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Editor's Column

National University's mission is to make lifelong learning opportunities accessible, challenging and relevant to diverse populations. In accordance with this mission, the National University **Journal of Research in Innovative Teaching (JRIT)** is an important benchmark in the university's maturation. Teaching, research and scholarship are interrelated; evidence shows that research enriches teaching and is capable of significantly improving student learning outcomes. The JRIT is an annual multidisciplinary peer-reviewed publication of original research focused on new effective instructional approaches, methods and tools. It is intended to produce momentum to increase the efficiency of learning and ensure better learning outcomes for our students.

The Journal is a forum to share faculty research and scholarship, which will ultimately benefit both the university's academic community, as well as our students. The Editorial Board is composed of top scholars and administrators from National University, as well as several internationally acclaimed academicians. The Review Board includes both internal and external reviewers.

Thus, the third issue of the JRIT published by National University demonstrates a steady progress in establishing a research culture at this institution. This volume includes 16 articles that were accepted after a rigorous double review and that include studies from individual members of the National University faculty, other US researchers and international writers, and joint projects between National University researchers and outside scholars.

All publications have been conditionally assigned in the following sections:

- General Issues
- Accelerated Learning
- E-learning
- Teaching and Learning
- Assessment and Evaluation
- Bilingual Education and Second Language Learning
- Best Practices

In the **General Issues** section we present two articles: *The Influence of Social Worlds on Engaging Ideas* by Shelley Ashdown from the Graduate Institute of Applied Linguistics, Dallas TX, and *Combining Research-based Effective Teacher Characteristics with Effective Instructional Strategies to Influence Pedagogy* by Dee L. Fabry who is a member of the National University faculty.

The first article discusses a global perspective for the classroom and curriculum and explores the diversity of social worlds across culture, which may lead to greater effectiveness in communication. The author argues that Cultural Theory identifies four social worlds as universal and delineates social rules and educational consequences inherent within each social orientation. She discusses the impact of the Bureaucratic, Hierarchic, Individualist, and Egalitarian orientations on engaging ideas.

The second article suggests that the reasons for elevated high school dropout rates range from a lack of relevance to boredom. Increasing student-to-teacher connections and motivation through the implementation of effective instructional strategies has been proven to be a

successful solution that increases student engagement. This study reports on the application of research-based effective instructional strategies by teachers in a high school setting.

In the **Accelerated Learning** section Dr. B. Charles Tatum from National University explores some of the learning principles on which accelerated education is based and compares them to the traditional model in his article *Accelerated Education: Learning on the Fast Track*. He offers a comprehensive review of the literature on the topic that reveals the evidence for and against accelerated education, and discusses several critical research issues. The article also addresses some important methodological concerns regarding research studies. The author suggests there are notable advantages to the existing practices in accelerated education, and encourages more scholarship and research in this area.

The **E-learning** section is represented by the article *From Evolution to Revolution: Updates to Effective E-Learning Model Help Build Better E-learning* prepared by Cynthia Larson-Daugherty from Spectrum Pacific Learning Company in La Jolla, CA and Coleman Walker from ITT Technical Institute in Raleigh, NC. This article discusses the current state of E-learning that has grown at a record pace over the last decade, especially in the academic sector. This growth has prompted numerous changes, challenges, questions, and also an opportunity to reexamine how people process information and learn. The e-learning model (e2L) developed in 2003 by SPL set the initial precedent for examining and reexamining the delivery of online learning. The model continues to evolve as researchers and practitioners alike further utilize this forum for learning. This update offer propositions to both the theoretical construct and the model's practical application that focus on designing, developing, and delivering e-learning in the most effective way to yield results.

The largest section is **Teaching and Learning**, which includes articles in various areas: engineering, teacher education (counseling), and reading instruction.

The first article, prepared by Majed A. Sahli from Saudi Aramco Oil Company, Dhahran, Saudi Arabia, and Gordon W. Romney from National University, *Agile Teaching: A Case Study of Using Ruby to Teach Programming Language Concepts*, discusses Ruby, an object-oriented programming language, which, according to the authors, is an obvious choice for agile web development. It provides a hands-on training tool for computer science students studying programming language grammars, scanners, parsers, Abstract Syntax Trees, and is confirmed in the web marketplace. A virtualized version of Ruby was used to implement a simple LL calculator grammar. The power gained by using Ruby significantly facilitated the implementation of the parser over comparable C++ and Java implementations. Usage of this portable, "virtual lab" facilitated the integration of laboratory and classroom assignments in a teaching model that completes class instruction for a semester course in one calendar month. This is an example of agile teaching in Internet-time.

The second article entitled *Using Bibliotherapy as a Tool for Counseling Supervision* by Richard P. Long from Columbus State University, Columbus, GA, presents the application of the Bibliotherapeutic Group Supervision (BGS) approach in a graduate program to increase the knowledge and skills of counseling candidates. Using books in intervention is not new; however, integrating bibliotherapy to affect counseling skills is an innovative approach to supervision. The BGS process is described and candidates' reactions and reflections are discussed.

In his article *Introducing Relevant Social Issues as Examples in the Counseling Classroom: The Impact of a Volatile Political Environment and a Therapeutic Solution* National University scholar Brian Tilley discusses the value of using real-world, relevant sociopolitical issues as classroom examples in a counseling training program. The author outlines a therapeutic

training-based method for integrating relevant examples drawn from politics and society in a way intended to reduce the likelihood of negative effects on the students and increase the number of learning opportunities for them. An instance in which the author used a political issue as an example for classroom discussion is provided, along with recommendations for future use.

Suzanne Evans from National University argues that children can adapt more easily to the changes of our increasingly multicultural society if they learn to understand and respect all cultures in her article *The Role of Multicultural Literature Interactive Read-Alouds on Student Perspectives Toward Diversity*. The purpose of this paper is to share the results of a qualitative research study that examined whether reading multicultural books aloud to elementary-age students could serve as a tool for altering student perspectives of others and for increasing tolerance. The results of this study demonstrated that through using an innovative critical literacy practice with multicultural literature, students' awareness and understanding of others could be positively impacted.

A collaborative effort between Thomas DeVere Wolsey from the National University faculty, Diane Lapp, a San Diego State University scholar, and Bruce Dow from Walden University, produced the article entitled *Reading Practices in Elementary Schools: Format of Tasks Teachers Assign*. The authors suggest that teachers often use groups and various reading modalities (for example, independent reading, guided reading) to meet the needs of students with divergent reading abilities. Their study explores the perceptions of teachers as to their grouping practices and reading formats when literacy tasks are assigned. The survey results indicate that teachers in the sample tend to value small-group oral reading configurations and partner work over whole-class or homework activities. Some whole-class oral reading is still used by some teachers.

The section **Bilingual Education and Second Language Learning** contains four articles.

In the article *Innovative Strategies that Work with Nondiverse Teachers for Diverse Classrooms*, C. Kalani Beyer from National University talks about today's classrooms as microcosms of the plurality of cultures, races, religions, and ethnicities in the world. Although classroom diversity is increasing, teachers still tend to be mainly nondiverse. The author believes teachers must be skilled in teaching and helping all students. This article focuses on five innovative strategies, confirmed by research, that education professors can use to improve the instructional practices of nondiverse teachers in teaching diverse students. These proven innovative strategies include the following: (1) reducing prejudice and enhancing tolerance; (2) identifying the white identity model; (3) determining white privilege; (4) multicultural infusion; and (5) searching for personal roots.

National University's Peter Serdyukov proposes some realistic steps for establishing balanced bilingualism, raising efficiency of SL teaching and learning, and improving teacher preparation on the basis of practical needs analysis of multicultural, multilingual societies and existing theories and practices of bilingual education in his paper *Can Balanced Bilingualism Be Achieved in a Multicultural Society? Second and First Language Implications*. He advocates the integration of innovative approaches, such as accelerated and intensive instructional methods, in second and foreign language teaching and learning.

The article *Language as Tool for a Global Education: Bridging the Gap Between the Traditional and a Global Curriculum* by Gladys N. Focho from Lycee Classique de Dschang, Cameroon, describes the situation in developing countries such as Cameroon where students are being taught the hard facts of academics, oblivious of the importance of a global education for

global citizenship. The features of a global curriculum such as cross-cultural awareness, global issues, universal values, critical thinking, and experiential learning are minimized in the official curriculum. The author identifies what constitutes a global education curriculum and how it could be integrated in English language teaching without jeopardizing the official curriculum. This may become possible because English is not subject specific, permitting the use of material from any subject area to teach language skills.

The study *Motivational and Attitudinal Characteristics of Highly-Proficient L2 Speakers: Implications for Foreign Language Teaching and Learning* by Lisa M. Basista from Alliant International University, San Diego, and Robyn A. Hill from National University, examines various motivational factors and, to a lesser extent, attitudinal factors that four near-native L2 speakers identified as leading to their high levels of fluency. Through reflective Second Language Learner Autobiographies, participants explore the role key constructs such as attitudes, motivation and sociocultural beliefs played in their L2 acquisition. A follow-up Likert-scale questionnaire ranks the common themes that were identified as leading to high proficiency. This study discusses each of the commonly identified factors and provides implications for second-language pedagogy.

The **Assessment and Evaluation** section contains two articles, *Learner-Centered Assessment: A New Tool* by Melinda Campbell, and *Student Evaluations of Courses and Teachers* by Nataliya Serdyukova, B. Charles Tatum, and Peter Serdyukov, all from National University.

Melinda Campbell argues that educators and course developers have long regarded the goals of increased student interactivity and highly developed critical thinking as key factors in superior student performance and satisfaction. With these goals in mind, she proposes a new pedagogical tool that promises increased student engagement and peer interaction, accelerated development of critical thinking skills, and opportunities for self-assessment in relation to course learning outcomes. The author suggests a new method for producing student-centered learning and generating peer criticism and commentary to accompany interactive discussion assignments.

The authors of the second article state that student course evaluations are an important factor in determining the quality of teaching and learning. They are an essential measure of student satisfaction and allow instructors and administrators to obtain the feedback necessary for reflecting on teaching and for updating the course and its delivery. The investigation of student evaluations, particularly the evaluation of instructors, offers insight into faculty teaching effectiveness, initiates professional development using self-assessment and reflection, and contributes to course renovation and academic rigor. The study investigates course evaluation form used at National University and explores the reliability and validity of the student course ratings. It shows a high degree of reliability and validity, which suggests that these course ratings can be applied to improving teaching and making decisions about faculty promotion, reappointment and merit.

Finally, in the **Best Practices** section the reader can find an article *Teaching Introductory Statistics and Probability Online in a Pace Format: Some Best Practices* by National University faculty member Michael V. Steinberg. His paper presents a summary of a multiyear experience of teaching the online course Introduction to Probability and Statistics (MTH 210). The author focuses on various aspects of teaching the online pace course, including its structure, textbook, class management, assessment, and ways of improvement, and discusses the parts of the course that are most difficult for the students and require the instructor's special attention.

The Editorial Board invites the readers to discuss the publications presented in this issue and to suggest topics that might be of interest to the academic community at National University and beyond. We will publish letters from our readers in the next issue.

Peter Serdyukov
March 1, 2010

General Issues

The Influence of Social Worlds on Engaging Ideas

Shelley Ashdown

Abstract

A global perspective for the classroom and curriculum explores the diversity of social worlds across cultures for greater effectiveness in communication. Cultural Theory identifies four social worlds as universal and delineates social rules and educational consequences inherent within each social orientation. This paper discusses the impact on engaging ideas by the Bureaucratic, Hierarchic, Individualist, and Egalitarian orientations.

Key Words

cultural bias, Cultural Theory, social orientation, ideas, roles, authority, group, individuation

Introduction

Developing a global perspective across the curriculum involves exploring the rich diversity of social worlds across cultures. The challenge for a global educational strategy is to identify specific societal orientations people use either individually or in combination as the basis for their reality. This knowledge increases awareness of diverse social ways of life and contributes to communicating more effectively across cultures. Cultural Theory is a research model designed for application across cultures to make sense of human experience and has been chosen as the investigative tool for this study.

Significant questions germane to this discussion begin with asking, What are the social worlds Cultural Theory identifies as universal social environments? Cultural Theory recognizes four primary classifications governing social orientations: the Bureaucratic, Hierarchic, Individualist, and Egalitarian social environments. All four operate in every society to some degree. A second question is, What are the theoretical tools Cultural Theory uses for distinguishing between social worlds? Two principles coined Grid and Group define the features of each social environment. Grid measures the degree to which social roles govern behavior, and Group assesses the degree to which collective relations are valued. The intent of this paper is to show how the dimensions of Grid (individuation) and Group (social incorporation) generate diverse social orientations that a global educator should explore in research and practice. Lastly, What are the social rules and educational consequences of those rules inherent within each of the four types of social worlds? In particular, this article discusses the impact on engaging ideas by the Bureaucratic, Hierarchic, Individualist, and Egalitarian orientations, with suggestions for structuring learning goals and learning tasks to account for dimensions of Grid and Group.

Social Worlds of Cultural Theory

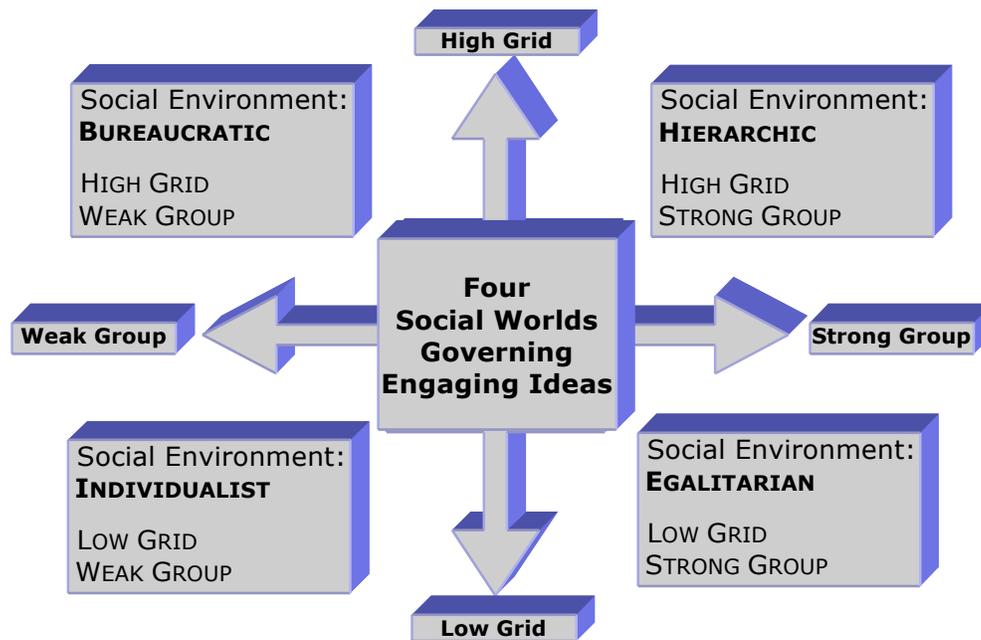
Cultural Theory is the brainchild of anthropologist Mary Douglas (1982, 1989) and has been embraced by a number of researchers across disciplines (Thompson, Ellis, & Wildavsky, 1990; Altman & Baruch, 1998; Buck & Shahrin, 2004; Duval, 2006; Neyrey, 2005; Stansberry & Harris, 2005). The basic premise of this theoretical approach is that there are five distinct social worlds found in human social and cultural experience: Bureaucratic, Hierarchic, Individualist,

Egalitarian, and Hermit.¹ These five social orientations are generated by “congruence between a particular set of values and beliefs and a pattern of interpersonal relationships” (Lingenfelter, 1996, p. 23).

Application of Cultural Theory to each social world is through typological analysis utilizing the dimensions of Grid and Group. Grid and Group are two defining principles for differentiating features between social worlds and can be thought of as two social forces generating diverse social environments. A social world is determined by how Grid and Group are enacted in that particular social context.

The Grid variable refers to the degree to which there are external societal prescriptions controlling personal and social interaction. Thus, Grid is the dimension of individuation. Bureaucratic and Hierarchic social worlds are both high Grid orientations in which society pressures each member into conforming behavior through status and role distinctions, which are carefully laid out in a network of social rules. A Bureaucratic social world (high Grid, weak Group) is characterized as an authoritarian way of life, while a Hierarchic social world (high Grid, strong Group) has a corporate orientation. The low Grid contexts of the Individualist (low Grid, weak Group) and Egalitarian (low Grid, strong Group) views encourage nonconforming behavior through support for individuals exhibiting unique value and autonomy (See Figure 1).

Figure 1. Four Social Worlds of Cultural Theory



The dimension of Group refers to the strength of affiliation people perceive to have with one another. Hence, Group is the dimension of social incorporation by group members. The Egalitarian social world (low Grid, strong Group) features a collectivist approach to the life

¹ The Hermit social world is not considered in this paper. It is a game played by only one individual with concerns only for a single self living in isolation from others; thus, it is appropriately called the hermit.

experience in a strong group setting and values group cohesion, as does the Hierarchic social world (high Grid, strong Group). The strong Group dimension places elevated value on collective support for survival of the social group with well-defined insider/outsider distinctions. On the other hand, the weak group typology is a social context that rejects communal commitments in favor of individualistic motivations. An Individualist social world (low Grid, weak Group) is distinguished by a preference for self-autonomy among societal members. The Bureaucratic social world (high Grid, weak Group) also is characterized with weak Group value, as each social member strives to maintain personal survival first and foremost.

The Bureaucratic, Hierarchic, Individualist, and Egalitarian social worlds differ in their rules for handling information with a variance in the way information is constructed and related. Educators have the opportunity to understand in greater depth differences that characterize social and cultural experience by recognizing the four social worlds of Cultural Theory. The following sections delineate each of the four social worlds with regard to the perception of acquiring knowledge and information, learning purpose and value, and the roles of the educator and learner.

Bureaucratic Social World

The Bureaucratic social orientation is fatalistic. Those in this social context believe the world to be chaotic, and the social world is organized to manage this chaos (see Figure 2). In the Bureaucratic high Grid realm, chaos is dealt with by the emphasis on narrowly defined rules of authority and action, which engender extensive role specializations. In general, individuation is strong because the focus by each member is on personal survival in a tumultuous world.

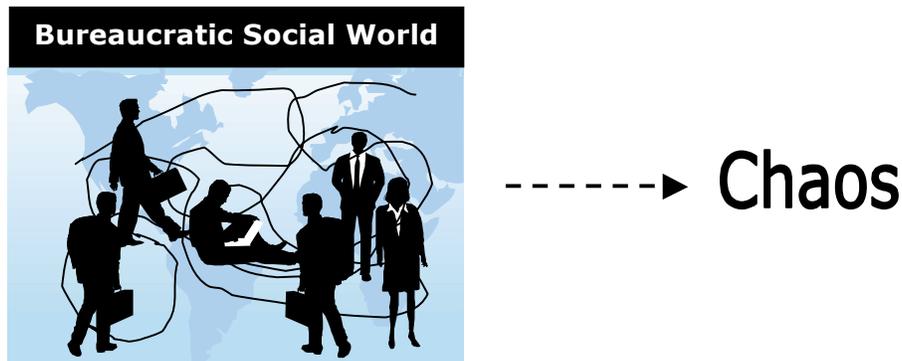
The authoritarian cultural bias perceives the role occupied by each individual as more centrally valued than the person themselves. Motivation is fueled by role expectations, and satisfaction is gained by role effectiveness. Social power is held by those occupying the top roles with the majority under their authority removed from decision-making processes.

Perception of Acquiring Knowledge and Information

Information in this world is intentionally diffused to reduce negative consequences surely to come if all members in the hierarchy had equal access to the same knowledge. Acquiring information is seen as a means for improving one's station. However, if every social member has equal access to the same information, the hierarchy would collapse. The tendency is to limit knowledge for those in the middle to low tiers. As a consequence, this social stratification encourages a fatalist perspective in which people believe education and literacy are out of reach.

This worldview assumes the universe has no organized reason for its happenings and that those in your social world are untrustworthy. It is a waste of time, energy, and resources to search for order, and doing so will inevitably reduce the chance for survival. The Bureaucratic learning environment does not use or cast aside information with systematic precision but instead macerates information to blend into the chaos (Thompson, 2000). The idea is that what you do not know will not hurt you.

Figure 2. Bureaucratic Social World Characterization of Chaos



Learning Purpose and Value

The Bureaucratic orientation assumes that knowledge should indeed undergird the social hierarchy and its fondness for role specialists. In this social world, powerbrokers in the hierarchy have the authority to restrict access to knowledge and ideas believed to possibly empower those lower down the social ladder. Notwithstanding, Bureaucratic acquisition of knowledge includes the value of entrepreneurial use (Barber, 1995). Bureaucratic entrepreneurship seems to be a weak group phenomenon. Knowledge is believed to be a utility for personal gain and a means of bringing a measure of order to life filled with ambiguous circumstances. As long as knowledge does not infringe of the roles and statuses of others, profitable endeavors by the one are expected and tolerated.

Because the Bureaucratic social world is weak Group, individuals define personal educational goals and choose knowledge domains for study and then align themselves with others who are like-minded. Group identity is limited to personal areas of interest and commitment. Students are generally interested in learning but choose individual majors and thesis topics according to personal interests.

Roles of the Educator and Learner

The Bureaucratic social world operates with the mandate of controlling the student first and actual learning as a secondary goal (Sterling, 1993). Teachers may control student behavior by a strict schedule of classroom regimen, and students are to respond with obedience to this authority. Knowledge is drilled in such a way as to build and strengthen the authoritarian hierarchy.

The roles of the educator and learner are defined to cope with the tendency for knowledge to be confusing and the learning environment cluttered with distractions. Neither the student nor the teacher is able to function without knowing the rules of authority and behavior. Social rules and proper recognition of status protocol are perceived to bring order to the learning environment and allow participants to relax and concentrate on the learning at hand. It is perceived to be both an insult and a threat for one to assume even a partial role of another.

Table 1
Example Scenario of a Bureaucratic Class

<p style="text-align: center;">Bureaucratic Class Scenario</p> <p>High Grid and weak Group play out in a university setting in which social hierarchy is not only developed but also highly valued. The school administration and faculty have detailed job descriptions with specific titles. Woe unto the individual occupying one position to attempt to fulfill the role of another! There is an elaborate hierarchy of roles and statuses governing administrative relationships and behavior. The role of the student is to participate in sanctioned learning activities assigned by the instructor. The type and use of equipment in the classroom is prescribed as well as dress code obligations for both instructors and students. The goal is to personally benefit by fulfilling the assigned role.</p>

Hierarchic Social World

The Hierarchic view holds to tight social rules but with the focus on norms of behavior and the use of appropriate information to maintain upper levels of status. People have value because of the role they inhabit. Relations between individuals are unquestionably delineated, with no room for negotiation. One's role is sacrosanct.

