noting what worked, what did not work, and other thoughts about the curriculum. Both the *Wizard's Book of Secrets* and the teacher notes were collected and analyzed. Each of the data sets was initially coded by applying both deductive and inductive coding strategies.

The supervisor scheduled classroom observations on weeks 1, 3, 6, 9 as well as during the final performance. Each class was observed for either the entire lesson or a minimum of 20 minutes. Informal interviews were conducted with students and teacher participants following observations.

In settings two and three, students were given two self-assessment tools to complete at the beginning and end of the curriculum evaluation. The first assessment tool used was the

Rosenberg Self-Esteem Scale. The second assessment tool was the Hocus Focustm Self-Efficacy Scale created specifically for this curriculum and based on the self-efficacy theories of Albert Bandura (Bandura, 2006). Informal student interviews were conducted throughout the evaluation period. Teachers were asked to observe student behaviors and make a careful review of the research process.

Findings

The findings of this study can be categorized into three primary areas: first, the psychological and cognitive benefits for students (self-esteem and self-efficacy; self-determination and self-regulation; self-actualization/self-realization; metacognition; sequencing and following complex directions, etc.); second, the pedagogical implications for students (engagement; communication and collaboration; creativity and innovation; critical thinking and problem solving); and third, the pedagogical implications for teachers. It is this third category which will be discussed more fully.

Pedagogical Implications for Teachers

Teacher Efficacy. Teachers who reviewed the Hocus Focustm curriculum prior to introducing it to their students demonstrated a greater confidence in their ability to assist students in reaching the performance and academic objectives. However, all of the teachers included in this study grew in their level of confidence in unison with their students. This allowed teachers to build a stronger rapport with their learners assisting them in classroom instruction, classroom management, student engagement, and student motivation.

As educators, it is our job to provide an environment that is conducive to learning – one that is engaging, goal-specific, and challenging. However, we must also not lose sight of the concept that learning can be fun. Individual Education Plans (IEP) must describe strategies for providing the student with acceptable and understandable ways of communication, teaching situation-appropriate social behaviors,

and providing experiences that satisfy sensory needs. Hocus Focus™ provides educators with another strategy to assist their students in meeting these IEP objectives. The Hocus Focus™ curriculum provides educators with proven strategies and tools to help their students reach their goals and better prepare for the future. Integrating simple magic tricks into the overall learning process can be a powerful and motivating way to engage students in their education and educators in the learning process – academically and functionally.

Teacher Proficiency. Knowledge of the subject to be taught, the skills to be developed, and the materials that embody the content of the curriculum provide the fundamentals for proficient teaching (National Board for Professional Teaching Standards, 2002). As teachers became more familiar with the content of the Hocus Focus™ curriculum, they became more effective in teaching the lessons. One of the teachers in the evaluation conducted by Bradley Walkenhorst, MAT (Special School District of St. Louis County, MO) stated that she had many “should’ve” moments after a class when she could identify when she could have made a connection between the Hocus Focus™ curriculum and the skills taught in the core curriculum. She described these as a light bulb going on after a particularly difficult lesson as she reflected back on what could have been done differently.

Teacher Satisfaction. Studies have concluded that “teacher motivation is based in the freedom to try new ideas, achievement of appropriate responsibility levels, and intrinsic work elements” (Sylvia & Hutchinson, 1985). They explain that real job satisfaction comes from the gratification of higher-order needs. Teachers who implemented the Hocus Focus™ curriculum in this study found satisfaction in bringing new ideas and strategies to their students, observing student growth, and celebrating student successes.

Discussion

The Hocus Focus™ curriculum provides educators with access to specific, goal-oriented magic tricks for use in the classroom. Each of these tricks assist the student in the achievement a specific functional and/or academic objective aligned with a National Standard and/or Common Core State Standard of Learning. When teachers integrate these magic tricks into learning experiences, they can provide students with authentic opportunities for advancement in critical thinking, problem solving, creativity, and retention, as well as positively impact the metacognitive and self-system processes.

The findings from this study have profound implications for the education of students with special needs and those involved in their education. Based on the pre and post assessments of the participants and the examination of the teachers, the following observations became evident when integrating magic tricks into the classroom experience by way of a structured lesson plan. These observations were as follows:

Help “level the playing field” for students from disadvantaged circumstances or those with learning differences. All students, regardless of their abilities, start at the same place when learning magic. It makes no difference their socio-economic status, their language, or their skill levels. Some students with autism learned more quickly because of their increased focus and their ability to think in terms of patterns and sequences (the very heart of the art of magic). Students with varying degrees of ability were able to achieve some level of success in the learning and performing of a magic trick.

Engage multiple skills and abilities that develop cognitive, social, and personal competencies. Learning magic requires students to think sequentially, follow directions, and perform specific tasks. Performing the magic trick for an audience, no matter the size, requires confidence, the ability to communicate (tell a story with the trick), and some knowledge

of social rules. Combined, they bolster self-esteem and move a child toward achieving self-actualization.

Reach students who are not otherwise engaged in school and excite them about the learning process. Frith and Walker (1983) found that magic has a special appeal for students because it gives them a chance to do something that cannot be equaled by their peers. Traditional instruction has focused on individual learning that isolates the student from social interaction. By integrating magic tricks into the educational process, students can engage in authentic experiences, purposeful conversation, and depend on each other's thinking to enrich their own understanding and construct meaning.

Provide an opportunity for students to teach or mentor other students in the classroom. Marzano (2007) writes that many studies support the idea that learning is most effective when it is social and collaborative. This cooperative learning process is a valuable experience for children. Helping one another stirs creativity and builds positive relationships. It also increases a student's feeling of control over his environment and improves self-esteem. The concept of magic tricks may also be used to talk about perspective and how two individuals may perceive the same situation differently. In today's inclusive and diverse classrooms, collaboration is a way to learn to contribute to

the common good, seek collegiality, and to draw on the knowledge and resources of others.

Engage the "whole person" - the student is invested in ways that are more meaningful than simply "knowing the answer," or reciting facts from memory. Unlike traditional learning experiences that look for right or wrong answers, being engaged in the learning and performance of a magic trick allows for multiple outcomes. When we allow students to learn creatively, we remove the stressors of "being right" and give them permission to take risks and make mistakes. And through those mistakes, they develop self-determination, critical thinking, observational techniques, and problem solving abilities. These are essential skills if young people are going to be productive in today's societies.

Conclusions

Preliminary research demonstrates that Hocus Focus™ can provide educators and students an opportunity to experience growth and development in a fun, exciting, and engaging way. Future research should be explored to examine how educators can be better trained and prepared to implement this strategy, what effects it may have on their resilience and satisfaction, and how including this strategy may improve teacher and student growth and engagement.

References

- Bellisario, K., Donovan, L., Prendergast, M., & Stevenson, L. (2009). What integrated teaching through the arts MED graduates tell us about arts integration in America's schools. *Voices from the field: A study funded by the Ford Foundation*. Lesley University, MA: Creative Arts in Learning Division.
- Boyle, C. A, Boulet, S., Schieve, L. A., Cohen, R. A., Blumberg, S. J., Yeargin-Allsopp, M., Visser, S., Kogan, M. D. (2011). Trends in the prevalence of developmental disabilities in US children, 1997–2008. *Pediatrics*. Originally published online May 23, 2011. doi 10.1542/peds.2010-2989

- Broome, S. A. (1989). *The magic kids: A strategy to build self-esteem and change attitudes toward the handicapped*. Paper presented at the 67th annual convention of the Council for Exceptional Children, San Francisco, CA. Macon, GA: Georgia Learning Resources System.
- Burton, J., Horowitz, R., & Abeles, H. (1999). Learning in and through the arts: Curriculum implications, In E. B. Fiske (Ed.), *Champions of change: The impact of the arts on learning*. Washington, DC: Arts Education Partnership.
- Christopher, M., & Christopher, M. (2005), *The illustrated history of magic*. New York: Carroll & Graf Publishers.
- Cote, J. (2011). Arts-based education and creativity. In L.F. Deretchin & C.J. Craig (Eds.), *Cultivating curious and creative minds*. Lanham, MD: Rowan & Littlefield Education.
- Doerflinger, W. (1977). *The magic catalogue: A comprehensive guide to the wonderful world of magic*. New York: Dutton Adult.
- Eisner, E. (2002). *The arts and the creation of mind: What the arts teach and how it shows*. Harrisonburg, VA: Donnelley & Sons
- Esaak, S. (2003). What is art? *About.com art history*. Retrieved from http://arthistory.about.com/cs/reference/f/what_is_art.htm,
- Ezell, D., & Ezell, C. (2003). M.A.G.I.C.W.O.R.K.S. (Motivating activities geared-to instilling confidence-wonderful opportunities to raise kid's self-esteem). *Education and Training in Developmental Disabilities*, 30(4), 441-450.
- Fisk, E.B. (1999). *Champions of change: The impact of the arts on learning*. Washington, DC: The Arts Education Partnership and The President's Committee on the Arts and the Humanities. Retrieved from <http://eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED435581>
- Frith, G. H., & Walker, J. C. (1983). Magic as motivation forh students. *Teaching Exceptional Children*, 15(2), 108-110.
- Gable, R. A., & Hendrickson, J. M. (1997). Teaching all students: A mandate for educators. In J. S. Choate (Ed.), *Successful inclusive teaching: Proven ways to detect and correct special needs* (2nd ed.). Needham Heights, MA: Allyn and Bacon.
- Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (2004).
- Illeris, H. (2011, May). *The performative aesthetic learning process*. Keynote presented at the 31st annual seminar for the International Society for Teacher Education, Kristiansand, Norway.
- Levin, D. M. (2006). Magic arts counseling: The tricks of illusion as intervention. *Georgia School Counselor Association Journal*, 1, 14–23.

- Levin Institute (2011). World report on disability. *Globalization 101*. Retrieved Aug, 14, 2011 from <http://www.globalization101.org/world-report-on-disability-3/>.
- Marzano, R. (2007). *The art and science of teaching: A comprehensive framework for effective instruction*. Alexandria, VA: Association for Supervision & Curriculum Development (ASCD).
- McCormack, A. J. (1985). Teaching with magic: Easy ways to hook your class on science. *Learning*, 14(1) 62-67.
- National Board for Professional Teaching Standards (2002), *What teachers should know and be able to do*. Retrieved from www.nbpts.org/userfiles/file/what_teachers.pdf
- New Oxford American Dictionary. (3rd ed.). (2010). New York, NY: Oxford University Press.
- No Child Left Behind Act of 2001, 20 U.S.C. § 6319 (2008)
- Pajares, F., & Urdan, T. (2006). Guide for constructing self-efficacy scales. *Self-efficacy beliefs of adolescents* (pp. 307-337). Greenwich, CT: Information Age Publishing.
- Schmidt, R., Rozendal, M., & Greenman, G. (2002). Reading instruction in the inclusion classroom: Research-based practices. *Remedial and Special Education*, 23(3), 130-140.
- Spencer, K. (2012). Hocus Focustm. Retrieved from <http://www.hocusfocusededucation.com>.
- Sylvia, R. D., & Hutchinson, T. (1985). What makes Ms. Johnson teach? A study of teacher motivation. *Human Relations* 38, 841-856.
- United Nations Educational, Scientific, and Cultural Organization (2009) *Policy guidelines on inclusion in education*. Retrieved from <http://unesdoc.unesco.org/images/0017/001778/177849e.pdf>
- World Health Organization & World Bank. (2011). *World report on disability*. Retrieved from http://www.who.int/disabilities/world_report/2011/en/index.html

Author

Kevin Spencer is a world-renown illusionist with dozens of accolades to his credit including 2009 *International Magician of the Year* and six-time recipient of *Performing Arts Entertainer of the Year*. He believes strongly in the power of the arts to make a difference in the reality in which we live, work, heal, and learn. He is adjunct faculty in the Occupational Therapy Department at the University of Alabama in Birmingham and is certified as a Qualified Autism Services Professional. He is widely considered the leading authority on the therapeutic and educational benefits of magic tricks in rehabilitation and special education. This paper was first presented at the 31st annual seminar of the International Society for Teacher Education in Kristiansand, Norway.

SOCIAL JUSTICE IN PARENTAL CHOICE OF SECONDARY SCHOOLS
IN HONG KONG: INSIGHTS FOR TEACHER EDUCATION

by Tat Heung Choi
Hong Kong Baptist University

Abstract: *This article expands the literature on parental choice of schooling and social inequality by offering insights into teacher education. A substantial amount of research has examined how the social basis of parental school choice for their children might hinder social equity. Rarely considered, however, are the implications of social disparities in secondary school choice for initial teacher preparation. With this neglect in mind, the questionnaire survey presented here seeks to investigate how parental choice of secondary schools is affected by their education levels, and how this attribute might reproduce social inequality. The results suggest that the progress in achieving social justice through the provisions for school choice is far from welfare enhancing. There are useful implications from this study for recruiting teacher candidates, and for redressing the relevance of social justice education to initial teacher preparation.*

Key words: parental school choice, social inequality, social justice, teacher preparation

Introduction

An expected benefit of expanded educational choice for parents and their children is more equality in schooling that should lead to social equality. However, the literature on the expansion of educational choice suggests that parents among other stakeholders in education “have been drawn further into reproducing a social system that exacerbates social inequality” (Forsy, Scott & Walford, 2008, p. 9). As Reay (2001) rightly puts it, “the more things change the more they stay the same” (p. 333).

This article, based on the Hong Kong context, adds to evidence on how a commitment to the expansion of consumer choice of schooling by policy-makers tends to promote unequal educational opportunity for pupils on the basis of social backgrounds (Edwards, Fitz & Whitty, 1989; Forsy et al., 2008; Kelly, 2007; Lund, 2008; Westoby, 1989; Whitty, Power & Halpin, 1998; Wu, 2008). Research on parental choice of schools has shown that social disparity is, in part, reinforced by parents’ ability to “buy into

a cluster of practices that allow their children to develop cumulative advantage” (Savage, 2003, p. 539). These parents, with higher education qualifications, tend to be reflexive strategic choosers, as demonstrated in their capacity to make informed school choices (Ball, Bowe & Gewirtz, 1996; Bosetti, 2004; Butler, Hamnett, Ramsden & Webber, 2007; Parsons & Welsh, 2006; Raveaud & van Zanten, 2007; Vincent, 2001).

With expanded educational choice for parents and their children as background, the present study sets out to investigate if education levels continue to have an important bearing on parents’ motivations for their children’s education and on their criteria of school choice. The findings shed light on whether educational policy-makers are making any progress in promising directions to social justice. These concerns are central to the promotion of equity in education – which is defined in needs-based terms – “educational resourcing should favour those with greater educational need and those with fewer private resources in the home and community to be able to meet

educational needs” (Gewirtz, Ball & Bowe, 1995, p. 181).

The findings about school choice and social disparity also have useful implications for initial teacher preparation. As Bernstein (2000) argues, “biases in the form, content, access and opportunities of education ... can reach down to drain the very springs of affirmation, motivation and imagination” and “can become, and often are, an economic and cultural threat to democracy” (p. xix). To counteract such social biases, it is necessary to recognize the school as a site of difference, and the relevance of social justice education for pre-service teachers (Cochran-Smith, 2004; Cook-Sather & Youens, 2007; McDonald, 2008; McDonald & Zeichner, 2008; Reynolds & Brown, 2010; Villegas, 2007).

Background

Every child (aged 11) in the final year of primary schooling (grade 6) in Hong Kong may consider participating in the secondary school places allocation system. There are two stages of selection in the primary-secondary transition: central allocation and discretionary places. For central allocation, the whole territory is divided into 18 school nets (catchment areas). The school net to which a pupil belongs is determined by the physical location of the primary school that the pupil attends, and where the pupil has residence. Applications are not restricted by school nets or pupils’ residence for discretionary places. Each applicant may opt for a maximum of two secondary schools.

As part of the Hong Kong government’s reform measures, the number of available discretionary places for admission to the first year of secondary education doubled from 10% to 20% between the years 2000 and 2005 (Education Commission, 2002). This was an initial attempt of the

government to progressively increase the proportion of discretionary places to 30% for admission to secondary school from September 2006 onwards. The rationale of the reform is two-fold: (a) to increase parents’ and pupils’ chances of choosing their preferred schools through direct application; and (b) to encourage schools to consider performance of pupils in all aspects by adopting diversified criteria of selection beyond written tests and so avoid drilling.

Those pupils who do not secure a discretionary secondary place are divided equally into three academic ability bands according to their primary school results through central allocation. Parents choose a maximum of 30 secondary schools and place them in order of preference. Central allocation is based on a pupil’s allocation band (based on standardised internal assessment results at the end of grade 5, and mid-year and year end of grade 6, which are weighted by a streaming test), parental choice of schools, and a random number (determined through a computerized allocation process, which involves the element of luck).

From this brief and summary overview, it is possible to appreciate that there is a determination of policy-makers to widen parental choice of schools, and to decentralize the mechanism of secondary school selection in Hong Kong. Forsey et al. (2008) comment on a similar direction in other national education contexts. The increase in the provision of discretionary places suggests that a discussion of parents’ motivations for their child’s education, and their criteria of school choice, during their child’s primary-secondary transition may be timely.

Research Purpose

A substantial amount of research has examined how the social basis of parental school choice for their children is likely to

hinder social equity. However, less is discussed about the relevance of social justice education to initial teacher preparation in connection with the role of social disparities in secondary school choice. With this gap in mind, the present study seeks to find out how parents' choice of secondary schools is affected by their education levels, and how this attribute might reproduce social inequality, despite the expected benefit of expanded educational choice for parents and their children. Relevant findings about school choice and social disparity in Hong Kong may shed light on the recruitment of teacher candidates, and on the relevance of social justice education to initial teacher preparation in other national contexts.

Data Collection

The research into parental choice of schools is guided by a quantitative approach in the form of a questionnaire survey. Adopting a survey method allows the collection of large amount of data from a selected sample within a relatively shorter period of time. The quantitative findings are also considered valuable for informing future qualitative research into the very complexity of understanding school choice, of making a choice, and of getting a choice.

The questionnaire survey was conducted a month prior to the release of results for secondary school places allocation. The questionnaire, in part, identified the demographic profile of parents (gender of parent respondent; gender of grade 6 child; number of children in the home; education levels of respondent and spouse; type of housing), and general information about the first school choice (language of instruction; type of school; gender composition; discretionary place) they had made for their grade 6 child. It also used forced-choice Likert-type scales ranging from 1 (not much/most irrelevant/most unlikely/strongly disagree) to 7 (a lot/most

relevant/most likely/strongly agree) concerning other aspects of school choice (time, effort and informants involved in researching choices; criteria for making and prioritizing choices; expectations of child's education and career futures). Completion of the questionnaire took approximately 20 minutes.

Sample

Stratified sampling was used as a method for achieving a greater degree of representativeness (or minimizing the probable sampling error) (Babbie, 2007; Cohen & Manion, 2000). Instead of constructing a sample from the total population of 720 primary schools at large, the reported study was concerned to ensure that appropriate numbers of elements were from homogeneous subsets of that population. In other words, to get a stratified sample of primary school leavers seeking secondary school places (84,800), the study aimed at organizing population into homogeneous subsets (with heterogeneity between subsets) and selecting appropriate number of elements from each type of schools, in keeping with the proportion of such education provisions in Hong Kong. The resulting sample of 14 primary schools was generally drawn from a range of academic ability bands, geographical districts, sponsoring bodies, as well as religious backgrounds.

Each of the 14 principals was instructed to select two grade 6 classes randomly; but seven responded by sending the questionnaires (available in separate Chinese and English versions with the non-locals in mind) to all their grade 6 parents. As a result, 39 classes were surveyed, and 1,235 completed questionnaires were received, with a response rate of 90%.

About two-thirds of the respondents were mothers (71.9%), with the majority having

not more than two children (54.6% with two children; 23.9% with only one child). The genders of grade 6 attendants were nearly the same (50.3% and 49.7% for boys and girls respectively). In terms of education level, there were 35.7% of respondents with only primary or junior secondary qualifications, 47.4% with O-level, A-level or post-secondary qualifications, and only 14.9% with a bachelor's degree or higher. As for the type of housing, 15.2% of respondents lived on public and aided rental blocks, 23.7% in Housing Authority/Housing Society subsidized sale flats, and 56.8% in private apartments.

Data Analysis

With the aid of mean scores and significance tests, the reported findings below compared parents as choosers of schools by education level against four identified themes: considerations for discretionary places (Table 1); researching choices (Table 2); making and prioritizing choices (Table 3); expectations of child's education and career futures (Table 4). The mean scores compared how parents with different education levels make school choices for their children, and to evaluate the education effect on the reproduction of social inequality. The impact of the attribute of housing on parental school choice is also reported where relevant (see Appendix A). Statistically significant findings from the parent survey with a .05 probability are reported below for discussion.

Results

In keeping with global expansion of educational choice (Forsey et al., 2008; Holsinger & Jacob, 2008), Hong Kong's education reform attaches great importance to parents' involvement in their child's education process, describing

parents as choosers of schools and supporters of their child's academic development. However, the progress in achieving social justice through the provisions for school choice is far from satisfactory, as the survey results show.

Education Effect on Parental Choice of Schools

The statistical analysis lends support to the claim that parental choice of secondary schools is affected by their education levels. The education effect on parental school choice can be summarized as follows:

Considerations for discretionary places.

The higher the parents' education level, the greater significance was attached to autonomy and control ("less restriction on school net;" "less determined by the element of luck") in making a school choice (Table 1). Parents' education levels also had a bearing on their perceptions of their children's capability to compete for a discretionary place. The higher the parent's education level, the more capable their child was perceived in competing for a desirable school place.

Researching choices.

The higher the parents' education level, the more time and effort was reported for researching school choices (Table 2). A significantly higher proportion of parents with degree qualifications made informed choices according to their own personal experiences, compared to those with junior secondary qualifications or below. Parents with post-secondary qualifications tended to acquire necessary knowledge of the admissions system through recommendations from primary teachers/headteachers, and through their social networks of relatives/friends/neighbours.

Table 1
Consideration for Discretionary Places

	Parent's Education Level		
	Junior secondary or below	O-level/A-level/ post-secondary	Bachelor's degree or above
No restriction on school net	4.76	5.35 *	5.10
Less determined by the element of luck	4.67	5.25 *	5.46*
Better autonomy in making a school choice	5.46	5.90 *	5.97 *
Availability of cultural resources in getting a school choice	4.90	5.23 *	5.22
My child is capable to compete for a discretionary place	5.12	5.59 *	5.84*

* = statistically different from "Junior secondary or below" at 0.05 level

Table 2
Researching Choices

	Parent's Education Level		
	Junior secondary or below	O-level/A-level/ post-secondary	Bachelor's degree or above
Time and effort devoted to understanding the first choice secondary school	4.65	5.20 *	5.12 *
Personal experience(s) of myself/my spouse	4.38	5.02 *	5.36 *
Recommendations from relatives/friends/ neighbours	4.43	4.80 *#	4.45
Recommendations from primary head teacher/teachers	5.32	5.60 *#	5.26
Government brochures/websites of schools/newspaper advertisements/ information days	4.43	4.79 *#	4.36

* = statistically different from "Junior secondary or below" at 0.05 level

= statistically different from "Bachelor's degree or above" at 0.05 level

Making and prioritizing choices. The higher the parents' education level, the greater significance was attached to "school ethos," "high prestige," "persona and interests of my child," and "institutional links between primary and secondary schools" (Table 3). Parents living in public housing tended to consider "easy access from home" (practical considerations of proximity and safety) more important than those living in private housing (Appendix A).