There is strong emphasis on group cohesion, collective identity, and social cooperation resulting in a weighted category for collective action. Less emphasis is placed on personal autonomy in the presence of a strong hierarchy with specialized roles and customary rules for action. This social world has great flexibility when dealing with conflict, since members may be rewarded by an elevated status or demoted by a downgrade in the hierarchy. While roles and statuses shift, the hierarchic framework remains constant to provide continuous support to the group.

Perception of Acquiring Knowledge and Information

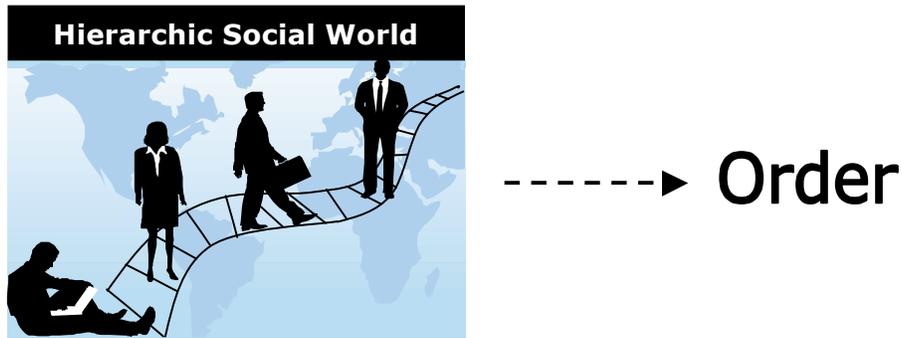
The Hierarchic social world engages ideas through a vetting process. Either the group accepts knowledge as part of their identity or information is rejected from social inclusion. Once knowledge has gained social acceptance, teachers and learners begin building a mechanism for others to participate in this new knowledge citizenship.

The Hierarchist orientation perceives knowledge as a means of protecting group cohesion of the larger social world. Whatever knowledge and ideas acquired are used in the elaborate hierarchy of status and role to underpin hierarchic relations. Knowledge is that which creates role specializations in the ladder framework of a Hierarchic social world (see Figure 3). Ideas then protect the group through adding strength to roles rather than to individual members (Barber, 1995).

Learning Purpose and Value

True learning occurs through group cooperation. What a person gains from education is considered for collective success as much as personal benefit. Nonetheless, the Hierarchic view is one in which competition thrives among players. The emphasis on specialized roles encourages recognition of outstanding achievers. The accomplishments of an individual are not perceived in the same way as an Individualist orientation.

Figure 3. Hierarchic Social World Characterized by Order



A Hierarchist will tell you that when one member advances in knowledge and skill, it is as if every member has gained. The entire social world profits and shares in the advancements of the one.

The Hierarchic orientation perceives reality to be a whole experience composed of interrelated and interdependent units of meaning. Whatever is learned in this setting should have a sense of completeness, a wholeness without fragmented, disjointed meaning. Knowledge should be presented in an orderly manner and displayed as a type of interrelated whole. Segmented learning without making connections to a more complete conceptual picture is dissatisfying and confusing in this social world.

Table 2

Example Scenario of a Hierarchic Class. Individualist Social World

Hierarchic Class Scenario
High Grid and strong Group enacted in a tertiary educational setting place restrictions on behavior through the role and status identity of each administrative and faculty member and each student. The role of the student is to participate in accordance with his/her status within the class. Careful attention is given to one's interaction with both the teacher and each classmate. Possible role and status constraints may include gender, age, ethnic group, year in college, language group, position in family, economic station, kin or political connections, etc. Student-teacher and student-student relationships are confined by status positions. Classmates in a Hierarchic social world tend to make clear insider/outsider distinctions and strive to fulfill their roles to ensure success of the entire class unit. The teacher will be perceived as a failure if not all class members demonstrate adequate learning.

Roles of the Educator and Learner

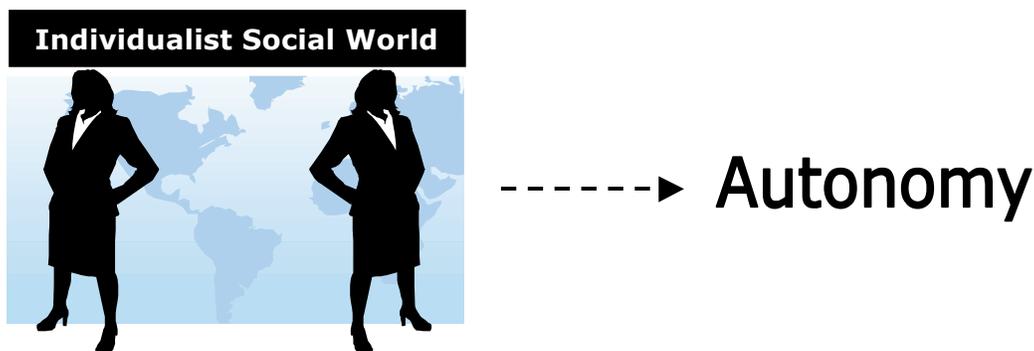
Educational processes function according to tight social rules concerning the content, method, participants, and setting. In many cases, students desire to move beyond generalized education and strive for specialization in learning. The Hierarchic social world is built on a complex scaffolding of roles and statuses, and students believe training for specialized roles within the

hierarchy ensures a social position. The greater the skill and accompanying specialization, the higher the status.

The role of the teacher is first to provide the rules of order that will serve as guidelines for participants. It must be remembered that the high Grid environment of the Hierarchist cannot function without explicit rules for maintaining social order. Once understood, the teacher is obliged to conduct the class according to those prescriptions.

An Individualist social orientation promotes personal autonomy by allowing individuals to freely choose roles with a fair amount of self-determination for how to behave in those roles (See Figure 4). There is little tolerance for external pressures to conform because of insubstantial group affiliations (Giles-Sims & Lockhart, 2005). The cultural bias of the Individualist promotes self-regulation versus group obligation, voluntary membership versus role duty, and shifting interpersonal and knowledge networks versus a fixed station in life. The Individualist is self-interested and prefers self-motivation.

Figure 4. Individualist Social World Characterized by Autonomy



Perception of Acquiring Knowledge and Information

Engaging in ideas is predicated on their potential for economic, social, political, and/or religious advantage sought by the individual. Learning is fueled by the competition for resources and power that acquiring knowledge inevitably brings to the player. A teacher is perceived to control knowledge resources and exercise influence over students. However, this leadership station is held only as long as an instructor maintains information superiority. Competition is fierce not only between students but among faculty and enterprising faculty candidates seeking to overtake colleagues with greater knowledge credentials. Engaging ideas in the university context is a mandate toward personal longevity. In addition, if using one's knowledge brings personal recognition from significant others, that in itself may become a motivation for engaging ideas in a creative manner.

Learning Purpose and Value

An individualist views information as a resource and promotes using this resource for personal benefit. This cultural bias assumes knowledge is an instrument for personal advancement. Learning is an enterprise in which knowledge is an agency for achievement. Learning for the sake of learning without an identifiable reward matched to personal desire is unrealized. In most instances, an individualist expects engaging ideas to provide skill and ability for gaining and managing financial and/or material wealth.

The Individualist social world is less concerned with group cohesion and instead supports entrepreneurial ideas. Information is a utility toward entrepreneurial success in the same way it is

for the Bureaucratic social world. Knowledge may also be viewed as a means of accessing information beyond the class environment and tapping positive outside resources. Knowledge and the use of knowledge is not to build a solid social hierarchy but rather to strengthen individual experience (Barber,1995). The Individualist setting is highly pragmatic and encourages a broad network that uses many different sources for both student and educator.

Roles of the Educator and Learner

Social roles and regulation of role behavior are loosely defined in an Individualist context. The one significant role distinction is between instructor and pupil; but, even in these roles, conduct by either party may be negotiated. A key facet of teacher responsibility is to encourage students' individual initiative. It may be stated, however, that student behavior and motivation are the responsibility of the student and not the teacher. Students expect their success or failure to be primarily dependent on their own investment. Teacher success as an educator is not necessarily dependent on student academic achievement.

Given the emphasis on self-interest and self-responsibility, it follows the individualist expects a fair amount of student freedom in research and writing. Students and teachers alike resist collective learning activities, especially if learning and assessment are dependent on other members of the group.

Table 3
Example Scenario of an Individualist Class

Individualist Class Scenario

Weak Group and low Grid may be viewed in a college class open to anyone who meets the educational requirements and financial obligations. Students have little, if any, loyalty to one other or to the instructor. Personal autonomy as a learner dominates the educational context, with an unlimited desire for competition among students. School dress is by personal preference, and the amount and quality of completed school work is entirely dependent on the single individual. Motivation for class attendance is strictly a means toward personal goals. Students expect little or no continuing relationship with other class members once the course is completed; however, each student has the freedom to negotiate tutorials, etc. with any other student (as opposed to status or role constraints such as gender). Classrooms in the Individualist social world are teeming with knowledge to be learned and exploited. Class rules are perceived to be a burden and are only sought when students and teachers feel they are advantageous to personal success. Instructors have an accumulation of knowledge considered a force of power that each student expects to grasp and also be empowered.

The tendency is to view collaborative projects as a hindrance to effective learning and personal accomplishment. In this social world, learners want to assume responsibility only for themselves and not for others in the class. Instructors and students prefer individual projects not dependent on others so that only their engagement with ideas is critiqued.

Egalitarian Social World

The equality setting of the Egalitarian regards personal autonomy as a natural benefit. The insistence people are uniquely gifted minimizes status differences in this low Grid social context

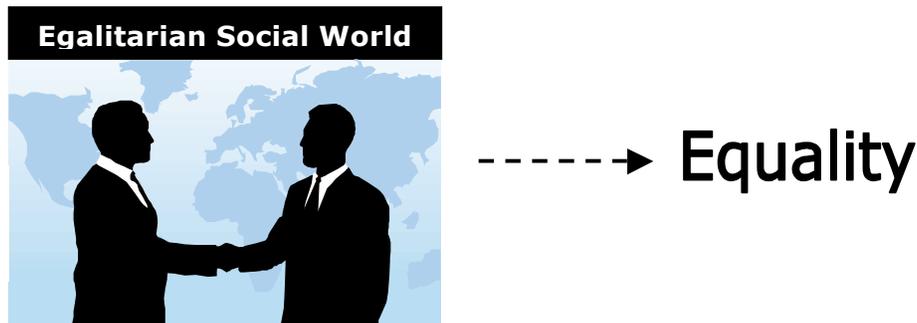
(see Figure 5). Each member is afforded respect as a person rather than as a mere role player. Relationships in this low Grid, strong Group context are equivocal and open to bargaining.

Value is placed on one's in-group as opposed to outsiders. Personal identity squarely falls on in-group membership. The strength of Egalitarian group identity has as its Achilles heel the lack of a cohesive structure to act with authority. Each person is free to behave according to personal preference and is not coerced by any sort of moral guidelines or corporate threat. Therefore, the Egalitarian social world has limited membership composed of small groups.

Perception of Acquiring Knowledge and Information

The Egalitarian orientation assumes that any use of knowledge will protect group solidarity. Information in an Egalitarian world is meant to strengthen community; thus, anything that muddles group relationships is viewed as a threat to group harmony. The Egalitarian social world is concerned with strengthening intergroup relations by emphasizing individual value rather than role obligations. In this way, knowledge acquisition and application are not used to underscore social hierarchy (Barber, 1995).

Figure 5. Egalitarian Social World Characterized by Equality



Knowledge is meant to expose how other groups have fallen short of success and also to reveal quite starkly that which is good and that which is bad. Whatever knowledge domains produce shades of grey associated with ambiguity or leave group members overwhelmed with the complexities of the life experience are dismissed post haste. Information is presented with confidence as a means of convincing others of the truth. The sharing of knowledge is never to be interpreted as correcting the ignorance or mistakes of others (Thompson, 2000).

Learning Purpose and Value

The purpose of engaging ideas is the advancement of the group as a whole. The thought of using knowledge for entrepreneurship is foreign to Egalitarian practice. The Egalitarian engages ideas with other group members to enhance the collective. If the collective has benefited from learning, the individual is satisfied. If a person does demonstrate greater skill or intellect, it is possible for the group to recognize this particular ability, but the individual is not perceived to be higher in status, nor is the person treated with greater respect because of a given expertise.

The value of engaging ideas lies in strengthening the bonds between group members through consensus. A learning activity is an avenue to practice consensus. Since individuals are not to be singled out from other learners, either as lacking skill or displaying brilliance, group learning activities are the norm. For example, an individual may learn to read by using a

songbook in group singing sessions. The learner has empowered intellect and less personal challenge in the group context.

Roles of the Educator and Learner

Group membership is a valued component for an Egalitarian with little emphasis on role and status. Each person offers something unique to the learning environment in which educational benefits are for the collective and enhanced by group work. The Egalitarian worldview demands that a learner in a class setting avoid the social taboo of standing out from the class as a whole. The role of the learner is to engage ideas on a horizontal plane alongside classmates to ensure social balance and collective outcomes. A natural result upholds the Egalitarian ideal of equivalence among class members. Individual curiosity, which leads to exploring areas by oneself, may be viewed as antisocial, since one is withholding knowledge from others. The role of a teacher is one of a facilitator. Instructors seek to foster an open climate of trust in classrooms, allowing students to freely experiment in the learning process. An Egalitarian class context supports the teacher openly communicating feelings along with facts in a respectful manner. Teaching manifests itself as explanations rather than commands. Knowledge is shared in such as way as to build each individual student.

Table 4
Example Scenario of an Egalitarian Class

Egalitarian Class Scenario

Strong Group and low Grid may be characterized by a classroom in which students and teachers are inclined to behave with cautious restraint when conveying knowledge or expressing opinions. The individual is less concerned with personal display of understanding and more concerned with the learning success of the group. A student may not display greater intelligence, share more resources, or in any way stand out from other students. A student's significant relationships are with classmates. Teachers and classmates are expected to provide assistance to each other if and when one is challenged with an assignment beyond their capacity. Each student is willing to sacrifice individual achievement in favor of classmate support and membership. Here there is little social hierarchy among students because every learner is an equal mate in acquiring information. Teacher leadership is diminished, with the instructor conscious and sensitive to the learning desires and values of the class.

Structuring the Learning Environment by Social Worlds

The question remains of just how to structure the learning environment to account for the four social worlds. If one is concerned with social world impact on the learning context, then associating learning outcomes, learning styles, and organization of learning tasks with social world orientations is key to providing a balanced classroom. The discussion that follows focuses on how teachers may structure learning goals and learning tasks in the classroom to account for each of the four social worlds.

Learning Goal Structures

Teachers direct student behavior by choosing a goal structure particular to the student activity. One way to accommodate social world preferences is by defining the objective of learning

through four types of instructional goal structures, each associated with one of the social worlds. These four types of goal structures specify the interdependence and interaction among students found in the four social worlds. The first is the Cooperative Goal Structure, most commonly associated with Egalitarian learning preferences (low Grid, strong Group). Here, coordination of student behavior as a learning group is necessary to achieve a mutual learning goal; if one achieves, all do. Students perceive that they can obtain their learning goal if, and only if, other students with whom they are linked can obtain their goal.

A Competitive Goal Structure is characteristic of the high Grid, weak Group Bureaucratic learning activity. A student strives to achieve his or her goal in a way that blocks all others from achieving the goal. The perception is that the learner can obtain his or her goal if, and only if, other students with whom the learner is linked fail to obtain their goal. This stands in contrast to an Individualist Goal Structure (low Grid, weak Group) in which the achievement of the goal by one student is unrelated to the achievement of the goal by other students. Learners in an Individualist structured learning activity participate knowing that whether or not they achieve the goal has no bearing on whether other students achieve their goal. A fourth type of instructional goal activity is the Coordinated Goal Structure. Agreement between students is necessary to have an organized, collective effort for achieving the goal. Students perceive they can obtain their goal if, and only if, group action maintains harmony through micro-coordination. Each student has a role to play in this Hierarchic learning activity and must fulfill that role so all can achieve the learning goal.

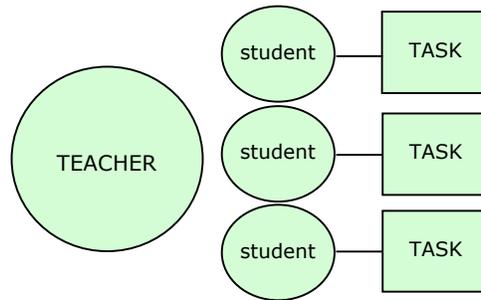
Teachers must ask what learning goals are salient and which goal structure most readily facilitates those goal achievements. Intentional use of all four goal structures throughout the curriculum builds intercultural competence and accounts for the range of student social orientations. For many students, the type of goal structure chosen will either sabotage the learning goal from the outset or boost the chances for learning success.

Learning Task Structures

Teachers should consider organizational patterns associated with social worlds as ways of engaging students in learning activities. How a task is structured should support both learning orientations and learning competencies. Seven organizational patterns considered here are the Individual Task Structure (Individualist), Small Group Task Structure (Hierarchic), Tutorial Task Structure (Bureaucratic), Didactic Task Structure (Bureaucratic/Individualist), Conference Task Structure (Egalitarian), Class Meeting Task Structure (Egalitarian), and Socratic Task Structure (Individualist).

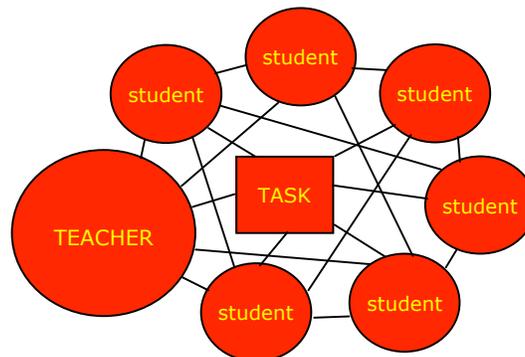
An Individual Task Structure is probably the most basic form of organizing an assignment for each student (see Figure 6). The behavioral objectives in an Individual Task Structure revolve around each student autonomously completing an exercise or assignment. Typical verbal instructions could be phrased like the following: "I would like each of you to open your books to p. 38 and answer the question . . ." The Individual Task Structure is meant to motivate individual efforts most often through recognition of outstanding achievers and is most effective among low Grid, weak Group learners. The rules for the Individualist social world support weak group obligations of the Individual Task Structure. Individualists expect to be personally empowered by knowledge, not relationships, and prefer tasks not dependent on others.

Figure 6. Individual Task Structure



A Socratic task is also an Individualist activity that seeks to capitalize on student readiness to voice individual thinking and public acceptance of challenge to personal opinions (see Figure 7). In a Socratic Task Structure, the teacher has definite cognitive objectives in mind. The instructor becomes both the questioner and facilitator in the activity. Often a teacher will begin by posing a question or problem to solve. The problem should be one that has many possible solutions or is best resolved through open exchange of ideas.

Figure 7. Socratic Task Structure



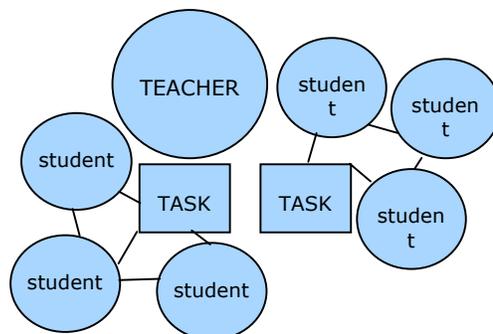
One example is to begin by saying, “When presented with a problem, students will offer theories to explain the phenomenon.” After posing and defining the problem, the teacher continues to listen, clarify, assess student comments, and press students to justify their thinking. The Socratic Task Structure requires a highly skilled teacher who must be conscious of processing inquiries and comfortable with little to no finality.

The educational consequences for an Individualist also promotes weak role constraints found in the Socratic Task Structure, which emphasizes individual autonomy, personal freedom, and experimentation in the what and how of engaging ideas. Individuals in a Socratic task are encouraged to conjure up innovative ideas, create novel designs, and synergize concepts. The Socratic task is a process of engaging a variety of information domains, focusing attention on details of interest, and adeptly drawing out and combining unrelated components for personal profit (Thompson, 2000).

An effective way of involving students in many types of meaningful work, with each student making a contribution, is through a Small Group Task Structure (see Figure 8). As a

Hierarchic (high grid, strong Group) organizing pattern, the Small Group Task must be highly structured with specific elements such as roles in the group (chairperson, treasurer, secretary) well defined. The Hierarchic preference manages the learning environment by pragmatic rules focused on norms. Here students are concerned with the behavioral expectations to successfully learn and the practical consequences of knowing. Most often learning behaviors are defined in terms of group interaction and appropriate recognition of authority. Thus, for a Small Group Task to be successful, several teaching behaviors are required.

Figure 8. Small Group Task Structure

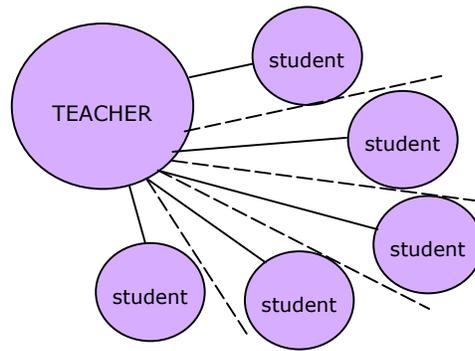


Tasks must be clearly defined and understood by learners as well as each learner's responsibility for tasks; necessary resources should be provided from the outset; the instructor should insist on a realistic schedule and periodically check on the progress of the group; and it should be expected that the instructor will evaluate the group's ability to function as a cohesive unit. The behavioral objective of each member in a Small Group Task Structure is to fulfill his or her role within the learning group so that everyone benefits. Examples of instructions could be: "Working together, develop a bulletin board depicting life at our school"; "The job of your group is to write and present a report on . . ." The style of handling information is through detailed instruction and analysis that reinforces knowledge boundaries (Thompson, 2000). It is pointless to have learners participate in self-discovery or trial by error (Giles-Sim & Lockhart, 2005). A Hierarchist demands a small group task be highly organized prior to the learning activity.

The challenge in a Hierarchic context is to inspire learners toward creative thought that may include questioning the conclusions of experts. Information is considered appropriate only when based on traditional thought. The high trust placed in those in authority, including those with educational expertise, curbs critical thinking and keeps small group interaction formal with little to no debate. Any knowledge that would disrupt hierarchic routine is not tolerated. The tendency to blindly accept knowledge may lead to incompetence because knowledge was never critically mulled over and understood.

Similar to a small group, a Tutorial Task Structure is less organized and allows for flexibility and different levels of learning among group members (see Figure 9). The Tutorial structure is a Bureaucratic (high Grid, weak Group) organizational pattern with teacher involvement that emphasizes individual instruction, usually through remedial or diagnostic interjection. A teacher will listen and help students in the tutorial group and assess learning success based on individuals rather than the group as a whole. For this reason, the Tutorial Task Structure operates with weak group solidarity and fosters enthusiasm for learning through a low stress activity.

Figure 9. Tutorial Task Structure



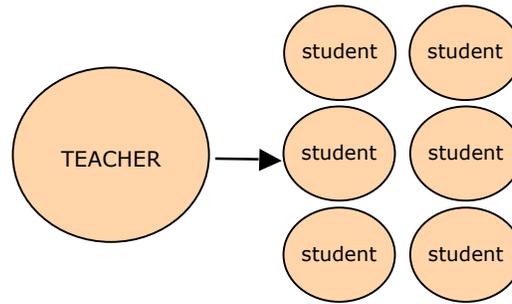
The Tutorial Task Structure offers individual tutelage within a loosely defined group context and does not press for immediate results. There is the tendency to react to changes in negative, unpredictable ways; thus, a teacher should be prepared to alleviate tensions and present material broadly without seeming to focus on specific areas. This diffused approach of the Tutorial Task is a less challenging manner to present information and uses ambiguity to reduce competition. Examples of typical Tutorial tasks are: “Each member of the group making a report on Kenya's climate will share his progress to date”; “I would like Clarinet Group B to take their place in the performance area. Each one of you take turns . . .”

A Didactic Task Structure is a type of grouping in which the teacher or student leader presents material with the purpose of sharing or informing (see Figure 10). Generally, a Didactic task is used to review, clarify, instruct, or give directions. The task is structured so that small amounts of information may be presented on a broad plane. Didactic tasks include public speaking or lecturing and audiovisual presentations. The behavioral objective is to present a concentration of pertinent information. A Didactic Task has the potential to function with either a Bureaucratic (high Grid, weak Group) or Individualist (low Grid, weak Group) orientation. A student sharing information but without resolving a dilemma is a Didactic task organized by Bureaucratic values. An example of a Didactic activity with Bureaucratic expectations is: “Today, I would like to describe to you . . .” Students expect the teacher to insulate the learning task from any threat of confusion or turmoil (Jackson & Philip, 2005).

An Individualist orientation uses the Didactic task for sharing information in which a student presents his or her conclusions and then elicits opinions from class members, such as: “Each student will present an oral report on his or her findings with a time for questions and comments at the end.” A limitation of the Didactic Task is the value placed on each person's opinion. Individualists have a tendency to challenge experts without competence on the issues and believe their opinion is of equal or greater value than the majority or even historical precedence.

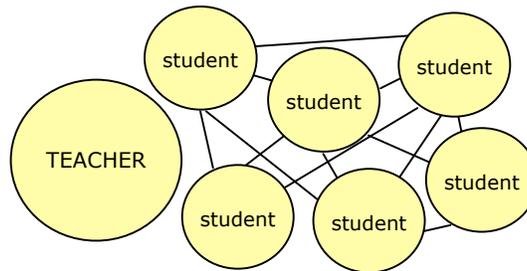
Free uninhibited discussion by a group students on a topic of prime importance is the benchmark of the Conference Task Structure (see Figure 11). It is most valuable in dealing with topics having controversy or issues of significant concern to students. This structure has no advance preparation other than being aware of a specific problem of interest to students. The teacher is in the background, and no behavioral objectives are imposed. Students are given the opportunity to discuss the topic as they wish. A general statement by the teacher to start the Conference is initiated, such as: “You may have about 10 minutes to discuss this topic.”

Figure 10. Didactic Task Structure



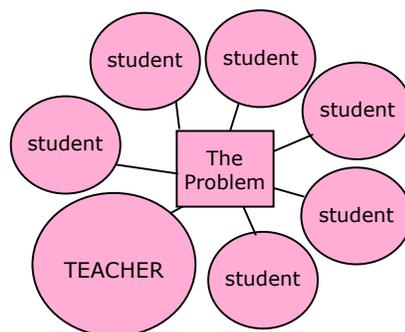
The Conference Task Structure operates according to the low Grid, strong Group principles of an Egalitarian. The discussion takes place in a group of equals in contrast to a Small Group Task. The Conference structure is a natural learning task for the Egalitarian, since this social world thrives on cooperative relationships between members in an atmosphere of harmony and shared knowledge (Alder, 2001). This is not to say roses are always red in this context. Egalitarians are predisposed toward an inability to resolve differences of opinion. Still, the educator in an Egalitarian setting is expected to cultivate student differentials in perception and valuation while holding each person accountable to the social group as a whole.

Figure 11. Conference Task Structure



Similar to the Conference Task Structure, the Class Meeting Structure is also Egalitarian and occurs with a meeting of the entire class. The role of the teacher is to present a problem for the class to solve in an open-ended discussion. The instructor does not direct the meeting but listens and clarifies in such a way that dialogue is free, uninhibited, and without value judgments. The behavioral objective is to brainstorm a topic where the ideas of each student are sought and given equal consideration (see Figure 12).

Figure 12. Class Meeting Task Structure



An example of a Class Meeting task may be engaging students in ownership of a learning activity, such as: "As you know, our class debate is only two weeks away. Let's decide how we should plan..." It may also include more serious topics the teacher may wish to stimulate thinking about, such as: "The class will discuss and determine what teaching structures are most appropriate for African children in their context." Egalitarian learners expect to be committed to each other so that each person active in the learning task feels successful.

Conclusion

Discussion of organized patterns of socio-interpersonal relations with inherent patterns of bias give rise to balancing an educator's sociocultural predisposition. Self-awareness of cultural bias is key for reducing barriers between social worlds and encouraging global citizenship. A positive consequence should be a broader global focus in curriculum, classroom management, and meeting expectations. That which is believed to be naturally so for engaging ideas in the Bureaucratic, Hierarchic, Individualist, and Egalitarian social worlds varies in significant ways. Educators have an obligation to understand these perceptual dynamics and to design learning environments to meet the challenges of these four orientations.

There are several obvious purposive motivations for recognizing and understanding the four social worlds in an educational context. Educators desire to be understood by learners through the easiest means for the student and by reducing confusing intentions that may hamper learning. Teachers also seek to communicate knowledge believed to improve student lives and their relations within their emerging identity in the global world. A global perspective recognizes the fundamental influence social orientation wields for engaging ideas and consciously pursues diverse uses of curriculum to meet those challenges.

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About the Author

Shelley G. Ashdown
D. Miss., Adjunct Professor
Graduate Institute of Applied Linguistics
Dallas, TX
shelley_ashdown@gial.edu
Major research interests: cognitive anthropology, world view and African studies

Combining Research-based Effective Teacher Characteristics with Effective Instructional Strategies to Influence Pedagogy

Dee L. Fabry

Abstract

Nearly 7,000 students drop out of high school every day (Editorial Projects in Education, 2007). The reasons for dropping out, according to the research, range from a lack of connection to relevance to boredom. Increasing student-to-teacher connections and motivation through the implementation of effective instructional strategies has been proven to be a successful solution that increases student engagement. This study reports on the application of research-based effective instructional strategies by teachers in a high school setting.

Key Words

Research-based instructional strategies, solutions to high school dropout rates, high school teaching

Introduction

We know there is a crisis in United States high schools today. Evidence suggests that the current system is an abysmal failure, with only 30 percent of freshmen reading at grade level (Lee, Grigg, & Donahue, 2007) and nearly 7,000 students dropping out every day (Editorial Projects in Education, 2007).

Teachers report their classrooms are filled with apathetic, bored, and passive students. At the same time, teachers are pressured into superficially addressing content in order to cover the required state standards and prepare students for the end-of-year tests. “I don’t have time to really teach or reach my students” is lamented in teacher lounges across the nation.

“The mission of high school is not to cover content, but rather to help learners become thoughtful about, and productive with, content. It’s not to help students get good at school, but rather to prepare them for the world beyond school—to enable them to apply what they have learned to issues and problems they will face in the future” (Wiggins & McTighe, 2008). Those profound words should be engraved across the entrance to every classroom in every high school. By extension, that concept also applies to teacher education today. Teachers can be one of the solutions to the current dropout rate. If the classroom teacher is thoughtful and productive with her/his own content and models it in the delivery of instruction, it follows that the students see meaningful teaching and learning in action. They then become engaged in learning.

Overview

High school teachers, it is often said, possess some of the characteristics of their own students: skepticism, doubt, distrust, and apathy. They need to be shown that how what they learn will affect them and their own students. Coburn’s (2001) research on teacher learning tells us that teachers respond to practices through a continuum of actions ranging from total rejection to accommodation. Teachers need to experience success and to see changes in their own students’ learning. One of the keys in connecting to this kind of thinking is to create relevancy and results in teacher education programs.

Utilizing current research-based content is essential for overcoming questioning attitudes toward learning. This article integrates the work of two powerful books: *Qualities of Effective Teachers* (2002) by James H. Stronge and *Classroom Instruction That Works* (2001) by Robert J. Marzano, Debra J. Pickering, and Jane E. Pollock. The concepts of teacher effectiveness and research-based instructional strategies combine to form a foundation that results in changes in teaching.

Study Participants

A cohort of 18 high school teachers in a master's degree program studied the qualities of effective teachers and instructional strategies that work over a one-month intensive course. They met twice a week for 4.5 hours. During this time they participated and interacted in a number of learning activities. They were presented with the key concepts through the modeling of strategies. They reflected on their own teaching characteristics, developed a personal effective teacher plan, studied and discussed research findings, debated the differences between teacher-directed and student-directed learning, developed new lessons and units, implemented new strategies, documented their lessons, shared what worked and what didn't, and created portfolio binders filled with energizing learning activities that transformed their personal classroom instruction and learning.

Multiple elements combined to produce transformational learning. First and foremost was the trust they had in each other and their deeply felt desire to learn. The modeling of the effective research-based instructional strategies during class time, collaboration time to discuss and share ideas and implementation techniques, the application and practice of new skills, and self-reflections to improve practice also contributed to the process of not only gaining new knowledge and skills, but internalizing them.

Method

At the first session of the course, each teacher completed the Teacher Skills Self-Assessment Checklist adapted from the Stronge (2002) research (See Appendix). After a self-evaluation process where strengths and areas for improvement were identified, a Personal Teacher Effectiveness Plan (PTEP) was created. The baseline self-assessment and PTEP were used to determine personal growth and development each week.

During Session 1 several instructional strategies from *Classroom Instruction That Works* were modeled. Students applied: (a) identifying similarities and differences while discussing their educational philosophies and creating their effective teacher characteristics lists; (b) note taking when jotting down important concepts; (c) cooperative learning when working in small and whole group activities; and (d) setting objectives during the development of the Personal Effective Teacher Plans. This intentional use of strategies from *Classroom Instruction That Works* was implemented throughout the course. Students were able to experience the instructional strategies, internalize them, reflect on what worked (or didn't), and discuss how to adapt them to their own teaching. They were able to understand the relevancy of the content they themselves were learning and connect to it on multiple processing levels as a result of the

student-centered learning environment that encouraged sharing, discussions, and the questioning of assumptions.

Connecting Effective Teacher Qualities to Instructional Strategies

The next step was to align the effective teacher characteristics with the research-based instructional strategies. This process provided the framework for the study of the strategies while consistently looping back to the PTEP. This alignment provided both a visual and a cognitive reference point for reflection to determine if goals were met. The class accomplished the alignment through a cooperative learning assignment, which modeled one of the effective instructional strategies. The resulting chart (Table 1) allowed the teachers to pinpoint which instructional strategies were most likely to increase their teacher effectiveness. For example, if a teacher identified Monitoring Student Progress as an area of need, he/she would focus on the strategies presented in the chapters dealing with Setting Objectives and Providing Feedback as well as Homework and Practice.

Table 1
Alignment of Characteristics and Strategies

Effective Teacher Quality Category	Instructional Strategy
Organization for Instruction Time management Planning for instruction Communicating expectations for student achievement	Setting Objectives and Providing Feedback
Implementation of Instruction Using appropriate questioning techniques Supporting active learning Differentiating instruction	Nonlinguistic Representation Cue, Questions, and Advance Organizers Generating and Testing Hypotheses Identifying Similarities and Differences Summarizing and Note Taking
Management and Organizational Skills Creation of an effective learning environment	Cooperative Learning Collectivism vs. Individualism
Monitoring Student Progress Feedback Homework Student learning outcomes	Setting Objectives and Providing Feedback Homework and Practice
Teacher as a Person Nonacademic interactions Professional attitude Reflective practice	Reinforcing Effort and Providing Recognition

Collecting Data

A qualitative approach was used for this case study. Reflection papers were turned in at the end of each class session that focused on specific instructional strategies paired with lesson plans. A weekly journal entry revisited the PTEP and tracked their progress in becoming more effective

teachers. The instructor kept a master journal that tracked changes in pedagogy and evidence of personal growth from the weekly reflections.

During the two sessions each week, one or more of the instructional strategies were presented, followed by a lesson plan development activity. The lesson was implemented in the classroom the following day, and the results were analyzed during the following class session. The teachers discussed in small and large groups what worked and what needed revised. They each then wrote a reflection paper and turned that in along with the initial lesson, as well as the revised lesson attached. At the end of each week, the Reflective Journals were sent via e-mail to the instructor. They included personal progress toward the goals generated from the self-assessment task.

Evidence of Growth

The power of collaboration in education has been written about with great authority (Darling-Hammond, 1997). One of the ongoing frustrations of being a classroom teacher is the feeling of isolation that happens on a daily basis (Turley, 2005).

One of the many positive aspects of being a member of a cohort is the time for collaboration, sharing, and teacher talk. The teachers who participated in this study talked. They shared what worked and what didn't. They enthusiastically explained how their teaching was changing. They asked for new ideas from their colleagues. They designed and developed new learning activities. Their reflective papers and journals clearly showed evidence of growth and change in their pedagogy.

All eighteen teachers reported that their teaching had improved by implementing the research-based instructional strategies. They reported feeling more confident in how they defined themselves as effective teachers and stated when implementing the new skills and knowledge their own students were more engaged in learning.

Here are a few unedited excerpts from their final reflections.

Teacher A: I'm glad I was introduced more formally to the research and writings of Marzano, et al. To this point in my M.A. program, this class has had the most impact on the way I conduct my classes and go about the business of teaching. My lessons have greater purpose, the students are more engaged, and (I dare say) the students' learning is deeper. With the information I've gained in this course, my teaching has been tightened-up and my delivery has been more fruitful, student-centered, and more engaging.

Teacher B: If I was asked to pick out the one big thing or the one big theme or impact this class has had on me it would be that it has kick started some creative juices for me by providing some new or novel ways of using instructional strategies for presenting content, engaging students, and improving achievement.

Teacher C: Actions that seemed so very important just a few weeks ago have taken a back seat to what is really important. I have discovered that what is really at the core of this profession is the student. The curriculum is meaningless without the student. So my first concern then is the person in the classroom that I am in control of. What are their educational needs and how can I move their education forward is now of the greatest importance. This course has helped me to focus on the number one asset of the school . . . the students.

This class has given me the tools that I can use directly in the classroom. I have used several of these tools and have seen excellent results. The students have responded so well in terms of both learning and behavior. The depth of questioning by the students has increased between both their peers and myself.

Teacher D: I learned that the hit-or-miss style of my lesson planning and the lack of cohesiveness I have often seen in my course preparation is primarily due to my not clearly articulating what it is that I believe about education. When I do not know what I want students to learn in the long term, my lessons and units seem like a bunch of semi-interesting but irrelevant and unconnected activities.

Having this class, and my peers in the class, to help me go through this self-analysis in an ordered, logical fashion has been very helpful to me. I have a much better idea of what I want to accomplish and of how I am going to accomplish it.

Teacher E: At the beginning of this class the only instructional strategy I thought would involve physical education was cooperative learning. Cooperative learning is something that I use every single day. However, summarizing, note taking, and the others are instructional strategies I never thought were possible to use in physical education. I realize now through much reading, class discussion and talking a lot with [another physical education teacher] that all these strategies are possible for me to use to teach more effectively. I leave every night learning something new that I can use to teach my students more effectively. To me that has been the most rewarding. I actually lay in bed and I contemplate new ways I can teach my students the following day.

Conclusion

Sonia Nieta (2009) poses the question: How do teachers move from simply surviving to actively thriving in the profession? From the collaborative work done by the cohort of teachers in this study, the answer would appear to be, by understanding the connection between effective teacher characteristics and research-based effective instructional strategies. The teachers first clearly identified their areas for improvement and then learned and applied specific strategies to improve their instruction together. The results included changes in attitudes and pedagogy. The teachers talked about a return to a love of and enthusiasm for teaching.

Suggestions for Future Research

Action research is a fertile avenue to provide meaningful information about what is taking place in the field of teaching today. This case study was conducted with a small cohort of high school teachers focusing on how the combination of two powerful concepts could merge to support a change in pedagogy. Each month, quarter, or semester we have the opportunity to study what strategies improve teaching instruction and in turn, what creates engaging learning environments. More research in this area will help us to become more effective teachers.

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About the Author

Dee L. Fabry
PhD, Assistant Professor
Department of Teacher Education
School of Education
National University
La Jolla, CA
dfabry@nu.edu
Major research interests: Assessment and evaluation, effective teaching strategies, effective online practices

Appendix

Teacher Skills Self-Assessment Checklist

The following checklist is adapted from *Qualities of Effective Teachers*, by James H. Stronge.

Directions:

1. Use the following scale to score your qualities as a teacher.
2. Then, review the checklist and highlight the HE and AE qualities in blue.
3. Go on to highlight the E qualities in green.
4. And finally, highlight the ME and IE qualities in yellow.
5. Reflect on the ME and IE qualities. What skills and knowledge do you need to acquire to move these into the E rating or above? Identify those qualities you want to improve.
6. Create an Effective Teacher Improvement Plan. Indicate specific actions you will take to move the identified qualities into a higher rating. Place this plan in your portfolio. The expectation is that you will identify an action each week and work on improving your teacher effectiveness.

HE = Highly Effective

An HE rating indicates that the teacher is an expert and has mastered this quality.

AE = Approaching Effective

An AE rating indicates a teacher who exhibits this quality 90% of the time.

E = Effective

An E rating indicates a teacher who demonstrates this quality at least 75% of the time and gets effective results.

ME = Marginally Effective

A ME rating indicates a teacher who infrequently (70% or less of the time) demonstrates the quality and needs to gain additional skills in this area.

IE = Ineffective

An IE rating means the teacher does not possess the quality.

N/A = The quality is not applicable to the subject matter.

Quality	Indicators	HE	AE	E	ME	IE	N/A
Teacher as a Person	Listens actively						
	Develops a personal relationship/interest in student while maintaining professional boundaries						
	Values student input						
	Exhibits love of teaching						
	Shows passion for content area						
	Enjoys teaching and learning						
	Seeks new knowledge and skills						
	Engages in reflective practice to improve teaching						
Sets high expectations for personal classroom performance							

Organizing for Instruction	Carefully prepares meaningful lessons aligned to standards							
	Selects a variety of teacher-directed and student-directed strategies and techniques							
	Prepares all materials in advance							
	Organizes sequencing of lesson for effective presentation							
	Sets clear learning outcomes aligned to standards and explains the linkage to students							
	Sets a pace that maintains momentum throughout the class period							
Implementation of Instruction	Optimizes use of instructional time							
	Varies research-based instructional strategies, learning activities, and assignments to engage and motivate learners							
	Paces learning and is able to adapt as the situation demands							
	Uses appropriate questioning techniques to scaffold learning and increase critical thinking							
	Connects prior knowledge to new concepts							
	Frequently checks for understanding using a variety of techniques							
	Sets high expectations for learning which includes stressing student responsibility and accountability							
	Gives clear examples							
	Differentiates instruction							
	Changes plan as needed based on successes and challenges							
	Celebrates student learning in a positive, reinforcing manner							
Management and Organizational Skills	Prepares plans and materials in advance							
	Involves students in creating classroom expectations							
	Is fair and consistent in using discipline							

	Establishes a classroom routine that creates a safe, yet welcoming learning environment						
	Balances variety and challenge in selection of learning activities						
	Uses space to maximize learning and to encourage interaction						
	Maintains a highly effective learning environment that values student learning						
Monitoring Student Progress	Clearly explains the purpose for assignments and homework						
	Provides timely feedback based on clear grading rubrics to improve student performance						
	Provides opportunities for re-teaching concepts as needed						
	Knows the strengths and needs of each student based on ongoing continuous assessment						

Accelerated Learning

Accelerated Education: Learning on the Fast Track

B. Charles Tatum

Abstract

In an attempt to meet the needs of the 21st century students, many colleges and universities have created classes and programs that proceed at a much faster pace than more traditional educational systems. This article explores some of the learning principles involved in this accelerated education and compares them to the more traditional model. A review of the recent literature reveals the evidence for and against accelerated education, and several critical research issues are discussed. The article also addresses some important methodological concerns with the research studies. The author concludes that there are notable advantages to the existing practices in accelerated education, and encourages more scholarship and research in this area of teaching and learning.

Key Words

Accelerated education, accelerated learning, accelerated programs, intensive learning, traditional education, learning and memory principles, educational effectiveness, educational-research methodology

Introduction

Historically, the demand for affordable, flexible, and convenient education has produced nontraditional educational formats and paradigms such as correspondence courses, evening classes, distance learning, and now online and web-based education (Kearsley, 1999; Serdyukov & Wheeler, 2002). Moreover, the college-student population is shifting from the traditional 18- to 22-year-olds to an older demographic sometimes referred to as nontraditional or “adult” learners (National Center for Education Statistics, 2003). As these nontraditional students try to combine work and study, they are looking for educational approaches that differ from the “traditional” university. One important consideration for these nontraditional students is the duration of the courses or programs. With great demands on their time, these students want to complete their studies as quickly as possible. In response to this need, postsecondary education has developed accelerated courses and programs, and this rapid-paced education seems to be the wave of the future. In fact, accelerated education is one of the fastest growing transformations in higher education (Scott & Conrad 1992; Bowling, Ries, & Ivanitskaya, 2002). According to Wlodkowski (2003), 250 U.S. colleges and universities offer various accelerated programs, and this number is increasing.

Accelerated education refers to any attempt to speed up or compress the educational process beyond the traditional semester or quarter systems that are used in most colleges and universities. Sometimes this means simply shortening the duration of the course (e.g., from 15 weeks to 6 weeks) without changing the number of contact hours in the classroom (e.g., 40 hours). In other instances, accelerated study means not only compressing the duration but also reducing the contact hours. To add to the confusion, there are many different definitions and distinctions in the literature on accelerated education. Sometimes the research applies to *accelerated learning*, defined here as a learning environment intended to achieve a faster learning rate, especially for specific learning modules or individual classes. The term *accelerated learning* as used here is sometimes called intensive, compressed, concentrated, or short-term learning (see Serdyukov, 2008; Serdyukov & Serdyukova, 2006; Serdyukov, Tatum, & Serdyukova, 2006). For some educators “accelerated learning” refers not to an acceleration of

the learning process but rather to a special area of learning that uses “multi-sensory, brain-compatible teaching and learning methodology” (McKeon, 1995, p. 64). I will adopt the broader use of the term rather than the more restricted methodological use.