Expectations of child's education and career futures. The academic qualifications of parents did not seem to bear any significant relation to their expectations of the child's education and career futures (Table 4). The expectation that emerged as of least agreement was "to

earn a lot of money" across education levels. The expectation that emerged as of greatest agreement was "to obey law and order," particularly for those parents with post-secondary qualifications. These parents with post-secondary qualifications also ascribed greater importance to "as the child wishes," indicating their humanistic emphasis in prioritizing school choices. Turning to the child's education and career futures, those parents living in public housing rated significantly higher on "continue to study in Hong Kong through university" than those living in private housing, understandably a logical response to their financial situation. By contrast, those parents living in private housing rated significantly higher on "plan to study abroad" than those living in public housing, justifiably a consequence of their possession of economic capital.

Table 3
Making and Prioritizing Choices

	Parent's Education Level		
	Junior secondary or below	O-level/A-level/ post-secondary	Bachelor's degree or above
School ethos	5.35	5.91 *	6.05 *
High prestige	4.56	5.02 *	5.27 *
Persona and interests of my child	5.85	6.19 *	6.14 *
Institutional links between primary and secondary schools	5.83	6.12 *	6.09 *

	Housing Type		
	Public	Private	Others
Easy accessibility from home	5.56 ^	5.32	5.54

* = statistically different from "Junior secondary or below" at 0.05 level

^ = statistically different from "Private" at 0.05 level

Table 4
Expectations of a Child's Education and Career Futures

	Parent's Education Level		
	Junior secondary or below	O-level/A-level/ post-secondary	Bachelor's degree or above
To obey law and order	6.54	6.71 *	6.64
To earn a lot of money	4.38	4.32	4.46
To have good social skills	6.03	6.02	6.08
To be a useful member of society	5.99	6.11	6.19
To be a professional	5.99	5.67	5.79
To be an all-rounder	5.35	5.19	5.25
As the child wishes	5.50	5.72 *	5.75

	Housing Type		
	Public	Private	Others
Continue to study in Hong Kong through university	5.94 ^	5.65	6.00
Plan to study abroad till after completion of secondary 6/7 (grade 12/13) in Hong Kong	4.10	4.66 #	3.87
Plan to study abroad till after completion of secondary 5 (grade 11) in Hong Kong	3.55	4.06 #	3.09
Plan to study abroad till after completion of secondary 3 (grade 9) in Hong Kong	2.78	3.10 #	2.67

* = statistically different from "Junior secondary or below" at 0.05 level

^ = statistically different from "Private" or "Public" at 0.05 level

= statistically different from "Public" at 0.05 level

Social Justice and Provisions for School Choice

The findings from the parent survey exhibit evidence to suggest that the progress in achieving social justice through the provisions for school choice is far from welfare enhancing. The educational market remains "a middle-class mode of social engagement" (Gewirtz et al., 1995, p. 181), despite policy-makers' increasing concern with equity and education. The findings about the education effect on parents' perceived

autonomy in making a school choice against structural restrictions and the element of luck (Table 1) conform to traditional stereotypes of parental school choice. Better educated parents tend to demonstrate greater confidence in their autonomy in making decisions with the options and resources available to them (Butler et al., 2007).

School choice is class-informed, as shown in parents' differential knowledge of and ability to "work" the admissions system (Ball, 1997; Gewirtz et al., 1995; Reay &

Ball, 1997; Wu, 2008). The findings about researching choices (Table 2) generally indicate that families have unequal resources, whether of personal experiences or social networks, to manage their children's schooling careers in an increasingly complex, decentralized and diversified admissions system. More highly educated parents tend to draw on their inner resources in making choices, whereas less qualified parents tend to resolve to advice from the school informants and other local communities. Parents with limited education are generally more dependent on the school as a source of advice.

There are unequal relations and opportunities in the current system of secondary school admissions in Hong Kong. To ensure futurity, the popularity of overseas education among those parents living in private housing is hardly surprising (Table 4). The entrenched prestige of overseas education as positional goods among parents living in private housing contrasts sharply with the practical considerations of proximity and safety among parents living in public housing (Table 3). As Bernstein (1975) maintains, "there is no class society which deliberately and rationally attempts to ensure that all social groups can participate equally in the creation, production and distribution of what are considered as value, goods and services" (pp. 27-28). Parents with more economic, cultural, and social capital tend to be "spoilt for choice" (Reay & Ball, 1997) with the capacity to reinforce their children's academic success through multiple pathways and to foster a cosmopolitan outlook through the acquisition of English.

Insights for Initial Teacher Education

It is necessary to acknowledge that the generalizability of results from the present study may be limited by the Hong Kong education context, the stratified sampling

of school types, the singular education effect on parents as choosers of schools, and the predominance of female respondents (though this is in tune with the literature). However, there are useful implications from this study for recruiting teacher candidates and for redressing the relevance of social justice education to initial teacher preparation.

Recruitment of Teacher Candidates

The recruitment of diverse teacher candidates from different pathways can be favorably viewed as "a form of capital" or rather "a 'cultural' resource" in terms of providing "a range of narratives and discourses" (Crozier et al., 2007, p. 265) for initial teacher education programs. Teacher candidates are endowed with their own histories, experiences, and socio-economic conditions, which inevitably result in their divergent beliefs, particular attitudes, preferred pedagogy, as well as stereotypes towards different communities. Reynolds and Brown (2010), for example, contend that the ethnic and cultural background of pre-service teachers has an impact on their relations with pupils. This observation also suggests the dynamic between cultural and structural influences on social class relationships to education. It may be argued that equal teaching ability and standardized teacher dispositions are crucial for creating equal opportunities for all pupils. However, recruiting suitably motivated teacher candidates from different backgrounds to initial teacher education programs is highly promising. It would enable participants to achieve a more balanced experience of life within a diverse pool of teacher candidates and to acquire better relational skills for nurturing pupils from varied backgrounds. After all, "a more diverse teaching force is needed in order to provide an increasingly diverse public school population with a high quality education" (McDonald & Zeichner, 2008, p. 602).

Teacher Preparation through Social Justice Education

It is important to redress the relevance of social justice education to initial teacher preparation. As observed by Reynolds and Brown (2010): “The idea of teaching for social justice is often dismissed as of little practical value” (p. 405). Teacher candidates tend to be more concerned with developing pedagogic skills and instructional strategies of their major subjects and less concerned with teaching about and for social justice in school. In effect, the social, psychological, and philosophical foundations of education courses do not seem to see eye to eye with curriculum and pedagogy in initial teacher education programs. This neglect, however, is incongruent with the fundamental goal of mass education, which is to augment the future experiences and life chances of its pupils, despite socially prejudiced circumstances.

Teachers’ pedagogic practice is crucial to pupils’ educational success, especially success of the socially disadvantaged. This follows that teacher educators should prepare teacher candidates to integrate “a diversity of experiences, perspectives and material” (Reynolds & Brown, 2010, p. 408) into the subject curriculum. Prospective teachers may be guided to discuss relevant approaches to teaching about and for social justice by turning input into intake for certain pupil groups, and by differentiating instruction based on their assessment of pupils’ needs (McDonald, 2008). Equally important is for prospective teachers to find ways of connecting with pupils from diverse backgrounds (or who do not share the same background as their own) in possible contexts. Community-based field experience is an effective way to expose teacher candidates to culturally diverse contexts, to question institutional thoughts and practices, and to acquire relevant cultural values in connection with social

justice or injustice. To these ends, it is incumbent on teacher educators to establish coherence among knowledge, field experience, and social justice issues in initial teacher education programs (Reynolds & Brown, 2010).

Conclusion

It is possible to appreciate a web of dilemmas and ambivalences and the difficult decisions that parents must confront in making school choices (Crozier et al., 2008; Oria et al., 2007), amid “a mixture of rationalities” (Bosetti, 2004, p. 387). As the literature suggests, better educated parents are found to be “thinking and acting otherwise” trying to perform “the good/ethical self” (Crozier et al., 2008, p. 261). This observation points out the very complexity of understanding school choice, of making a choice, and of getting a choice, for which the use of more exploratory interview techniques is required. Nevertheless, the investigation demonstrates the possibility of refining sociological explanations of school choice rather than subordinating them to largely psychological orientations.

The present study has redressed the importance of social justice education for initial teacher preparation in connection with the unequal relations in the current system of secondary school admissions in Hong Kong. To counteract the reproduction of unequal educational opportunity for pupils through parental school choice, it is necessary to recognize the school as a site of difference, for facilitating progress and compensating for inadequacy. This implies the importance of promoting equity in education through teachers’ contribution to the motivation and success of pupils especially success of the socially disadvantaged. As Bernstein (2000) maintains, “education can have a crucial role in creating tomorrow’s optimism in the context of today’s pessimism” (p. xix). To realize this role of

education, it is imperative for teacher educators to enlighten teacher candidates on ascertaining what assists young people to succeed and on working for social justice for their deprived pupils from a welfare perspective.

Appendix A. Criteria of Parental Choice of Secondary Schools in Hong Kong

	Parent's Education Level		
	Junior secondary or below	O-level/A-level/ post-secondary	Bachelor's degree or above
Religious belief	3.50	3.86 *	4.41
School ethos	5.35	5.91 *	6.05 *
High prestige	4.56	5.02 *	5.27 *
Conducive learning environment	6.24	6.53 *	6.41
A caring community	6.18	6.36 *	6.16
Ample facilities and resources	6.10	6.28 *	6.11
Affordable school fees	5.55	5.54	5.27
Small-class teaching	5.15	5.39	4.92
Language of instruction	5.86	5.99	5.86
Easy accessibility from home	5.59	5.40	5.10
Strong leadership	5.67	5.66	5.42
Strong teacher qualifications	5.96	6.21 *	6.04
Advanced teaching/learning approaches	5.88	5.97	5.76
Commendable school academic records	5.67	5.92 *	5.88
Good conduct and discipline	6.31	6.49 *	6.49
Development of school-based curriculum	5.55	5.64	5.14
Variety of extra-curricular activities	5.62	5.72	5.45
Balance between study and play	5.58	5.79 *	5.57
Social background of student intake	5.20	5.30	5.32
Favourable social networks	5.23	5.32	5.18
Myself/My spouse having studied in the school	3.04	3.34 *	3.28
Sibling(s) studying in the school	3.87	3.75	3.49
Academic suitability of my child	4.20	4.27	4.11
Persona and interests of my child	5.85	6.19 *	6.14 *
Institutional links between primary and secondary schools	5.83	6.12 *	6.09 *
Religious belief	3.50	3.86 *	4.41

* = statistically different from "Junior secondary or below" at 0.05 level

O-level: The Ordinary Level General Certificate of Education

A-level: The Advanced Level General Certificate of Education

(Continued on next page)

	Housing Type		
	Public	Private	Others
Religious belief	3.58	4.01 #	3.46
School ethos	5.47	5.91 #	5.65
High prestige	4.66	5.09	4.49
Conducive learning environment	6.33	6.44	6.61
A caring community	6.24	6.27	6.47
Ample facilities and resources	6.13	6.23	6.20
Affordable school fees	5.51	5.46	5.85
Small-class teaching	5.12	5.28	5.30
Language of instruction	5.84	5.98	5.93
Easy accessibility from home	5.56 ^	5.32	5.54
Strong leadership	5.57	5.64	5.83
Strong teacher qualifications	5.97	6.17 #	6.30
Advanced teaching/learning approaches	5.90	5.91	5.85
Commendable school academic records	5.68	5.90 #	5.98
Good conduct and discipline	6.31	6.50 #	6.41
Development of school-based curriculum	5.60	5.48	5.67
Variety of extra-curricular activities	5.66	5.61	5.88
Balance between study and play	5.69	5.68	5.68
Social background of student intake	5.18	5.33	5.27
Favourable social networks	5.24	5.30	5.04
Myself/My spouse having studied in the school	3.10	3.33	3.00
Sibling(s) studying in the school	3.90	3.69	3.23
Academic suitability of my child	4.21	4.25	4.11
Persona and interests of my child	5.98	6.12	6.21
Institutional links between primary and secondary schools	5.91	6.09 #	6.06
Religious belief	3.58	4.01 #	3.46

^ = statistically different from "Private" at 0.05 level

= statistically different from "Public" at 0.05 level

A copy of the questionnaire may be requested from the author.

References

- Babbie, E. (2007). *The practice of social research*. Belmont, CA: Wadsworth.
- Ball, S. J. (1997). On the cusp: Parents choosing between state and private schools in the UK: Action within an economy of symbolic goods. *International Journal of Inclusive Education*, 1(1), 1-17. doi: 10.1080/1360311970010102
- Ball, S. J., Bowe, R., & Gewirtz, S. (1996). School choice, social class and distinction: The realisation of social advantage in education. *Journal of Education Policy*, 11(1), 89-112. doi: 10.1080/02680930960110105
- Bernstein, B. (1975). *Class, codes and control III. Towards a theory of educational transmissions*. London, England: Routledge & Kegan Paul.

- Bernstein, B. (2000). *Pedagogy, symbolic control and identity: Theory, research and critique* (Rev ed.). Lanham, MD: Rowman & Littlefield.
- Bosetti, L. (2004). Determinants of school choice: Understanding how parents choose elementary schools in Alberta. *Journal of Education Policy*, 19(4), 387-405. doi: 10.1080/0268093042000227465
- Butler, T., Hamnett, C., Ramsden, M., & Webber, R. (2007). The best, the worst and the average: Secondary school choice and education performance in East London. *Journal of Education Policy*, 22(1), 7-29. doi: 10.1080/02680930601065718
- Cochran-Smith, M. (2004). Defining the outcomes of teacher education: What's social justice got to do with it? *Asia-Pacific Journal of Teacher Education*, 32(3), 193-212.
- Cohen, L., & Manion, L. (2000). *Research methods in education* (4th ed.). London, England: Routledge.
- Cook-Sather, A., & Youens, B. (2007). Repositioning students in initial teacher preparation: A comparative descriptive analysis of learning to teach for social justice in the United States and in England. *Journal of Teacher Education*, 58(1), 62-75. doi: 10.1177/0022487106296216
- Crozier, G., Reay, D., James, D., Jamieson, F., Beedek, P., Hollingworth, S., & Williams, K. (2008). White middle-class parents, identities, educational dilemmas, ambivalence and moral ambiguity. *British Journal of Sociology of Education*, 29(3), 261-272. doi: 10.1080/01425690801966295
- Education Commission. (2002). *Progress report on the education reform (1): Learning for life, learning through life*. Hong Kong, China: Printing Department.
- Edwards, T., Fitz, J., & Whitty, G. (1989). *The state and private education: An evaluation of the Assisted Places Scheme*. Basingstoke, England: Taylor & Francis.
- Forsey, M., Scott, D., & Walford, G. (Eds.). (2008). *The globalisation of school choice?* Oxford, England: Symposium Books.
- Gewirtz, S., Ball, S. J., & Bowe, R. (1995). *Markets, choice, and equity in education*. Buckingham, England: Open University Press.
- Holsinger, B., & Jacob, W. J. (Eds.). (2008). *Inequality in education: Comparative and international perspectives*. Hong Kong, China: Comparative Education Research Centre, The University of Hong Kong.
- Kelly, A. (2007). *School choice and student well-being: Opportunity and capability in education*. Basingstoke, England: Palgrave Macmillan.
- Lund, S. (2008). Choice paths in the Swedish upper secondary education – a critical discourse analysis of recent reforms. *Journal of Education Policy*, 23(6), 633-648. doi: 10.1080/02680930802209743

- McDonald, M. (2008). The pedagogy of assignments in social justice teacher education. *Equity and Excellence in Education*, 41(2), 151-167. doi: 10.1080/10665680801943949
- McDonald, M., & Zeichner, K. (2008). Social justice teacher education. In W. Ayers, T. Quinn & D. Stovall (Eds.), *Handbook of social justice in education* (pp. 595-610). New York, NY: Routledge.
- Oria, A., Cardini, A., Ball, S., Stamou, E., Kolokitha, M., Vertigan, S., & Flores-Moreno, C. (2007). Urban education, the middle classes and their dilemmas of school choice. *Journal of Education Policy*, 22(1), 91-105. doi: 10.1080/02680930601065791
- Parsons, C., & Welsh, P. J. (2006). Public sector policies and practice, neo-liberal consumerism and freedom of choice in secondary education: A case study of one area in Kent. *Cambridge Journal of Education*, 36(2), 237-256. doi: 10.1080/03057640600718661
- Raveaud, M., & van Zanten, A. (2007). Choosing the local school: Middle class parents' values and social and ethnic mix in London and Paris. *Journal of Education Policy*, 22(1), 107-124. doi: 10.1080/02680930601065817
- Reay, D. (2001). Finding or losing yourself? Working-class relationships to education. *Journal of Educational Policy*, 16(4), 333-346. doi: 10.1080/026809300054335
- Reay, D., & Ball, S. J. (1997). "Spoilt for choice": The working classes and educational markets. *Oxford Review of Education*, 23(1), 89-101. doi: 10.1080/0305498970230108
- Reynolds, R., & Brown, J. (2010). Social justice and school linkages in teacher education programmes. *European Journal of Teacher Education*, 33(4), 405-419. doi: 10.1080/02619768.2010.529124
- Savage, M. (2003). Review essay: A new class paradigm? *British Journal of Sociology of Education*, 24(4), 535-541. doi: 10.1080/01425690301920
- Westoby, A. (1989). Parental choice and voice under the 1988 Education Reform Act. In R. Glatter (Ed.), *Educational institutions and their environments: Managing the boundaries* (pp. 65-81). Buckingham, England: Open University Press.
- Whitty, G., Power, S., & Halpin, D. (1998). *Devolution and choice in education: The school, the state, and the market*. Buckingham, England: Open University Press.
- Wu, X. (2008). The power of positional competition and market mechanism: A case study of recent parental choice development in China. *Journal of Education Policy*, 23(6), 595-614. doi: 10.1080/02680930802209735
- Villegas, A. M. (2007). Dispositions in teacher education: A look at social justice. *Journal of Teacher Education*, 58(5), 370-380. doi: 10.1177/0022487107308419
- Vincent, C. (2001). Social class and parental agency. *Journal of Education Policy*, 16(4), 347-364. doi: 10.1080/026809301154344

Author

Tat Heung Choi is Assistant Professor at Hong Kong Baptist University, where she engages in initial and in-service teacher education. Her previous education in London and Cambridge universities has motivated her concern with social class, symbolic control and education, amid the divine intervention of English literature and poetry bidding work.

THE IMPACT OF ONE-TO-ONE COMPUTING ON STUDENTS' ACADEMIC EXCELLENCE AT KUWAIT UNIVERSITY

by Ammar H. Safar
Kuwait University

Abstract: *Using computers and various forms of information and communication technology (ICT) in educational institutions around the world is commonplace among students, faculty, and administrators. One of the modern trends of education involves the integration of one-to-one (1:1) computing in higher education institutions as well as PK-12 schools. The study's objective was to investigate the effect and usefulness of the application of 1:1 computing on students' learning and academic excellence at Kuwait University (KU). A quasi-experimental research model was used. The results pronounced clearly that 1:1 computing/laptop program did have a statistically significant positive impact on students' learning and achievement—in terms of improvement in test scores, final grades, the quality of work on assigned projects, as well as heightening students' motivation, attitudes, and involvement with the academic course.*

Key word: computers, communication technology, integration of computers, academic achievement

Introduction

Using computers and various forms of information and communication technology (ICT) in educational institutions around the world is commonplace among students, faculty, and administrators. This practice reflects the societal embrace of ICT in terms of its usefulness and acceptance over the past 15 years or more. ICT has found its place or presence inside and outside the classroom for academic purposes, thereby affecting the students' experiences and achievement (Sandler, 2010). Numerous research studies focusing on the impact of ICT on students' achievement have acknowledged significant increases in students' achievement measures across disciplines and grade levels, such as in their accumulative grade point averages (GPAs), end-of-course grades, and standardized norm-referenced tests.

Literature Review

This literature covers the impact of 1:1 computing on students' academic

achievement. The literature provides notable information on the role of 1:1 computing on students' learning outcomes, teaching practices, as well as the effect of its use on students' attitudes and motivation.

A research study investigated the effect of 1:1 laptop use on students' math and science achievement in at-risk middle school in the US (Dunleavy & Heinecke, 2008). Around 300 randomly selected students and 12 teachers across three grade levels, sixth through eighth, participated in the study for a period of two years. There was one laptop team per grade, consisting of four core teachers and approximately 100 students. The researchers used a pretest-posttest research design. The results are based on between-group Analysis of Covariance (ANCOVA) of longitudinal data comparing math and science standardized achievement test scores of students randomly assigned to 1:1 laptop classrooms, versus students randomly assigned to classrooms without 1:1 laptops, within the same middle school. The results revealed that there was

a significant main effect of the laptop group on science posttest scores. Students in the 1:1 laptop classrooms significantly outscored their peers in the classrooms without 1:1 laptops. Also, male students in 1:1 laptop classrooms significantly outscored their female classmates on science standardized tests. Nevertheless, no significant differences among the groups were found on math test scores. This result was interpreted mainly due to the differences in the content provided for each discipline (Dunleavy & Heinecke).

Suhr, Hernandez, Grimes, and Warschauer (2010) in California in the US investigated the effect of a 1:1 laptop initiative on fourth- and fifth-grade students' achievement on English language arts (ELA) test scores. A total of two groups of fourth-grade students from two different elementary public schools within the same school district—one group being taught traditionally and the other group being entered a 1:1 laptop program—participated in this study over a two-year period. The findings of the study indicated that students enrolled in 1:1 laptop program significantly outscored their counter peers in the traditional group in the ELA total test scores of California Standards Test (CST).

Hawkes and Hategekimana (2010) conducted a study at a comprehensive university in the upper Midwest region of the US exploring the impact of 1:1 computing on students' achievement did suggest some interesting possibilities. The university embraced the widespread integration of ICT into all disciplinary areas. The study applied a quasi-experimental research design comparing classroom assessment scores for control (i.e., non-mobile computing) and experimental (i.e., mobile computing) student groups in four general education courses—math, English, CIS, and history. The selected courses included students from a variety of majors. Each course was

taught by the same instructors before and after adoption of 1:1 computing. The results indicated that positive differences in students' assessment outcomes were found in the selected courses that were taught using 1:1 computing. Hence, students' achievement scores were higher than those of their peers in the same courses that were taught traditionally.

Lei (2010) conducted an empirical study on 237 seventh- and eighth-grade students and nine teachers in a Northwestern middle school in the US. The school had rich ICT resources such as 1:1 laptops. The research investigated the relationship between ICT use and students' learning by comparing the association between the quantity of ICT use (i.e., how much or how frequency ICT is used) and students' outcomes with the association between the quality of ICT usage (i.e., how ICT is used) and students' outcomes. Data were collected using several instruments such as: surveys, interviews, and students' GPAs. The findings indicated no strong correlation between the quantity of ICT use and students' GPA, technology proficiency, learning habits, and developmental outcomes. However, when looking at the quality of ICT usage, data analyses revealed statistically significant relationships between the quality of ICT usage and most students' outcomes.

A recent study conducted by Bebell and Kay (2010) with students and teachers across five public and private middle schools in western Massachusetts in the US that were implementing a pilot ICT program entitled "Berkshire Wireless Learning Initiative" (BWLI). The program provided 1:1 ICT access to all students and teachers across the five schools. A pre/post comparative research design model was used over a three-year period in order to investigate and examine the effectiveness of ICT use on teaching practices and students' learning outcomes when teachers and students alike were provided with

laptops, wireless learning environments, and additional ICT resources. The schools varied in their deployment and management of the ICT-mediated program. Each school had its own resource allocation, policies, curricular and technical support, as well as training and professional development offerings. Various modes of inquiry were used for data collection purposes: surveys, test scores on standardized tests, students' drawings, classroom observations, computer writing assessment, and interviews. The researchers also collected comparison data from two neighboring public middle schools with similar demographics, but where teachers and students used traditional learning environments. Comparisons were made within, between, and across the five participating schools (i.e., pilot schools) and the two other public schools (i.e., comparison schools) using several statistical techniques such as factor and regression analyses.

The findings indicated that both the implementation and outcomes of the ICT-enriched program were varied and mixed across the five schools and over the three years implementation period. However, there was noteworthy evidence that the types of educational access and opportunities provided by ICT-mediated learning settings led to statistically significant positive changes in many aspects such as: (a) augmented teachers' practices (i.e., teaching strategies, curriculum delivery, and classroom management); (b) enhanced students' academic achievement; (c) increased students' motivation, attentiveness, and engagement; (d) improved students' quality of work; and (e) enhanced students' communication/collaboration and research skills. It is important to note that these marked shifts were discovered across disciplines and grade levels (Bebell & Kay, 2010).

Thus, scholarly research studies have proven that the integration of ICT and 1:1 computing into education has the ability to enhance learning as well as teaching outcomes. Similar ICT applications into education have the potential to build a solid foundation for promoting a meaningful lifelong learning for learners of all ages and across all disciplines.

Objectives of the Study

Modern trends of education emphasize the importance of ICT and the big role it plays to achieve the educational goals and improve students' learning. One such trend involves the integration of 1:1 computing (i.e., 1:1 laptop program or initiative) in higher education academic institutions as well as PK-12 schools. The State of Kuwait is among these nations embracing the deployment of 1:1 computing in Kuwait's governmental public schools and higher education institutions, including KU.

The study's main objective was to investigate, examine, and identify the effect and usefulness of the application of 1:1 computing on students' learning and academic excellence. To that end the following objectives were addressed

1. The impact of 1:1 computing on undergraduate students' achievement at KU in terms of their scores' in tests and end-of-course grades.
2. The quality of work, of the assigned projects, submitted to the instructor/researcher in order to fulfill the requirements for the completion of the academic course.
3. The level of satisfaction of undergraduate students with the academic course.

Assumptions and Limitations of the Study

The study assumed that 1:1 computing has highly positive effect on students' academic excellence in terms of their scores in academic tests, final grades, as well as the quality of work they would submit. The research also anticipated that the deployment of 1:1 computing at KU would highly inspire and motivate students academically; thus, affecting their level of engagement in creating their own learning. The research covered the use of 1:1 computing in academic activities of the students enrolled only in two sections of a course entitled "Computing in Education 0840-235." Other areas of applications were excluded. A sample of 50 female senior undergraduate students in the College of Education (COE) at KU were investigated and observed due to the nature of the academic course of study that limits the number of students enrolled in each section to 25 students in senior classes.

Significance of the Study

Many research studies have acknowledged the significant impact that ICT, in general, and 1:1 computing, in particular, have on students' learning and thinking. However, through the course of searching, retrieving, and reviewing literature for this study, the researcher found no evidence of such studies—focusing mainly on the effect of 1:1 computing on students' learning—in the Arab Gulf Cooperation Council (AGCC), and due to the fact that the State of Kuwait is undergoing an extensive educational reform plan which, in part, entails the integration of ICT into education made this study significant. Specifically, Kuwait's Ministry of Education and Higher Learning is deploying the first stage of the 1:1 computing initiative starting from the academic year 2011-2012 in its governmental public schools as well as

higher education institutions, including KU.

Therefore, initial findings of such research may help provide policy and decision makers as well as professionals working in the field of education with some valuable contribution regarding the integration of 1:1 computing into education in the AGCC region and the State of Kuwait. However, more research studies are needed to be conducted with larger sample sizes in order to present more empirical research evidences that either support or contest the application of 1:1 computing on a national level.

Methodology

Research Design

A quasi-experimental research model was used to determine the effective assessment of 1:1 computing on students' learning. This research design compared classroom assessment scores and final grades for control (i.e., non-1:1 computing) and experimental (i.e., 1:1 computing) student groups in two section of an undergraduate education course designed for senior students. This model enabled assessment professionals, researchers, and faculty to explore survey data through a powerful lens close to the respondents' experience, thereby explaining the impact of 1:1 computing on students' learning and academic excellence with greater clarity and understanding. Traditional measurement indicators were used such as tests' scores, projects' or assignments' scores, and students' final grades. Other measurement tools such as attendance and participation logs/records, interviews, and observations were used to help the investigation. The interviews dealt with feelings, beliefs, and opinions regarding the deployment of 1:1 computing which, eventually, can help in determining the satisfaction level of the respondents.

Sample

KU provides rich ICT resources for students, faculty, and employees alike. It embraces the widespread integration of ICT into all disciplinary areas. A sample of 50 female undergraduate students from the College of Education at KU enrolled in two sections of a three-credit, undergraduate-level course entitled “Computing in Education 0840-235” for the spring semester 2010-2011 participated in this study. The two groups were of comparable size and gender balance, as well as they evidenced a similar mix of ethnic backgrounds. All participants were senior students. The course is a mandatory requirement for the professional preparation of all undergraduate students in the College of Education.

Data Collection

A total of two groups of students enrolled in two sections of an undergraduate-level course entitled “Computing in Education 0840-235” for the Spring semester 2010-2011—one group (i.e., control group) being taught traditionally and the other group (i.e., experimental group) being entered a 1:1 laptop program—participated in this study over a four-month period. The selected sections included students from a variety of majors. During the study, both sections of the course were taught the same subject content, by the same instructor, using the same delivery method for instruction.

The instructional model combined face-to-face instruction (i.e., traditional learning environment) with online and offline curriculum, traditional testing, and instructional materials disseminated over the Web (i.e., online learning environment) using a learning management system. Thus, the instructor/researcher provided a blended learning environment model—utilizing ICT with traditional instructional

strategies—which can bring the strengths of both learning environments into instruction and can increase students’ achievement and satisfaction, hence improving students’ learning, thinking, and motivation.

In order to insure the quality of the course’s data analysis, various modes of inquiry were used for data collection purposes. Data were collected from the sample using both quantitative and qualitative measurement methods and tools: tests, projects, attendance and participation logs/records, final grades, interviews, and classroom observations. The tests that were used for measuring students’ performance were developed locally within KU by the instructor/researcher. The interviews aimed to obtain an in-depth understanding of how 1:1 computing was used, for what purposes, and in what contexts. The qualitative inquiries provided rich data sources and served multiple functions within the research.

Three major criteria were used in this study to measure students’ outcomes: (a) students’ academic achievement in tests; (b) students’ quality of work in assigned projects; and (c) students’ level of satisfaction with the academic course as being demonstrated in their learning habits such as their motivation, engagement, and interest with the course, as well as their attendance and participation. Participants’ were assured that their data was highly confidential and would only be used for statistical analysis purposes. Their demographic information such as name, university/college grade level, content area specialty (i.e., major), grade point average (GPA), gender, and type of ICT user was also collected. The data collection was exclusively conducted by the researcher/instructor throughout the deployment period of the study.

Methods of Analysis

Quantitative methods of analysis were deployed to examine the collected data. The descriptive analysis techniques used were frequency, percentage, mean, and standard deviation. In order to insure the quality of the groups' data analysis, only students' scores earned on tests and projects that were administered in the classroom with supervision of the instructor/researcher were included in the final analysis. The data were interpreted on the basis of objectives formulated.

A series of comparisons were made to evaluate and assess the two different classes' academic achievement, attitude, and perception as groups. Specifically, a series of independent-samples t-tests were conducted to compare the means of the dependent variables—always being the students' achievement scores for the three main research objectives—with respect to an independent variable having two groups/levels, experimental 1:1 laptop group and control group; hence, they were used to test for differences between two groups/levels. The analyses techniques used in this study met the basic parametric assumptions required for their application. When performing inferential tests, an alpha level of 0.05 was selected.

The comparisons clarify how different students achieved in tests and projects, how they felt toward integrating 1:1 computing within the course, and whether or not there were any demographic differences among the research groups. Stated differently, the comparisons determined if there were significant differences in students' learning in terms of their performance/achievement in tests and assigned objective-oriented projects and their level of satisfaction with the course being taught in terms of their attitude, motivation, engagement, as well as their attendance and participation logs/records, and between the two groups

of students who had received different forms of access to ICT tools. The results of these comparisons helped administrative and instructional technology leaders determine appropriate solutions to educational problems, taking the right decisions at the right time for the right purpose.

Results

The results of the study significantly indicate that access to ICT tools such as 1:1 computing is definitely a “lever” for teaching and learning. One-to-one laptop program does have a significant positive impact on students' learning and academic excellence as well. It facilitates the following: (A) raising the students' test scores; (b) boosting the students' final grades; (c) enhancing the students' quality of work in their projects; (d) escalating students' collaboration and communication skills; and (e) increasing students' motivation, interests, and involvement in their own learning and growth which improved the level of satisfaction with the academic course among students. Hence, the findings favorably contend the study's assumptions.

Objective 1 – Students' Achievement

This objective tackled the impact of 1:1 computing on undergraduate students' achievement at KU in terms of their scores on tests and end-of-course grades. Two traditional tests and the final grade log/record addressed this research objective. The results show that 68 percent of the experimental group students' achievement scores in *Test-1* were above average and 32 percent average. Whereas, 32 percent of the control group students' achievement scores were above average, 40 percent average, and 28 percent below average. Besides, the findings reveal that 72 percent of the experimental group students' achievement scores in *Test-2* were above average and 28 percent

average. While, 32 percent of the control group students' achievement scores were above average, 32 percent average, and 36 percent below average.

The findings of the study indicate that students enrolled in 1:1 laptop program significantly outscored their peers in the control group in their achievement in Test-1 and Test-2 scores. The results of the independent-samples t-tests for Test-1 and Test-2 yielded a statistically significant differences between the two groups: Test-1, $t(33.086) = -3.982, p < 0.001$ ($p = 0.000$); and Test-2, $t(30.922) = -4.260, p < 0.001$ ($p = 0.000$). The findings disclosed that the students of the experimental group achieved very high scores (Test-1, $M = 22.24, SD = 1.832$; and Test-2, $M = 22.64, SD = 1.800$) in comparison to the control group's students (Test-1, $M = 18.64, SD = 4.132$; and Test-2, $M = 18.36, SD = 4.689$).

Furthermore, the results of the study also demonstrate that 52 percent of the experimental group students' final grades were above average, 40 percent average, and eight percent below average. Whereas, 16 percent of the control group students' final grades were above average, 24 percent average, and 60 percent below average. Therefore, the findings also constitute strong evidence that curriculum-centered 1:1 computing usage does have a statistically significant effect on students' final grades, $t(32.718) = -4.949, p < 0.001$ ($p = 0.000$). The results disclose that the students of the experimental group have achieved very high grades ($M = 88.56, SD = 6.801$) in comparison to the control group's students ($M = 71.64, SD = 15.684$).

Objective 2 – Quality of Students' Work

This objective related to the quality of work on the assigned projects submitted to the instructor/researcher in order to fulfill the requirements for the completion of the academic course. Four objective-oriented

curriculum-centered projects focused on this research objective. The findings indicate that 60 percent of the experimental group students' projects were classified as high quality and 40 percent medium quality. While, 12 percent of the control group students' projects were categorized as high quality, 72 percent medium quality, and 16 percent low quality.

Precisely, in *Project-1*, 32 percent of the experimental group students' projects were categorized as high quality and 68 percent medium quality. Whereas, 16 percent of the control group students' projects were classified as high quality, 64 percent medium quality, and 20 percent low quality. In *Project-2*, 52 percent of the experimental group students' projects were categorized as high quality and 48 percent medium quality. However, 12 percent of the control group students' projects were classified as high quality, 72 percent medium quality, and 16 percent low quality.

Additionally, the results for *Project-3* reveal that 72 percent of the experimental group students' projects were categorized as high quality and 28 percent medium quality. Whereas, 16 percent of the control group students' projects were classified as high quality, 68 percent medium quality, and 16 percent low quality. Likewise, the findings for *Project-4* indicate that 72 percent of the experimental group students' projects were categorized as high quality and 28 percent medium quality. While, 12 percent of the control group students' projects were classified as high quality, 68 percent medium quality, and 20 percent low quality.

Thus, the results evidently show noteworthy evidence that the types of educational access and opportunities provided by ICT-mediated 1:1 computing/laptop learning setting led to statistically significant positive changes in

the quality of students' work. Precisely, the findings indicate that students enrolled in 1:1 laptop program significantly outscored their counter peers in the control group in their achievement in Project-1, Project-2, Project-3, and Project-4 scores. The results of the independent-samples t-tests for Project-1, Project-2, Project-3, and Project-4 produced statistically significant differences between the two groups: Project-1, $t(38.072) = -4.062$, $p < 0.001$ ($p = 0.000$); Project-2, $t(38.103) = -4.454$, $p < 0.001$ ($p = 0.000$); Project-3, $t(35.009) = -6.377$, $p < 0.001$ ($p = 0.000$); and Project-4, $t(39.556) = -5.550$, $p < 0.001$ ($p = 0.000$). The findings disclose that the students of the experimental group have achieved very high scores (Project-1, $M = 8.32$, $SD = 0.852$; Project-2, $M = 8.48$, $SD = 0.823$; Project-3, $M = 8.96$, $SD = 0.735$; and Project-4, $M = 8.96$, $SD = 0.935$) in comparison to the control group's students (Project-1, $M = 6.92$, $SD = 1.498$; Project-2, $M = 7.00$, $SD = 1.443$; Project-3, $M = 6.84$, $SD = 1.491$; and Project-4, $M = 6.96$, $SD = 1.541$).

Objective 3 – Students' Satisfaction Level

This objective was concerned with the level of satisfaction of undergraduate students had with the academic course. The results illustrate that 72 percent of the experimental group students' were highly satisfied with the academic course and the remaining 28 percent were considered averagely satisfied. However, in the control group only 16 percent of the students were highly satisfied with the course, while 44 percent averagely satisfied and 40 percent less satisfied.

Also, research findings derived from both the quantitative measurement tools (i.e., the attendance and participation logs/records) as well as the qualitative measurement instruments (i.e., the interviews, classroom observations, and students' communication and collaboration

skills) pronounce clearly that ICT-mediated 1:1 computing/laptop learning environment did have a statistically significant positive impact on students' attitudes, motivation, and engagement with the academic course for the majority of the students. Precisely, the results of the independent-samples t-test for attendance & participation yielded a statistically significant difference between the two groups, $t(33.756) = -5.079$, $p < 0.001$ ($p = 0.000$). The findings disclose that the students of the experimental group have achieved very high scores ($M = 8.96$, $SD = 0.841$) in comparison to the control group's students ($M = 6.92$, $SD = 1.824$). Stated differently, the students enrolled in 1:1 computing/laptop program were significantly highly motivated, interested, engaged, and involved with the academic course. Their satisfaction level was significantly greater than their peers in the control group.

Discussion

This study presented empirical evidences on the effectiveness and meaningfulness of ICT use through the utilization of 1:1 computing/laptop program for improving and enhancing students' learning outcomes and academic excellence. The findings derived from the quantitative analyses assert clearly that 1:1 computing did have a statistically significant positive impact on students' achievement. It was evident that the experimental group has mean scores for all dependent variables much more than the control group has. This denotes that 1:1 computing giving a very high progress to the students in their achievement in tests' scores, projects' scores, attendance and participation, as well as the final grades. It also means that students significantly benefited in the 1:1 computing/laptop program.

Stated differently, there were notable evidences that the types of educational access and opportunities provided by ICT-

enriched 1:1 computing/laptop setting led to statistically significant positive changes in many aspects including (a) enhanced students' academic achievement; (b) improved students' quality of work; and (c) increased students' motivation, attentiveness, and engagement with the academic course as well as it enhanced students' communication, collaboration, and research skills.

These results coincide with many research studies conducted over the past five years and more concerning the impact of 1:1 computing on students' learning which significantly confirm the close association between scholastic/academic success and ICT use with students doing better in achievement measures across disciplines and grade levels, (e.g. in their accumulative grade point averages (GPAs), end-of-course grades, tests) as well as becoming more interested and involved in their studies and even having more fun learning (Bebell & Kay, 2010; Dunleavy & Heinecke, 2008; Hawkes & Hategekimana, 2010; Lei, 2010; Suhr et al., 2010).

The findings reveal a significant positive effect of 1:1 computing on students' learning; however, these positive alterations must be sustained and secured steadily across disciplines and grade levels. The researcher emphasized that the implementation of the ICT-enriched 1:1 laptop program would not be varied and mixed across the different schools and higher education institutions in the State of Kuwait during the implementation period. When schools and institutions vary in their deployment and management of the ICT-mediated 1:1 computing/laptop program to best suit the needs of their own educational community, each school has its own ICT resource allocation, policies, wireless learning environment, curricular and technical support, as well as training and professional development offerings. As a result, varied outcomes might be recorded

throughout the deployment period due to these differences (Bebell & Kay, 2010).

Conclusions and Recommendations

There is no doubt that modern life is dominated by ICT; however, ICT is not the sole remedy for what is wrong in education. ICT is only a tool that can be used as an instrument and enabler, but not as an end (Ololube, Eke, Uzorka, Ekpenyong, and Nte, 2009). Understanding how ICT is being used and measured, when and where ICT can be used, and for what purposes ICT may be used are all deemed to be of paramount importance if educators are really seeking to achieve its meaningful potentials and effectiveness on teaching and learning. The correlation between ICT use and students' learning outcomes might be affected by other pertinent facets including the users, the technology, and environmental factors.

For accurate measurement to occur, a blend of traditional and non-traditional assessment procedures and practices should be adopted and sustained (Bebell, Russell, & O'Dwyer, 2004). Assessment tools may include tests, projects, essays, portfolios, and performance assessments. Students' academic achievement should not be the only norm for scrutinizing the effect of ICT use. Other relevant developmental learning outcomes should also be considered including students' attitudes, behavior, motivation, attentiveness, self-esteem, learning habits, social skills, and ICT proficiency (Lei, 2010).

Findings from this research, as well as the studies covered in the literature review section, pronounced clearly that ICT through an e-learning intervention such as 1:1 computing did have a statistically significant positive impact on students' learning and achievement in terms of improvement in test scores, final grades,

the quality of work on assigned projects, as well as heightening students' motivation, attitudes, involvement with the academic course, and technology proficiency, too, for the majority of students in the experimental group. Hence, the findings of the study indicate that a strong and significant correlation was identified between 1:1 laptop use and students' academic excellence.

These results can be considered as educational indicators for researchers, educators, and policymakers that the Kuwaiti Government's decision to reform the educational system through integrating ICT resources into education by its support and endorsement to many ICT-mediated initiatives such as 1:1 computing/laptop program is on the right track. However,

this improvement in performance cannot be generalized unless more research is conducted on a wide scope of students covering a wide range of disciplines in various learning environments. It is suggested that longitudinal empirical research on a national level at different geographical locations is needed to investigate and identify the association and long-term impact of 1:1 computing on students' learning outcomes. Additionally, qualitative methods of analysis and other demographic independent/factor variables should be taken into consideration in the prospective research analyses including students' gender, major, GPA, and prior ICT knowledge.

References

- Bebell, D., & Kay, R. (2010). One to one computing: A summary of the quantitative results from the Berkshire Wireless Learning Initiative. *Journal of Technology, Learning, and Assessment*, 9(2), 1-60. Retrieved October 14, 2010, from <http://www.eric.ed.gov/PDFS/EJ873676.pdf>
- Bebell, D., Russell, M., & O'Dwyer, L. M. (2004). Measuring teachers' technology uses: Why multiple-measures are more revealing? *Journal of Research on Technology in Education*, 37(1), 45-63.
- Dunleavy, M., & Heinecke, W. F. (2008). The impact of 1:1 laptop use on middle school math and science standardized test scores. *Computers in the Schools*, 24(3), 7-22. doi: 10.1300/J025v24n03_02
- Hawkes, M., & Hategekimana, C. (2010). Impacts of mobile computing on student learning in the university: A comparison of course assessment data. *Journal of Educational Technology Systems*, 38(1), 63-74.
- Lei, J. (2010). Quantity versus quality: A new approach to examine the relationship between technology use and student outcomes. *British Journal of Educational Technology*, 41(3), 455-472. doi: 10.1111/j.1467-8535.2009.00961.x
- Ololube, N. P., Eke, P., Uzorka, M. C., Ekpenyong, N. S., & Nte, N. D. (2009). *Instructional technology in higher education: A case of selected universities in the Niger Delta*. Retrieved October 14, 2010, from http://www.ied.edu.hk/apfslt/v10_issue2/ololube/index.htm
- Sandler, M. E. (2010). *Teaching and learning with technology: IT as a value-added component of academic life*. Retrieved October 14, 2010, from <http://www.eric.ed.gov/PDFS/ED509731.pdf>
- Suhr, K. A., Hernandez, D. A., Grimes, D., & Warschauer, M. (2010). Laptops and fourth-grade literacy: Assisting the jump over the fourth-grade slump. *Journal of Technology, Learning, and Assessment*, 9(5), 1-46. Retrieved October 14, 2010, from <http://www.eric.ed.gov/PDFS/EJ873679.pdf>

Author

Ammar Safar has a Ph.D. in Education from The University of Tennessee, with a concentration in "Instructional Technology and Distance Learning (e-Learning)," with a cumulative G.P.A. and M.P.A. 4.0.

INTERNATIONAL STUDENT TEACHER EXCHANGE: A PROGRAM EVALUATION
OF GEORGIA SOUTHERN UNIVERSITY AND
PLACEMENT SITES IN ENGLAND

by Hsiu-Lien Lu and Lina Soares
Georgia Southern University

Abstract: *The purpose of this article is to articulate the results of a program evaluation study conducted in the Department of Teaching and Learning in the College of Education at Georgia Southern University (GSU). The study provides understanding on how best to pilot a new student teacher exchange program launched between GSU and National Taipei University of Education in Taiwan in fall 2011. Using a combination of phenomenological and grounded theory methods, this study involved 15 participants, including faculty and students, in in-depth and focus group interviews. Detailed results responded to three major research questions regarding the critical components, benefits, and recommendations of the student teaching abroad experience. Thoughtful discussions were conducted concerning topics over critical components, benefits, and problems of the practice. Based on the results, recommendations were made for the development of future international student teacher exchange programs.*

Key words: program evaluation, student teacher exchange, teaching abroad, global education

Background

Reports tabulated in a recent correction to the 2000 United States Census estimated that the share of racial and ethnic minorities will reach 54% of the population by 2042. This statistic highlights that non-Hispanic whites will be outnumbered for the first time in the United States history (U.S. Bureau of the Census, 2008). As a result, American schools reflect the changing demographics and students of diverse cultural and ethnic backgrounds comprise many classrooms. In fact, several of the largest cities in the US have already experienced this change whereby a “majority minority” is typical in most public school classrooms (Anderson, 2002)

Due to the increased diversity in American schools, administrators have recognized that colleges of education in the US have a two-fold job in order to help children reach their full potential. First, they must continue to actively recruit and train more teachers from all racial and ethnic

backgrounds (Nilsen, 2005). Second, they must instill in future teachers an attitude of cultural awareness that will help them meet the needs of the diverse students they will find in their classrooms (Stewart, 2010).

In order to recruit teachers who have been schooled in culturally diverse pedagogy, colleges of education in the U.S. are now required to include some form of multicultural education within their programs of study (Gomez, 1996). This policy includes student teachers’ field experiences. As a result, some American teacher education programs have added international field experiences (Pence & Macgillivray, 2007). The premise is that a single form of practicum experience has not been adequate in terms of preparation of future teachers to develop multicultural dispositions.

Researchers’ Stance

As teacher educators, we believe that practice teaching abroad is one practical

solution for institutions of American higher education to consider for training prospective teachers. It is this belief that provided the motivation to formulate an international exchange between Georgia Southern University (GSU) and National Taipei University of Education (NTUE). Support for this endeavor is provided by the Georgia Board of Regents who proposed that the number of students studying abroad be substantially increased to 25% of all students enrolled in undergraduate degree programs (USG, 2010). The intention was to create partnerships that are committed to expanding cultural awareness, educational and social ties, research activities, and student and faculty exchange.