In addition to accelerated learning, which usually applies to individual classes, the research on accelerated education also focuses on *accelerated programs*, defined as whole programs and curricula offered in a shortened time frame (Donaldson, 2001; Lynott, 1998; Mealman & Lawrence, 2000; Scott & Conrad, 1992; Wlodkowski & Westover, 1999). This article will address both accelerated learning and accelerated programs.

The first section of this article reviews the psychological foundation for accelerated education. What are the basic learning principles involved, and how do these principles differ from those involved in traditional educational practices? The second major section addresses the educational quality issue: Can postsecondary education deliver courses and programs faster than has traditionally been the case and still achieve the same or better learning outcomes? In other words, how effective is accelerated learning? The final section deals with several methodological issues and suggests ways to overcome these obstacles and produce better quality research in teaching and learning under accelerated conditions.

Learning and Memory Principles Applied to Accelerated Education

There are many psychological dimensions that could potentially bear on accelerated education, such as the cognitive, emotional, and social. This section will deal primarily with learning and memory principles and their application to accelerated learning.

Massed versus Distributed Practice

One of the most robust findings in the psychological literature is the spacing effect (Cepeda, Pashler, Vul, Wixted, & Rohrer, 2006; Dempster, 1989; Dempster & Farris, 1990). The effect dates back to the classical work of Ebbinghaus (1964) but has been replicated in many studies since. The consistent finding is that spacing practice session over a longer duration (distributed practice) promotes better learning and memory than compressing the sessions into a short time frame (what students refer to as “cramming” and what researchers call *massed practice*). Given this phenomenon, it is natural to conclude that longer classes (e.g., semester-length classes) would produce better learning than shorter, accelerated classes. Accelerated classes, however, do not necessarily reflect massed practice because they usually involve, at the very least, 24-hour cycles of concentrated effort followed by rest. As noted by Hefferlin (1972), these cycles are comparable to the distributed practice cycles use in some studies.

Memory Retention

As established long ago by Ebbinghaus (1964), and replicated many times, memories fade with time, and the shorter the retention interval, the better the memory. Accelerated classes would seem to benefit the retention of course material because the time delay between studying the material and having to recall it on a test is shortened. This does not address the issue of how long the memory lasts after the test is completed (an issue that is discussed later in this paper), but clearly if students want to perform well on immediate tests, then accelerated classes should be superior to longer classes.

Memory retention is related to the spacing effect discussed above because, if the study sessions are spaced too far apart, memory retention will be poor and the spacing effect will lose its potency. Rohrer and Pashler (2007) argue that the spacing effect depends jointly on two intervals: the interval between study sessions (the intersession interval, ISI) and the interval between study sessions and the test (the retention interval, RI). These researchers suggest that the optimal ISI for the spacing effect is roughly 10–30 percent of the RI. In other words, if the interval between study and test (the RI) is ten days (not uncommon for accelerated classes), the ISIs should be spaced somewhere between one and three days apart. If the retention interval is one month (common for semester classes), the optimal ISI would be between three and nine days. Rohrer and Pashler (2007) reported that mathematics students in traditional classes who spaced practice problems across a one-week period performed better on a subsequent test than math students who massed the practice problems into one session. If their formulation is correct, we should see the same improvement with math students taking accelerated classes and spacing their practice over one or two days rather than a week.

Proactive and Retroactive Interference

Classical verbal learning theory proposed two types of interference—proactive and retroactive (Underwood, 1957). Proactive interference occurs when prior learned material interferes with and creates forgetting of the current material under study. Retroactive interference refers to subsequent learning that interferes with and causes forgetting of the to-be-remembered material. Just how interference theory relates to the accelerated versus traditional education debate is difficult to pin down. On the one hand, interference theory might suggest that it is not a good idea to take shorter, accelerated courses in a sequential fashion (as done, for example, in some nontraditional colleges and universities) because earlier and later classes might interfere with learning of the current class. On the other hand, taking courses concurrently over an extended time period (as is done in more traditional semester sessions) might create proactive and retroactive effects when students try to study one subject but experience interference from material learned in the other classes. What little evidence exists seems to indicate that whether classes are taken in sequence or concurrently does not effect learning performance (Boddy, 1985; Tatum & Parker, 2007).

Multiple Testing Effects

If students are tested regularly (e.g., once per week), they tend to study more and space their studying more evenly during the class (Bangert-Drowns, Kulik, & Kulik, 1991; Leeming, 2002). Moreover, Roediger and Karpicke (2006a, 2006b) have shown that testing alone, independent of the effect of studying, can have a positive impact on long-term retention of the study material. These facts suggest that the longer, more traditional forms of course delivery should produce better learning and retention than accelerated classes because more time is available to test students. As discussed below, the research evidence is equivocal on this point, with most studies showing no difference between accelerated and extended learning on long-term retention. Although no difference is typically the cases, a handful of studies show better retention for the extended classes, while a few other studies show slightly better retention for accelerated classes.

Focused Attention

Most of us have experienced situations in which we have become deeply immersed in an activity, losing self-consciousness and feeling highly productive and satisfied afterward.

Csikszentmihalyi (1982) has written about such “optimal experiences” and argues that intense, concentrated study leads to enhanced motivation and increased creativity. We do not yet know whether accelerated education produces these desirable effects, but clearly the opportunity for immersion in a topic or field is better when a class is taken in a short, intensive block without the distraction from other classes. Advocates for immersion programs in foreign language learning clearly believe that focused attention is the key to successful language acquisition, and there is some research to support their claims (Powell, 1976).

Transfer of Learning

It can be argued that the primary goal of education is the transfer of learning. After all, what is the point of education if it is never used and cannot be applied in other situations? Learning for learning’s sake is fine for some, but the vast majority of students want to be able to do something with their education. According to Barnett and Ceci (2002), for over 100 years psychologists and educators have debated the evidence for, and the theories of, transfer. In their review of the transfer literature, Barnett and Ceci suggest that the ambiguity and controversy is, in part, a function of not appropriately specifying the various dimensions along which transfer occurs. They propose that transfer must be viewed in terms of the content (what is transferred) and the context (when and where does transfer occur). Any comparison of accelerated and traditional education needs to address both dimensions, of course, but perhaps context is more critical than the content at this early stage of inquiry (e.g., knowing that some learned information got transferred to the next assignment, the next class, the lab, or a job may be more meaningful than knowing what specific bit of knowledge or skill got transferred).

It is probably premature to suggest that either accelerated or traditional models of education fit better conceptually with what we know about transfer. Nevertheless, Serdyukov and Wheeler (2002) have argued that, in the teaching of mathematics, physics, and second language learning, students perform better when topics are presented sequentially and each unit builds and expands on the previous one. Bruner (1960) calls this a “spiral curriculum,” or “[a] curriculum as it develops should revisit these basis ideas repeatedly, building upon them until the student has grasped the full formal apparatus that goes with them [so it] turns back on itself at higher levels” (p. 13). It may be that classes that are offered sequentially in smaller units (accelerated classes) are more likely to create these spiral or iterative transfer effects.

Incubation/Insight

Traditional wisdom maintains that some material and problems require an extended period of time to “digest” or “simmer.” There is evidence in the psychological literature that setting a problem aside for a while (a process labeled “incubation”) does help the learner and problem solver. For difficult material and problems in which the learner can get stuck (and perhaps require some special creative “insight”), the research suggests that an incubation period can be useful (Smith, 1995). It would appear that for some courses in some disciplines, an accelerated approach could be a disadvantage for the students because they are not given sufficient time to ruminate over the course content or the homework problems. Although there is no research that addresses this issue directly using real-world classes or programs, it is possible that accelerated education may not be ideal for certain kinds of learning and problem solving.

Evidence for Effectiveness of Accelerated Education

The preceding section demonstrates that, on a conceptual level, there are arguments for and against accelerated education. What does the research evidence show? Several early reviews found very difference between compressed, intensive programs and more traditional programs (Lynch, 1975; Mims, 1985; Powell, 1976). In the most recent comprehensive review, Scott and Conrad (1992) discussed how the present-day need for accelerated courses and programs stemmed from several sources (e.g., refresher courses, make-up credits, fast foreign-language training), all of which were aimed at accelerating the delivery of educational content with little or no sacrifice to educational quality. The discussion of effectiveness here will summarize what is known by examining five distinct areas outline by Scott and Conrad (1992). These areas represent situations where the learning process is accelerated in an attempt to move students through their courses and programs faster and more efficiently compared to more traditional forms of college instruction (e.g., semester and quarter systems). I will not review the early studies cited by Scott and Conrad (the interested reader is encouraged to examine their excellent monograph); instead, I will focus on more recent evidence (studies done since 1992) related to the effectiveness of accelerated programs and learning.

Summer Sessions

Summer sessions are usually embedded between spring and fall semesters in an attempt to offer accelerated classes to special groups of learners (e.g., teachers in need of “refresher classes,” students requiring continuing education, traditional students trying to make up lost units during the regular session). The general conclusion from the early studies reviewed by Scott and Conrad (1992) is that there is no significant difference between achievement in summer sessions compared to longer courses.

A recent study by Anastasi (2007) compared three psychology courses (Effective Thinking, Memory and Cognition, and Research Methods) taught during a regular semester and a summer session. In the study, the instructor, teaching style, number of contact hours, exams, and other assignments were held constant. The results favored the summer session students; they received higher grades than the semester students, despite the fact that the semester students had a higher grade point average than the summer students prior to taking the classes.

Petrowsky (1996) had mixed results with macroeconomics classes taught in either 2-week or 15-week sessions. Exam scores for the compressed classes were superior to the longer classes when the material was focused on knowledge acquisition, but scores were lower for the shorter classes when the course emphasized comprehension, analysis, application, and synthesis. The student survey also showed mixed results. A majority of the students said they would recommend the 2-week course to a friend and would enroll again in the abbreviated course, but most students also felt that it would be better to take the course in 15 weeks.

A study by Lee (1996) was less ambiguous with respect to student perceptions. Lee reported that students clearly preferred the summer course to the traditional courses.

Interim Sessions (Intersession)

This form of accelerated education was originally designed as an alternative to the more familiar concurrent scheduling (several classes at a time). Interim session (or intersession) allows students to concentrate on a single subject without interference from other classes. The interim

term (intersession) gets its name because it is normally a session that is squeezed between the fall and spring semesters and runs for 3 to 4 weeks.

The findings in the literature prior to 1992 are mixed (e.g., Allen, Miller, Fisher, & Moriarty, 1982), but in only one study was the interim design inferior to the traditional format (Richey, Sinks, & Chase, 1965). Only one study since 1992 was identified that directly addressed intersession learning outcomes. Geltner and Logan (2001) compared 6-week, 8-week, and 16-week classes. Some of the 6-week classes were conducted during a winter session (intersession). In general, the 6-week classes were associated with higher success rates (grades of C or better or earning credit for the course) and lower withdrawal rates. Although the intersession classes in this report were not specifically singled out, it was implied that the intersession classes were no different from the other 6-week classes.

Weekend Courses

Weekend colleges began in the 1960s and were designed to meet the needs of working adult students who had weekday obligations but were willing to sacrifice weekends to advance their education. There are many variations on the weekend format, but some schedules can become very compressed (e.g., 40 hours of instruction in two weekends).

The concern by some regarding the achievement levels of such highly compressed schedules was addressed in several studies prior to 1992. The broad conclusion from these studies was that there is no significant difference in learning outcomes between weekend and traditional courses (Scott & Conrad, 1992). Williams (1992) compared classes offered on two weekends, over 8 weeks, and during 15 weeks. There were no differences in grades among any of the classes investigated. Messina (1996) also reported that there was no difference in semester grades for students taking weekend courses and students taking regular courses at a community college. Messina also noted that the students in these weekend courses claimed to learn the same or more as they had in the traditional courses.

Intensive Courses (Taken Concurrently with Regular Courses)

Intensive classes are sometimes taken at the same time as other, more traditional-length classes. Again, the research prior to 1992 shows very little difference in outcomes between intensive courses and traditional courses (Ray & Kirkpatrick, 1983, did find superior pre- to post-test gains in knowledge for the accelerated class, but other studies found little or no difference).

Wlodkowski and Westover (1999) investigated three private colleges that offer both 16-week programs and 5-week accelerated programs and compared three undergraduate courses (accounting, business law, and philosophy). Using faculty experts to rate the achievement of the students, the investigators found virtually no difference between the two types of programs (students in the accelerated accounting course did score better in the area of calculation than the traditional students).

Geltner and Logan (2001) showed positive results for the intensive courses they investigated. These researchers found that students had a higher success rate (grades of C or higher or credit for the course), better average grades, and lower withdrawal rates in shorter courses (6 weeks) compared to longer (8-week and 16-week) courses.

Modular Systems (Courses Taken Sequentially)

The modular system represents an educational environment in which accelerated classes are offered sequentially (one at a time in succession). In many cases, the modular system is in

addition to a more traditional system. For example, the University of Wisconsin—Oshkosh and San Diego State University have summer sessions that have two consecutive four-week terms. The studies reviewed by Scott and Conrad (1992) showed mixed results (see Blackburn, Armstrong, & Dykes, 1977; Mazanec, 1972).

Several colleges and universities in the U.S. teach whole programs almost exclusively on the modular system (e.g., Colorado College, Cornell College, National University, Regis University, Tusculum University). Evaluations of the effectiveness of these models have consistently shown positive results on student learning, perceptions, and attitudes. For example, an extensive evaluation of the Colorado College Block Plan (where courses are taught in 3½ week “blocks”) by McJimsey (1995) revealed high levels of satisfaction with the plan from students, faculty, and alumni. Students reported higher levels of improvement in writing, oral presentations, problem solving, and analysis than students at other private colleges.

On a smaller scale, Tatum and Parker (2007), at National University (NU), compared three courses in psychology (developmental, personality, and psychopathology) taught under their 4-week sequential system with the same three courses offered concurrently during a 12-week period. There was no difference in grades or exam scores, but the students’ perception of the sequential courses was more favorable (e.g., “I would recommend this course to others”). Serdyukov, Subbotin, and Serdyukova (2002) also found that students at NU preferred the one-course a month format to teaching math to the more traditional semester format. Schwartz (2002) demonstrated that students in NU’s accelerated accounting program achieved above-average pass rates on the national CPA exam.

Jonas and Weimer (1999), at another university, found a similar pattern when they compared the results of the Educational Testing Service’s Major Field Achievement Test for business students in both an accelerated program and a traditional program. The 124 accelerated students scored higher on the test than the 209 students in the traditional program, and the accelerated students also scored higher than the national average.

In a report by Wlodkowski, Iturralde-Albert, and Mauldin (2000) at Regis University, the researchers compared four undergraduate courses (economics, history, human relations, and labor relations) taught in their accelerated program (5 weeks) with the same courses taught in their traditional program (16 weeks). They found very small differences in student perception (one item on a student survey favored the accelerated classes, all other items showed no difference), but substantial differences in student performance (in favor of the shorter classes). Students were rated by faculty experts on three performance dimensions (critical thinking, writing skills, and knowledge), and on each of these dimensions the accelerated students receive higher ratings. Wlodkowski, Mauldin, and Gahn (2001) compared grades in accelerated programs at Regis with grades for similar programs at the University of Missouri at Kansas City run under a semester system. The grade point average at Regis was significantly higher than the grade point average at Missouri.

Finally, Vaughan and Carlson (1992) did a comprehensive evaluation of the One-Course-At-A-Time (OCAAT) calendar at Cornell College and reported a number of benefits of the Cornell system. Relative to the semester calendar that Cornell College used prior to adopting the new OCAAT calendar, these researchers found high student and faculty satisfaction, improved student performance, and a positive alumni assessment of their college experience.

Some Important Issues

Scott and Conrad (1992) identified several unresolved issues with respect to learning outcomes and the effectiveness of accelerated education. Since 1992, some of these issues have been more fully addresses and others have not. This section attempts to summarize what we now know.

Short-Term versus Long-Term Outcomes

A review of the literature by Daniel (2000) concluded that the evidence was clear on the short-term benefits of accelerated learning but was inconclusive with regard to long-term outcomes. The vast majority of studies have shown that students in accelerated classes perform as well as, and often better than, students in traditional classes on short-term outcome measures (e.g., unit test, class exercises, exams, homework assignments). With regard to long-term outcomes, most studies found no difference in performance between accelerated classes and traditional classes on retention of delayed post-tests (e.g., Seamon, 2004). Some studies have found slightly superior (but nonsignificant) delayed performance for accelerated classes (Doyle, 1978; Doyle & Yantis, 1977; Doyle, Moursi, & Wood, 1980), but others studies report declines in delayed performance for students taking the accelerated classes (Petrowsky, 1996; VanScyoc & Gleason, 1993).

Different Student Groups

The literature is clear that different kinds of students choose accelerated classes compared to more traditional (quarter or semester) classes. Students taking accelerated classes and programs are generally older, adopt a more experiential style of learning, and are more motivated than traditional students (Daniel, 2000). What is not so clear is whether the different types of students benefit more from accelerated learning experiences. One study that provides some useful data on this issue was conducted by Geltner and Logan (2001). They examined several outcomes from accelerated classes (success rate, withdrawals, average grades) as a function of gender, ethnicity, age, first language, student academic goals, enrollment status, and several other student characteristics. In virtually all categories, the outcomes were better for the accelerated classes (6 weeks) compared to longer-term classes (16 weeks).

Degree of Intensity

The studies that have been done on accelerated education have examined everything from classes offered in compressed, 2-week time frames to full 17-week semester classes. It is difficult to extract any clear relationship between the degree of intensity and the level of student learning or success because studies typically do not examine more than two intensity levels. In a study by Geltner and Logan (2001), three levels of intensity were investigated (6-week, 8-week, and 16-week classes), but no reliable trend was reported by these researchers. A more definitive answer to the question must await further research.

Subject Matter Effects

The studies reported in the literature have examined a wide range of course and disciplines. Because each study is unique in design and sample, it is difficult to compare subject matter directly. The pattern of results from different studies is fairly clear, however; across a broad array of course content, accelerated classes are at least as good as, if not better than, traditional courses. Geltner and Logan's (2001) study is unusual in that they compared many disciplines within the same investigation. These authors examined 50 different disciplines and analyzed

student success, grades, and withdrawal rates for accelerated (6 weeks) and nonaccelerated classes (16 weeks). In only one instance was the outcome worse for the accelerated classes (withdrawal rates were higher for a 6-week cosmetology classes than for the same classes offered in 16 weeks). Otherwise, for each discipline, there was either no difference between the accelerated classes and the longer classes, or the accelerated classes were superior.

Levels of Learning

An interesting issue is whether accelerated classes are better or worse than traditional classes with respect to higher-order thinking skills. If we use Bloom's (1956) taxonomy, for example, do students under an accelerated system perform as well as student in a traditional system when it comes to the application, analysis, synthesis, or evaluation of what they have learned? An early study by Waechter (1966) suggested that the accelerated students did not understand the material as well as traditional students. A more recent study by Petrowsky (1996) reinforces this notion. The students in an accelerated macroeconomic course performed worse on a comprehensive exam than the students in the traditional course. The comprehensive exam required that the students comprehend and analyze the material.

In contrast to the above findings, several studies have reported a different set of results. A study by Collins (2005) suggests that higher-level cognitive skills are not compromised by accelerated learning. Collins used the Learning Environment Preferences (LEP) instrument, a test that measures cognitive complexity, and studied cohort-based and noncohort-based accelerated programs. She compared pre-program LEP scores with post-program LEP scores and found no difference in pre-and post-scores using both quantitative and qualitative analyses. As noted above, Wlodkowski et al. (2000) found that faculty rated accelerated students higher on critical thinking compared to students in more traditional courses. Finally, Seamon (2004), in a psychology of learning course, found that students in an accelerated class (three weeks) performed better on post-test questions that assessed "higher order" learning than students in a semester class. Interestingly, this difference was not maintained over a long retention interval (three years), but this finding is tentative because the sample sizes were very small after such a long delay.

Course Withdrawal and Degree Completion

Geltner and Logan (2001) examined withdrawal rates for 6-week, 8-week, and 16-week classes. Their evidence clearly showed that the accelerated classes yielded fewer student withdrawals than the longer classes. Wlodkowski, Mauldin, and Gahn (2001), reporting on "persistence" (degree completion), compared students enrolled in an accelerated program with students in a traditional program. Using a historical analysis, they showed that, given a sufficient amount of time (six years), there was no difference in graduation rates between the two types of programs (although the accelerated students did graduate sooner, which was the intent of the program). In another analysis of current students, Wlodkowski, Mauldin, and Gahn did not find any difference between the accelerated and traditional programs in the proportion of students who withdrew (i.e., the percentage of students who did not return following the end of the fall term). In a follow-up study, Wlodkowski, Mauldin, and Campbell (2002) identified several factors that influenced student withdrawal from college. These influences were not much different for accelerated and traditional programs. Mostly, the reasons for dropping out focused on money (tuition costs, lack of financial aid) and time (conflict between job and studies, home

responsibilities). A higher percentage of students in the accelerated program than the traditional program reported time conflicts as the top reason for leaving.

Student Attitudes and Perceptions

Studies of student attitudes toward accelerated courses consistently show that students like this format. In a series of articles, Scott (1994, 1995, 1996, 2003) reported that students (and faculty) found that intensive courses promoted a quality learning experience in which they could connect and synthesize ideas. Lee (1996) stated that 80 percent of the students surveyed preferred short, intensive courses. Messina (1996) claimed that the majority of students in the weekend courses studied stated that they learned more in these intensive classes, and had more student-instructor interaction, than in the traditional classes. Tatum and Parker (2007) found that the tendency to recommend the accelerated classes to other students was significantly greater than for the more extended classes. Shafer (1995) found that “procrastinators” preferred the accelerated format because they believed that it reduced their tendency to procrastinate and provided needed structure. Parsons (2005) reported generally favorable attitudes toward the accelerated classes that were investigated, except that some students expressed concern that the pace was too quick, especially for math and science classes. When students reveal negative perceptions of accelerated programs or classes, they generally revolve around lack of time, too much work, and high levels of stress (Parsons, 2005; Petrowsky, 1996; Sakaly, 1995; Smith, 1988; Tatum & Parker, 2007).

Summary and Conclusions on Effectiveness

The evidence is quite clear with regard to the effectiveness of accelerated education. When comparisons are made with more traditional forms of education (e.g., semester and quarter systems), very few studies report superior outcomes for the traditional method. The most common finding is that there is no difference between the two approaches to higher education. Quite frequently the literature shows that the accelerated format produces better learning and achievement than the traditional format. Further research is needed on at least two critical issues: Do shorter formats lead to better outcomes for higher-order cognitive skills (e.g., comprehension, application, analysis, and synthesis), and what are the long-term effects of accelerated education? There is a growing body of evidence that students like and prefer the accelerated, intense pace better than the extended schedules, even though it is stressful and highly demanding of students’ time. This high level of student satisfaction is probably due to the kinds of students who self-select these programs (adults who are highly motivated and want to achieve their educational goals quickly). The evidence strongly suggests that students can finish classes and programs more quickly than is typically the case without major sacrifices to academic rigor and educational quality.

Methodological Issues

Much of what we know about accelerated education is based on studies that are relatively weak methodologically speaking. This is understandable given that the studies are usually conducted in real-world environments that do not afford the controls and precision found in laboratory studies. This section discusses some of the major methodological issues with the research on accelerated education and reviews the evidence for and against compressed, rapid-paced classes

and curricula. Most of the studies in the literature fall within the category of research that Campbell and Stanley (1963) refer to as “quasi-experimental.” These studies lack the kinds of controls, random assignment, and measurement precision that characterize true experiments. Consequently, the validity of the inferences and conclusions drawn from this research is limited. This is not to say that the research has no value; it just means that we must be very cautious about what we can say with confidence about the results. Many of the threats to validity noted by Campbell and Stanley (e.g., repeated testing, selection bias, differential loss of respondents) are found in the studies review above, and it is beyond the scope of this paper to discuss them all. However, there are some artifacts that are common to many of the studies and bear special attention. In addition, certain measurement issues are relevant and will be addressed.

Different Populations

A frequent problem with the studies of accelerated education is that the individuals engaged in the accelerated courses or programs come from different populations than the comparison group. For example, Wlodkowski, Mauldin, and Gahn (2001) compared grades in accelerated programs at Regis University with grades for similar programs at the University of Missouri at Kansas City run under a semester system. Obviously, the population of students was quite different, and the superior grades for students in the accelerated classes may have been due to differences in the type of student rather than the pace of the class.

Selection Bias

Somewhat related to population differences is selection bias. Even within the same population, different types of students, when given the choice, may gravitate to either accelerated classes or traditional classes. Wlodkowski, Iturralde-Albert, and Mauldin (2000) compared four undergraduate courses (economics, history, human relations, and labor relations) taught in their accelerated program (5 weeks) with the same courses taught in their traditional program (16 weeks). Despite the fact that the courses remained the same, the differences in performance may be due to differences in the type of student who chooses one type of instruction over another. Likewise, when Jonas and Weimer (1999) reported that the business students in their accelerated program scored higher on a standardized test than the business students in their traditional program, the results could have been due to a selection bias rather than program differences.

Extraneous Variables

The primary goal of much of the research in this area is to allow causal inferences from the results (e.g., accelerated classes lead directly to improved learning). To make an unambiguous cause-and-effect connection between two variables (e.g., type of class causes different learning outcomes), all or most of the other competing variables must be controlled within the study design. Most of the studies on accelerated education do not adequately deal with these “extraneous variables.” Some of these variables are an inherent part of the accelerated approach (e.g., differences in teaching style), but many others are simply nuisance variables that compete with the primary causal variables in the study (e.g., differences in time of day, instructors, textbooks, type of testing, class size). Geltner and Logan (2001) is an example of a study that involved many extraneous variables. These researchers demonstrated several advantages of 6-week classes over 8-week and 16-week classes, but there were many differences between these classes besides their length (e.g., time of day, academic discipline, student age, cumulative GPA of students, faculty status). To eliminate these extraneous variables, researchers need to control

them in such a way that the likelihood that they are causing the changes is significantly reduced (e.g., hold them constant, remove them statistically).

Matching versus Random Assignment

In some instances, the research design attempts to deal with group differences by matching the participants in the groups. In other words, the researcher attempts to reduce initial differences between participants in the accelerated and nonaccelerated classes or programs by matching them on one or more critical variables (e.g., age, ethnicity, intelligence). For example, Preziosi (1995) matched the students in nonaccelerated instruction with students in accelerated instruction on the bases of a knowledge pre-test (a test administered prior to the start of classes). The study found that students in the accelerated classes performed better than the nonaccelerated students. While this is a step in the right direction, there are many other group differences that could account for Preziosi's findings. In general, matching is not a substitute for using random assignment to equate groups. The most effective way of ensuring that the groups are comparable prior to the study is to randomly assign participants to the groups. Randomization, however, is not always a realistic option in these kinds of real-world studies (Daniel, 2000). Although matching is desirable, it should not be seen as accomplishing the same ends as random assignment.

Time Series and Retrospective Designs

Some research examines a single group of learners before and after they have been exposed to an accelerated treatment. Collins (2005) used this design to research changes in cognitive development in two types of accelerated programs by comparing pre-test and post-test scores on the Learning Environment Preference (LEP) instrument. One advantage to this "time series" approach is that it eliminates the issue of group differences. Because there is only one group, the researcher does not have to worry about equating a group that experiences the accelerated class or program with another group that does not experience the accelerated condition. In a sense, the time series design uses the single group as both the treatment group and the comparison group (what is sometimes referred to as using the "subjects as their own control"). Although this does control for potential group differences (because the treatment and comparison groups are exactly the same), it does raise other design problems. We cannot know for sure whether any differences in the before-treatment measures and the after-treatment measures were in fact due to the treatment itself. As Campbell and Stanley (1963) point out, any number of other factors could be operating. For example, there may be some historical artifact (i.e., a specific event that occurred between the first and second measurement), a maturational change (i.e., some process within the respondents that changes with time such as age or fatigue), or some kind of testing effect (e.g., the students are better at taking tests because of exposure to prior tests).

A variation on the time series approach is the "retrospective" study in which students are asked to compare their current experiences with past experiences. For example, Messina (1996) asked students to compare how much they learned after taking weekend courses with how much they had learned when taking more traditional courses. As with the time-series design, the retrospective study eliminates some group-based differences because subjects serve as their own control. Unfortunately, the retrospective design has many of the same methodological problems as the time-series design, and introduces some other methodological limitations such as memory biases.

Measurement Considerations

There is a large variety of measurement instruments used in studies of accelerated education. Some of these are standard metrics used across a wide array of educational institutions (e.g. GPA, SAT, GRE, course evaluations, grades, student retention). Other instruments are not so commonly used but may be more informative than the standard measures (e.g., alumni surveys, employer surveys, assessment of competencies). The value of any measure, however, is only as good as the quality of the instrument used. The quality of a measurement device can be assessed in two important ways: reliability and validity (see Nunnally & Bernstein, 1994). Most studies on accelerated education either have not analyzed these two psychometric properties or have failed to report them. Not knowing the reliability of a measurement instrument is a serious limitation to research on accelerated education because unreliable measures directly affect the generality and validity of the studies (Nunnally & Bernstein, 1994, p. 214). Before studies of accelerated education can be considered scientifically mature, both reliability and validity issues must be more directly assessed.

Summary and Conclusions for Methodological Issues

The methodology that has been used thus far to study accelerated education leaves much to be desired. First, researchers must start using more sophisticated research designs to control for a variety of methodological shortcomings (e.g., selection bias, extraneous variables). Second, the researchers must make bolder attempts to assess reliability and validity of the measures used. Neither of these objectives is an easy target given the inherently applied nature of the research. But, we are beyond the stage at which we show crude differences between accelerated and nonaccelerated systems and should be entering the stage at which we design more rigorous studies with more precise measurement tools. Only then will the field start to gain a more complete understanding of the advantages and disadvantages of accelerated learning and programs.

General Summary and Conclusions

The available research on accelerated education is a mixed bag of different types of studies across a variety of institutions and disciplines using a broad array of methodological approaches. For the most part the research is not methodologically sophisticated, and future studies should aim for higher standards of research design and measurement precision. Nevertheless, despite the fact that no one study can be singled out as a conclusive demonstration of the effectiveness of accelerated education, the *pattern* of findings over a large number of studies is compelling. Mostly what is shown is little or no difference between accelerated versions of classes or programs and their more traditional (semester or quarter system) counterparts. When differences are reported, the advantage usually tilts toward the accelerated class or curriculum. This pattern suggests, at the very least, that there is value in moving students through their studies at an accelerated pace, and our students are not at risk when they engage in the accelerated learning experiences typically offered at colleges and universities (e.g., summer session, weekend programs, modular curricula). Obviously more research is needed in this field, especially research that addresses issues of design, measurement, long term benefits, and higher levels of learning. I would like to encourage the readers to pursue this kind of scholarship in teaching and learning. The recent study by Anastasi (2007) serves as a good model for what is possible and

makes a valuable contribution to our knowledge. The literature produced so far, even with its limitations, points us in the right direction and offers some hope that experimentation with accelerated education has value and can put our students on the fast track to their educational goals.

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About the Author

B. Charles Tatum

PhD, Professor

Department of Psychology

College of Arts and Letters

National University

La Jolla, CA

ctatum@nu.edu

Research interests: Adult Learning, accelerated learning, program evaluation, organizational psychology

E-learning

From Evolution to Revolution: Updates to Effective E-Learning Model Help Facilitate Better Learning

Cynthia Larson-Daugherty and Coleman Walker

Abstract

E-learning has grown at record pace over the last decade, especially in the academic sector (Boehle, 2005; Eduventures 2007; Sloan Consortium, 2007). This growth has prompted an onslaught of changes, challenges, questions, and incredible opportunity to reexamine how people process information and learn. It was recognized early on that e-learning (aka online learning, web learning, desktop learning) is different than the classroom and as such should be treated differently. This difference was noted in particular by the creation of the effective e-learning model (e2L) in 2003 by Spectrum Pacific Learning Company. The e2L model put the proverbial ball in play and set the initial precedent for examining and reexamining the delivery of learning online (Larson-Daugherty & Mossavar-Rahmani, 2007). The model continues to evolve as researchers and practitioners alike further utilize this forum for learning. This update offer propositions to both the theoretical construct and the model's practical application that focus on designing, developing, and delivering e-learning in the most effective way to yield results.

Key Words

Online learning, e-learning, e2L model, online training, online education, content design, development and delivery

Introduction

The status of online learning today is impressive when we that consider its roots are roughly just a little over a decade old. Consider the two venues that have seen the most growth in e-learning utilization: corporations and academic institutions.

Corporate Learning Today

Trend data (Elearning Guild, 2006; Chief Learning Officer, 2007) indicate that corporate entities are utilizing online learning more and more; however, the interesting part of this trend is how it is being used in the workplace: supplements to classroom training and hybrid training (a mix of onsite in the classroom and online). Based on research data, classroom training with paper-based materials is still taking up the largest chunk of corporate training budgets, followed by online training (Wexler, 2008). Chief Learning Officer reported similar findings in 2007, "E-learning is now the method companies use second-most often to deploy learning and development, according to the study, . . . [and] the U.S. e-learning market is the world's largest, as its 2007 revenues are expected to exceed \$17.5 billion (for e-learning). Further, the U.S. corporate e-learning market share is more than 60 percent." Conversely, Europe is the second largest e-learning user and positioned at 15 percent. It is suggested that with the current economic climate that is expected to show little change in 2010, we may see a trend of greater utilization of online training and less onsite classroom training in the next 12 to 24 months. Businesses are looking for ways to maximize the yield on resources, and this includes those left after downsizing and massive layoffs. It is therefore reasonable to deduce that more will have to be done with less. The opportunity for increased utilization of e-learning is more prevalent in society today, as the level of comfort and interaction with digital data is increasing.

Academic Learning Today

Academic institutions, especially higher education, have experienced the greatest growth in the last decade (Eduventures, 2007; Sloan Consortium, 2007). More students are taking online courses now, either mixed in with an on-campus program or fully online programs, than ever before (Dillon, 2008). With an increase in demand, the marketplace has been saturated with a multitude of traditional and nontraditional institutions offering single courses, certifications, programs, and degrees.

The greatest opportunity in this situation is for the learner to have a better learning experience based on increased competition. It is proposed that no longer will students accept text files and PowerPoints as a quality learning experience. Not only does learning theory indicate that engaging content is essential to create an effective learning experience (Knowles, 1984; Gagne, Briggs, & Wagner, 1992; Johnston, Killion, & Oomen, 2005), but offering audio, visual, and kinesthetic learning opportunities is increasingly becoming a requirement. With such tremendous growth in a delivery modality for learning that is relatively young in comparison to the traditional classroom, there is incredible opportunity to reflect on and assess not only what has been learned but also what paradigm changes have occurred as a result.

In addition, with the latest Department of Education study results (Means et al., 2009), “students who took all or part of their instruction online performed better, on average, than those taking the same course through face-to-face instruction. Further, those who took ‘blended’ courses—those that combine elements of online learning and face-to-face instruction—appeared to do best of all. That finding could be significant as many colleges report that blended instruction is among the fastest-growing types of enrollment.”

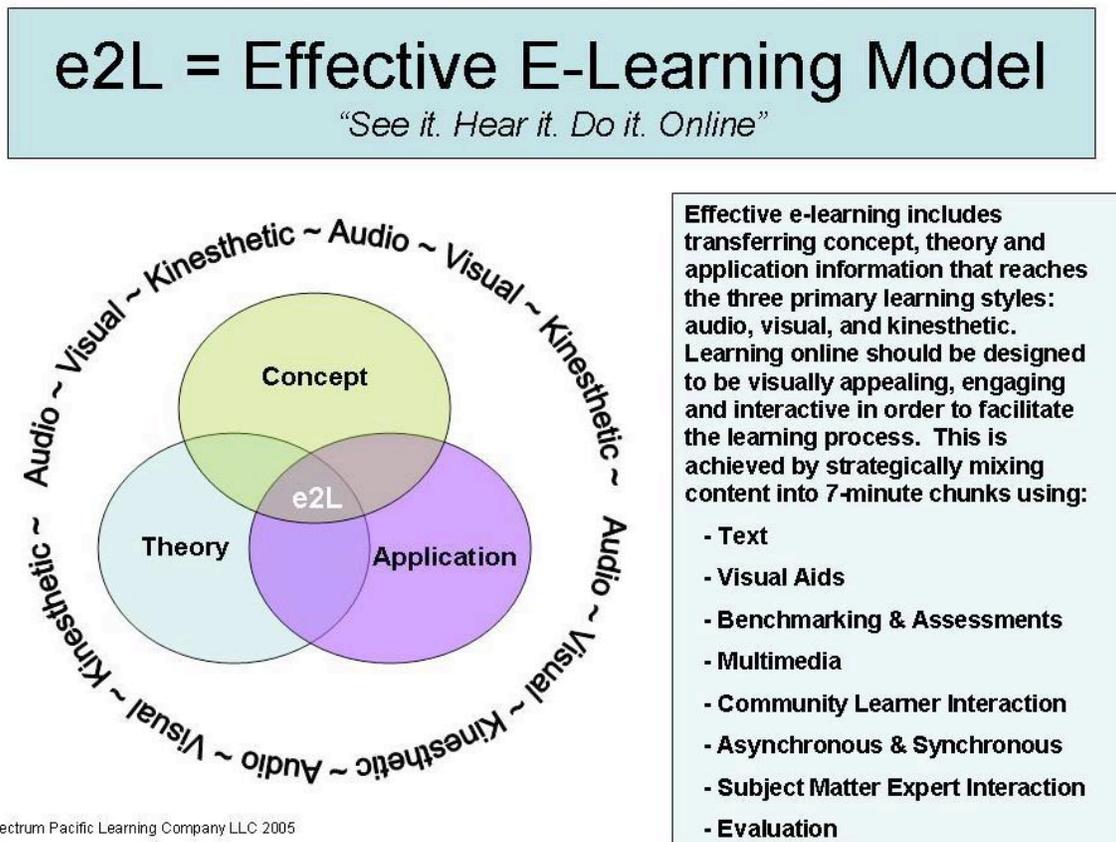
Purpose of the Review—Research

How does the corporate world see a return on its investment in online training dollars? How do higher education institutions demonstrate to both students and accrediting bodies that they are offering a quality learning experience worth the investment of time and money? Of particular interest in both academic and business circles is how e-learning has changed the way we design, develop and deliver “learning.” In late 2003, the effective e-learning model (e2L) was developed (Larson-Daugherty & Cooper, 2004; Larson-Daugherty & Mossavar-Rahmani, 2007) in response to the initial growth of online learning and to address these essential questions. It does so by providing a framework from which to design, develop, and deliver effective online learning. Even in its infancy, many recognized e-learning was different than classroom learning and that the mechanisms used to design, develop, and deliver in this medium should be given consideration. Taking into account early research on learning, content design, and development (Gagne, 1992; Knowles, 1984), the researchers of the e2L model were able to set the foundation for the next evolution of learning (Spectrum Pacific Learning Company, 2004).

Background

In the early years (circa mid-to-late 1990s), online learning development and deployment content were essentially onsite classroom curriculum placed in electronic files (i.e., Word, PDF, PowerPoint) and placed in a virtual classroom space. Today this would be described as an e-library of documents or an e-document warehouse. This was not necessarily effective online learning; however, it was the first iteration or generation, as practitioners and educators were foraging new territory. Developed in late 2003, the initial proposition of the Effective e-Learning Model (e2L) centered on formulating a foundation by which creators of online learning content could operate. The foundation consisted of pinpointing the fundamental elements that enable the learning process, coupled with quality of content as key indicators of online learning success (Boehle, 2005). The e2L model was created by the management team of a growing e-learning solutions and services provider, with each member of the team bringing a broad background in online learning, training and development, and education. Figure 1 reflects the initial e2L model.

Figure 1. Original e2L circa 2004



In the original publication by the e2L developers, Spectrum Pacific Learning Company's Larson-Daugherty and Cooper, the model was described as follows: The premise of the model is (whether it is corporate training or an academic course) that concepts, theories, and practical application are the core concepts that are delivered by key design and delivery elements. Of paramount importance in the design is factoring in of learning styles of participants engaging with the content. The learning needs to address the three primary learning styles as the population is broken down into the approximate segments: audio, visual, and kinesthetic styles. Statistics vary in terms of how the population falls into preferences for these styles.

In layman's terms, one might suggest having the material presented in a way that allows the learner the option or integrated mix of being able to "see it, hear it and/or do it." This allows the learner to identify with the delivery that best meets their learning styles, requirements and needs.

As the model took form, it was critical to articulate that every concept, theory, and application be delivered in a strategic presentation mix that includes audio, visual, and hands-on opportunity to process the information. Other research suggested that there be subject matter interaction, student community interaction, brief chunking of the information in the online environment, both synchronous and asynchronous opportunities to interact, and assessments throughout the learning experience so both the learner and facilitator can understand their evolving levels of knowledge (Tallent-Runnels et al., 2006; Larson-Daugherty, & Mossavar-Rahmani, 2007). Further, evaluation of the e-learning process and its content is critical to better understand and address effective presentation mix (Horton, 2001). For a visual and audio representation of the e2L, please visit Spectrum Pacific Learning Company's website: <http://www.splclients.com/e2l/>.

Initial e2L Changes

From 2002 to 2007, as e-learning continued to grow at a rapid pace, research into effective e-learning also continued. The most notable discovery of the research, from the learner perspective, was the importance of chunking information to retain learning (WorldWideLearn, 2010; Tan et al., 2003). Initially the e2L model proposed 7-minute clusters or chunks based on processing of information and synthesis by learners. What was gleaned through this process, particularly in the academic setting, was that online learners described wanting information in even smaller chunks for easier processing. The e2L model recommends that the learning of specific concepts can be chunked into the following: an overview of the concept, theoretical construct data, and practical application. Further, each of these chunks should be delivered in audio, visual, and kinesthetic learning formats, taking no more than 3 to 5 minutes apiece. The chunking of information into 3–5 minutes increases engagement level by condensing learning into a shorter time-span (Science Daily Trend Report, 2008). The e2L model also stresses the importance of pre- and post-assessments, as well as subject matter validation in effective e-learning. Offering additional information and resources was also found to be helpful (e.g., more detailed documents, audio files), but the highest probability of a student clicking on the information, staying on the information, and remembering it was in shorter chunks (Tan et al., 2003). As a result, a modification was made to the e2L model in 2007 that shifted clusters of information from 5–7 minutes to 3–5 minutes (see Figure 2).

Since 2003 the growth of online learning has come a long way. Today, there continue to be implications for design, development, and delivery. The next section offers an update and proposition for consideration.

Figure 2. Version 2 of the e2L 2007, illustration by David Montes De Oca



The e2L Today: Further Updates

Over the past several years there has been the recognition of an evolutionary process regarding how people learn and process information in both the traditional brick and mortar classroom (group setting) and the online setting (individual setting). The classroom has historically been driven by lecture (auditory), whereas online initially started out very text/document heavy (visual), it has slowly shifted to intentionally including auditory and kinesthetic (hands-on) learning opportunities to reach the various learning styles that individual brings to the learning experience (Knowles, 1984). This is what the authors of the e2L model call “from evolution to revolution” in online learning. The 2009 update to the model is based on the research and developments that have evolved through what we have learned about the way people “learn” online. This data have been drawn from both the academic and corporate sectors, primarily on their increased utilization of e-learning. Critical updates to the e2L model include adding:

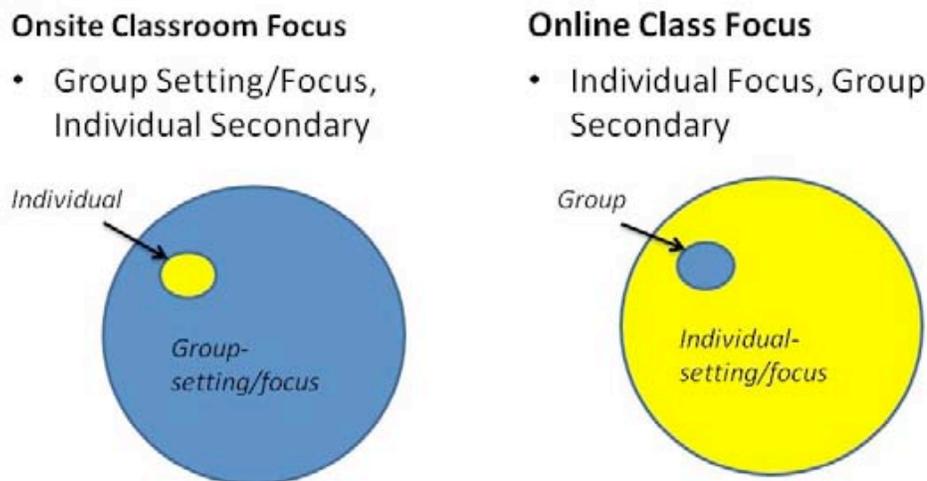
- ∞ Both linear (already exists) and decision-tree learning options (coming into play more and more)
- ∞ Analytics that further validate learning is occurring (beyond benchmarking and assessment)
- ∞ Interactive Learning Objects (aka multifunctional digital learning assets)

- ∞ Individual (1) — Group (2) content design and delivery (focusing on individual engagement with the content as the primary driver in the experience, and the group comes secondary)

Linear learning design has been the most common online practice in terms of design and development (i.e., complete this section and then move to this section). Decision-tree learning allows for learners to be routed back to the specific areas where more work is required to move through the content. It also allows the learner to move forward faster if mastery of specific content items already exists. Analytics around online learning are becoming increasingly important. In part, this is due to organizations/institutions providing the learning experience, the learners, as well as governing and/or accrediting bodies that are starting to seek higher levels of validation and verification that learning is actually occurring in this learning medium.