Program Evaluation

In order to develop guidelines for our proposed exchange with NTUE, we focused our attention on student teachers and faculty members who had firsthand experience with an organized practice-abroad program. This article reports the evaluation of a well-established student teacher exchange program between GSU and public schools in England. The student teacher exchange program has operated for ten years. The objective was to understand the practices of the program, analyze areas to be improved, and together reach an agreement on how best to pilot the exchange with NTUE.

We interviewed the participants, asking them to describe everything they had experienced during their exchange in England that was critical, beneficial, and to begin the program evaluation, areas to improve. In doing so, we let the participants' voices be the source of our data collection. Based on what happens to participants when they participate in a cross-cultural field experience in another country, the findings allowed us to gain insight and construct guidelines into the

planning of our future program with NTUE.

Relevant Literature

Because schools in the U.S. have become more diverse (Bank & Banks, 2001; Nieto, 2002), cultural differences among students and between students and teachers are on the rise (Appelbaum, 2002; Banks, 1997). There is a mismatch between students and teachers because the majority of teachers in the classrooms are monolingual and white (Swartz, 2003). Gay (2000) adds that these teachers are ill-prepared to cognitively and affectively impact students from diverse backgrounds. Futrell, Gomez, and Bedden (2003) reinforce this point by noting that teachers in multicultural settings use curricula and teaching strategies that are not operationally different from mainstream teaching approaches. In addition, research has found that teachers' habits of mind can impede culturally responsive practice unless self-examination into their own attitudes and beliefs into diverse cultures is done (Lenski, Crumpler, Stallworth, & Crawford, 2005). One suggestion to achieve a true multicultural perspective was to provide more field experiences in diverse cultural settings.

Study abroad programs provide the opportunity for such field experiences. A review of the literature indicates that study abroad programs contribute to pre-service teachers' abilities to be pluralistic in their thought, behavior, and affect. Students who study abroad bring a higher level of discussion to the classroom that is framed by international knowledge (Heyl & McCarthy, 2003). Furthermore, study abroad provides a firsthand view of the world at-large and the opportunity to see multiple points-of-view, which in turn is beneficial for today's teachers in America (Younes & Asay, 2003). Blair (2002) echoes this point by positing that teacher candidates develop a deeper understanding

of immigrant children in American classrooms by student teaching in an international setting. Additionally, Quezada and Alfaro (2007) found that student teaching abroad allows future teachers the opportunity to develop global perspectives and to “speak from the other side” (p. 95). According to Zhao, Meyers, and Meyers (2009), educators who have experienced a cross-cultural teacher exchange gain the skills and abilities to help children of all backgrounds achieve in school because they have had experiences with other languages and because they have an increased respect for non-American students. However, the literature does point to a need to conduct follow-up studies, focusing on the application of knowledge, skills, and attitudes once student teachers who have studied abroad become classroom teachers (Quesada, 2004; Zhao, et al., 2009).

Based on the literature and research, colleges of education should continue to encourage student teaching abroad programs. The literature suggests that involvement in a teaching abroad program would expose student teachers to a variety of cultural challenges, immerse them in a culture completely different from their own, and potentially widen their worldview, thereby strengthening cultural awareness.

Methodology

Research Design

Based upon the purpose of the evaluation and concerns about what constitutes a defensible international student teacher exchange program, a qualitative research design (Creswell, 1998; Denzin & Lincoln, 2003) in the tradition of phenomenology (Moustakas, 1994) was used in the study. The interpretive nature of qualitative research was needed to search for the meaning of the students’ experiences in the spring 2010 American-England

exchange and the interpretations of those meanings from first person accounts. Thus, a qualitative research design was appropriate because this study sought to describe and understand what experiences the participants believed were critical and beneficial and offered indications for program improvement. Thus, the three research questions were

1. What are the critical components in the student teaching abroad experience and why?
2. How is a student teaching abroad experience beneficial to students and the department?
3. What changes, if any, are needed?

A combination of phenomenological and grounded theory methods was used to answer the three research questions that guided this program evaluation. Phenomenology served as a means to understand the experiences of the individuals in the international context (Creswell, 1998; Holstein & Gubrium, 2005); whereas, grounded theory methods provided the means to move beyond the description of those experiences and build an overall understanding of the critical components of an international student teacher exchange (Denzin & Lincoln, 2003; Glaser & Strauss, 1967; Strauss & Corbin, 1990).

Participants and Setting

Participants in this evaluation consisted of one cohort of nine student teachers who taught in England during spring of 2010, three former participants, two university faculty members, and a field placement coordinator who has worked with this exchange program for six years.

The participants had firsthand experience with the partnered exchange between GSU and public schools in England. The twelve student teachers were selected to experience the international exchange

because they had met the department's criteria for the exchange program.

The student teacher exchange in this program evaluation is a partnered exchange; i.e. GSU students teach in public schools in England for four weeks and English students teach in public schools in the state of Georgia in the United States for four weeks. Both GSU and English student teachers are provided off-campus housing. However, GSU provides placement for English students in Georgia Schools, whereas, public schools administrators in England provide field placement for GSU students while participating in the exchange.

Data Collection and Analysis

Data sources consisted of two forms of semi-structured interviews: individual-to-one and focus group. Participants' responses were audio-taped and then later transcribed for analysis. The data were coded and analyzed according to the typical protocol for a phenomenological study (Creswell, 1998; Holstein & Gubrium, 2005). Emerging themes and categories were identified, followed by revision of those themes and categories with every round of analysis for a total of five rounds.

Results

The results are organized in three sections that correspond with the three research questions about the exchange program: critical components, benefits, and recommendations for improvement.

Critical Components

Five main themes emerged from the data analysis that comprise critical components of a student teaching abroad experience: purposes of the experience, student teaching abroad procedures, and working around differences.

Purpose of the experience. The purpose for the opportunity was articulated by all participants (100%). The program views the exchange opportunity as an experience for students and faculty to develop in the areas of education, cultural enhancement, and personal growth; whereas, the perspectives of participating students revealed a more diverse personal purpose. In addition to immersion in different cultures, personal growth, and the opportunity to experience education in a different country, most student participants (80% of all participants) comprehended it an opportunity to travel, to connect globally, and to beautify resumes.

Student teaching abroad procedures.

The student teaching abroad procedures contained steps that ensure involvement and commitment for a successful experience. Following illustrate the procedural steps.

Recruitment. The recruitment process was a vital step that allows the opportunity to happen. The recruitment was conducted by coordinator assisted by faculty members on the International Studies Opportunity (ISO) committee according to participants (33%). The coordinator visited future student teachers and distributed flyers, introduces the study abroad opportunity, and debriefed the application procedure and expectations.

Selection. The results indicated a screening process following the submission of application packets. The ISO committee examined documents and interviewed each applicant to determine the student's eligibility, according to coordinator and faculty. This process served as a gatekeeper to ensure students equipped with necessary knowledge and dispositions to maintain certain extent of potential success in the opportunity.

Placement. After the selection process, a commitment to student placement was in

play according to the coordinator. Coordinators in both Georgia and England worked to provide diverse placement for teaching experiences.

Orientation. The coordinator provided two to three sessions of orientation before the experience according to coordinator and faculty (20%). The orientation included a mixture of professional issues as well as preparing students for the environment. Students learned about similarities and differences between the cultures and information for the international travel. They also worked on a unit project in groups about America to share with children in England.

Reflection. Once placed in host classrooms, students reflected using weekly prompts about their experiences and sent the reflections back via email to the coordinator and in few cases to the program supervisor according to three participants (20%). The reflection corresponded to evaluation and constituted portion of the portfolio turned in at the end.

Sharing. Multiple participants (40%) mentioned that, after returning from abroad, students were required to share their experience to future interested students and faculty members. At the presentation, they talked about what they learned in the experience. Over the years, this sharing has become a tradition pointed out by coordinator and faculty.

Working around differences. The alliance between English schools and GSU works because people are willing to work around differences and at times through obstacles, as stated by the faculty. The differences comprised the following areas: basic survivals, concepts about practicum, expectations, and communications.

Basic survivals. Food, lodging, and transportation were topics of student

participants (80%) that constitute basic survivals determined by what the host institution has to offer and cannot be altered much. These basic necessities are distinctive in England than in the states. With the currency exchange rate higher for U.S. dollars, it makes things cost more. Students therefore had to plan carefully to save money. For example, they mostly grocery shopped and cooked meals for themselves. Room and board was arranged in the receiving end, and students were provided with choices of apartment with various locations and price ranges. They might pick the cheapest one but paid almost double or triple what they would pay in Georgia. On the other hand, all student participants (80%) complimented convenient transportation as an advantage in the city, where they took bus, cabs, or trams to move about places and the prices were reasonable.

Concepts about practicum. While GSU practicums are placed by the field coordinator, English students find placements by themselves, which brings forth different practicum experiences according to faculty. This ISO opportunity started as an alliance between GSU and public schools in Derby, England. However, when the contact personnel moved, the GSU followed him and was introduced to other schools. Later, meeting a faculty from Sheffield-Hallam University at a conference led to the hope of working with the university which, unfortunately, has a different concept of practicum that requires students to find their own placements and not have supervisors to work with in the field. So GSU has to work with public schools again. Therefore, over the years, GSU has been sending students to different schools and was not always sure what they were going to find when they arrived.

Expectations. A relation built upon public schools and university inevitably causes different expectations of both ends. At

GSU, according to faculty and coordinator, students are required to teach based on curriculum standards; whereas in England, they do not have clear-cut standards to follow in the classroom. To fulfill GSU requirements, the ISO committee has created a framework based on the COE framework, and students are required to keep a portfolio in response to the framework.

Communications. GSU is working with two groups of people in different institutional systems, according to the coordinator. In spring, they work with two coordinators in public schools in England. One is a head teacher, and the other is an art teacher in high school. These two English coordinators developed and sent contact information and provided service to GSU exchange students, which was appreciated by student participants. In the fall semester, they work with the faculty member in Sheffield-Hallam University, who sends her students to GSU to work in early childhood classrooms. The communication between the coordinators, as described by the GSU coordinator, is slow and usually takes a while to respond to a piece of information.

Result Section II: Benefits

In response to the second question, this section provides an account of the benefits of student teaching abroad to both students and the department. The findings were organized in two themes, benefits to pre-service teachers and benefits to faculty and public school teachers.

Benefits to pre-service teachers. The findings in this study indicated that pre-service teachers benefit from cross-cultural immersion in professional development and personal growth as exclusively perceived by student teachers (80%). This immersion experience allowed the students to compare and contrast school cultures and practices. For example, focus-group

students articulated how this student teaching abroad experience had broadened their teaching knowledge and allowed them to realize there are other approaches to effective teaching. Some students found a lack of special education in English schools, while others believed this experience helped establish a global connection. Many of them (40%) admired how English teachers had lunch break and prep time and appreciated the opportunity to bring new things to kids on both sides. They believed they have become more creative through this experience. Coming from small towns, many of the focus-group students found this experience had challenged their comfort zone and enabled them to learn a lot personally. Finally, some stated this experience had helped them become a better-rounded teacher, and others described this trip as a humbling experience and learned what it was like to be a minority.

Benefits to faculty and public school teachers. According to the coordinator and faculty, areas beneficial to faculty included service, scholarship, teaching, and personal growth. This opportunity involved the ISO committee in the selection process and at the sharing presentation upon students' returns. Scholarly, coordinator and faculty presented at a national conference, and a report about the partnership was published in a newsletter. Additionally, via the pursuant of faculty development grants, faculty and school teachers visited host schools and practice students. Through this experience, the faculty and school teachers were able to compare and contrast educational systems and practices and to see "inside in the world" of other cultures. Subsequently, this experience promoted personal growth and enabled perspective change and urged them to consider how to bring different ideas back.

Result Section III: Recommendations for Improvement

In response to the third question, the final section presents the details on recommendations for improvement. Five themes emerged from data analysis as follows.

Alliance through universities and departments. The relationship established between university and schools brought forth challenges according to faculty. The communication between two sides through people was prone to change of practicum sites when contact personnel moved. As faculty stated, “If you are in the same school year after year...we would have the same expectations positioned in a longitudinal way.” The coordinator also acknowledged the fragileness of this relationship stating, “If anything happens to my three contacts or anything happens to me, this ends.”

Based on experiences, student participants (20%) recommended the exchange relation be built between universities. They suggested that students go to the university, see students’ life, experience the culture, and actually live as a student teacher, instead of a teacher. They argued an experience working with public schools alone prevented students from catching bigger pictures of the host country’s education and culture.

The coordinator experienced the lack of support at the departmental level and exclaimed in the interview stating, “It is not my project!” She recommended, “It would be awesome if the department does the orientation... because this program is very detached from the department.” Conducting all logistics but finding a disconnection with curriculum, the coordinator continued suggesting, “I would like to have faculty members more involved...to have the faculty actually structure some discussions with them [the

students] about the educational component that prepared them for this experience.”

Incorporating cultural curriculum. Based on personal experience, students (20%) recommended GSU offer a cultural class so students would know more about the peoples’ values and customs. The coordinator echoed students’ remarks and suggested having “an international course or global education course.”

Supervision needed. Students (13%) suggested professors visit the classroom and communicate with English teachers how GSU students have been prepared as future teachers. Because of lack of communication, they could not do what they should have and not being treated as a competent future teacher.

Faculty research. There has been little scholarship generated from this experience over the years and faculty (13%) suggested more to be yielded because many things should have been followed up. They hoped to see more student and faculty learning translated into influence on curriculum modification or addition for pre-service teacher education and literature.

Less traveling. Traveling seemed to become a priority in this exchange opportunity, which concerned the coordinator. Students (27%) acknowledged they got exhausted because of excessive traveling over weekends. GSU students have been given the last week to travel planned by themselves since spring 2010. Consequently, traveling took up one fourth of the stay in England, which caused some students (27%) to feel insufficient of this experience.

Discussion and Conclusion

The results of the first research question indicate that a student teaching experience requires three critical purposes of components: purposes of the experience,

student teaching abroad procedures, and working around differences. These components make sense because of the following reasons. First, there should be sound purposes for this experience, either for the program or aspirant students, given the fact that, according to the results, their purposes may not concur, but they do not conflict either. At any rate, these purposes pursued by the program and students should be strong enough for either party to generate the driving force for this opportunity. Second, administrative procedures that involve advertisement, recruitment, orientation, and other logistic support should be in play. These procedures should be conducted in ways that allow the opportunity to happen. Truly, how each piece of the procedures is handled might end up contributing to or deterring from the opportunity. Finally, divergences are likely to exist as systems are different in countries. Only through the willingness to work around differences and barriers could success of the experience be fostered. As a corollary, these three components establish the foundation of a viable student teaching abroad program and probably are the reasons that enable ISO to have proceeded for years.

Nonetheless, viability alone does not sustain a program enough if without benefits for participants involved in the opportunity. The results responding to the second research question indicate that the ISO opportunity is beneficial to students and faculty in the areas of personal growth and professional development. According to the results, students become more expanded, humble, and well-rounded personally and are more plural, creative, and open-minded in cultural and teaching perspectives through seeing the world and comparing and contrasting practices and perspectives (Stewart, 2010). These findings align with the literature that urges future teachers to increase knowledge and capacity in order to serve increasingly diverse students in schools (Zhao et al.,

2009). On the other hand, this opportunity allows faculty, though not many, to extend their capacity and have perspective change personally and in the areas of service, teaching, and scholarship. This opportunity provides firsthand experience, and therefore, is beneficial to teacher educators. Normally and reversely, teacher educators tend to use traditional strategies, such as reading assignments and other informational media, to spark cross-culturally responsive discussions because of lack of global experiences personally (Zhao et al.).

Although the evaluated program is deemed as viable and beneficial, the way it was established and the relation it has created with the partners have resulted in multiple problems that generated the recommendations for the third question. These recommendations include establishing alliance through universities and departments, incorporating cultural curriculum, providing supervision, encouraging faculty research, and reducing travelling in the experience. These recommendations, reflecting the reality of the evaluated program, could therefore provide guidelines for a future international student teaching project.

Ultimately, the authors discuss with pros and cons of this evaluated program. On the pro side, the evaluated program is practicable in ways because it is purpose-driven, follows necessary procedures, and endeavors to problem solve, which leads to the advancement of participants' benefits in personal and professional development (Nilsen, 2005). In terms of purpose, the evaluated program covers important aspects, such as cultural enhancement and personal and professional growth for participants. The purpose, therefore, drives an orientation to provide basic knowledge in cultural awareness and classroom practice for the experience. The orientation, however, does not offer workshops focusing on the host country's

beliefs, culture, and educational expectations and therefore may not reduce much cultural shock (Queszada, 2004). However, with basic preparation and endeavors to problem solve, it allows cultural and teaching enhancement to happen through immersion. This immersion experience situates participants in an alien culture and instructional context as a minority where personal advantages have been removed. Yet participants are still framed in a safe environment under the agreement of institutional cooperation, which grants the expansion of personal and professional development (Nilsen, 2005). The personal and professional development, thus, enhances the competence of future teachers and teacher educators to teach increasingly diverse student population in schools and universities (Futrell, Gomez, & Bedden, 2003).

On the flip side, the fact that the alliance is linked between university and public schools through field contact persons lends itself to a number of issues in the experience. First, a fragile relationship is likely to emerge due to a lack of a reciprocal protocol that entails a strong sense of collaboration and responsibility. Second, it does not cultivate a strong rationale for the faculty members' teaching and research (Nilsen, 2005) as the key linkage is placement and administration, instead of curriculum and academics. This feeble rationale for faculty participation inevitably leads to a chain of

consequences, e.g., the disconnection between logistics and curriculum, the frustration of the coordinator and students, the little faculty involvement in the process, and the meager scholarship generated, as indicated by the results. Finally, the lack of supervision may impact on student teachers' choices between teaching and traveling.

The results, therefore, imply that an alliance should be established between two higher education institutions via both administrative and faculty efforts, which might promote a better experience to participants and encourage more faculty commitment. It could also cultivate a stronger rationale to forge faculty teaching, learning, collaboration, and scholarship in two parties. With the extent of faculty involvement, it might therefore entail the establishment of bilateral logistic and curricular support, the offer of cultural introduction, and the joint pursuit in the areas of service, teaching, and scholarship across people in various levels, programs, and even departments.

This study has presented certain limitations in areas, such as participants being limited to the side of GSU stakeholders and school teachers not being included. The limitations therefore point to future study to include perceptions of relevant stakeholders.

References

- Anbe, E. B. (2006). Fostering multicultural appreciation in pre-service teachers through multicultural curricular transformation. *Teaching and Teacher Education*, 22(6), 690-697.
- Anderson, K. (2002, June 1). Diversity: America's new face. (The consumer counts: Minorities) [Electronic version]. *Home Accents Today*. Retrieved November 1, 2010 from https://goliathreference.ecnext.com/freescripts/document_view_v3.pl?item_id=0286-25580451&format_id=XML
- Appelbaum, P. (2002). *Multicultural and diversity education*. Santa Barbara, CA: ABC-CLIO, Inc.
- Banks, J. A. (1997). *Educating citizens in a multicultural society*. New York: Teachers College Press.
- Banks, J. A., & Banks, C. A. (Eds.) (2001). *Multicultural education: Issues and perspectives* (4th ed.). New York: John Wiley.
- Blair, J. (2002). Colleges sending teacher-candidates to see the world. *Education Week*, 22(15), 8.
- Census, U.S.B. o. t. (2008). *School enrollment social and economic characteristics of students. Current population reports*.
- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. London: Sage.
- Denzin, N. K., & Lincoln, Y. (Eds.) (2003). *Collecting and interpreting qualitative materials*. Newbury Park, CA: Sage.
- Futrell, M. H., Gomez, J., & Bedden, D. (2003). Teaching the children of a new America: The challenge of civersity. *Phi Delta Kappan*, 84(5), 381-385.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory*. Chicago: Aldine.
- Gomez, M. (1996). Prospective teachers' perspectives on teaching other people's children. In S. M. K. Zeichner, & M. Gomez (Eds.), *Currents of reform in pre-service teacher education*, (pp. 109-132). New York: Teachers College Press.
- Heyl, D., & McCarthy, J. (2003). *International education and teacher preparation in the US*. National Conference on Global Challenges and U.S. Higher Education: National Needs and Policy Implications. Duke University, Durham, NC.
- Holstein, J. A., & Gubrium, J. F. (2005). Interpretive practice. In N. K. Denzin, & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 483-506).

- Nieto, S. (2002). *Language, culture, and teaching: Critical perspectives for a new century*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Nilsen, P. (2005). Practice note: An international dimension in practice teaching. *International Review of Education/Internationale Zeitschrift für Erziehungswissenschaft*, 51, 525-531.
- Quesada, R. L. (2004). "Beyond educational tourism": Lessons learned while student teaching abroad. *International Education Journal*, 5(4), 458-465.
- Quesada, R. L., & Alfaro, C. (2007). Biliteracy teachers' self-reflections of their account while student teaching abroad: Speaking from the "other side." *Teacher Education Quarterly*, 34(1), 95-113.
- Stewart, V. (Ed.) (2010). *Going global: Preparing students for an interconnected world*. Asia Society.
- Strauss, A., & Corbin, J. (Eds.) (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. London: Sage.
- Swartz, E. (2003). Teaching white pre-service teachers: Pedagogy for change. *Urban Education*, 38(3), 255-278.
- USG. (2010). *University system of Georgia strategic plan: Strategic goal one*. Retrieved from http://www.usg.edu/strategicplan/one/global_prep.phtml.
- Younes, M. N., & Asay, S. M. (2003). The world as a classroom: The impact of international study experiences on college students. *College Teaching*, 51(4), 141-147.
- Zhao, Y., Meyers, L., & Meyers, B. (2009). Cross-cultural immersion in China: Preparing pre-service elementary teachers to work with diverse student populations in the United States. *Asia-Pacific Journal of Teacher Education*, 37(3), 295-317.

Authors

Hsiu-Lien Lu is an Assistant Professor for Teaching and Learning and Coordinator of the Master's Early Childhood Program at Georgia Southern University. Dr. Lu's career as an educator includes teaching K12, undergraduates, and graduates and supervising future teachers. Her research interests include teacher education, instructional strategies, and international learning communities.

Lina Soares is an assistant professor in the Department of Teaching and Learning at Georgia Southern University. She teaches undergraduate and graduate classes in middle grade education. Dr. Soares has conducted numerous research presentations including international, national, and state settings, focusing on effective pedagogical practices for content area teachers.

GENDER IMBALANCE IN SCIENCE EDUCATION:
IMPLICATIONS FOR IMPROVING FEMALE PARTICIPATION IN SCIENCE
IN AKWA IBOM STATE OF NIGERIA

by Folashade Afolabi
University of Ibadan, Nigeria
and
Akinyemi Olufunminiyi Akinbobola
University of Uyo, Nigeria

Abstract: *This paper examines the gender imbalance among science teachers by analyzing the number and the ratio of male to female science teachers and the enrollment of male and female students in the two tertiary institutions in Akwa Ibom State of Nigeria. The ex-post facto design was used for the study. The results of data analysis showed an imbalance in science teachers' enrollment against the female gender. Findings further indicated that a gap exists between the number of male and female science teachers in favour of the male gender in ratio 6:4. The result also showed that there are more male science students than their female counterparts in the ratio 7:3 based on the enrollment between 2000 and 2006. This paper discusses the implications for improving female participation in science education in Akwa Ibom State of Nigeria. In view of the implications of these findings for women empowerment and national development, it is recommended that parents and government should be involved in encouraging of women in science education for nation building. In addition, female science students should be encouraged through separate cut-off marks for admission and financial subsidy into higher institution.*

Key words: gender imbalance, female participation, science teachers

Introduction

The national policy on education (Federal Republic of Nigeria, FRN 2004) endorses the fact that no education system can rise above the quality of its teachers. Adesina (1977) also posits that the quality of education in any country is reflected by and related to the quality of the men and women who serve as teachers in its school systems. It is to be noted that the science teacher is the main aid to learning: the methods, styles and techniques being additional aids. The qualities of a science teacher include being a good innovator, the ability to improvise, possession of science process skills and knowledge of the subject matter.