Figure 3. Individual (1) – Group (2)

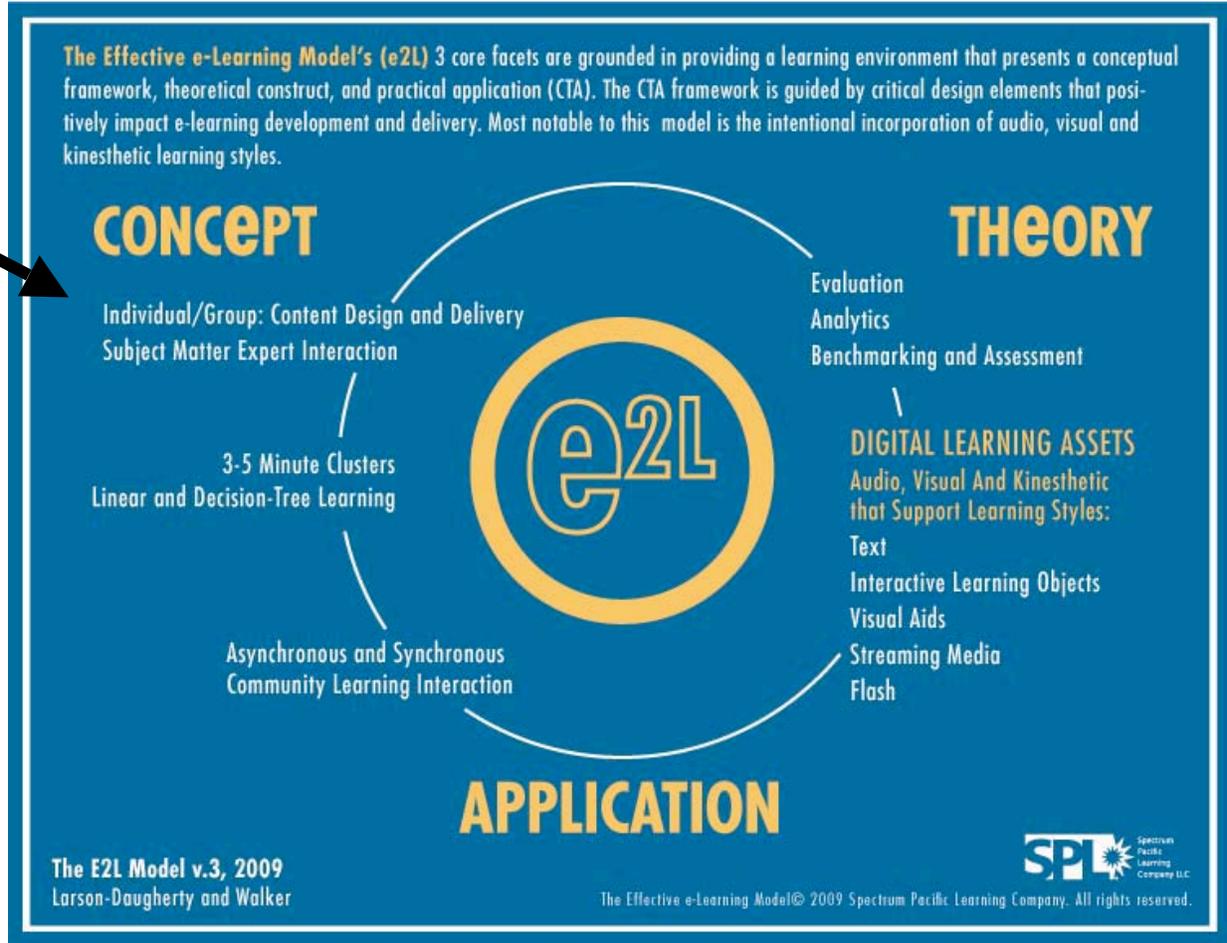
Individual (1) – Group (2) Onsite versus Online Learning Focus & Experience



Digital Learning Assets (DLAs) are interactive learning objects and are any form of content and/or media that have been formatted into a binary source, which include the right to use it for the purpose of facilitating learning. A digital file without the right to use it is not an asset. Digital learning assets are commonly categorized in three major groups: textual content (digital assets), images (media assets) and multimedia (media assets). DLAs are commonly found in online learning (academic course work, corporate training, etc).

Individual (1) — Group (2) content design and delivery recognizes what has been learned in the last several years regarding the online learning experience (see Figure 3). Online learning is primarily engaged from the individual “domain” (1) of thinking and processing first and foremost, and the group domain (2), i.e., classmates, is an ancillary part of the experience.

Figure 4. Version 3 of the e2L 2009; Illustration by David Montes De Oca



This does not dismiss the importance of community interaction in the learning experience (e.g., live discussions/chats, discussion threads, group projects). Rather, it highlights the reasons that online learners choose to engage in online learning (from a higher education perspective): it is the flexibility/ accessibility that student can do course work on their own time and not in the confines of a traditional brick and mortar classroom group- setting (Johnson et al., 2005; Eduventures, 2007). As such, the reality is that engagement with the material comes from a framework of “self” first. This is where and why understanding learning styles and ensuring audio, visual, and kinesthetic learning opportunities become increasingly important in the development of online learning.

These additional components to the model and the reorganization of the existing components provide an opportunity for easier understanding and application in online learning development.

The e2L model has experienced three revisions since its development in 2003, and we anticipate it will experience more as technological advances are made and we continue to learn more about how we interact with technology and use it to learn (see Figure 4). The revisions, as noted, have not been major but more an evolutionary process. The goal is to consistently be able to offer an engaging online learning experience that easily demonstrates results with impact.

Challenges and Opportunities

From those who run organizations to those who help the organization run, everyone knows that results are necessary regardless of the endeavor at hand. The question is, how do we create tangible results for our organizations from e-learning programs (whether it is a business or an institution of higher education)? The short and easy answer is, create effective learning experiences. The simplicity of the answer provides the context by which to operate:

- ∞ Define the goal(s)—expected specific results to be achieved by the e-learning experience (academic program or training module)
- ∞ Engage key stakeholders (facilitators, developers, learners, evaluators); include those who will participate in the e-learning to define the goals—do not create in isolation
- ∞ Benchmark where your entity is today and create milestones that will help you assess goal achievement; drive the process by evaluation and by utilizing analytics (applies to both academia and corporate environments)
- ∞ Implement the e2L model in the design of courses/trainings
- ∞ Create the ability to “go back” to the e-learning courses/trainings any time to make it just-in-time (i.e., more immediate with faster development time)
- ∞ Provide reinforcement tools and/or resources to support reflective learning
- ∞ Corporate—application to the workplace and training development and deployment relevancy
- ∞ Academia—provide virtual learning communities to facilitate ongoing learning opportunities and dialogue
- ∞ Evaluate and adjust your courses/trainings to best meet how students learn today and to understand that e-learning is an evolutionary process.

Summary

The e2L framework is based on core curriculum development ideology that includes concept (conceptual framework), theory (theoretical construct), and application (practical application, use). Uniting these three core elements with e2L model design and delivery promotes improved learning whether it is online or in the classroom. Ensuring that audio, visual, and kinesthetic opportunities are built in and linked to the rest of the model has truly demonstrated a positive impact on learning since its application. In addition, chunking learning elements into smaller segments helps learner process, apply, and retain. This gives consideration to moving beyond the days of the midterm and the final, expecting students to recall multiple data sets. Instead, provide preassessments to gauge what they know and don't know as they enter into the learning experience, then review smaller chunks of information more frequently in mini-assessments. This can be applied to both the corporate and academic settings.

The combined review and recent research regarding the e2L helps support this proposition. As noted in the introduction, both the corporate arena and the academic arena are further exploring efforts to effectively utilize electronic learning. The research must continue and the e2L will clearly continue to evolve as humans and technology further interface around learning.

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About the Authors

Cynthia (Cindy) Larson-Daugherty
EdD, Adjunct Faculty
National University
President
Spectrum Pacific Learning Company
La Jolla, CA
clarson@spectrumacific.com
Major research interests: e-learning, technology, and human learning

Coleman Walker
M.S. College Director
ITT Technical Institute
Raleigh, NC
coleycoop@yahoo.com
Major research interests: education management, onsite and online learning

Teaching and Learning

AGILE TEACHING: A CASE STUDY OF USING RUBY TO TEACH PROGRAMMING LANGUAGE CONCEPTS

Majed A. Sahli and Gordon W. Romney

Abstract

Ruby, an object-oriented programming language, is an obvious choice for agile web development that is being confirmed in the web marketplace. It provides a hands-on training tool for computer science students studying programming language grammars, scanners, parsers, and Abstract Syntax Trees. A virtualized version of Ruby was used to implement a simple LL(1) calculator grammar. The power gained by using Ruby significantly facilitated the implementation of the parser over comparable C++ and Java implementations. Usage of this portable, “virtual lab” facilitated the integration of laboratory and classroom assignments in a teaching model that completes class instruction for a semester course in one calendar month. This is an example of agile teaching in Internet-time.

Key Words

Accelerated learning, agile problem driven teaching, agile software development, portable development environment, Ruby, virtual labs

Introduction

Ruby is a unique open-source programming language that is of growing popularity. Ruby is mostly paired with Rails, so it is common to use the name Ruby on Rails (RoR). Rails is a framework that when used with Ruby makes an easy and productive web development framework. While RoR has been a success in the web marketplace, being adopted by Yahoo!, Google, Twitter, J.P. Morgan, New York Times, John Deere, and others (Fernandez, 2008), not many educators notice the unique Ruby features that promote it as a useful education tool, especially in agile problem-driven teaching environments. The faculty at the National University (NU) School of Engineering and Technology (SOET) was among the early adopters of agility in pedagogy (Dey et al., 2009).

The authors showcase the use of Ruby as a hands-on training tool for computer science students. The use case took place at NU, where courses are taught in a unique one-course-per-month format. The students learned the concepts of programming language grammars, scanners, parsers, and Abstract Syntax Trees (AST) by implementing a simple Left to right Leftmost derivation, LL(1), calculator grammar, introduced by Lee (2008). Using Ruby in a portable virtual lab enabled the students to successfully accomplish the goal of the project in an accelerated course format.

Principles Behind Ruby

Ruby was written by Yukihiro Matz Matsumoto (Matz), of the Network Applied Communication Laboratory in Japan, in 1993. It was first released to the public in 1996 as Ruby 1.0 (Vinoski, 2006). The popularity of Ruby has only grown since, with many improvements. The current stable Ruby version is Ruby 1.9.1, released January 30, 2009.

Ruby is unique because the basic principles on which it was based were inspired by Perl with Smalltalk-like features. Matz believes that programmers need to enjoy programming. He

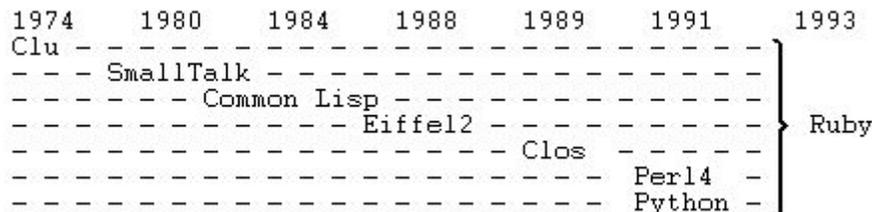
considers a programming language as a user interface for programmers, so he designed Ruby “to make programmers happy.” He based his design for Ruby on three main principles: conciseness, consistency, and flexibility (Matsumoto, 2000).

These three principles make programming in Ruby not only fun but, more importantly, productive. This is where Ruby stands out to be the language of choice in agile problem-driven teaching environments. The principle of conciseness dictates that a language should do a lot of work quickly. The principle of consistency means that a programmer with basic knowledge can learn Ruby very quickly. Last but not least, the principle of flexibility means that Ruby will help express humans, not restrict them. A Ruby programmer can write arbitrary objects that are treated just like the built-in ones (Matsumoto, 2000).

Ruby Genealogy

Ruby is generally described as an object-oriented scripting language. This general description relates directly to the genealogy of Ruby. Programming languages genealogy reveals how Ruby was directly affected by several object-oriented and scripting languages, as shown in Figure 1 (Lévénéz, 2009). Matz designed Ruby with the goal of having the right balance of functional and imperative programming (About Ruby, 2009). Ruby inherited powerful data abstraction features from Clu. It is as much dynamic and object-oriented as SmallTalk, Common Lisp, Eiffel, and Clos. Ruby is as versatile as Perl and as powerful as Python (Scott, 2006).

Figure 1. Ruby Inherited Features from Different Programming Paradigms



Key Ruby Features

Ruby is purely object-oriented and is an interpreted language. These two characteristics put every feature of the language in perspective according to the principles behind it. Ruby did not introduce new features to the programming languages world, however, it did combine the best available features from existing paradigms. These features are the reason Ruby stands out and was chosen in this use case of agile teaching and learning.

Six-Level Scoping

Ruby has a spectacular six-level variable scoping system. This allows for flexible scoping and the ability to encapsulate variables at different levels. A variable can be of global, local, class, class instance, instance, or block scope. Each scope level is identified by a certain prefix or naming convention. There are no variable declarations in Ruby. This made the course project implementation easier, as there is no need to worry about variable types and declarations. However, one would argue that this could cause issues due to ambiguity about variables. In fact,

the scope-by-name feature of Ruby enhances code readability. Knowing the scope of a variable from its name is a very concise yet informative aspect of Ruby (Matsumoto, 2001).

Polymorphism

While there are different definitions of polymorphism in the literature, Ruby implements a specific type of polymorphism that is not hard to define, *interface polymorphism*. Interface polymorphism exists when objects have methods of the same name but are not inheriting from each other. Ruby's version allows methods of modules to be mixed into existing classes. Matz described this mixing in as “a restricted form of multiple inheritance with implementation sharing,” and that is discussed in more detail in the next feature, inheritance (Fulton, 2006).

Overloading operators is a specific polymorphism case. Operators like “+” and “*” are implemented as methods in Ruby. Fulton (2006) explained how this means that a Ruby programmer can easily override an operator by redefining its method to give it a new meaning in a particular context. The ability of overriding operators means that we can now add real estate properties, subtract office branches, and divide an apple pie.

Inheritance

Ruby was designed with eliminating confusion in mind. It only supports single inheritance because multiple inheritance can cause class hierarchies to be confusing complex networks. The aforementioned module mix-in feature makes up for the lack of multiple inheritance in Ruby (Matsumoto, 2000). Inheritance was used in the project to reduce redundancy in the AST nodes implementation.

Reflection

A reflective programming language allows an active environment to query, extend, or modify objects at runtime. As a dynamic language, Ruby implements reflection, allowing a programmer to check type, class, and methods of objects at runtime. The ObjectSpace Ruby module can access all and any living object at runtime (Fulton, 2006).

Garbage Collection

Scott (2006) affirms that a big portion of costly application bugs are caused by programming errors in memory management. Memory leaks and dangling pointers are common bugs in applications written in languages that require manual memory deallocation. Ruby has an automatic garbage collector (GC) that relieves a programmer from performing such a task. Just like mostly anything else in Ruby, the garbage collector is an object that can be accessed and managed using the GC module or the ObjectSpace module (Thomas, Fowler, & Hunt, 2004).

Exception Handling

Exception handling is the mechanism that deals with unexpected conditions that may arise in an application at runtime. If a programmer is to deal with such conditions, he or she would invent a default value, return a status value, or pass a closure to a routine to handle that condition (Scott, 2006). Luckily, Ruby programmers do not have to choose any of the previous possible actions because Ruby has built-in exception handling. There are many classes of exceptions that can be extended as needed (Fulton, 2006). Catching an exception in Ruby is as simple as using rescue and ensure clauses to deal with a certain type of exception (Matsumoto, 2001). Exceptions in

Ruby are objects that hold information about unexpected conditions. They contain message strings and stack traces.

Real Iterators

Iterators are used to enumerate items in collections. Ruby has true or real iterators that work as a separate routine or a resumable execution context with a program counter and some local variables. Real iterators are flexible and much easier to use than regular iterator objects. They do not need to maintain any intermediate states (Scott, 2006). A Ruby programmer would not need to worry about a loop counter or any boundary conditions when iterating through a collection using built-in iterator methods such as `find`, `each`, and `collect` (Matsumoto, 2001).

Virtualization

It is an established fact that many Information Technology (IT) students learn best through Hands-on-Learning (HOL). However, with the current trend for accelerated education and on-line instruction; students are losing the laboratory and HOL experiences (Romney, 2009). Virtualization can now be used to create Virtual Labs. Doing so will not only restore the right for HOL to students but also capitalize on available technology to enhance the quality of accelerated education and its outcomes. Virtual labs were successfully used in the use case discussed in this paper.

The idea of a Virtual Lab revolves around building a Virtual Machine (VM) image that can be distributed to students. Each student gets a VM that he or she can store on external storage and run from any computer. The distributed VM is ready to use with all required software already installed and set up. In this instance, each student has the problem to be solved in an already operational computer environment that belongs to him or her (Romney, 2009). System configuration on disparate laptops or workstations is eliminated.

In our use case, these virtual machines served as isolated development environments for students. If a student messes up a virtual machine, no other student is affected and no real PC needs to be fixed. The student can always start from a fresh clean VM image. Students are also advised to save backup VM images as they progress so they can easily return to a previous usable configuration, if needed. This advantage alone saves a lot of time and effort. There is no need to involve IT support when students make mistakes, and there is minimal effort to restore a virtual lab. We found that students are more confident when using virtual labs that allow them to experiment with no risk as they learn and try to solve the problem at hand.

Desktop virtualization technology is now readily available in the marketplace. Software for building and running virtual machines has been around for years and has reached professional quality. Major software companies provide free desktop virtualization products, such as Virtual PC from Microsoft, VirtualBox from Sun Microsystems, and VMware Player from VMware. In our use case, both Virtual PC and VirtualBox were used. VirtualBox is an open-source solution that supports Personal PC VM images and is available for MS Windows, Linux, Solaris, and OS X hosts.

Grammar Implementation Use Case

Agile Problem Driven Teaching (APDT) ensures that students are better prepared for the workplace. The involved agile components simulate the real-world problems that students will

need to deal with. Students learned in a one-month course how to adjust a defined problem to available skills, discover workarounds while progressing to a solution, and work in teams to meet deadlines. APDT supported by virtualization allowed the students to think outside the box and experiment with multiple options instead of following a traditional approach to a single solution (Romney, 2009).

Use Case Problem Definition

The use case was a project that involved completing the development of an interpreter for a simple calculator language. The students used problem-driven techniques to learn the concepts of programming language grammars, scanners, parsers and Abstract Syntax Trees (AST). An AST is an intermediate form that is passed from the front end to the back end in the process of language semantic analysis. A parser builds an AST by removing irrelevant nodes from the tree's interior (Scott, 2006). An AST is also known as an Annotated Syntax Tree because the remaining nodes are then annotated by the parser with useful information, called node attributes. In our case, the language and the implementation road map were partially provided for the students from Lee (2008). Figure 2 shows the LL(1) calculator language grammar that was used for implementing the project.