In employment, section 17(3)(e) of the 1999, Nigerian constitution provides for equal pay for equal work without

discrimination on the basis of sex or any other ground whatsoever. Section 18 of the 1999 Nigerian constitution provides for equal educational opportunities at all levels for every citizen. Equally, it provides for the provision of free adult literacy programme, free secondary education, and free, compulsory, and universal basic education. Section 42 of the 1999 Nigerian constitution also provides for non-discrimination on the basis of sex (FRN, 1999).

In spite of equal constitution provisions for both sexes, persistent gender inequalities in both employment and educational attainment between males and females are evident. According to Ukoh-Aviomoh (2004), the level of illiteracy of Nigerian women is still very high; they are mainly young girls and married women who cannot afford education and may not easily

have access to it. Adeyemi and Akpotu (2004) noticed an imbalance in gender enrollment at all levels and types of education, as well as across various disciplines and programmes, especially at the tertiary level. Inhabekhai (2003) noted that women participate more in humanities and related courses than in science related courses. Gender, according to Olawoye (1993), refers to the social relations between men and women although these could be directed by sex, which refers to the biological differences between them.

Udchukwu (2001) reported a gender inequality in the enrollment figures in favour of males. According to Udchukwu, the enrollment of male students at University of Nigeria, Nsukka was 63.4 percent while that of female students was 36.6 percent. The result of this research showed a gender disparity in the number of graduated females compared with their counterparts in male dominated courses such as engineering, medicine, science, and technology. Owolabi (2001) found the enrollment of females for science education was 36.8% while that of males was 63.2%. Okebukola (1993) also stated that except for education and arts, female enrollment was less than half of males. The disparity was more pronounced in environmental design, engineering, and veterinary medicine.

The prospect of women's full participation in the society at all levels is a prospective force for a better order in the society. Abdus-Salam (1988) debated on the issue of gender and science and how the Third World Academy of Science (TWAS) could respond to the challenges of increasing the involvement of women scientists. Abdus-Salam later involved a small group of women that eventually turned to be a success. He remarked that women possessed the strengths, qualities, and insights, which they can bring to scientific approach especially for the three-quarters of humanity living in the third world. He

believed that women see and feel reality in a way different from most men and that women tend to view the world in a more holistic way irrespective of gender or historical and social conditions. From the development view point, Abdus-Salam noted that women played an important role in development because they provide half the food, fetch most of the firewood, and carry most of the world's produce, raise all the children, and above all, they are the main educators and health providers of the young boys and girls. However, upon all these achievements, women constituted 500 million out of 800 million illiterate people in the world and were less likely to receive training opportunities.

The campaign on the rights and freedom of women has gained momentum in the world as a result of supports from the United Nations. Consequently, women have been empowered by the government since the adoption of some major legislation that promoted equal opportunities, treatment, and rights. Moreover, women are now recognized and allowed important roles at all levels of public life and gaining relevant access to proper health care, education, and civil justice. The people of Nigeria must understand that women empowerment is not a privilege, but rather, it is a step that must be followed to promote sustainable development for all people. However, some problems people overlook constitute a great hindrance to the achievement of women's rights. Some cultures and religions still encroach into women's rights and count them as a group that cannot exist or alter comment. Women are denied of their right of full participation in education by factors including social, economic, cultural, political, educational, and religious. Examples include the lack of sustained government policies, girls hawking and trading, early marriage, family's preference of boys' education, and distant location of school (Eze, Chikwendu &

Onyejegbu, 2006) According to World Bank (1992), parents preferred to educate boys, and girls were encouraged to engage in early marriages or were made to do the house chores like fetching water, preparing food, gathering firewood, and looking after the younger children. Njoku (2001) saw gender as the social attributes and opportunities associated with being male and female, the relationships between women and men, boys and girls, as well as the relations between women, and those between men. These attributes, opportunities, and relationships are socially constructed and are learned through socialization processes. They are contextual, time-specific, and changeable. Gender equity is a process of being fair to women/girls and men/boys. Gender Equity Employment by Status is the state or rate of workers in employment by gender.

According to World Bank (2002), the consistent imbalance in students' enrollment against the female gender at the primary and secondary levels of education has far-reaching direct consequences on the gender distribution in university enrollments, and consequently, in the participation of women in high-level manpower occupations. To solve the problem of low enrollment of women in science is not only a scientific issue, it is social and political. Therefore, the question of more women at all levels of decision-making on the field of science and technology is not a feministic issue; rather, it is of justice and making intelligent use of talent and experience.

Statement of the Problem

Governments at all levels have been devoting given proportions of financial resources to education in view of its importance. This allocation is done without gender bias. Yet, why has there been gender disparity in the enjoyment of the resource provisions for education; every Nigerian citizen, irrespective of

gender, has the right to be educated. No recorded statistical evidence has shown that there is discrimination in the employment of secondary school science teachers in Akwa Ibom State of Nigeria. Also no statistical evidence shows that discrimination in the number of male and female science education students admitted in the tertiary institutions in Akwa Ibom State of Nigeria is happening. Hence, what is the situation concerning gender imbalance among the science teachers, and the enrollment of science education students in Akwa Ibom State of Nigeria?

Purpose of the Study

The main purpose of this study was to find out the gender imbalance in science education and its implications for improving female participation in science education. Specifically, the study was designed to achieve the following objectives: (a) To investigate the difference in the number of male and female science teachers in Akwa Ibom State secondary schools; and (b) To examine the difference in the enrollment of male and female science education students in the tertiary institutions of Akwa Ibom State, Nigeria.

Research Method

The ex-post facto design was used for the study. All the 584 male and 388 female science teachers in secondary schools, and 781 male and 288 female science education students in the two tertiary institutions offering science education (Akwa Ibom State College of Education and University of Uyo) in Akwa Ibom State constituted the population size. All the subjects in the population were engaged in the study due to the few number of science education students in the two tertiary institutions and science teachers in Akwa Ibom State. Enrollment figure of male and female science teachers

in the secondary schools were obtained from the Ministry of Education, Akwa Ibom State, Nigeria, while that of the two tertiary institutions were collected from their respective departments. The data collected were analysed using simple percentages and chi-square. All the hypotheses were tested at .05 level of significance.

Results

Research Question One

What difference exists between the number of male and female science teachers in Akwa Ibom State secondary schools? Table 1 shows that more male science teachers than female science

teachers in Akwa Ibom State at the ratio of 6:4.

Research Question Two

What difference exists between the enrollment of male and female science education students in the tertiary institutions of Akwa Ibom State? Table 2 above shows female science education students in the minority each year the data were reported; however, their numbers are slowly growing. Combining the total numbers for both institutions, 1351 science students were enrolled between 2000/2001 and 2005/2006 academic sessions. Of that total, 946 (70.02%) students were males, but only 405 (29.98%) students were female: a ratio of 7:3.

Table 1

Frequency and percentage distribution of gender of science teachers in secondary schools in Akwa Ibom State

Subjects	Number of Teachers				
	Male	%	Female	%	Total
Physics	216	68.35	100	31.65	316
Chemistry	266	58.21	191	41.79	457
Biology	346	67.10	260	42.90	606
Mathematics	268	62.33	162	37.67	430
Total	1096	60.59	713	39.41	1809

Table 2

Frequency and percentage distribution of the enrollment of male and female science education students by institution

Year	Gender	AKCOE		UNIUYO		Total	%
		#Students	%	#Students	%		
2000/2001	Male	122	76.25	30	73.17	152	175.62
	Female	38	23.75	11	26.83	49	24.38
2001/2002	Male	138	75.82	36	70.59	174	74.68
	Female	44	24.18	15	29.41	59	25.32
2003/2004	Male	145	71.78	45	67.16	190	70.63
	Female	57	28.22	22	32.84	79	29.37
2004/2005	Male	154	68.75	54	64.29	208	67.53
	Female	70	31.25	30	35.71	100	32.47
2005/2006	Male	164	67.49	58	59.79	222	65.29
	Female	79	32.51	39	40.21	118	34.71
Total							
2000- 2006	Male	723	71.51	223	65.59	946	70.02
	Female	288	28.49	117	34.41	405	29.98

AKCOE = Akwa Ibom State College of Education UNIUYO = University of Uyo

Discussion of Findings

From the analysis in Table 1, it was observed that 31.65% of the physics teachers were females, 37.67% of the mathematics teachers were females, 41.79% of the chemistry teachers were females, and 42.90% of the biology teachers were females. The highest proportions of female science teachers were found in biology, seconded by chemistry with mathematics and physics having the fewest female science teachers in Akwa Ibom State. However, the number of female science teachers was relatively low when compared with their male counterparts at a ratio of 6:4, male to female science teachers which might be due to the erroneous beliefs that women are more suitable for less tedious disciplines and vocations such as the humanities or the arts. Science and technology based disciplines have been seen as too tasking for the female gender. This erroneous notion has had the tendency to widen the gap in opportunities between males and females.

The results showed that significant differences exist in the number of male and female science teachers in Akwa Ibom State secondary schools in favour of male science teachers. This might be due to the fact that women are denied of their right full participation in education by factors such as teenage pregnancy, early marriage, religious beliefs, family's preference of boys' education in science, spirit of inferiority, and inability to set equality goals for themselves compared with their male counterparts.

The result was in line with the findings of Inhabekhai (2003) that women participate more in humanities and related courses than in science related courses. The result was also in agreement with the findings of Akanbi (1999) that women are not encouraged to go into professions such as engineering, science, architecture,

technology, or any of the prestigious profession necessary for building the nation, but women are seen as housewives, cooks, petty traders, and mothers.

Similarly to the results about science teaching in Akwa Ibom State, science education students in the two tertiary institutions have a male/female average ratio of 7:3 from 2001 to 2006. A significant difference exists in the enrollment of male and female science education students in the tertiary institutions in Akwa Ibom State of Nigeria in favour of the male science students. The result was in line with the findings of Njoku (2001) that the number of females who received education in Nigeria at all levels has been below their male counterparts. The result was also in agreement with findings of Okebukola (1993), and Adeyemi and Akpotu (2004) that an imbalance in the distribution of female undergraduates in favour of the arts and humanities and against science and technology-based courses exists.

Implication for the Production of Female Science Teachers

Based on the findings of the study, Nigeria has not been able to achieve what is stated in section 17(3) (e) and section 42 of the 1999 Nigerian Constitution that equal opportunity should be provided for males and females without any discrimination in terms of education and employment. Hence, women cannot meaningfully make important contributions to science and technology development especially in Nigeria.

Women, particularly in Nigeria, have been recognized as the major working subjects in agriculture and health, even now have increasingly engaged in other non-traditional sectors such as industry, trade, marketing, and services. Because their population is about 51% of the total population in Nigeria (Ashasim & Isa,

2004) and a majority does not participate in science-oriented courses, it implies that Nigeria may not be able to meet with technological advancements based on a solid scientific foundation. Thus, the contribution of science and technology education to national development in Nigeria may not be able to provide humanity with the change in the quality of life of the citizenry, industrialization, knowledge of the environment, social behaviour, improvement of the economy, and strong international decision and policy making. Hence, more women are needed in science based courses.

Recommendations

In view of the implications of the findings from this study, the following recommendations are made. (a) The admission cut off-marks for female applicants into colleges of education and universities in Nigeria especially in science oriented courses should be reduced compare to their male counterparts. (b) Manpower training, development, and utilization policies need to be established to attract females into diverse fields of

science and technology. (c) By making professional science and technology careers attractive to female through the injection of incentive packages, the derogatory images of females in science and technology education will be erased and replaced with that of pride as practitioners in fields with comparable or even better opportunities to those of their counterparts in other education professional fields. (d) Public awareness/enlightenment and mass education for the mobilization of more female participation in science education in tertiary institutions of learning must be a priority. (e) Special bursary and scholarship schemes should be introduced for females offering the sciences in tertiary institutions by the governments (federal, state and local). (f) In order to bridge the gap between number of male and female teachers, government should recruit and employ more female science teachers. (g) Federal legislation to provide adequate and equal opportunity for suitable employment without discrimination against females should be enacted.

References

- Abdus-Salam, A. (1988). *Women in science: Problems and solutions*. Welcome address presented in a conference organized by Canadian International Development Agency (CIDA) and Third World Academy of Science (TWAS), pp 146-147.
- Adesina, S. (1977). *Planning and educational development in Nigeria*. Ibadan: Educational Industries Nig. Ltd.
- Adeyemi, K. & Akpotu, N. (2004). Gender analysis of students' enrollment in Nigerian universities. *Higher Education*, 48, 361-378.
- Akanbi, G.O. (1999). Vision 2010 and the challenges of women education in Nigeria. *Journal of Educational Development*, 6(1), 25-30.
- Ashasim, C & Isa, D. (2004). High level manpower training as a necessity for enhancing women leadership in Nigeria. *Journal of women in Colleges of Education*, 8, 321-325.
- Eze, F.U. Chikwendu, M. & Onyejugu, L.N. (2006). Gender issues: The role of women in the development of science and technology in the developing countries. *Journal of Science and Technology Research*, 5(1), 22-27.
- Federal Republic of Nigeria (FRN, 1999). *Constitution of the federal republic of Nigeria*. Lagos: Federal Government Press.
- Federal Republic of Nigeria (FRN, 2004). *National policy on education*. Lagos: NERDC Press.
- Inhabekhai, C.I. (2003). Analysis of females participation in university education at the university of Benin in Nigeria. *Journal of Educational Foundations and Management*, 3(1), 101-109.
- Njoku, Z.C. (2001). Improving science and technology education of girls and women in Nigeria: The ways forward. In C.U. Nnaka & M.C. Anaekwe (Eds.), *Towards gender equality in Nigeria in the 21st century*. Enugu: Podiks.
- Okebukola, P. (1993). Access, retention and attrition as key issues in attainment of education for all in Nigeria. *Journal of Research in Science Teaching*, 20(3), 230-238.
- Olawoye, J.E. (1993). *Gender analysis in agriculture*. A lead paper presented at the WORDOC workshop, Institute of African Studies, University of Ibadan, Ibadan.
- Owolabi, T. (2001). Towards improving female participation in science, technology and teacher education. *Journal of Lagos State University Institute of Education*, 2, 123-128.
- Udchukwu, A.N. (2001). Gender difference in students' enrollment into higher institutions: A case study of university of Nigeria, Nsukka. *Knowledge Review*, 8(1 & 2), 14-18.

Ukoh-Aviomoh, E.E. (2004). The contribution of NGOs towards female vocational education in Nigeria. In E.O. Fagbamiye, J.B. Babalola, M. Fabunmi & A.O. Ayeni (Eds.), *Management of primary and secondary education in Nigeria*. Ibadan: NAEAP in association with Codat Publications.

World Bank (1992). *Primary education: A world bank policy paper*. Washington D.C.: The World Bank Development in Practice Publications.

World Bank (2000). *Higher education in developing countries: Perit and promise*. Washinton D.C.: IBRD. The World Bank Development in Practice Publications.

Authors

Folashade Afolabi is a lecturer in the University of Ibadan, Nigeria and specializes in science education (physics).

Akinyemi Olufunminiyi Akinbobola specializes in science education (physics) in the University of Uyo, Nigeria.

INSTRUCTIONAL STRATEGIES AND WORD PROBLEMS
OF ENGLISH LANGUAGE LEARNERS

by Shirley Leali & David R. Byrd
Weber State University, USA
and
Mongkol Tungmala
Northern Arizona University

Abstract: *Math is thought to be a universal language; however, many specific types of math problems (word problems in particular) are language specific. Strategies are discussed that will help the English language learner overcome the language barriers to succeed in the math classroom. Although focused on English language learners, the strategies discussed in this article would be of value, with obvious modifications, to any teacher who is teaching students who do not speak the language of the other students in the classroom.*

Key words: math, word problems, English language learners, strategies

Introduction

Academic language, or language used in a specific academic content area, can challenge the most proficient of students. Imagine, however, the difficulties specific content terminology or dense reading passages pose for students who are not quite proficient in the dominant language of the classroom where this academic content is being taught. This latter situation is the world of the English language learner (ELL), and the needs of this student can test the teaching skills of the most seasoned teacher.

In the United States, today's classrooms have changed dramatically from years past. Students are more academically diverse, and at the same time more inclusive, due to instructional philosophies that emphasize placing most students into the mainstream classroom for a significant portion of the school day (Kauchak & Eggen, 2010). The chemistry of the classroom may be made up of gifted students, students with special needs and students who are learning English along with the class content. Between 1997 and 2009, the number of ELLs in K-12 public schools grew 53.25 percent while the total

enrollment in these schools increased by merely 8.4 percent (National Clearinghouse for English Language Acquisition, 2011). Unfortunately, scholars reported that ELLs in particular received lower grades on standardized reading and mathematics tests than their native speaking peers (Echevarría, Vogt, & Short, 2010; Fairbairn & Jones-Vo, 2010; Reardon & Galindo, 2009). With the impact of significant number of ELLs in many classrooms, coupled with the unsatisfactory test results, schools are looking for ways to reverse this trend. Pre- and in-service teachers are often encouraged or even required to seek English as a Second Language (ESL) endorsements.

Lenz, Marrs, Schumaker and Deshler (1993) reported that the most common solution to teach today's diverse classroom is to aim for the mythical mean of the class. While this approach seems to make intuitive sense, research has shown that this approach does not meet the needs of *all* students. However, the National Council of Teachers of Mathematics (NCTM) *Principles and Standards for School Mathematics* (2000) stated that mathematics should be taught equitably to

all children. This means offering *all* students access to important mathematics. NCTM views the comprehensive mathematics education of every child as its compelling goal. By *every child*, we mean – no exception. NCTM is particularly concerned about students who have been denied access to education opportunities for any reason, such as language, ethnicity, and/or gender. We emphasize that every child includes both ELLs and speakers of English as a first language (NCTM, 2006). The recently revamped Standards for ELLs reflect this commitment. Standard number three of the TESOL Standards states, “English language learners communicate information, ideas, and concepts necessary for academic success in the area of mathematics” (Teachers of English to Speakers of Other Languages, 2006, p. 25).

Mathematics and ELLs

Many educators in today’s classrooms assume that mathematics is a universal language that crosses boundaries (Winsor, 2008; Zainuddin, Yahya, Morales-Jones, & Ariza, 2007). Pre- and in-service educators not familiar with ESL pedagogy generally have a misconception that ELLs should be able to do well in mathematics because mathematical principles and concepts are abstract and independent. They also assume that ELLs should be able to effortlessly transfer mathematical skills they have acquired in their first language to English. Although numbers and symbols may be similar across cultures, classroom practice and research demonstrate that more is needed when introducing mathematics to ELLs. Several studies demonstrated that ELLs must be given explicit and frequent instruction to move them beyond simply learning mathematical vocabulary and symbols to gleaning deeper the deeper meaning of mathematical concepts and properties (Chapin, O’Connor, & Anderson, 2003; Moschkovich, 1999; Winsor, 2008). As

Moschkovich points out, mathematics teachers must find “different ways of talking about mathematical objects and points-of-view of mathematical situations that bring students into the discussion” (p. 18).

Learning Academic English

Cummins (1981, 2000) clarified educators’ understanding regarding the process ELLs must go through in order to acquire English. Research has shown that basic interpersonal communication skills (BICS) or daily conversational skills are developed first and may take only one to three years to develop (Cummins, 2000; Thomas & Collier, 2002). However, the cognitive academic language proficiency (CALP) or classroom-based language could take a minimum of five years, with many students needing seven years or more to acquire (Cummins, 2000; Hakuta, Butler & Witt, 2000; Lindholm-Leary & Borsato, 2006; Thomas & Collier, 2002). Today’s educators, who will inevitably work with ELLs, must realize that in order for their students to succeed academically, they must concurrently acquire both conversational and academic English. According to the U.S. No Child Left Behind Act (2004), legislation that mandates that all students become proficient in major content areas, such as mathematics, schools are held accountable for assisting ELLs to meet the same academic attainment in English, as well as meet the same challenging state academic content and student academic achievement standards as their native speaker counterparts. ELLs are given only a one to two year exemption from taking end of level or state academic competency tests (Short & Echevarría, 1999). This means that CALP must be attained within the same time frame as conversational skills. Again, this requirement proves to be a great challenge for many classroom teachers.

Cummins (1994) and Leafstedt and Gerber (2005) assert that literacy-related or academic skills developed in children's first language (L1) can be positively transferred during the process of second language (L2) acquisition, but only after the student has acquired sufficient skills in L2 to allow the transfer of their L1 knowledge into their new language. A great number of ELLs at all grade levels today, however, do not possess the cognitive strategies described above. This is especially true with children whose education was repeatedly interrupted prior to their arrival to the United States due to economic deprivation, war, and political upheaval of their countries of origin (Suárez-Orozco & Suárez-Orozco, 2001).

ELLs and Word Problems

As shown above, some researchers feel that mathematics requires some specialized work to help ELLs to become proficient in the subject area. However, others are of the opinion that mathematics can be successfully taught early in ELLs' academic careers. Chamot and O'Malley (1994) and Herrera and Murry (2011) recommended that mathematics be introduced to ELLs early in their academic learning. Both sets of researchers suggested that ELLs begin the study of mathematics after science and before social studies and language arts. Their reason for placing mathematics second to science is because science has extensive contextual supports for learning or reduced language demands through a discovery and hands-on approach to instruction.

The goal of this article is to help bridge the gap between these two schools of thought in mathematics research and provide practitioners practical methods of addressing one of the most troublesome areas of mathematics—problem-solving with an emphasis on word problems. Abedi and Lord (2001) found that “[t]he discrepancy between performance on

verbal and numeric format problems strongly suggest that factors other than mathematical skills contribute to success in solving word problems” (p. 220). The current author will make recommendations to show mathematics teachers to help ELLs improve their performance with this troublesome area.

Cultural differences. ELLs in the United States come from over 400 language (and cultural) backgrounds (Goldenberg, 2008). These students do not share the common cultural background knowledge of the surrounding culture of their native English-speaking peers. This disconnect with the dominant language culture affects many areas of word problems for the ELLs.

Setting of the word problem. First and foremost, the situation presented in the word problem may cause troubles for the student. If the setting for the problem is too dependent upon knowledge of the culture of America, students may become bogged down in trying to understand the *story* behind the problem and not be able to focus their energies on gleaning the pertinent information from it. For example, if the problem deals with a baseball game, but the ELL has never heard of baseball, nor understands its rules, they may become overwhelmed trying to understand the basic premise of the problem; thus keeping them from solving it. When faced with such situations, the teacher must provide sufficient background knowledge for the students. Likewise, some problems can be written that are more *international* in flavor, such as a soccer game or other situations that are more familiar to their international students (Reyes & Kleyn, 2010). Teachers cannot forget that even seemingly basic ideas such as common American household items, such as CDs or DVDs, may become problematic. Zainuddin, et al. (2007) recommended using daily life situations that can be

demonstrated with real objects, which will also help teach ELLs about their new culture.

Cultural taboos. Students from some cultures may be challenged by the use of some ideas presented in word problems that are related to their values or belief systems (Fairbairn & Jones-Vo, 2010). One significant aspect of this area is the mention of ideas that are forbidden in the student's native culture. Such instances range from setting to the use of food items. An example of this can be seen with some common American food items are forbidden in their native culture, such as pork for Muslims. Although the teacher cannot always eliminate problems with content that may be culturally offensive, they can be sensitive when dealing with such problems and avoid writing problems containing potentially offensive items, thus demonstrating to their international students that they care for them and their beliefs (de Melendez & Beck, 2010).

Units of measure. Students who are accustomed to a specific measuring system may become confused if they confront an unknown system in a word problem. Generally speaking, most ELLs will arrive in classrooms with knowledge of the metric system. If the teacher uses a system that uses yards instead of meters or quarts instead of liters, the student most likely will not know how related terms in the measuring system are related. Whereas millimeters, meters and kilometers are logically connected, inches, feet, and miles are not. Teachers can either convert problems to a more familiar system for the ELL or provide the necessary background knowledge related to the culture's common system as needed. This can be done easily with a mini-lesson on measures with a useful chart provided to the ELLs.

Provide visuals. Research into teaching ELLs clearly showed that supplying

visuals for learning is consistently positive for their learning (cf. Echevarría, Vogt, & Short, 2010; Fairbairn, 2006; Goldenberg, 2008; Reyes & Kleyn, 2010). On one level, providing a picture, graph, chart, or some other type of illustration, will aid in the understanding of written problems both simplistic and complex in relation to the above areas of cultural concern. With the use of computers, teachers have access to many visual support items through the Internet or clipart from word processing programs, making them a practical option in almost any classroom setting. On another level, supplying students with a visual representation of how a problem can be solved will aid them in learning the structure of the given and related problems. Regardless of the goal of the visual, teachers need to demonstrate to students how to optimally utilize these resources to solve problems as students may not understand the purposes of the graphics on their own (Everson & Kuriya, 1998).

Cultural differences are inevitable in mathematical word problems, but the caring teacher can help bridge the gap between cultures with awareness and a little effort. It is important to remember that ELLs are immersed in the target culture and will, eventually, become familiar with many cultural differences presented in such problems. Until this happens, however, the teacher needs to provide sufficient guidance to carry the student along.

Vocabulary Issues

Basic Vocabulary

As discussed above, the usage of specific content vocabulary can pose a problem for ELLs. The context may be culturally related, but it also may be simply a matter of how the word is used in a specific sentence. Table 1 contains words that may become problematic because each

connotes different meanings depending on their usage.

Table 1
Troublesome basic English vocabulary

pants	ducks	lake	board	drain
count	long	wide	take	cost
table	close	right	consume	distribute

The word *board* may cause ELLs to think of the black- or whiteboard, instead of the intended meaning of a piece of sawed lumber. The word *take* may bring to mind the meaning of placing into one’s possession, instead of using up space or time, as in the question, “How long will it *take* her family to drive to California?” The first three words on the bottom row – *table*, *close*, and *right* – each have multiple meanings. The last two words, *consume* and *distribute*, are not commonly used in daily conversation but are frequently found in word problems. Teachers must provide sufficient examples to model sentences using such vocabulary. Teachers may also want discuss and illustrate the meaning of problematic words with the ELLs. For instance, referring back to the example of the problematic meaning of *take* in reference to time, the teacher can write an

example before giving the assignment, like ‘It *takes* me 30 seconds to walk around the room.’ The teacher can then demonstrate the action of walking around the room, while describing that it takes him/her 30 seconds to do so. Subsequent examples can be less immediate and concrete, allowing students to practice more abstract thinking. Such demonstrations do not require a lot of time and are well worth the effort.

Specialized Content Vocabulary

Another dimension of vocabulary the can be problematic to ELLs is terminology specific to mathematics. This can be seen in Table 2 of specialized mathematical terms which includes words and phrases from the content strand number and operations.

Table 2
Troublesome content vocabulary

Add	Subtract	Multiply	Divide
plus	minus	times	per
altogether	many (much) more	each	a/an
in all	decreased by	multiplied by	each
increased by	less than	product of	divided by (into)
sum	take away	in all	out of
total	difference of (between)	altogether	percent

Upon close examination of each column, the reader will find many words or phrases used to express similar mathematical functions such as add, subtract, multiply, or divide. The teachers can increase the comprehension of their students while helping them acquire additional content vocabulary in context. When teachers

anticipate vocabulary that may be too difficult, they can to modify the materials. The following examples (see Table 3) were adapted from the techniques of modifying materials recommended by Díaz-Rico and Weed (2009):

Table 3

Simplification	Your salary for mowing the lawn will increase from 6 to 8 dollars. It is going to increase or go up from 6 to 8 dollars.
Expansion of ideas	The cutting board measures 24 inches in diameter . <i>This cutting board is a circle. A straight line that joins the center of the board to two points on its sides is its diameter. So you can say that it is 24 inches in diameter.</i>
Direct definition	200 scouts consume 40 boxes of cereal a day. <i>This means that 200 scouts eat 40 boxes of cereal a day.</i>

Mechanical Issues

Sentence Structure

Like vocabulary issues, most ELLs encounter unfamiliar sentence structures that prevent them from comprehending what seems to be common knowledge among their English proficient peers. Frequently, their thought processes are interrupted as they encounter features, such as unfamiliar grammatical structures or complex tenses.

Passive constructions. Passive constructions are frequently used by classroom teachers in writing word problems. In fact, the previous sentence

and this sentence are both written in passive constructions. What makes this particularly problematic is that the subject of the sentence (*passive constructions, previous sentence/sentence*) is the receiver of the action generated by the verb (*are ... used, are...written*). Further examination of the verb phrases, “are ... used” and “were ... written,” one will notice that the “to be” verb from the first sentence is in the present tense (are) and the second is in the past (were). The main verbs, “used” and “written” are called by grammarians as past participles (use-used-**used**; and write-wrote-**written**). Table 4 illustrates passive constructions that are commonly used in various tenses in word problems.

Table 4

Passive construction samples

Present Tense	Pencils are sold for twenty-five cents each.
Past Tense	The assignments were submitted on Tuesday.
Future Tense	The tickets will be counted after five.
Present Perfect Tense	Many books have been checked out.
Past Perfect Tense	When we arrived, the cookies had already been eaten.

Added to this problematic situation is that questions in word problems are often expressed in passive voice, such as “How many meals were served?” or “How much of the pizza has been eaten so far?” In explaining word problems with passive constructions, the teacher should be aware that initially this type of structure is cognitively demanding for ELLs. None of the examples above identifies the ‘doers’ of the action, because each are understood. Teachers need to teach explicitly how to do such problems step-by-step, adding additional information that is generally understood by native speakers without a complicated explanation of passive construction or tense terminology.

The important goal is to have ELLs understand the elements presented in the word problem and know how to solve it. If they are struggling with sentence constructions, the teacher may find it helpful as a first step to re-write the word problems into active voice for the students (Echevarría et al., 2010). For instance, instead of “How many balloons were sold?” the teacher can write, “How many balloons did the man/woman sell?” for clarification. When ELLs master these types of re-written problems, re-introduce passive constructions, so that they can master these common forms as well.

Complex English Tenses. Verb tenses are natural to native speakers, but can prove cognitively demanding to ELLs (Fairbairn & Jones-Vo, 2010). The word problem below illustrates why verb tense can be challenging for new immigrant students:

520 students over the past four years have each checked out all 60 of the science books on kangaroos. How many times together have the books been checked out?

The main verb of this sentence is in the present perfect form, “*have ... checked out.*” ELLs may be puzzled by the use of

present perfect tense, which may not be commonly used or be indicated by an adverbial time indicator in their native language. To add to the problem, ‘*over the past four years,*’ an adverbial phrase is placed between the subject and the verb, causing the students’ train of thought to be interrupted. The word ‘*each*’ is unique to word problems because it provides the decisive clue to students that they need to multiply 520 by 60 because each one has checked out the 60 science books on kangaroos. At the end of this word problem, the students encounter the question, “How many times altogether have the books been checked out?” This question contains both the present perfect tense and the passive construction. The students must understand why this problem was written in the present perfect tense. A brief explanation below may satisfy the students’ bewilderment.

*All 520 students have each checked out 60 science books on kangaroos over the past four years up until now, and they probably will continue to check the books out in the future. That’s why we ask, “How many times **altogether have the books been checked out by the 520 students?**”*

Social Nature of Learning

When teaching non-native English speakers word problems, it is important to remember that education should be social in nature. Sociocultural theory suggests that students learn best while interacting with others (Lantolf, 2000; Vygotsky, 1978). Therefore, in addition to the considerations above, teachers cannot ignore one of the most readily available resources available to them: students’ native English speaking peers. These native speakers may not be able to verbalize why the word problem is written in passive voice or why the situation is culturally bound, but they do understand

both concepts. Allow ELLs to work in groups with native English speakers to aid in mathematical development.

González, Moll and Amanti (2005) emphasize the need for both native and non-native speakers to actively participate in learning; therefore, it is crucial to create activities where the students work together to solve problems and verbalize the steps as they do so in order for the non-native English speakers to become familiar with not only the process but also the terminology of solving word problems (cf. Winsor, 2008). (Native speakers will also benefit from the verbalizations.) These activities can include allowing students to act out the situation presented in the word problem (Zainuddin, et al., 2007). This kinesthetic approach will not only help students who learn in this way, but can also demonstrate to students that the word problems have a real world application by relating them to daily situations and social interaction.

Conclusion

Calderón (2007) points out that every subject area has its own approach to reading and writing and teachers need to explicitly scaffold these learning areas. Studies have suggested that ELLs struggle with mathematics in general and with word problems specifically (Abedi, & Lord, 2001; Bielenberg & Fillmore, 2005; Robinson, 2010). Even students who appear to be very fluent in English while interacting in daily conversations with others may have problems with academic language structures, vocabulary, and so on. Teachers must be aware of the potential areas of difficulties that these students might have and realize that it is crucial, therefore, to use a varied approach to teaching mathematics, so that those grappling with learning this content area along with learning English can do so in a successful manner.

To bridge the call for help for ELLs in the professional literature, the following concrete recommendations will help the teaching of mathematical word problems more practical for all educators. These suggestions fall into several broad categories as follows. First, pre-read the problems and identify any cultural, grammatical, or lexical challenges that they may pose to the students. Focus on real world settings, including problems to be solved based on the students' native cultures (Ovando & Combs, 2012; Reyes & Kleyn, 2010). This strategy will allow for the use of manipulatives, visuals, real objects, and language banks.

Second, as teachers introduce these methods, they need to include appropriate think aloud modeling for students to help them under the process of solving word problems. This method will not only allow students to hear an expert demonstrate how problem-solving takes place with word problems but will also provide the opportunity to eventually make students part of a dialogue in which they can learn to communicate with mathematics (Beilenberg & Fillmore, 2005; Moschkovich, 1999). Careful planning and guided practice that includes both verbal and written practice using mathematical terms and structures make ELLs proficient participants in mathematical dialogue, a goal of the NCTM Standards (Winsor, 2008). As students learn to dialogue in academic areas, teachers must provide extra time for students to respond as they draw pertinent information from their long-term memory and/or synthesize materials (Echevarría et al., 2010).

Third, allow students to take advantage of the power of social learning, while becoming proficient in problem-solving tasks (Vygotsky, 1978; Zainuddin, et al., 2007). Most students like to socialize, but it must be the goal of the teacher to make this socialization meaningful. ELLs may

need some extra time and support to feel comfortable interacting with their peers, using content focused language skills. Graphic organizers to structure ideas and guided role-plays to demonstrate how to participate in such dialogues with peers may be appropriate.

Finally, all lesson plan adaptations must address the proficiency levels of the various ELLs in the classroom. This adaptation can be particularly challenging since ELLs will be at different language stages and have different levels of background knowledge (Fairbairn & Jones-Vo, 2010; Goldenberg, 2008). Often, effective lesson planning can be accomplished using the suggestions provided here, while bearing in mind that individualized instruction may be necessary on occasion to scaffold student learning. Frequently, this requires that teachers take one “extra step back” to assess student knowledge and provide missing pieces to help them fill in missing

knowledge or transfer such knowledge from their first language (Cummins, 2000). Helping ELLs successfully learn to apply mathematical academic language to word problems will not happen overnight. Proper preparation by the teacher and application of sound teaching principals will create opportunities for these students to become proficient in this area. Teachers need to manipulate the concepts recommended here and apply them to fit their own situation, becoming comfortable with one and applying it to their teaching. When this is accomplished, they can learn a different strategy and add it to their teaching repertoire. This will provide students with the scaffolding that they require and allow teachers to keep word problems and problem-solving as an interesting area of mathematics instruction. Over time, students will become proficient at word problems and independent problem solvers.

References

- Abedi, J. & Lord, C. (2001). The language factor in mathematics test. *Applied Measurement in Education, 14*(3), 219-234.
- Bielenberg, B. & Fillmore, L. W. (2005). The English they need for the test. *Educational Leadership, 64*(4), 45-49.
- Calderón, M. E. (2007). *Teaching reading to English language learners, grade 6-12: A framework for improving achievement in the content areas*. Thousand Oaks, CA: Corwin Press.
- Chamot, A., & O'Malley, M. (1994). *The CALLA handbook: implementing the cognitive academic language learning approach*. Massachusetts: Addison-Wesley.
- Chapin, S. H., O'Connor, C. & Anderson, N. C. (2003). *Classroom discussions: Using math talk to help students learn*. Sausalito, CA: Math Solutions.
- Cummins, J. (1981). Empirical and theoretical underpinnings of bilingual education. *Journal of Education, 163*(1), 16-29.
- Cummins, J. (1994). The acquisition of English as a second language. In K. Spangenberg

- and R. Pritchard (Eds.) *Kids come in all languages: Reading instruction for ESL students*, (pp. 36-62). Newark, DE: International Reading Association.
- Cummins, J. (2000). *Language, power and pedagogy: Bilingual children caught in the crossfire*. Clevedon, England: Multilingual Matters.
- de Melendez, W. & Beck, V. (2010). *Teaching young children in multicultural classrooms: issues concepts and strategies*. (3rd ed). Belmont, CA: Cengage Learning.
- Díaz-Rico, L., & Weed, K. (2009). *The crosscultural, language, and academic development handbook: A complete k-12 reference guide*. (4th ed.) Boston: Allyn & Bacon.
- Echevarría, J, Vogt, M, & Short, D. (2010). *Making content comprehensible for elementary English learners: The SIOP model*. Boston: Allyn & Bacon.
- Everson, M. E. & Kuriya, Y. (1998). An exploratory study into the reading strategies of learners of Japanese as a foreign language. *Journal of the Association of the Teachers of Japanese*, 32 (1), 1-21.
- Fairbairn, S. (2006). *English language learner's performance on modified science test item formats: A Pilot Study*. (Unpublished doctoral dissertation). University of Iowa, Iowa City.
- Fairbairn, S., & Jones-Vo, S. (2010). *Differentiating instruction and assessment for English language learners: A guide for k-12 teachers*. Philadelphia: Caslon.
- Goldenberg, C. (2008). Teaching English language learners: What the research does—and does not—say. *American Educator*. 32(2), 8-43.
- González, N., Moll, L. C. & Amanti, C. (2005). *Funds of knowledge: Theorizing practice in households, communities, and classrooms*. Mahwah, NJ: Erlbaum Associates.
- Hakuta, K., Butler, Y., & Witt, D. (2000). *How long does it take English learners to attain proficiency?* Policy Report 2000-1. Santa Barbara: University of California, Linguistic Minority Research Institute.
- Herrera, S. G. & Murry, K. G. (2011). *Mastering esl and bilingual methods: Differentiated instruction for culturally and linguistically diverse (cld) students*. (2nd ed.). Boston: Pearson.
- Kauchak, D. & Eggen, P. (2010). *Introduction to teaching: Becoming a professional*. (4th ed.) Upper Saddle River, NJ: Pearson.
- Lantolf, J. P. (2000). *Sociocultural theory and second language learning*. Oxford: Oxford University Press.
- Leafstedt, J. M. & Gerber, M. M. (2005). Crossover of phonological processing skills: A study of Spanish-speaking students in two instructional settings. *Remedial and Special Education*, 26, 226-235.

- Lenz, K, Marrs, R. W., Schumaker, J. B. & Deshler, D. (1993). *The lesson organizer routine*. Lawrence, KS: Edge Enterprises, Inc.
- Lindholm-Leary, K., & Borsato, G. (2006). Academic achievement. In F. Genessee, K. Lindholm-Leary, W. Saunders, & D. Christian (Eds.), *Educating English language learners: A synthesis of research evidence* (pp. 176-221). New York: Cambridge University Press.
- Moschkovich, J. (1999). Supporting the participation of English language learners in mathematical discussions. *For the Learning of Mathematics* 19(1), 11-19.
- National Clearinghouse for English Language Acquisition (NCLEA). (2011). *NCELA frequently asked questions*. Retrieved March 23, 2011, from www.ncele.gwu.edu/expert/faqs
- National Council of Teachers of Mathematics. (2000). Principles and standards for school mathematics. Reston, VA: Author.
- National Council of Teachers of Mathematics. (2006). The “every child” statement. Reston, VA: Author.
- No Child Left Behind. (2004). Title III: Language instruction for limited English proficient and immigrant students. Washington, DC: U.S: Department of Education. Retrieved April 1, 2011, from <http://www2.ed.gov/policy/elsec/leg/esea02/pg39.html>
- Ovando, C. J., & Combs, M. C. (2012). *Bilingual and esl classrooms: Teaching multicultural contexts*. (5th ed). NY: McGraw Hill.
- Reardon, S. F., & Galindo, C. (2009). The Hispanic-white achievement gap in math and reading in elementary grades. *American Educational Research Journal*, 46(3), 853-891.
- Reyes, S. A., & Kleyn, T. (2010). *Teaching in two languages: A guide for k-12 bilingual educators*. Thousand Oaks, CA: Corwin.
- Robinson, J. P. (2010). The effects of translation on young English learners’ mathematics performance. *Educational Research* 39(8), 582-590.
- Short, D., & Echevarría, J. (1999). *The sheltered instruction observation protocol: A tool for teacher-researcher collaboration and professional development*. Washington, DC: Center for Research on Education, Diversity & Excellence. Retrieved April 1, 2011 from <http://www.cal.org/resources/digest/sheltered.html>
- Suárez-Orozco, C., & Suárez-Orozco, M. (2001). *Children of immigration*. Cambridge, MA: Harvard University Press.
- Teachers of English to Speakers of Other Languages. (2006). *PreK-12 English language proficiency standards*. Alexandria, VA: TESOL.

Thomas, W. P., & Collier, V. P. (2002). *A national study of school effectiveness for language minority students' long-term academic achievement*. Santa Cruz, CA, and Washington D.C.: Center for Research on Education, Diversity and Excellence.

Vygotsky, L. S. (1978). *Mind and society*. Cambridge, MA: Harvard University Press.

Winsor, M. S. (2008). Bridging the language barrier in mathematics. *Mathematics Teacher*, 101 (5), 372-378.

Zainuddin, H., Yahya, N., Morales-Jones, C. A., & Whelan Ariza, E. N. (2007). *Fundamentals of teaching English to speakers of other languages in k-12 mainstream classrooms* (2nd ed.). Dubuque, IA: Kendall/Hunt Publishing, Co.

Authors

David R. Byrd completed his Ph.D. at the University of Iowa with a focus on foreign language and ESL education with a cognate area in second language writing. He is currently an Assistant Professor at Weber State University where coordinates the ESL and dual-language endorsements.

Shirley Leali is an emeriti professor from Weber State University where she was a mathematics education specialist in the Teacher Education Department. She received her Ph.D. from University of Denver (Colorado).

Mongkol Tungmala at the time of his death was an assistant professor at Northern Arizona University after being at Weber State University for nearly a decade. He received his Ph.D. from Brigham Young University in Provo, Utah.

THE ROLE OF MANAGEMENT AND GOVERNANCE IN EFFECTIVE SCHOOL BASED MANAGEMENT IN SOUTH AFRICAN SCHOOLS

by RJ (Nico) Botha
University of South Africa, Pretoria

Abstract: *During the past three decades, South African education has experienced an immense decline in teaching and learning standards as a result of the political upheavals that have afflicted the country. This decline in standards as well as other, mainly political, factors has resulted in legislation being passed to transform and renew the South African education system by inter alia, creating new structures and opportunities for all stakeholders in education to participate in the management and governance of South African schools.*

School-based management, or SBM, is therefore no longer an option, but a reality in South African education. Legislation and policy documents all point South Africa firmly towards a school-based system of education management. The new policy framework for decentralised decision-making is also embedded in the South African Schools Act 84 of 1996.

The effective management and governance of SBM structures are widely regarded as essential dimensions for effective SBM. In response, this article is an attempt to explain the critical role of management and governance of SBM structures in ensuring effective SBM in South Africa where educational reform is the norm, rather than the exception.

Key words: school-based management, governance

Introduction

During the past 20 to 30 years a major shift has happened towards greater self-management and self-governance in educational institutions throughout the world. This trend is evident in a number of countries such as Australia, Canada, New Zealand, the United Kingdom and parts of the United States of America (cf. Imber, Neidt & Reyes, 1990; Johnston, 1997; Leithwood & Menzies, 1998; Murphy & Beck, 1995; Taylor & Bogotch, 1994) and is related to a move towards institutional autonomy, the so-called school-based management (SBM) or self-management of schools (cf. Gultig & Butler, 1999; Hart, 1995; Taylor, 2004).

Similarly, in South Africa, educational policy investigations undertaken within the last decade by the Department of Education (DoE) such as the Report of the Task Team on Education Management

Development (DoE 1996) and legislation such as the South African Schools Act of 1996 (RSA 1996a) focus, inter alia, on the need for all stakeholders in education to work in democratic and participative ways to build relationships in sustainable communities, thus ensuring the effective delivery of education. At the core of these policy initiatives and legislation is a process of decentralised decision-making powers to the nation's schools and school governing bodies (SGBs), the allocation of resources to school level and "a significant process of democratisation in the ways in which schools are governed and managed" (DoE, 1996, p. 27).

Globally, SBM is such a widespread phenomenon in education and thus so relevant and important for South African education at the time of writing, that Education Minister Pandor recently reassured the education fraternity of the government's commitment to the self-

management and the self-governance of South African schools. In addressing the media, she referred to SBM as “a mega-trend” in education and urged parents and other stakeholders in education to participate in school management and governance. She described SBM as “the way to participate in school management and governance” (Star, 2005, p. 7). In spite of other more negative and often contradictory reports regarding local school management and governance (specifically with regard to the powers of SBM structures in the appointment and promotion of educators) that have appeared in the South African media over the last few months (Star, 2005), the powers of school governance and management continue to be vested in SBM structures such as the school governing body (SGB).

For more than 30 years policymakers, educators, and academics have viewed SBM as a key ingredient in school improvement and reform efforts (cf. Cohen, March & Olsen, 1972; Cohen, 1982; Conley, Schmidle & Shedd, 1988; Griffen, 1995; Taylor, 2004). Effective management and governance of SBM structures are regarded all over the world as essential dimensions for successful and effective SBM (cf. Malen, Ogawa & Kranz, 1991; Marishane, 2003; Squelch, 1999; Wohlstetter & Odden, 1996). The Commonwealth Secretariat (1996), for example, refers to this issue as follows: “The management and governance roles of the school principal and school governing body play the most crucial role in ensuring effectiveness in school-based management” (p. 2).

But what exactly is the role of management and governance in ensuring effective SBM? In addressing this question, the role and importance of the state in the democratisation of South African schools, via SBM, will first be discussed.

The Role of the State in the Management and Governance of School-Based Management

During the past three decades, South African education has experienced an immense decline in teaching and learning standards as a result of the political upheavals that afflicted the country (Behr, 2004). This decline in standards, together with other political and social factors, has resulted in legislation, such as the South African Schools Act (SASA) 84 of 1996 (RSA 1996a), the main aim of which was to transform and renew the South African education system by, inter alia, creating new structures and opportunities for all stakeholders to participate in the democratic management and governance of South African schools.