Figure 2. LL(1) Calculator Language Grammar Used in the Use Case Project

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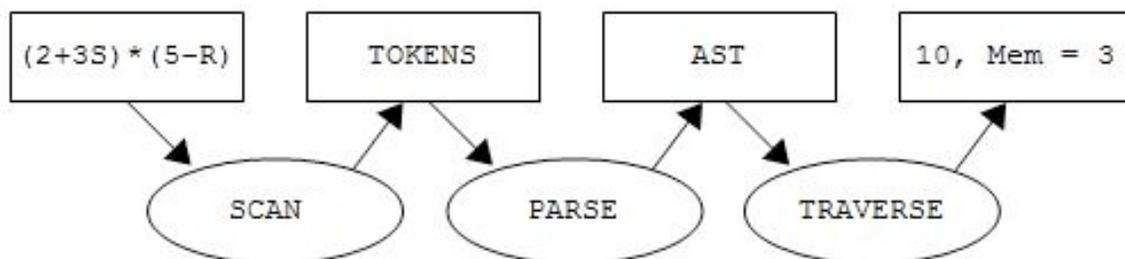
Prog --> Expr EOF
Expr --> Term RestExpr
RestExpr --> + Term RestExpr | - Term RestExpr | <null>
Term --> Storable RestTerm
RestTerm --> * Storable RestTerm | / Storable RestTerm | <null>
Storable --> Factor S | Factor
Factor --> number | R | (Expr)

```

An LL(1) grammar is one that can be parsed by predictive parsers that need to look only one symbol ahead in the input stream to determine the next parsing action decisions. Predictive parsers are recursive-decent parsers that need no backtracking. LL(1) stands for Left-to-right Left-most derivation with one input symbol look-ahead (Aho, Lam, Sethi, & Ullman, 2007). The LL(1) grammar was used to build a parser that returns an AST for the parsed expression. The AST was used to evaluate the parsed expression. The overall data flow of the calculator interpreter is shown in Figure 3. An expression goes through the scanner which does the lexical analysis. The scanner returns tokens to the parser. The parser uses the tokens to create an AST. The AST is then traversed to get the value of the expression (Lee, 2008).

Figure 3

The Calculator Language Interpreter Involves Different Concepts That The Students Learned Through Agile Problem Driven Teaching In One Month with Ruby



The problem involves dealing with operator precedence. According to the calculator language grammar, the highest precedence is for parenthesis. Parentheses appear in the last production of the grammar, as shown in Figure 2. The recall operation, denoted by the letter R, is of the same high precedence. It makes sense to start by replacing an R with its value from the calculator memory before we evaluate other parts of the expression. However, an R operator can only appear after we use an S operator, or a store operator. The S operator stores the value of the token that is to the left of it into the calculator memory. When an S operator is used in an expression, we can use an R operator somewhere after it. As one would expect, the grammar is set as to have multiplication and division with higher precedence than addition and subtraction. Since the calculator grammar is an LL(1) grammar, associativity of operators goes from left to right.

The Solution

To implement the simple calculator language interpreter, students had to learn important programming language concepts. The project involved the implementation of a scanner, a parser, and an abstract syntax tree. The students had to deliver the project in three weeks. With such a time constraint, APDT proved to be a practical major success. Students were able to learn the course objectives and deliver the project deliverables on-time. They learned to use Agile Project Management techniques that made them adjust quickly and dynamically according to project progress and time frames. The skills learned and used throughout the use case are skills that every IT professional needs to master in today's accelerated Internet-time workplace (Romney, 2009). The students do not learn the course subject alone, but the best practices and techniques used in the industry. Using cutting-edge technologies, such as virtualization, and the latest teaching methodologies, such as APDT, allows for efficient resource management that results in increased productivity in less time.

Redefining the Problem

The APDT nature of the use case allowed the students to redefine the problem in hand. The problem was redefined from “implementing a calculator language interpreter” to “implementing a scanner, and a parser with an abstract syntax tree that would work together to evaluate an expression according to the calculator language grammar.” This redefinition identified three major milestones that can be used to break the problem into three subprojects. A smaller problem is easier to handle and can, in turn, be subdivided without affecting the other subprojects. Another key concept students learned and dealt with was the integration of the solution for each subproject to achieve a viable solution to the main problem at hand. All of these are critical project management concepts essential in the workplace.

The LL(1) grammar was used to build a parser that returns an AST for the parsed expression. The AST was used to evaluate the parsed expression. The overall data flow of the calculator interpreter is shown in Figure 3. An expression goes through the scanner that does the lexical analysis. The scanner returns tokens to the parser. The parser uses the tokens to create an AST. The AST is then traversed to get the value of the expression (Lee, 2008).

Putting the Pieces Together

Building and integrating the use case project was simplified by using the virtual labs. Students were able to have isolated development environments for each sub-project that ensured modification to one would not affect the others. The virtual labs allowed the students to

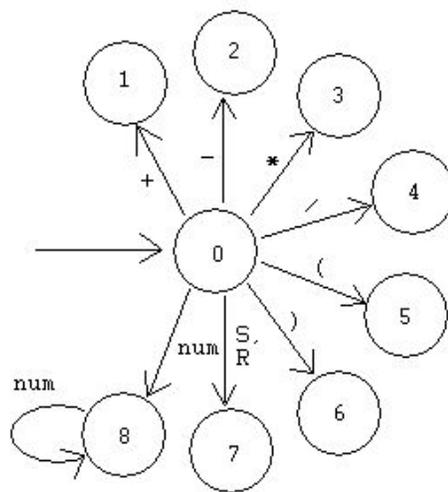
experiment with different options for each subproject simultaneously without the risk of losing previously completed work or mistakenly breaking working components. The students wrote less code because of Ruby's conciseness.

The choice of implementing an LL(1) grammar was made to ensure that students learn the main concepts of programming languages without being caught in time-consuming details that do not contribute to their overall expected knowledge outcome. Instead, students use simple and proven techniques that require the right amount of detail to reach a solution. In general, following the next four steps guides one to go from an LL(1) grammar to a parser (Lee, 2008):

1. For each non-terminal, construct a function that returns a node in the AST.
2. Some of the functions may require input to be able to return a partial AST.
3. Each non-terminal function should get the next token from the scanner as needed and should return the last token if not needed.
4. Each non-terminal function chooses which production to expand depending on the next token value. The functionality is determined by the semantics of the chosen production.

Following these four steps, the complete solution consisted of fourteen classes in one Ruby script file with less than 340 lines of code. The solution relied on Ruby's object-oriented features to create a class hierarchy. There was a *Token* class and a *LexToken* child class. Operation classes inherited from either a *UnaryNode* class or a *BinaryNode* class depending on their operand count. A *Calculator* object initiates the *Parser* object which in turn calls the *Scanner* object. The *Scanner* class is the lexical analyzer for the calculator language. It scans the input string and "tokenizes" it. The public methods of the Scanner are *getToken* and *putBackToken*. The *Parser* calls the *Scanner* to provide *LexTokens* from the input stream. The scanner is implemented as a Finite State Machine (FSM) that can recognize the set of possible lexemes in the language to build tokens as shown in Figure 4.

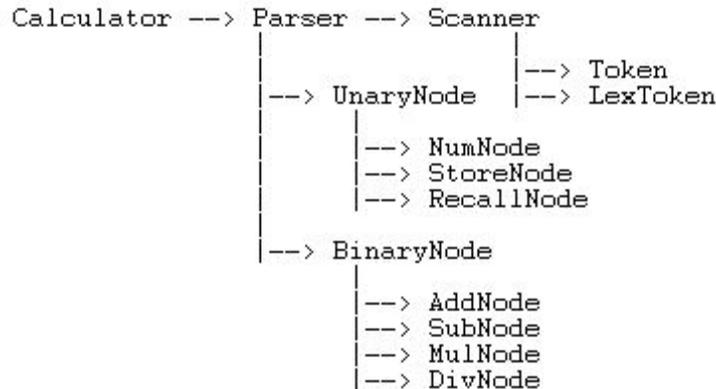
Figure 4. A Scanner Is a Recognizer That Is Implemented as a Finite State Machine



The *Parser* class is the semantic analyzer for the calculator language. It is the engine that implements the grammar. It initiates the *Scanner* and performs the actual parsing of the returned

“tokenized” input stream. The *Parser* creates the AST of *UnaryNode* and *BinaryNode* subclasses from the lexical tokens so it can be traversed and evaluated. This class was not complete in Lee (2008) and the methods *Term*, *RestTerm*, *Storable*, and *Factor* were implemented as part of this project. Figure 5 shows the order in which the classes are called.

Figure 5. Order of the Class Calls in a Typical Expression Evaluation Session



As an example, consider evaluating the expression $(3-1)S*R+5/R$. This expression has all the possible operators that are allowed by our calculator grammar. It demonstrates the precedence of parentheses over multiplication as the $(3-1)$ will be evaluated before multiplying with $R+5/R$. It also demonstrates the precedence of division over addition as $5/R$ will be evaluated before adding to R . The expression evaluates to 6 according to the interpreter output. Following the grammar precedence and associativity rules, we can see below how the expression evaluates to 6, as shown in Figure 6.

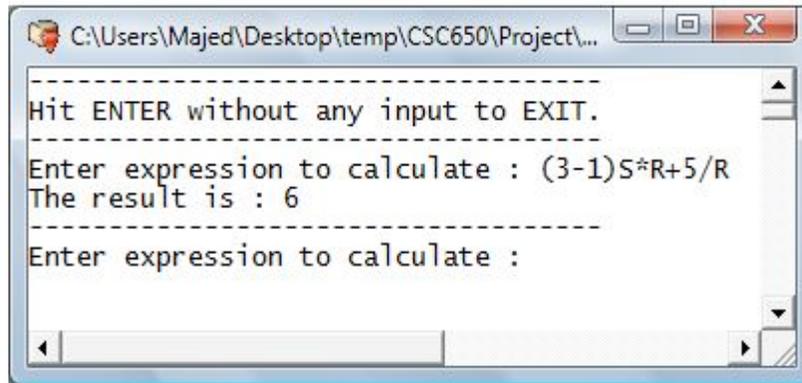
$3-1)S*R+5/R$	memory=0	::	Paranthesis has the highest precedence, $(3-1)=2$.
$2S*R+5/R$	memory=0	::	The S operator stores the number 2 in memory.
$2*R+5/R$	memory=2	::	Multiplication precedence is higher than addition with R evaluated from memory as 2 so $2*R=4$.
$4+5/R$	memory=2	::	Division precedence is higher than addition with R evaluated from memory as 2 so $5/R=2$.
$4+2$	memory=2	::	Straightforward addition.
6	memory=2	::	Value of the expression.

The Project Outcome

The students were able to meet deadlines and have enough time to use the virtual labs to experiment with tools that would assist in delivering the final solution to users. After the completion of the application implementation, the students realized that for a Ruby application to be distributed to users, a user would need to locally have a running and compatible Ruby environment. The application was developed on an isolated virtual machine for the reasons discussed in section 1.4. It is inconvenient to install Ruby on any machine where we would want to run the application, at least not for such a simple application. The used APDT techniques let

the students evaluate the optimum solution for this specific task. The students found a Ruby script that collects and packages all required Ruby files into one Windows executable file, the RubyScript2Exe script (Veenstra, 2007). An executable calculator interpreter was generated and executed in a Windows XP environment.

Figure 6. A Working Solution Delivered In-Time by Utilizing Agile Tools in an Accelerated Environment



Conclusion

This project started off with an excellent decision. Choosing to work with Ruby certainly benefited the students in different ways. Not only is Ruby currently a hot language, but it is uniquely clear and well defined. Working with such clear and concise language allowed the students to better understand the ideas and concepts behind it. We were always interested in object-oriented languages and in scripting languages. Ruby was the first object-oriented scripting language that we used. This experience enriched our knowledge by contrasting features with Java and C++. Differences between programming languages give an insight on the design decisions and trade-offs that affected their grammars and implementations.

Dynamic binding is an interesting feature of Ruby. While it is a feature that many of its supporters praise, the experience we had with it was not favorable. It is true that dynamic binding makes writing code easier. It is also true that it adds to the productivity of programmers—but only if they don't make mistakes! Debugging is very difficult in a dynamic language. We faced many error messages that did not help pinpoint errors because of the flexibility of the Ruby language environment. If one misspells a local variable in an assignment, the interpreter will just create a new variable with the new name and assign it without reporting any errors. If one mistakenly refers to a local variable by its capitalized name, the error message could be about an uninitialized constant. It is important to examine the trade-offs; when we gain simplicity and flexibility, we lose early and accurate error reporting. However, the level of possible compromise is usually defined by a project's requirements.

Last but not least, using virtual machines and other agile teaching techniques for implementing this project allowed the students to learn a great deal about programming languages in only four weeks. Virtual machines are now easy to setup and use. Although we had previously used virtual machines for more traditional purposes, it seems that we missed the more

logical use of having them serve as portable and isolated development environments that make agile web development a reality.

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About the Authors

Majed A. Sahli

Knowledge Management Consultant

Saudi Aramco Oil Company

Dhahran, Saudi Arabia

majed.sahli@aramco.com

Major research interests: Web applications, knowledge management, data mining, artificial intelligence, virtualization, and open source software.

Gordon W. Romney

PhD, Professor

Department of Computer Science and Information Systems

National University

San Diego, California

gromney@nu.edu

Major research interests: Cybersecurity, information assurance, anonymization of data, virtualization and agile pedagogy.

Using Bibliotherapy as a Tool for Counseling Supervision

Richard P. Long

Abstract

This paper presents the use of the Bibliotherapeutic Group Supervision (BGS) approach to increasing the knowledge and skills of counseling candidates in a graduate program. Using books in intervention is not new; however, integrating bibliotherapy to affect counseling skills is an innovative approach to supervision. The BGS process is described and candidates' reactions and reflections are discussed. Recommended readings are annotated.

Key Words

Bibliotherapy, counseling, supervision

Introduction

The use of literature, via guided reading and discussion, to gain an understanding of or find solutions to problems relevant to therapeutic needs is referred to as bibliotherapy (Riordan & Wilson, 1989). Bibliotherapy, used as an approach to counseling supervision, offers both faculty and students an option for a supervised on-campus internship. This innovative approach can meet the needs of program candidates, as well as the requirements of the program.

There are two schools of thought about bibliotherapy. In a review of definitions of bibliotherapy, Barker (1987) presented a variety of ways it can be used in treatment of people with emotional problems or mental illness, and he stated that it is effective with people in institutions, as well as outpatients. More recently, Amer (1999) concluded that the use of bibliotherapy promoted a gaining of insight and an expression of feelings by the children in her study. In a meta-analysis examining the efficacy of bibliotherapy, Marrs (1995) cautioned that it "may be moderately effective for the generally prescribed problems and populations the empirical studies have addressed to date" (p. 10). Riordan and Wilson (1989) concluded their thoughts by reframing the question: "How and when should bibliotherapy be used as a tool that can contribute to a satisfactory outcome?" (p. 507).

The purpose of this article is to present the application of bibliotherapy in a new setting. Bibliotherapy has been used in situations ranging from P-12 school settings (Pardeck, 1994; Sullivan & Strang, 2002; Wolpow & Askov, 2001) to pediatric nursing situations, (Amer, 1999) to adults in treatment (Marrs (1995). The literature, however, does not present a discussion of bibliotherapy when implemented with candidates in a graduate counseling program. This paper discusses how the use of bibliotherapy can be translated into a process to increase counseling candidates' skills.

Connecting Bibliotherapy to Counseling Supervision

Counseling programs must meet standards for accreditation. Bibliotherapy clearly aligns to the 2009 Council for Accreditation of Counseling Standards in a number of areas: (a) response to the professional orientation and ethical practice, (b) helping relationships, (c) human growth and development, and (d) assessment of core curricular areas. When candidates read about and discuss how people have been treated by the mental health community, they are challenged to

think about their professional roles, functions, and relationships with other human service providers. Weekly interaction invites candidates to consider counseling theories and interventions used by helping professionals to improve the lives of the clients the students read about. They begin to see how human growth and development are interrelated and what the term *developmentally appropriate* means. Client reflections of their treatment call on students to consider the role assessment plays in the client's treatment and outcome.

According to Pardeck (1994), there are six goals of bibliotherapy: (1) to provide information about problems, (2) to provide insight into problems, (3) to stimulate discussion about problems, (4) to communicate new values and attitudes, (5) to create awareness that others have dealt with similar problems, and (6) to provide solutions to problems (p. 421). These goals align to the accreditation standards.

Bibliotherapy and Supervision

The use of bibliotherapy in counseling supervision is analogous to the use of metaphor in clinical supervision. Both concepts require the supervisee to transfer new knowledge from one genre—a memoir, for example—to another, a client with a similar presenting problem. Marzano, Pickering, and Pollock (2001) relate that metaphors give familiarity to the unfamiliar, thus making new information less overwhelming and more easily understood. Both bibliotherapy and metaphor convey thoughts and feelings as a means of eliciting growth.

For a supervisee who has never counseled a suicidal teen, for instance, reading a book about someone's personal journal through the depths of suicide ideation may increase the supervisee's ability to build an alliance with a struggling teenager. In addition to alliance building, Lyddon, Clary, and Sparks (as cited in Giuffrida, Jordan, Saiz, & Barnes, 2007) note that metaphors (and by extension bibliotherapy) provide several other therapeutic functions, including (a) accessing and symbolizing client emotions, (b) uncovering tacit clients resistance, and (c) introducing new frames of reference.

Defining Bibliotherapeutic Group Supervision

Bibliotherapeutic Group Supervision (BGS) can be defined as applying the principles and goals of bibliotherapy within a supervised internship of three or more students to increase counseling candidates' knowledge, skills, and dispositions. Through the use of BGS, supervisees are able to state not only surface emotions such as anger but also underlying emotions such as sadness and grief. Whether resistance takes the form of the narrator escaping from a residential treatment facility or not taking prescribed medication, supervisees come to understand that resistance is as varied as the clients who chooses to act out. By asking, "What change is the narrator seeking?" supervisees will find themselves struggling to uncover what it means to hold onto the current narrative. For example, what is the function of embracing a diagnosis of a bipolar disorder for the storyteller? What counseling skills might be most helpful to a client at a particular stage of treatment?

BGS can be used effectively with supervisees unfamiliar with a wide range of presenting problems. Bernard and Goodyear (1992) identify supervisee exposure to a broader range of clients as an advantage to group supervision. In taking a BGS approach, supervisors focus on

different clients and their presenting problems at meta-cognition and affective levels prior to exposure through a practicum or internship experience. As supervisees read about the lives of people struggling to overcome mental health issues, their own concerns and questions can be explored in a safe, supervisory setting.

Implementing Bibliotherapy Group Supervision

Typically in group supervision (Bernard & Goodyear, 1992; Borders & Brown, 2005) a supervisee presents a case, describes a session's dynamics, and requests feedback from the facilitator and the group. In taking the BGS approach, supervisees read an autobiography of someone's struggle with a mental health problem such as anxiety, depression, or anorexia. They are provided with a list of reflection questions to answer while reading the autobiography. They then come to the class session prepared to discuss and explore the material.

Candidates enrolled in the graduate counseling program participated in BGS in the final semester of their course of study. The first step in the bibliotherapy process was selection of the book. The candidates selected an autobiography with the only criteria being that the writer had to have been diagnosed and treated for a mental illness. Self-help books (i.e., books that prescribe "how-to" methods for correcting mental health problems) were not permitted. Students were asked to read Book Club Guidelines prior to coming to the first class in order to establish a climate for in-depth discussion. They were directed to read and summarize three chapters of the book. Then, they were asked to imagine that they were the narrator's counselor and to be prepared to talk about treatment considerations. Did they agree with the stated diagnosis? What theory or model might they use to help the writer? What intervention(s) might work best? What intervention(s) would they want to avoid? What other professional(s) might the counselor want to consult?

Candidates were encouraged to be creative in presenting to the class. Some read excerpts of a book to the class, while others played portions from an audio taped version of the book. One creative student word-processed a transcript of a counseling session that might have occurred had this supervisee provided counseling to the writer. Highly motivated students brought copies of journal articles related to chapters they had read the previous week. All students' presentations revealed a high level of synthesis of content and integration of counseling dispositions.

To move students to this level of integrative thinking and application, the facilitator's role in processing BGS can be summarized through an adaptation of the Hawkins and Shohet Model of Supervision (Bernard & Goodyear, 1998). Such a modification includes a focus on the following:

- ∞ Reflection on the content of the writer's life as experienced by the supervisee
- ∞ Exploration of the models and theories of change as understood by the supervisee and elaborated by the facilitator
- ∞ Exploration of the strategies and interventions used by the therapist, if applicable
- ∞ Exploration of the therapeutic relationship between the writer and the therapists as experienced by the supervisee
- ∞ Focus on the therapist's experience as understood by the supervisee
- ∞ Focus on the here-and-now process as a parallel of the there-and-then process
- ∞ Focus on the supervisor's/facilitator's experience

Thus, the BGS process is a highly collaborative one, with the facilitator providing scaffolding in order for supervisees to attain the knowledge and skills and dispositions required of a practicing professional.

Student Reactions from a Three-Year Implementation

Qualitative data, via student self-report, were collected from 12 counseling students during the final semesters of their course from 2005 to 2008. The internship included the BGS weekly interaction and one hour per week of individual supervision. In evaluating the BGS weekly interaction, students were asked to reflect on the strengths and limitations of the BGS approach and to provide their personal insights gleaned from the experience (see Appendix A).

The following is a representational sample of what students had to say about their BGS experience:

- ∞ “I think the biography/memoir method of supervision was a way we could step into our professional roles as counselors.”
- ∞ “The use of autobiographies in supervision was a rewarding experience because I was able to learn about books that might help me with my clients.”
- ∞ “In my family suicide [the subject of a memoir this student read] was a taboo subject due to multiple successes. [As a result of this approach] I was able to discuss suicide on an anniversary date.”
- ∞ “I found this [approach] to be a practical resource that enabled me to learn and understand different dynamics that aid you in understanding who your clients are, where they have been, how they see themselves, and ultimately how you can best use the resources available to you.”

Of the twelve graduate counseling students who participated in BGS over the three years, ten reported the approach as moving them closer to becoming counseling professionals in the community. Reservations expressed had to do with book selection, not with the BGS approach.

Challenges to BGS

Hynes and Hynes-Berry (1986) point out that the effectiveness of bibliotherapy, and by extension use of this approach in counseling supervision, depends on the facilitator’s ability to choose material that speaks to the individual participant/supervisee’s needs and interests. This perspective became clear when in one semester every supervisee was required to read Gail Griffith’s *Will’s Choice*. While most supervisees recognized and empathized with the writer and mother’s struggle to provide her son with good care, others lost interest in this self-proclaimed desperate mother. Even when students selected their own books, some changed books because of a lack of connection with the writer after reading one or two chapters. This leads to the question, should the reading be self-selected or come from a recommended reading list? A recommended reading list is available in Appendix B for those who wish to use that approach. Providing

supervisees with a brief synopsis of each book prior to selection could be beneficial in supporting the choice for BGS.

Conclusion

Throughout their coursework candidates are challenged to explore ways to build alliances with clients. Once the basics of how to think and behave like a professional counselor are put into practice through the practicum experience, it is time to consider how to motivate supervisees to develop a curiosity about a wide array of clients and their presenting problems.

The author sees a need to vary the standard case-based presentation in the final semester of supervision. The approach and variation offered using bibliotherapy provides counselor educators a unique way to connect supervisees with present and future clients/patients or consumers by adding emotion those books can evoke to the thinking and behaving elements of their graduate experience.

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About the Author

Richard P. Long
PhD, Professor
School of Education
Columbus State University
Columbus, GA
Long_ric@colstate.edu
Research interests: marriage and family therapy, supervision, instruction and technology

Appendix A End of Course Reflection

Thoughtfully consider and respond to each of the following questions:

1. Cite the book you selected to read for this course.
2. What was the basis for your selection of this book?
3. What were the strengths and limitations of the BGS approach to this course?
4. What personal insights did you discover from this process?
5. What professional insights did you discover from this process?

Appendix B Recommended Readings

Clifford, Norcross, & Sommer (1999) provide a starting point for the following titles that candidates may want to consider reading should a counselor educator take a BGS approach.

After Silence, by N. V. Raine

Raine's book helps the supervisee understand rape-induced trauma and what it takes to survive.

First Person Plural, by Cameron West

This book describes dissociative identity disorder and the power of the mind to gain control of multiple voices that would not be heard.

The Naked Bird Watcher, by Suzy Johnson and *To Walk on Eggshells*, by Jean Johnson

A daughter (suzy) describes her mental illness in one book while a mother (Jean) writes about being her daughter's caretaker in the other.

A Brilliant Madness, by Patty Duke and Gloria Hochman

A celebrity recounts the problems of getting an accurate diagnosis of what is now called bipolar disorder and moves to a detailed discussion of treatment options.

Stick Figure, by Lori Gottlieb

As the title suggests, this is a book about the author's bout with anorexia and a co-presenting issue of low self-esteem.

The Center Cannot Hold, by Elyn Saks

Living with schizophrenia is the focus of this book, written by a person who was treated at one of the best psychiatric hospitals in the country and went on to become a distinguished professor of law.

The Tricky Part, by Martin Moran

The inequality of power when an adult is sexually active with a child is the subject of this memoir of sexual trespass.

Down Came the Rain: My Journey through Postpartum Depression, by Brooke Shields

Exercise, medication, a supportive husband, and a high level of self-determination are key elements of recovery described in this celebrity memoir of postpartum depression.

Will's Choice, by Gail Griffith

This book provides the reader with an inside look at one family's battle to save a suicidal teen from being successful at ending his life.

Skin Game, by Caroline Kettlewell

This is a book about winning a game of trying to gain power over feelings of alienation through physical pain.

Autobiographies receiving the highest ratings in the Clifford, Norcross, and Sommer (1999) study included *An Unquiet Mind* by Jamieson; *Nobody Nowhere* by Williams; *Darkness Visible* by Styron; *Out of the Depths* by Boisin; and *Girl Interrupted* by Kasen.