In line with global trends in educational reform, local school communities have been given the opportunity to establish democratically elected SBM structures to assist schools in areas of management and governance. SBM structures consist of a wide range of stakeholders such as parents, educators, learners, the principal, and various other members of the community with the potential to make meaningful contributions to school education and to serve as partners in the management and governance of South African schools (RSA, 1996a).

The concept of stakeholders in education has become fashionable in many countries, including South Africa. The notion is based on the assumption that certain groups and individuals have an interest or stake in the activities of an institution. This concept is reflected by government (DoE, 1997) when it states “The democratisation of education includes the idea that stakeholders such as parents, learners and other role players, such as members of the community, must participate in the activities of the school” (p. 6).

The inclusion of these stakeholders as partners in SBM structures is done in pursuance of the ideal of the democratisation of education, which in turn is rooted within the concept of decentralisation. The latter entails the devolution of decision-making powers from the central authority (state) to the lower level (school). Such devolution partly owes its origin to a way of thinking which Holloway (2000) expressed

If people are empowered to make decisions about the school, and if these decisions are made closer to the school, then better informed decisions will be made about the school than would otherwise be the case, and people who make these decisions will feel enriched as they enjoy decision-making freedom. (p. 81)

It is therefore in line with the views expressed above that SBM structures in South Africa have been given powers implied in their functions as provided by section 20 of the SASA (RSA 1996a) as well as the necessary freedom to exercise these powers in a responsible manner as they carry out their functions in schools (RSA 1996a). Section 21 of the SASA (RSA 1996a) also makes provision for the conferring of additional powers if SBM structures demonstrate expertise and competence. This principle is demonstrated by the fact that SBM structures that show competence in the performance of their duties are given additional powers, while those who perform incompetently either forfeit their powers or have their powers reduced, as is implied in the draft Education Laws Amendment Bill of 2004 (RSA 2004). This is done to ensure that SBM leadership act in a responsible and accountable manner.

It follows that the democratisation of educational control by the state, as part of the educational reform strategy of

decentralisation, was not an event, but a continuing empowerment process that involved an array of issues. Given the above picture of the democratic management and governance of schools, one can conclude that the successful devolution of decision-making authority to the school level depends on the extent of the powers that SBM leadership has. For effective teaching and learning to take place in our schools, it was essential that SBM leaders be empowered to execute these functions effectively. The primary role of the state in a democratically controlled school environment was to empower SBM leadership once these they have been properly established and have clear roles and responsibilities been delegated to them. The role of the state in this empowerment process can be divided, according to Marishane (2003), into three distinct, but interconnected sets of activities, namely

- the creation of an environment for the empowerment of SBM structures
- capacity building for members of SBM structures to perform optimally
- the creation of an environment for the facilitation, monitoring and evaluation of SBM processes through which SBM structures will operate. (p. 40)

These activities were collectively aimed at giving SBM leaders the decision-making authority and autonomy needed in key performance areas. By virtue of the authority and autonomy they enjoyed, SBM leaders were accountable to the state for the nature of the performance resulting from their decisions and actions. The state-school relationship was therefore balanced in pursuance of the common goal of school improvement. These three interconnected activities will consequently be discussed.

The creation of an environment for the empowerment of SBM structures. As part of its role in the empowerment of SBM structures, the state had to create an

operational system with clear guidelines for operational structures, processes, activities, and goals (Bisschoff, 2002; Squelch, 1999;). In order to function effectively SBM structures required, according to Marishane (2003), the following

- familiarity with state policies relating to their operation
- clear operational guidelines (for example how to establish supportive structures such as subcommittees and delegate some responsibilities to them)
- procedures followed by SBM structures in the course of carrying out their responsibilities
- knowledge and understanding of the state’s priorities regarding education service delivery within a given time frame
- accountability measures to be applied when decisions are made
- educational objectives to be pursued
- knowledge of performance standards and principles to be applied in pursuance of these objectives. (p. 41)

In other words, the operational system referred to above addressed fundamental questions relating to who should do what, how, when, and why. Understanding of the operational system, as well as knowledge of roles and responsibilities, ensured that an ideal climate was created for SBM structures to carry out their functions, specifically within critical areas such as curriculum, personnel matters, finances, matters concerning learners, and property issues (Briggs & Wohlstetter, 1999; Bush & Heystek, 2003).

Capacity building for members of SBM structures to perform optimally. Section 4.4 of Education White Paper 2 (RSA 1996b) defined capacity building as “empowerment,” where capacity was regarded as the “power to act”. The same section in Education White Paper 2 (RSA, 1996b) set the tone for the empowerment of SBM structures by clearly stating that

“school management, school governing bodies and district education offices must be empowered to implement effectively the new system of democratic management and governance” (p. 12).

As a state initiative, capacity building involved first, the development of an appropriate legislative framework; second, the provision of necessary and essential resources; and third, the training of members to serve in SBM structures (Marishane, 2003; Squelch, 1999;).

The development of an appropriate legislative framework. It was the primary task of the state to provide a legislative framework that resulted in new policies and directions to meet challenges brought about by the change from centralised, bureaucratic control to decentralised, democratic control of schools. The SASA of 1996 (RSA 1996a) was based on the spirit and principles enshrined in section 195(1) of the South African Constitution, Act 108 of 1996 (RSA 1996c). For this reason, Education White Paper Two (RSA 1996b) made provisions for the organisation, governance, and funding of schools and stands out as an example of a legislative framework tailored to suit a transformed education system and guide the activities of SBM structures that share power and autonomy in the system.

In supporting the provisions of the SASA (RSA 1996a) as well as the principles of equity, redress, quality and efficiency enshrined in the South African Constitution (RSA 1996c), various pieces of legislation have been adopted over the past few years. Legislation was an important empowerment instrument in that SBM structures appealing to the authority of the law to justify their decisions and actions. As long as they feel protected by the law, SBM structures will feel empowered and motivated (Marishane, 2003). The following are a few examples of such legislation as presented in the form

of laws, regulations, and notices

- *National Norms and Standards for School Funding, Notice 2363 of 1998 (RSA 1998a)*: This notice created opportunities for SBM structures to exercise their decision-making powers over school funding. The proposed amendments to this notice, contained in the Education Laws Amendment Bill (RSA 2004), have been developed to address, among others, challenges that may emerge in the course of exercising these decision-making powers. As reflected in the amendments, the state recognises the important part played by the school community in the area of school finance and finds it imperative to give clarity to various legal provisions covered in or implied by the National Norms and Standards for School Funding (RSA 1998a).
- *Employment of Educators Act 76 of 1998 (RSA 1998b)*: In terms of this act and its sub-sequent amendments, Act 48 of 1999 (RSA 1999) and Act 50 of 2002 (RSA 2002), SBM structures were empowered to recommend the appointment, transfer, or promotion of educators to the Head of Department (HoD). Although this act recognised the importance of SBM structures' decision-making authority with regard to the employment of educators, the structures' powers are limited to making recommendations with the ultimate authority being vested in the HoD of the specific province.
- *Education Laws Amendment Bill, Notice 26911 of 2004 (RSA 2004)*: This bill explained and clarified the provisions of the SASA (RSA 1996a), which deal with such aspects as school fees, the disposal of movable school assets, the suspension and expulsion of learners, and the appointment of educators. These aspects fell within the critical performance areas of finance, property, learners, and personnel respectively in which SBM structures

are given a certain measure of authority commensurate with their capacity to exercise such authority.

The provision of essential resources.

Resource provisioning was one of the critical elements for effective SBM. Resources were needed in order to translate ideas and decisions of those in powerful positions into meaningful actions, i.e. actions aimed at organisational improvement. While it was the responsibility of the state to give schools power, power in the absence of essential resources cannot bring about improvements. SBM structures needed capacity in the form of tangible resources to actualise this power. They needed resources in order to make informed decisions, and they needed information in order to implement those decisions. Schools may be said to have capacity if they have resources at their disposal and can use and control these resources efficiently (Wohlstetter, 1995).

According to Marishane (2003), the state has an important role to play in capacity building for efficient resource utilisation in the school. First, the state was responsible for providing access to resources; second, it had to ensure that once the resources were provided, members of SBM structures had the capacity to use them efficiently to bring about improvements in schools. Such resources included (a) information and (b) funding, both of which were critical for self-development of members of SBM structures.

Information. Information was an important resource needed by the SBM structures to support school management, educators, and learners. It was a prolific source of power for people and underlain the importance of informed decision making to an organisation that operated in a decentralised environment, which in itself was people-centred. Giving people information, however, did not necessarily

result in the automatic empowerment of stakeholders in the SBM process. It was the nature of information disseminated and the way this information was used in the organisation that counted. This applied to the school. As David (1996) discovered, a decentralised system of school management functions properly “...only when each knows how it is doing” (p. 8). For this reason, the SBM structure needed easy access to information that enabled the leaders to plan and to make informed decisions on all matters affecting effective school management.

The complexity of information that flowed into the school was reflective of the pace of educational reform, and this was a major challenge facing the SBM structure, particularly since it had to share this information with other task teams in the school (Taylor, 2004). Because information had a tendency to become distorted on the way to the recipients, there was a need for a critical analysis of the type of information that should be delivered to the SBM structure and the manner in which that information was delivered. For SBM structures to function effectively, they required information that had particular bearing on their sphere of operation. It was the responsibility of the state to empower SBM structures by giving them information and strategies to seek clear, reliable, accurate, relevant, and up-to-date information.

In this regard, Marishane (2003) warned that misinformation, (information that does not meet these criteria) may have a rippling negative effect on a wide range of stakeholders of which the SBM structure was representative. Information that was centrally gathered and analysed should be decentralised together with other resources. This enabled school governors to be creative and to evaluate themselves as they compared their own performance with that of others.

Funding. Funding was one of the most important resources needed for the empowerment of SBM structures. The importance of this resource was reflected in paragraph 98F of the proposed amendments to the National Norms and Standards for School Funding (RSA 2004) which stated

Government sees the school allocation as a key means of empowering school communities, and realising democracy at the level of the school. It is important for the local level to participate in decision-making relating to what non-personnel inputs to purchase for particular schools. For this reason, government supports the gradual transfer to the school level of decision-making powers relating to the school allocation. This must obviously occur in a controlled manner, in accordance with the important sections 19 to 22 of the SASA, and in such a way that public funds are not squandered, and are spent in a manner that fully supports the national curriculum.

The above paragraph indicates the value the state in countries like South Africa attached to decision-making over funding as a means of empowering SBM structures and raised four points worth noting: (a) decentralisation of financial control to the school was acknowledged as a means of empowering stakeholders close to the school; (b) active participation of stakeholders in financial decision making, once the money allocated for the school reaches the school level, was recognised; (c) using the allocated money in a responsible manner was encouraged; and (d) accountability for the manner in which the allocated money was spent was demanded. These points as reflected in the legislation showed that empowerment of SBM structures in the area of funding was a combination of the following aspects:

- availability of funding (having

- resources allocated)
- high involvement (knowing what to do and then doing it in a meaningful way)
- responsibility (seeing the value of what is done)
- accountability (being in a position to explain what has been done, how and why)
- empowerment as a developmental process (having a time frame)

Given these aspects of financial empowerment, a number of challenges were likely to emerge in the South African educational field. One such challenge was how to get all SBM structures actively involved in decision making in the (occasional) absence of adequate knowledge of what to do given the current level of understanding of the majority of SBM structures. A recent study (Marishane, 2003) found that SBM structures still need training in financial management for capacity building. The same study also found that self-managing schools need easy access to information that will enable them to make informed decisions on all matters concerning the budget. Marishane (2003) concluded "As the saying goes: Whoever has the money, has the power" (p. 264).

With financial resources and decision-making power over the use of these resources in their possession, SBM structures created their own plans and made decisions related to the improvement of their specific school circumstances with regard to certain critical issues, thus creating an organisation concerned with enhancing its performance by making meaningful changes aimed at self-improvement.

The training of members of SBM structures. If self-management and self-governance of schools were to be successful in producing quality schools which provided a good learning environment for educators and learners,

sufficient high quality training and development of members of SBM structures had to be provided to enable these structures to carry out their tasks and responsibilities as required by legislation. This fact was acknowledged by the statutory requirement for provincial departments to provide training for school governors (Bush & Heystek, 2003). Section 19(1) of the SASA (RSA 1996a) also provided for the enhancement of capacity building of SBM structures as a primary responsibility of the state, and the Report of the Task Team on Education Management Development (DoE, 1996) suggested that the various provinces be required to make training in management and governance available to SBM structures. One of the aims of the training was to improve and transform schools in South Africa as part of the government's commitment to develop "a vibrant and successful democracy" (DoE, 1996, p. 12) for the post-Apartheid era. In this regard two important issues were noted: (a) that training would be available, as required by statute, and (b) that training would contribute to school improvement. The training of members of SBM structures were regarded as an important capacity-building responsibility of the state. To carry out this responsibility, the SASA (RSA 1996a) demanded that funding be appropriated to enable the HoDs of the various provinces to establish programmes to (a) provide introductory training for newly elected SBM structures enabling them to perform their functions, and (b) provide introductory training to members of SBM structures promoting the effective performance of their functions or enable them to assume additional functions.

Thody (1999) reported two main approaches to the training of members of SBM structures. The first approach involved the use of professionals (such as facilitators, principals, advisers, and financial experts) as trainers to conduct workshops for targeted members.

Although this approach seemed logical, it was sometimes criticised for disempowering members by overloading them with a mass of management-related information, but supplying them with few skills and competencies in the short period of time available for the workshops. The second approach involved engaging members of SBM structures in on-site training that was tailored to their needs by consultants who assisted them in certain problem areas.

Despite the criticism of the first approach, Thody (1999) suggested that a combination of the two approaches had the potential to empower SBM structures. It was therefore the responsibility of the state to ensure that whatever approach was followed, SBM structures would be left with sufficient power to advise and support school management and staff in matters relating to curriculum, learners, finance, information, personnel, and other critical areas. School governors were to be trained properly for their demanding leadership roles. Given the international evidence on the relationship between effective management and school outcomes, most countries now recognise the importance of providing specific preparation for SBM structures (Bush & Jackson, 2002; Mampuru, 1996; Squelch, 1999; Wohlstetter & Mohrman, 1995;).

The creation of an environment for the facilitation, monitoring, and evaluation of SBM processes through which SBM structures operated. Devolution of decision-making powers to the school level in line with the ideal of the democratic control of schools demanded a great measure of responsibility and accountability from SBM structures once the process had started. It also demanded active participation on the part of the state in facilitating, monitoring, and evaluating the entire process. Partnership between the state and the school played a pivotal role in this respect because the two structures

were bound together by a common goal, namely, educational improvement. For its part, the state created a viable environment for effective SBM and coupled this with capacity building to empower the SBM structure, which in turn dispersed power by delegating some responsibilities to school-based subcommittees or task teams. In return for the powers given, the SBM structure accounted to the state for all decisions taken and actions emanating from the exercise of the decision-making powers (Marishane, 2003; Wohlstetter & Mohrman, 1995).

Accountability was an important element in the development of a positive relationship between the state (the source of empowerment) and the school (the empowered). Lack of accountability, according to Deem, Brehony, and Heath (1995), threatened the democratic control of schools. This in turn might damage the relationship between the state and the school as partners and shift the focus away from the common goal. To strengthen this relationship and ensure that it did not deviate from the goal that bond the two structures together in the first place, the state had to monitor and evaluate the quality of the performance of the structure in terms of its decisions and actions. It then adjusted its level of support (capacity building) in accordance with changes that occurred in the operational system. This necessitated the development of a monitoring and evaluation system to ensure that SBM structures operated effectively (Mampuru, 1996; Squelch, 1999).

Given the shift to SBM as discussed earlier in this article, the SGB, as the most important SBM structure, had “a vital role to play in ensuring that schools serve their communities and provide a good educational experience for learners” (Bush & Heystek, 2003, p. 127). The problems and challenges with regard to the role of SGBs in the SBM process will now be

discussed.

The Role of School Governing Bodies in School-Based Management: Problems and Challenges

The SGB, as SBM structure, was a relatively new and significant part of the educational landscape in South Africa. At most schools, they began to operate for the first time in the latter years of the previous century and were perceived as an important and integral part of the democratisation process of South African schools. SGBs were perceived as “one dimension of a major commitment to democracy in a post-apartheid South Africa” (Mampuru, 1996, p. 25). In 1996 the South African government laid a firm legislative foundation for the democratic control of schools via the SGB when they introduced the SASA (RSA 1996a) and stated, “Just like the country has a government, the school that the learners in the community attend needs a ‘government’ to serve the school and its community” (DoE, 1997, p. 2). Later in the same year, the Report of the Task Team on Education Management Development (DoE, 1996) also emphasised the role and importance of SGBs by stating

....the South African Schools Act places us firmly on the road to a school-based system of education management: schools will increasingly come to manage themselves. This implies a profound change in the culture and practice of schools. The extent to which schools are able to make the necessary change will depend largely on the nature and quality of their governing bodies. (p. 28)

The underlying philosophy behind these initiatives on the part of the government related to a view that stakeholder participation in SBM, via the SGB, was likely to be beneficial for the school, its learners, as well as for the community it served. Taylor (2004) linked this

emphasis on stakeholder participation to wider ideals of participation in post-Apartheid South Africa by stating, “The introduction of school governing bodies was envisaged as part of democratic transformation: from an authoritarian, unrepresentative, bureaucratic and unresponsive system to one of stakeholder participation” (p. 3).

This emphasis on stakeholder participation has, however, led to a variety of problems in the democratic governance and management of South African schools. The first problem was implicit in the assumption by the South African government in its justification for the establishment of SGBs that there would be a harmony model of operation. This was reflected in the following statement (DoE 1997)

Meetings of governing bodies will be the place for calm discussion about how the school should be run, how problems must be solved, and where important decisions are made. Since many interest groups are represented on the governing body, everyone involved must learn how to respect the opinions of others and how to make decisions together. Within the governing body, the talents of many will be combined to take the best decisions for the school. (p. 7)

It was clear from this statement that the government’s original idea was that all members of SGBs, as stakeholders in the SBM process, would be actively and harmoniously involved in the process. This ambitious conception of the role of SGBs, operating as a vehicle for generating agreement among interest groups, contrasted sharply with some of the empirical evidence in this regard (see Bisschoff, 2000; Taylor, 2004).

The second problem was with the knowledge and competency levels of SGB

members (cf. Bush & Heystek, 2003; Mampuru, 1996;). The government's commitment to school democracy was understandable, but it was also widely recognised that many parents, who were the majority stakeholders in education lacked the required knowledge and skills to contribute effectively to school governance. Bush and Heystek (2003) stated

The empowerment of school-level governing bodies is one of the manifestations of the many education systems in transition, yet it is largely a matter of faith that these institutions can deliver what is expected of them. This is especially true in those countries, such as South Africa, where there has been no tradition of political participation for the majority of the population. (p. 128)

A third problem was that the government did not foresee the fact that the professional nature of school governance and management was particularly challenging to those who were not trained for the task, yet were supposed to understand it, namely members of SGBs. Although SGB members were not all directly involved in tasks like the management of the curriculum, information, personnel, and other professional duties, their constituencies expected them to have at least sufficient understanding of how these tasks were performed (Bisschoff, 2000). This problem occurred in spite of the training of SGB members as part of the capacity-building responsibility of the state. It was never the intention that every member of the SGB should be fully involved in every activity at the school. However, the key to the successful execution of the SGB's duties was to learn about the school's strengths, weaknesses, and the opportunities that existed so that they could effectively cope with the threats facing the school (Mampuru, 1996).

In addition to this, a fourth problem was that concerns had been raised in many parts of the world regarding SGB members' ability to give relevant advice "...since they lack the required professional background" (Thody, 1999, p. 115). These problems underlined the need for governance training as well as for commitment on the part of SGB members to such training to fulfil the ten functions of all SGBs of public schools stipulated by the SASA (RSA 1996a), namely to

- promote the best interests of the school through the provision of quality education for all
- adopt a constitution for the school
- develop a mission statement for the school
- adopt a code of conduct for the learners at the school
- support the principal, educators and other staff in the performance of their duties
- determine times of the school day and applicable conditions of employment of staff
- administer and control the school's property, buildings and grounds
- encourage parents, learners, educators and other staff at the school to render voluntary services to the school
- recommend to the HoD the appointment of educators as well as non-educators at the school
- allow the reasonable use under fair conditions of the facilities of the school

The devolution of decision-making powers to the school level, as stipulated in the ten functions of SGBs above, together with the enormous responsibility this carried, had also brought about many challenges for SGBs with regard to empowerment in South African schools.

The first challenge involved enhancing capacity building in the form of training for members of the SGB. This issue was

touched upon earlier in this paper as part of the empowering role of the state with regard to the management and governance of SBM. This challenge highlighted the importance of focussing on at least two critical issues. The first issue involved the development of a high level of understanding of what constitutes good school management and governance. The second issue involved the need to balance the gradual transfer of powers to SGBs with the current pace of educational reform. The pace of educational reform in the country was so fast that SGBs needed intensive training in order to adjust to the pace and participate effectively in school improvement (Bush & Heystek, 2003).

The second challenge involved the extent to which SGBs had to account for decisions made. Problems often arise when SGBs tried to exercise their decision-making powers within the school. Often a lack of clarity between members of the SGB who in fact were actually accountable for poor decision-making, and the school principal as “a leading figure in the SBM process” (Marishane, 1999, p. 171) existed. As a result of this, school principals were reluctant to share power with other SGB members. This was because they feel that they alone were accountable when school improvement efforts failed. This necessitated the development of an accountability system. Lack of such a system reduced the powers of SGBs to the point where they merely gave an account of decisions rather than being accountable for decisions made (Holloway, 2000).

The third challenge involved intensive monitoring, support, and evaluation of the performance of SGB members. Such actions reduced problems relating to role confusion within the SGB where, for example, decisions reserved for the provincial office were taken at school level and thus caused conflict. A programme of intensive support for SGBs was made

available, with the guidance suggested by Thody (1999). Such a programme was facilitated by experts from the provincial office who were visibly there to provide on-site support to SGB members, particularly in struggling schools. Periodical evaluation of the performance of the SGBs provided the province with information that was needed for improvement and planning (Bush & Heystek, 2003).

The fourth challenge was to create a plan for the development of SGBs from partial empowerment status (where their powers were limited to recommendations) to full empowerment status (where they had full decision-making powers), given the existing disparities in the level of development among members of SGBs of different communities. It should be mentioned that a lack of an empowerment strategy with target setting and time frames could delay the process. This may necessitate the development of a three-year empowerment plan that coincided with the current legal three-year service period of SGB members (Bush & Heystek, 2003; Marishane, 1999).

Conclusion

The context of this article was the dramatic change to self-management and self-governance in South African schools through SBM. This shift was underpinned by the assumption that schools required the active support of their communities if they were to be successful in educating their learners. However, as the Report of the Task Team on Education Management Development (DoE, 1996) pointed out, such structural changes were only a starting point

The move towards self-management in itself offers no guarantee of positive change. Real transformation will depend on the nature and quality of internal management. Self-management must be

accompanied by an internal devolution of power within the school and by transformational leadership. (p. 29)

SBM structures contributed to two important aims in South African schools by (a) extending democracy to grass roots level by providing for the representation of all legitimate stakeholders in the SBM process; and (b) providing a vehicle for SBM as a contribution to school improvement.

These were both challenging objectives for the relatively newly integrated South African education system. To effectively transform a school into a quality school demanded the active involvement of the entire community. Members of SBM

structures kept in mind that the school was there to serve the community. They were therefore the messengers of both the school and the community. They needed to mediate and transmit important messages about the school to the community as well as vital messages from the community to the school. Members of SBM structures must therefore be open, inclusive, trustworthy, proactive, supportive, and accountable. They needed to know and understand that parents as well as other stakeholders in education expected the best education for their children and the best value for their money.

References

- Behr, A. L. (2004). *New perspectives in South African Education*. Durban: Butterworths.
- Bischoff, T. (2000). Functions of school governing bodies in South Africa: First steps towards school-based management. *Management in Education*, 14(3), 12-14.
- Briggs, K. L. & Wohlstetter, P. (1999). *Key elements of a successful school-based management strategy*. Austin, TX, USA: University of Texas.
- Bush, T., & Heystek, J. (2003). School governance in the new South Africa. *Compare*, 33(2), 127-138.
- Bush, T., & Jackson, D. (2002). A preparation for school leadership: International perspectives. *Educational Management and Administration*, 30, 417-429.
- Cohen, M. (1982). Effective schools: Accumulating research and findings. *American Education*, 18, 13-16.
- Cohen, M., March, J., & Olsen, J. (1972). A garbage can theory of organisational decision-making. *Administrative Science Quarterly*, 17, 1-25.
- Commonwealth Secretariat. (1996). *Managing and motivating teachers under severe constraints: Training headteachers to face the challenges*. London: Commonwealth Secretariat.
- Conley, S. C., Schmidle, T., & Shedd, J. B. (1988). Teacher participation in the management of school systems. *Teachers College Record*, 90, 259-280.
- David, J. L. (1996). The who, what, and why of site-based management. *Educational Leadership*, 34(3), 4-9.
- Deem, R., Brehony, K., & Heath, S. (1995). *Active citizenship and the governing of schools*. Buckingham, England: Open University Press.
- Department of Education (DoE). (1996). *Changing management to manage change in education*. Report of the Task Team on Education Management Development. Pretoria, South Africa: Government Printer.
- Department of Education (DoE). 1997. *Understanding the SA Schools Act*. Pretoria: Government Printer.
- Griffen, G. A. (1995). Influences of shared decision-making on school and classroom activity. *The Elementary School Journal*, 96(1), 29-45.
- Gultig, J. & Butler, D. (1999). *Creating people-centred schools: School organisation and change in South Africa*. London: Oxford University Press.
- Hart, A. W. (1995). Re-conceiving school leadership. *Elementary School Journal*, 96(1), 9-28.

- Holloway, J. H. (2000). The promise and pitfalls of site-based management. *Educational Leadership*, 57(7)81-82.
- Imber, M, Neidt, W. A., & Reyes, P. (1990). Factors that contribute to teacher satisfaction with participative decision-making. *Journal of Research and Development in Education*, 23(4), 216-225.
- Johnston, C. (1997). Leadership and the learning organisation in self-managing schools. Unpublished doctoral dissertation. University of Melbourne, Melbourne, Australia.
- Leithwood, K., & Menzies, T. (1998). Forms and effects of school-based management: A review. *Educational Policy*, 12, 325-346.
- Malen, B., Ogawa, R. T., & Kranz, J. (1991). What do we know about school-based management? A case study of the literature. *Choice and Control in American Education*, 2, 78-97.
- Mampuru, K. C. (1996). Effective school-based management: A case study of selected schools in Pretoria. *Vista Occasional Papers*, 4(1), 24-33.
- Marishane, R. N. (1999). Partnerships in school governance: Foundation for research and restructuring. Unpublished master's thesis, University of South Africa, Pretoria.
- Marishane, R. N. (2003). Decentralisation of financial control: An empowerment strategy for school-based management. Unpublished doctoral dissertation, University of South Africa, Pretoria.
- Murphy, J., & Beck, I. (1995). *School-based management as a school reform: Taking stock*. Thousand Oaks, CA, USA: Corwin Press.
- South Africa (Republic). (1996a). South African Schools Act 84 of 1996. Pretoria: Government Printer. Vide RSA.
- South Africa (Republic). (1996b). Education White Paper Two: The Organisation, Governance and Funding of Schools. Pretoria: Government Printer. (Notice 130.) Vide RSA.
- South Africa (Republic). (1996c). Constitution of the Republic of South Africa Act 108 of 1996. Pretoria: Government Printer. Vide RSA.
- South Africa (Republic). (1998a). National Norms and Standards for School Funding. Pretoria: Government Printer. (Notice 2363.) Vide RSA.
- South Africa (Republic). (1998b). Employment of Educators Act 76 of 1998. Pretoria: Government Printer. Vide RSA.
- South Africa (Republic). (1999). Education Laws Amendment Act 48 of 1999. Pretoria: Government Printer. Vide RSA.

- South Africa (Republic). (2002). Education Laws Amendment Act 50 of 2002. Pretoria: Government Printer. Vide RSA.
- South Africa (Republic). (2004). Education Laws Amendment Bill. Pretoria: Government Printer. (Notice 26911.) Vide RSA.
- Squelch, J. (1999). Governance of education. In E Lemmer (Ed.), *Contemporary education: Global issues and trends*. Portsmouth, NH, USA: Heinemann.
- Star*. (2005, 26 July). Powers of school governing bodies will be extended. Extract from a speech made by Education Minister Naledi Pandor.
- Taylor, D. (2004, March). Effective school governing bodies: The misnomer of the idea of a balance between governance and management. Paper presented at the Education Management Association of South Africa's Annual Conference, Port Elizabeth.
- Taylor, D. L., & Bogotch, I. E. (1994). School-level effects of teachers' participation in decision-making. *Educational Evaluation and Policy Analysis*, 16(3), 302-319.
- Thody, A. (1999). Developing school governors: Change or inertia? *School Leadership and Management*, 19(1), 115-134.
- Wohlstetter, P. (1995). Getting school-based management right: What works and what does not. *Phi Delta Kappan*, 7(1), 22-26.
- Wohlstetter, P., & Mohrman, S. A. (1995). *Assessment of school-based management*. Los Angeles: USC's Center on Educational Governance.
- Wohlstetter, P., & Odden, A. (1996). Rethinking school-based management policy and research. *Educational Administration Quarterly*, 28, 529-549.

Author

RJ (Nico) Botha is a professor of educational management and international education at the University of South Africa in Pretoria. He received his doctorate from UNISA and attended the Indiana Principals' Leadership Academy.

THE COURSE-EMBEDDED COMMUNITY OUTREACH EVENT AND ITS VALUE IN PROMOTING HIGH QUALITY TEACHER CANDIDATE REFLECTION

by Shannon Melideo
Marymount University

Abstract: *This paper discusses how the “course-embedded community outreach event” can provide a logical and meaningful vehicle for engaging teacher candidates in quality reflection. With this approach, the teacher candidate undergoes all phases of hosting a special academic event from the planning through orchestration and delivery. This “real life” experience presents a prime opportunity to engage teacher candidates in metacognitive discourse as they reflect on the process, approach, and culmination of a community outreach event.*

Key words: reflection, community outreach, community service

Introduction

Across the globe, teacher education faculties are keen on the notion of teacher candidates reflecting, often and deeply. Decades of research and pedagogy have edified practitioners as to the invaluable skill of reflection, thus the frequent *reflective journal assignment* in teacher education coursework. Teacher reflection is certainly not a new concept. Confucius’s sage guidance is highly applicable to teacher candidate reflection when he said “study without reflection is a waste of time; reflection without study is dangerous”. Additionally, Confucius is also known to have said “there are three methods to gaining wisdom. The first is reflection, which is the highest. The second is limitation, which is the easiest. The third is experience, which is the bitterest.”

In the 1930s, Dewey (1933, 1938) wrote extensively about the value in reflective practice. He purported that reflective thinking occurs at the conclusion of a deep thinking cycle about a “dilemma.” This sequence includes the gathering data, studying the problem, gaining new knowledge, and coming to a sound decision. It is the deliberate contemplation

that begets new learning. “In the 1970s, Lortie (1975) described how failing to reflect on teaching decisions leads to teaching by imitation rather than intentionality. . . . They may sense *what* teachers do but have no grasp of *why* they do it. Other researchers (Clift, Houston, & Pugach, 1990; Hargreaves & Fullan, 1992) have reinforced how important it is for teachers to examine their own beliefs about their classroom practices” (Danielson, 2009, para. 4). Yet, how much time do teacher education faculty members actually spend on modeling reflection or providing purposeful occasions to ponder?

This paper discusses how the “course-embedded community outreach event” can provide a logical and meaningful vehicle for engaging teacher candidates in quality reflection. With this approach, the teacher candidate undergoes all phases of hosting a special academic event from the planning through orchestration and delivery. This “real life” experience presents a prime opportunity to engage teacher candidates in metacognitive discourse as they reflect on the process, approach, and culmination of a community outreach event. It is critical to provide this reflective activity immediately after the event. The appraisal of the planning, the

actual outreach event, and their performances are “fresh in their minds.” They are also eager to gain feedback as they reflect on the experience. The reflection can be framed with several questions specific to the planning and delivery of the event. For example: “What will you definitely duplicate when you host a special event at your future school?”; “How did your pre-conceived expectations of your interactions with parents connect to the actual experience?”; and “How might you improve the delivery of an outreach project like this one in your future school?” Constructing the list of reflection questions which ascend from low level to higher level thinking is a critical step for the instructor. These questions may change in the actual reflection activity, but having a guiding document to begin the process is very helpful.

The implementation of course-embedded community outreach events came to pass in two courses as an attempt to help teacher candidates become more confident working and communicating with parents of elementary school students and to instigate a place where they could showcase their new learning. Because these teacher candidates were not in their own classrooms yet, this idea seemed to be the “next best thing” for a real life teacher and parent interaction experience. Thus, initially, the events were planned only for the purposes of getting teacher candidates more access to working with students and parents.

Teacher education faculty in the United States are quite familiar with and versed in the language of the Interstate Teachers Assessment Support Consortium (InTASC) standards as sponsored by the Council of Chief State School Officers (2011). Teacher education faculty members recognize the importance of these “Model Standards for Beginning Teacher Licensing, Assessment and

Development” particularly in the preparation of the pre-service teacher’s portfolio. As they attempt to incorporate the appropriate knowledge, dispositions, and performances of each of the ten standards in education coursework and field experiences of teacher candidates, Standard 10 remains somewhat more elusive in the traditional teacher education program.

Leadership and Collaboration: The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession. (p. 9)

Simply due to the nature of methods courses, content and skill preparation are critical instructional foci and the above and beyond community outreach experiences are not at the forefront of pedagogy for teacher preparation instruction. The compilation of artifacts in a portfolio that supports and demonstrates the teacher candidate’s performance on the ten InTASC standards is often referred to as “an intensive exercise” during the student teaching semester. As teacher education faculty members have found, it challenging to provide community outreach experiences in the teacher education program historically, and teacher candidates have been challenged in showing quality evidence of Standard 10.

Therefore, the ability to show meaningful evidence of Standard 10 seemed to be an area for improvement. To remedy this shortcoming, two in-class community outreach events were implemented in two different courses in an effort to instruct teacher candidates on the responsibilities of planning a school event involving children and parents, for engaging in effective communication with parents, and

hopefully, inspiring participation of the pre-service teachers in special outreach events at their future schools. The events were titled *Family Math Night* and *Literacy Luau*. Both events allowed teacher candidates to engage parents in informal conversations about the children's learning, ways to assist their child with schoolwork, and an overall assessment of the child's participation in the event.

Family Math Nights Discussion

Family Math Nights were incorporated in a specific mathematics methods course over three years totaling five events. This special event was prepared and hosted by the professor and teacher candidates. Children from local schools and their parents were invited to participate. An average of 20 elementary students participated at each event with an average of 12 parents in attendance. An average of 15 teacher candidates participated each semester as well. The teacher candidates were all graduate students from varied educational and ethnic backgrounds.

The teacher candidates prepared engaging mathematics activities that could be differentiated to students in kindergarten through 6th grade levels. The activities matched the state and national standards of instruction in mathematics. Elementary school children were paired with teacher candidates and then the children rotated through stations to experience the variety of activities. The parents initially met with the professor to try some fun math tricks and to receive advice for helping their child with math homework. The children were read math-related stories, had math-related refreshments, left bearing a nametag that said, "I went to college today!" which all kept for wearing to their school the following day. Additionally, students always received the all-important math "goodie bag" with treats and mementos from the event. Often the

student affiliate of a national teaching organization would sponsor the event with the presentation of the snacks, literature, and additional teacher candidates to help facilitate Family Math Night.

Family Math Nights were most successful as witnessed by highly positive responses of the parents and children and the frequent requests to receive the "invitation to Family Math Night next semester." While it was expected that the planned community outreach activities would give the teacher candidates the opportunity to show what they learned with a "live audience" of invited elementary students and their parents, what was not expected was value of the reflective activities that followed the outreach events. Reflective debriefing sessions were held after each Family Math Night with the teacher candidates. Discussions centered on their reflection of the planning and implementation of the special event. All debriefing sessions over the course of several semesters also included teacher candidates mentioning their nervousness before the event, their preconceptions about speaking with parents, and the sense of satisfaction that they had created meaningful activities and performed effectively. The teacher candidates were surprised with all the details of planning a special event like Family Math Night and making sure it flowed effortlessly.

Literacy Luau Discussion

Another special community outreach event that was incorporated into a reading and language arts methods course was a Literacy Luau. The Literacy Luau was planned and orchestrated to give prekindergarten through 6th grade teacher candidates the experience with the emergent literacy development of pre-kindergarteners. A local preschool was invited to take a field trip to the university where they would participate in a morning

of developmentally appropriate planned literacy activities.

The Literacy Luau was repeated three times over the course of three fall semesters. An average of ten preschool students participated at each event with an average of ten parents and three preschool teachers in attendance. An average of 15 teacher candidates participated each semester as well. The teacher candidates were all graduate students from varied educational and ethnic backgrounds.

The teacher candidates prepared engaging literacy activities, some of which also incorporated technology that could be adapted to meet preschool students' needs at varied developmentally appropriate levels. The preschool students' parents and teachers received an overview of emergent literacy activities appropriate for the preschoolers with the professor. After which, the parents would visit the classrooms where their children were taking part in the literacy activities. In preparation for the special event, the teacher candidates engaged in a healthy discourse about the proceedings of the event, the theme, how the children might be grouped, the appropriateness of activities, overall organization and flow of the event, and refreshments. Once a consensus was made, the teacher candidates negotiated and then chose committees necessary to plan all the elements of the Literacy Luau. Most all preparations for the special event were made by the teacher candidates and professor in out-of-class time.

The Literacy Luau was successful as noted by the highly positive feedback from the preschool teachers, the parents, and the children. After the event, a reflective debriefing session was held to discuss the event overall, the preparation, and final outcomes. Teacher candidates were again amazed at the detailed planning and

orchestration necessary for a successful school event.

Reflection as an Outcome

The unexpected outcome of incorporating the community outreach event into the methods courses was the powerful element of reflection. Therefore, the special events ended up serving multiple purposes. The Family Math Night and Literacy Luau are two examples of university-based, course-embedded community service events that permitted teacher candidates to plan, experience, and implement outreach programs for children and their parents. A minimum amount of in-class time was spent on the planning of the special events. Though, this planning time decreased the methods instructional time to some extent, it was worth the concession. Teacher candidates not only engaged in projects that they might not have otherwise until later in their teaching careers, they were able to employ all that they had learned about the content, pedagogy, and communication and relationship building with families. In these experiences the professor was able to witness firsthand the students' knowledge, dispositions, and performances in action. In the quasi-focus group experience of the reflective debriefing sessions, teacher candidates mentioned how the special event boosted their confidence in working with parents. They also expressed their affirmed desires to participate in similar events in their future schools.

Several informal measures of success of these projects can be measured anecdotally. Years after the Family Math Night and Literacy Luau events, former teacher candidates (now practitioners), the children, and their parents are still talking about the fun, engagement, and inspiration of the special event they experienced. More than 25 unsolicited communications were sent to the professor from former teacher candidates, parents, and the

preschool director. The teacher candidates have penned emails and cards thanking the professor for the unique experience with explicit detail about how it helped prepare them for their classrooms. The parent and preschool communications requested the ability to participate in any future events and thanked the professor and teacher candidates for a meaningful experience.

If further reasons are needed to incorporate a community outreach event in a methods course, the Family Math Nights and Literacy Luau provided meaningful performance assessments of teacher candidates' learning. I highly endorse the implementation of more community outreach events in methods courses for teacher candidates with the guidance of their professor.

References

- Council of Chief State School Officers. (2011). *InTASC model core teaching standards*. Retrieved from http://www.ccsso.org/documents/2011/intasc_model_core_teaching_standards_2011.pdf.
- Danielson, L. (2009). Fostering reflection. *Educational Leadership*, 66(5). Retrieved from <http://www.ascd.org/publications/educational-leadership/feb09/vol66/num05/Fostering-Reflection.aspx>
- *Clift, R. T., Houston, W. R., & Pugach, M. C. (Eds.). (1990). *Encouraging reflective practice in education: An analysis of issues and programs*. New York: Teachers College Press.
- *Hargreaves, A., & Fullan, M. G. (1992). *Understanding teacher development*. New York: Teachers College Press.
- *Lortie, D. C. (1975). *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. New York: D.C. Heath.
- Dewey, J. (1938). *Experience and education*. New York: MacMillan.
- *As cited by Danielson (2009).

Author

Shannon Melideo is the chair of the Education Department at Marymount University in Arlington, Virginia. She has recently done teacher training in Uganda. Dr. Melideo is currently researching peer coaching models at the university across disciplines and Ugandan teacher preparation.

Publication Guidelines

The journal (*JISTE*) publishes articles by members of the International Society for Teacher Education (ISfTE). Exceptions are made for a non-member who is a co-author with a member, or who is invited to write for a special issue of the journal, or for other special reasons.

Articles submitted to *JISTE* must be written in English, following manuscript guidelines (see below) and will be anonymously reviewed by referees. Each article must pass the review process to be accepted for publication. The editors will notify the senior author of the manuscript if it does not meet submission requirements.

Articles are judged for (a) significance to the field of teacher education from a global perspective, (b) comprehensiveness of the literature review, (c) clarity of presentation, and (d) adequacy of evidence for conclusions. Research manuscripts are also evaluated for adequacy of the rationale and appropriateness of the design and analysis. Scholarly relevance is crucial. Be sure to evaluate your information. Articles should move beyond description to present inquiry, critical analysis, and provoke discussion.

Articles pertaining to a particular country or world area should be authored by a teacher educator from that country or world area.

All manuscripts accepted for publication will be edited to improve clarity, to conform to style, to correct grammar, and to fit available space. Submission of the article is considered permission to edit to article.

Published manuscripts become the property of the *Society*. Permission to reproduce articles must be requested from the editors. The submission and subsequent acceptance of a manuscript for publication serves as the copyright waiver from the author(s).

Manuscript Guidelines

- Manuscript length, including all references, tables, charts, or figures, should be 3,000 to 5,000 words. **Maximum length is 5,000 words.** Shorter pieces of 1500-3,000 words, such as policy review or critique papers are welcomed.
- All text should be double-spaced, with margins 1 inch (2.5 cm) all around and left justified only.
- Paragraphs should be indented using the “tab” key on the keyboard. No extra spacing should be between paragraphs.
- Tables, Figures, and Charts should be kept to a minimum (no more than 4 per article) and sized to fit between 5.5 x 8.5 inches or 14 x 20 cm.
- Abstract should be limited to 100-150 words.
- Include four or five keywords for database referencing; place immediately after the abstract.
- Cover page shall include the following information: Title of the manuscript; name(s) of author, institution(s), complete mailing address, email address, business and home (mobile) phone numbers, and fax number. Also on the cover page, please include a brief biographical sketch, background, and areas of specialisation for each author. Please do not exceed 30 words per author.

- Writing and editorial style shall follow directions in the *Publication Manual of the American Psychological Association* (6th ed., 2009). References MUST follow the APA style manual. Information on the use of APA style may be obtained at www.apa.org.

Future Submissions

2013 (Volume 17, Number 1)

Theme – Educating for Gross National Happiness: The Role of Teachers

This is the theme of the seminar in Bhutan hosted by the Paro College of Education of the Royal University of Bhutan in May, 2012. Participants (including those from the Distance Paper Group) are invited to revise their seminar papers, attending carefully to the manuscript and publication guidelines, and submit them to the journal for consideration. Book reviewed on the theme are invited. Deadline for submission has passed. Look for 17.1 to be published no later than April, 2013.

2013 (Volume 17, Number 2)

Open submission – Members of ISfTE are invited to contribute manuscripts related to any important topic in teacher education. Members are encouraged to co-author articles with their students or colleagues who may not be members of ISfTE. Articles that explore teacher education issues such as the practicum, mentoring in other disciplines (e.g. nursing, adult education, social work education) are particularly invited. Such articles should explore the discourse in relationship to teaching at the elementary, secondary, or tertiary (college/university) level.

Deadline for Submission: March 1, 2013

2014 (Volume 18, Number 1)

Theme – Teacher Education: Meeting the Needs of the New Generation

This seminar will be held in May, 2013 in Hong Kong hosted by the Hong Kong Baptist University. Participants (including those from the Distance Paper Group) are invited to revise their seminar papers, attending carefully to the manuscript and publication guidelines, and submit them to the journal for consideration. Book reviewed on the theme are invited.

Deadline for submission: September 1, 2013

2014 (Volume 18, Number 2)

Currently an open submission with no specific theme – Members of ISfTE are invited to contribute manuscripts related to any important topic in teacher education. Members are encouraged to co-author articles with their students or colleagues who may not be members of ISfTE. Articles that explore teacher education issues such as the practicum, mentoring in other disciplines (e.g. nursing, adult education, social work education) are particularly invited. Such articles should explore the discourse in relationship to teaching at the elementary, secondary, or tertiary (college/university) level.

Deadline for Submission: March 1, 2014

Book and Other Media Review Submission

Reviews of books or other educational media are welcome. Either the review or the item reviewed must be by a current member of ISfTE. Reviews must be no longer than 1000 words.

Annotation of Recent Publications by Members Submission

ISfTE members may submit an annotated reference to any book which they have published during the past three years. Annotation should be no longer than 150 words.

Submission Requirements

It is preferred that articles be submitted directly to the editor, Karen Bjerg Petersen at kp@dpu.dk. To submit an article by email, send it as an attachment using MS Word, if at all possible.

You may also send article by fax to +45 8888 9231. Or you may submit by mail by sending a printed manuscript and a copy on either a computer disk or flash drive. Printed manuscripts and storage items will not be returned.

Manuscripts and editorial correspondence should be directed to:

Dr. Karen Bjerg Petersen, Editor, *JISTE*
Niels Juelsgarde 894, bygn 2110
8200 Århus, N.
University of Aarhus
Denmark

Email: kp@dpu.dk

Book Reviews should be directed to:

Dr. Peggy Saunders, Associate Editor, *JISTE*
Weber State University
1306 University Circle
Ogden, UT USA 84408-1306

Email: psanders@weber.edu

Front cover: These institutions' logos appear on the front cover of this issue.

The **University of Agdar** in Kristiansand, Norway, was formally established in September, 2007. This regional university came into being after six public regional colleges were merged in 1994. Currently, over 8,000 students attend the university.

Founded by the Baptist Convention of Hong Kong in 1956 as a post-secondary college, **Hong Kong Baptist University** became a fully-fledged university in 1994, and it now boasts eight faculties and schools and an academy offering a wide range of undergraduate and postgraduate programmes to around 8,400 students.

Weber State University in Ogden, Utah, United States, was founded in 1889. It is a coeducational, publicly supported university offering professional, liberal arts, and technical certificates, as well as associate's, bachelor's and master's degrees. Currently, over 25,000 students attend the university.