Introducing Relevant Social Issues as Examples in the Counseling Classroom: The Impact of a Volatile Political Environment and a Therapeutic Solution

Brian Tilley

Abstract

The value of using real-world, relevant sociopolitical issues as classroom examples in a counseling training program is discussed. Research supporting the concept is presented. The author outlines a therapeutic training-based method for integrating relevant examples drawn from politics and society in a way intended to reduce the likelihood of negative effects on the students and increase the number of learning opportunities for them. An instance in which the author used a political issue as an example for classroom discussion is provided, along with recommendations for future use.

Key Words

Society, examples, classroom discussion, politics, counseling psychology

Introduction

Studies have shown the effectiveness of the use of relevant real-world examples in the classroom as measured by subject-specific test results or instructor reports (e.g., Boaler, 1997; Bouillion & Gomez, 2001; Wu, 2003; Lee, 2004; Brinson, Brew, & Denby, 2008). Researchers have also found support for the idea that students prefer the use of examples from current society as a teaching or illustrative tool (e.g., Merta, Stringham, & Ponterotto, 1988; Glenwick & Chabot, 1991; Lakin & Wichman, 2005). Students in National University's Master of Arts in Counseling (MAC) program have demonstrated through personal communication, as well as measurable data in the form of teacher evaluations, their preference for current, relatable examples in the type of training provided by the program.

The MAC program teaches students not only to be ethical therapists but also to recognize places, people, and situations in need of help. As a result, the examples used in the classroom may relate to the intersection of therapeutic treatment and current social issues. For example, a classroom discussion may be built upon the unique requirements of and demand for treatment of returning war veterans. However, today's political environment lends itself to heated debate. The content on numerous 24-hour news channels, news websites (both mainstream and alternative), and copious forums for political expression available via the Internet indicate that using a relevant political example in the classroom might draw a variety of responses, including some negative and perhaps a few verging on revolt.

The paper is (a) an exploration of the reasoning behind the use of politically relevant examples in the classroom and (b) a proposal for one method used in psychologist training that could be effective in introducing and discussing the issues. First, because therapists are in the unique position to help society one person at a time, they have a duty to be aware of the contexts in which those individuals operate and the effects of these contexts—i.e., today's sociopolitical climate. Avoiding controversial social issues discourages the critical psychological thinking espoused by the MAC program. Instructors should lead by example by showing social and

psychological awareness to encourage a more complete understanding of the environment and its effects on potential clients.

Second, the paper outlines a proposal for the inclusion of sociopolitical examples into the classroom using a model originally proposed for the training of therapists in group psychotherapy. The author outlines the similarities in the needs of students enrolled a graduate-level group psychotherapy course and those discussing issues that may result in heated discussions or strong reactions. Irvin Yalom's (2005) guidelines for running such a group psychotherapy course are presented in light of their applicability to the type of discussions and classroom dynamics politically relevant examples could engender.

The Role of Sociopolitical Context

The difficulty involved in discussing heated sociopolitical issues in the classroom, particularly those related to race and perceived slights toward minorities, has been documented (Sue, Lin, Torino, Capodilupo, & Rivera, 2009). However, several studies also advocate the value of introducing social discussions into the classroom regardless of the potential for disagreement and debate (Henry, 2005), specifically in the psychology classroom (e.g., Sue, Bingham, Porsché-Burke, & Vasquez, 1999). Much like cultural issues, political issues hold the potential for divisiveness among the students in the classroom because of the dichotomous nature of the political party system as well as issue-based voting and debate. However, there is evidence to support the claim that healthy political discussion should be introduced into the classroom, even at the high school level (Torney-Purta, Barber, & Wilkenfeld, 2009). The use of real-world examples, even highly charged political ones, seems appropriate, given the inclusion of a class on multicultural competencies in the MAC curriculum and the recommendations for integration of social awareness into training programs (Sue et al., 2009).

Application of a Mindset

The identity of the therapist requires a certain level of advocacy and social awareness (e.g., Grove-McCrea, Bromley, McNally, Koetting-O'Byrne et al., 2004; Lating, Barnett, & Horowitz, 2009). Part of therapist training is "developing active 'citizen psychologists' who promote . . . social justice through the recognition of diversity and multiculturalism issues" (Lating et al., 2009, p. 106). To accomplish this part of the training, relevant issues from society must be introduced into the classroom. It is not necessary to instruct the students which way to vote or even think about issues. Rather, the idea is to request that the students apply the same critical thinking mindset advocated in research courses found in counseling training programs to evaluate real-world events and debates and their potential effects on clients and society as a whole.

The application of skills is a major piece of the prevalent training model for therapists; the preceding proposition is another opportunity for students in programs like the MAC to show they can think critically and use a psychological mindset. Overall, if students are to become aware of social justice issues, such behavior must be introduced somewhere. While it might be time-consuming, especially considering how precious classroom hours and credits are in institutions like National University, to devote entire modules to the discussion of social issues, instructors can integrate an awareness of social issues by using appropriate, socially relevant examples.

Classroom Discussion

Given that therapists have the opportunity to improve societal conditions at a grassroots level—that is, by assisting the improvement of individual lives—the responsibility to know the context of those lives becomes more important. As noted by Sue (2003), because context and background are important to understanding clients, those factors must be discussed in the classroom for training to be complete. While the previously mentioned multicultural competencies classes cover much of the requirement for understanding client background, due attention must be paid to how that client identity fits into the context of the current day.

The goal in broaching issues of politics is to prime students to be aware of the effects of political and social real-world issues on their clients. As noted by many studies but most famously by Albert Bandura (Bandura & McDonald, 1963; Bandura & Kupers, 1964; Bandura, 1977, 1986), social modeling is an effective method of training. A major determinant of a future behavior is the opportunity to witness that behavior being modeled (Bandura, 1977). Thus, demonstrably socially aware instructors tend to encourage the development of similar future therapists.

A bonus to using these examples is the opportunity for trainees to build and exhibit critical thinking skills, such as how to examine the debate over government-funded health care. The result of discussing even heated issues in the classroom should be students who are aware of the current events in society and are ready to seek out ways to examine those events in light of their training. As with any training, the idea is to plant a seed that continues to grow, in this case an interest in social and political events.

Structuring Political Classroom Discussion

As mentioned in the introduction, the contentious nature of politics currently makes for a more challenging task moderating related classroom discussions. The author recommends a strategy proposed by Irvin Yalom (2005) in his popular textbook on group psychotherapy. The text contains a chapter on how group therapy can be taught to counseling trainees, including guidelines for navigating the potentially divisive and emotional discussions often found in groups inside or outside the classroom. That strategy seems appropriate for handling discussion topics that often produce strong reactions in students, such as the sociopolitical climate.

Three of Yalom's (2005) guidelines for teaching group therapy seem particularly suited to the current endeavor: establish a therapeutic atmosphere of support and acceptance in the group, guide the group toward relevant issues, and allow members to participate at their own pace (p. 525). Each of these areas seems worthwhile to explore in the case of sociopolitical classroom discussion, especially with the same audience, i.e. counseling students. The following section describes how each of the guidelines can be translated to situations discussed in the paper.

Recommended Guidelines

The establishment of a therapeutic atmosphere, meaning one that is comforting to the group members and that encourages support for one another, is important in the classroom as well as in the group therapy environment. The types of examples encouraged by this paper (e.g., abortion, California's Proposition 8, health care reform) are likely to produce strong reactions, especially among students primed to react strongly by the numerous points of view in the news media and

on the Internet. To keep the classroom a safe place for student expression, it is recommended that instructors using such examples preface any discussion by noting that each student has a right to his or her own opinion.

Opinions may be reflective of culture. Students should already be aware that culture must be taken into account before drawing lasting conclusions about a person. In a counseling program, this information would be conveyed through the multicultural therapy class or through the type of integrated awareness recommended by Sue et al. (2009). It may be an easier leap of acceptance for students to take if political views are linked to culture, provided they have had some exposure to civil and productive discussions of culture in the classroom.

Yalom (2005) notes that discussions based on occurrences happening outside the group rarely lead to any positive progress, mainly because such reports cannot be viewed from a purely objective standpoint. Therefore, group leaders should guide discussion toward occurrences in the group, which may be supported by multiple group members, rather than a single report from one member. In this case, the productive discussion should be limited to the application of the counselor's point of view, which may often include advocacy for patients' rights as well as social change, and critical thinking.

The final guideline is to allow each member of the class discussion to participate at his or her own pace. As in any discussion that may reveal personal feelings, background, or other information, the instructor should be aware of the internal barriers to full expression that each student experiences. Sometimes those barriers are for the good, such as cases in which disclosure of a reaction is either inappropriate or not sufficiently related to the topic at hand. Sometimes, however, those barriers are external; the instructor may be restricting the ability of the students to discuss a topic by either not creating the supportive atmosphere covered above or not setting clear parameters for the discussion.

The classroom discussion of relevant sociopolitical examples should be moderated by an instructor who is aware of the boundary between critical analysis and pure venting or arguing. One alternate method to instructor moderation is breaking the class into smaller groups to encourage participation by students unlikely to express themselves to the class as a whole. The solution runs the same risks of argument seen in the larger classroom so, as with any group discussion, the instructor should be ready to interject.

Students should be encouraged to apply analytical skills to their own reactions and the ongoing debate about the issue. They should also be informed that their reactions are not being graded and do not need to be analyzed by other students. One major way instructors can strike this balance is by encouraging students to look inward regarding reactions, just as therapy group leaders advise group members to process and analyze their own reactions before the reactions of others in the group.

The following section is included to shed light on a situation in which the author applied the above guidelines to the use of a relevant real-world example in the psychology classroom.

Example

One of the main themes of the MAC program's research course is to introduce critical thinking and encourage analytical thought. As instructor, the author introduced this theme through two recent political advertisements as examples of media to which students should apply an analytical eye.

Discussion Topic. The advertisements were regarding California's Proposition 8, the proposed law to ban gay marriage in the state. The issue is already one that creates strong reactions on either side. In addition, the advertisements, for purposes of illustrating specious reasoning that should be challenged by active learners, were particularly pointed. A "Yes on 8" advertisement used language intended to create fear about the stability of churches and what would be taught to small children in the classroom if Proposition 8 failed (Protectmarriage.com, 2008). A "No on 8" advertisement depicted Mormon missionaries entering the home of a lesbian couple to seize their marriage license (Courage Campaign Issues Committee, 2008).

Preparation. Prior to showing the videos, students were informed that the topic would be introduced so that they would be able to apply what they have learned about research as a process of supporting a point of view. The students were encouraged to keep that guiding principle in mind during discussion. After the students had viewed both videos, the author stated, "I know this is a tough topic for many of you here, myself included. What we need to remember before discussing the merit or lack of merit with these two ads is that we should concentrate on how the message was delivered, not just our feelings about the message itself."

Open Discussion. The classroom discussion took place on three separate levels. The first level was a discussion of the merits and problems of each advertisement after it was shown. The second level was a discussion of the state of public discourse about the topic of the advertisements, Proposition 8 and gay marriage. The third level was a discussion of the generally misleading nature of political advertisements. This level included a direct link to the night's overall theme of critical thinking.

After each advertisement was shown, the students were invited to contribute their thoughts on the flaws in logic, presentation, and method of communication inherent in the advertisement. During this time the students were not invited to compare the advertisements, just to note problems in each. This level of discussion was direct and did not result in any perceived heated arguments, raised voices, or other indices of strong reactions. The discussion was started with the question, "What is wrong with the way these advertisements chose to convey their points?" Both advertisements were flawed in numerous ways; the students seemed to find it easy to address these flaws objectively.

Once the students had finished discussing each advertisement, the discussion was expanded to include the nature of the public debate over Proposition 8. This discussion included the use of fear-based tactics and faulty arguments on both sides of the issue—e.g., people eventually marrying animals on the "Yes on 8" side and society reverting to slavery after rights had been stripped away on the "No on 8" side. A sample question would be, "What are your reactions to the process of public debate over this issue?"

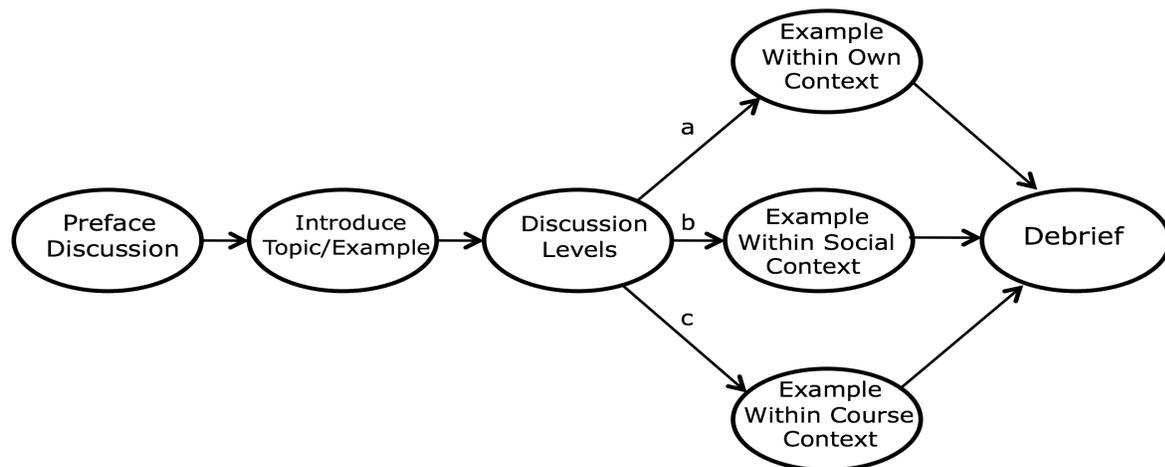
During this time a few students noted their feelings about Proposition 8, but they were for the most part couched in the point of view of the counseling field's advocacy for clients. The students who provided personal reactions uniformly opposed Proposition 8; no students spoke in favor of Proposition 8. It is not known why the other view was not represented. It is possible that those in favor could have held back because those against it had already spoken and gotten tacit approval from their fellow classmates. It is also possible that the comments were indicative of the views of the entire group. This was not investigated further, out of respect for the possibility that exposing students in the minority view (i.e. "Yes on 8") might have violated the principle of moderation to prevent problematic self-disclosure, as discussed above.

The third portion of the discussion about the broader topic of misleading political advertisements was a slightly easier topic for the class, similar to the first portion. It was at this time that the instructor introduced a stronger link between the example of the faulty advertisements and the use of critical thinking in the search for knowledge. A sample question here would be, “What mistakes, logical, factual, or otherwise, have you noticed in political advertisements?” More students seemed to feel comfortable engaging in a general discussion, especially one more academic and less political in nature.

Students were asked to relate what it was like to discuss an example of this nature in class as a debriefing measure. Multiple students remarked during and after class meeting that they enjoyed the exercise and the opportunity to analyze something relevant to everyday life despite strong reactions to the advertisements. No students reported a negative reaction to the exercise.

Figure 1 below documents the structure and flow of the type of discussions recommended in this paper. The discussion proceeds from left to right in the chart.

Figure 1. Structure of Classroom Discussion Using Sociopolitical Examples



a. Level of discussion is meant to introduce the topic.

b. Level could require extra supervision/vigilance on the part of the instructor to moderate strong reactions.

c. Level should be most directly related to the course; emotional “stakes” lower than preceding level if not lowest within discussion at this point.

Potential Adjustments. Given more time, perhaps it would have been useful to press the class on what they thought the position of the counseling field would be. The goal in doing so would be to request that the students again resist the temptation to recite their reactions and instead focus on presenting a point of view and then supporting that point of view with either logical argument or empirical evidence. If a student presented a strong reaction, the plan would have been to use that opportunity to model how to process through such a response. The role of the counseling field in social advocacy could then be explored as the literature (Lating et al., 2009) suggests.

Conclusion

Research has supported the use of relevant real-world examples in the classroom (Merta et al., 1988; Glenwick & Chabot, 1991; Boaler, 1997; Bouillion & Gomez, 2001; Wu, 2003; Lee, 2004; Lakin & Wichman, 2005; Brinson et al., 2008). There is also support for the idea that those examples can be of a sociopolitical nature (Sue et al., 1999; Grove-McCrea et al., 2004; Henry, 2005; Lating et al., 2009; Torney-Purta et al., 2009). Yalom's (2005) approach to training group counseling students through the use of a classroom therapy group is one easily accessible way such discussions can be moderated in the counseling training classroom.

The author recommends that instructors use the wealth of issues present in today's society, even when they are potentially reaction provoking, to engage students in a dialogue that both encourages them to be more socially aware and gives them opportunity to apply critical thinking skills. The author additionally recommends the following guidelines for using examples based on social or political issues drawn from a charged sociopolitical environment.

The first guideline is that the classroom should be a supportive atmosphere. The students should be comfortable expressing themselves within reason as the example is provided and the discussion develops. The second guideline is that the discussion should be limited to issues relevant to the course and the goals of the program. The instructor should be ready to redirect discussion if it is not serving the academic end. The third guideline is to protect the students from embarrassment or nonproductive disclosure. Students can present their personal viewpoints and reactions, but they should be processed in a supportive fashion and the goal should remain to analyze the example in light of the course and the program's goals.

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About the Author

Brian P. Tilley

PhD. Assistant Professor

Department of Psychology

College of Letters and Sciences

National University

Carlsbad, CA

btalley@nu.edu

Major research interests: political psychology, counseling psychology, teaching of psychology, online learning

The Role of Multicultural Literature Interactive Read-Alouds on Student Perspectives Toward Diversity

Suzanne Evans, Ed.D.

Abstract

Children can adapt more easily to the changes of our increasingly multicultural society if they learn to understand and respect all cultures. Educators have suggested that using multicultural literature in classrooms provides students with a practical way to build understanding and empathy. However, there is limited systematic study examining the practice and outcome of using interactive read-alouds of multicultural literature with elementary-age students. The purpose of this paper is to share the results of a qualitative research study that examined whether reading multicultural books aloud to elementary-age students could serve as a tool for altering student perspectives of others and for increasing tolerance. The results of this study demonstrated that through using an innovative critical literacy practice with multicultural literature, students' awareness and understanding of others could be positively impacted.

Key Words

Critical literacy, multicultural literature, interactive read-aloud, literature-based instruction, diversity, tolerance

Introduction

Cultural diversity is an integral part of our schools. As our society and schools become more diverse, it is essential to cultivate in children an awareness of and respect for this changing mosaic of cultures. Children can adapt to the changes in our increasingly multicultural society if they learn to understand and respect cultures other than their own. If schools have an obligation to individual students, to families, and to society as a whole to cultivate this cultural understanding, our curricula need to be focused on using innovative strategies that build awareness of how power, language, and meaning affect people and the lives they lead. Although literacy instruction is a major component within all curricula at the elementary level, implementation of new critical literacy practices with multicultural literature may provide teachers and students with the tools to ask tough questions about fairness, justice, and equality in their schools and community in order to help create the multicultural society we need.

Within the literacy curriculum, the power of reading aloud to children as a tool for gaining and improving academic learning and literacy skills is well documented. Reading aloud, however, may also hold potential power as a tool for developing a socially just society. Herbert Kohl (1995) describes the deep impact books have on children as that of influencing their values and dreams and helping them move beyond violence, stereotypes, and prejudice. This message echoes that of researchers who believe that literature is a mirror that reflects to children a view of themselves, and a window that shows what other people are like while allowing children the opportunity to see themselves as a part of humanity (Bishop, 2007; Boutte, 2008). Literature is also often viewed as a socializing agent for students and a powerful instructional tool to help students value and perhaps celebrate the diversity of society (Hadaway & Young, 2009; Jackson & Boutte, 2009).

Even though many educators suggest that using multicultural literature in classrooms provides students with examples of the differences among people while highlighting the universality of the human experience, limited systematic studies exist that are dedicated to the examination of the outcomes of the classroom practice of reading multicultural literature with

elementary-age students. Linked with the potential use of multicultural texts is the question of how these texts are shared with students and how students are encouraged to respond to these texts. Educators must take a critical stance and explore innovative strategies that are effective in helping students address and confront issues surrounding the text. Learning about other cultures and participating in critical thinking about the text and personal responses to that thinking are essential to understanding and changing beliefs. Although, much of the focus, research, and practice of this critical literacy practice occur at the high school and middle school levels, children of all ages have the capacity to be critical readers of multicultural text (Botelho & Rudman, 2009; Vasquez, 2004).

The purpose of this educational research was to explore the role of interactively reading aloud multicultural books to fourth grade students coupled with critical literacy discussions and written student responses as a means of altering student perspectives of others different from themselves. The study also explored whether the use of this innovative approach of critical literacy instruction could be beneficial in helping students accommodate cultural differences and also be a tool for increased tolerance and social action by students.

Theoretical Framework for the Study

The overarching theory that forms the framework for this study is critical literacy. Critical literacy is grounded in the beliefs that the teaching of literacy is never neutral, is focused in equity and shared decision-making, is empowering, and leads to transformative action (Allen, 1997; Creighton, 1997; Powell, Cantrell, & Adams, 2001). Critical literacy is a form of social practice in reading, writing, and dialogue that enables students to engage with text, understand, and confront social, political, or economic realities of daily life, and engage in critical relationships (Foss, 2002; Henkin, 1998; Macphee, 1997; Moulton, 2002). The goal of critical literacy is to go beyond conventional notions of reading and writing to a level of critiquing and challenging texts, recognizing connections between one's life and the social structure of the text, engaging in critical thinking and questioning, and moving toward transformation of one's self and one's world (Heffernan & Berghoff, 2000; Houser, 1999; Vasquez, 2004). It is dependent on the interactions of the students and teacher with each other and with the texts. Critical literacy requires critical conversations examining power and multiple perspectives, finding one's authentic voice, recognizing and crossing social barriers, regaining one's identity, and listening and taking action to promote social justice (Botelho & Rudman, 2009, Ciardiello, 2004; Hall & Piazza, 2008; Leland, Harste, Ociepka, Lewison, & Vasquez, 1999; Nieto, Botelho & Rudman, 2002). A critical literacy perspective also requires that students be active participants in reading for real purposes, real audiences, and real action (Boutte, 2002; Lewison, Flint, & Van Sluys, 2002). This critical literacy practice pushes all readers to analyze literature critically; to dispute and question to find out what they believe about race, class, and gender differences; to read literature closely to discern the meanings given to power and difference in society; to examine and reflect on multiple perspectives; and to promote social justice (Leland & Harste, 2000; McLaughlin & DeVogd, 2004).

Critical literacy calls upon teachers to teach the complexities of the reading process, to examine the texts used in the classroom for cultural and gender representations and bias, and to develop a classroom environment conducive to critical interactions by students with text and with other students. Critical literacy requires that the teacher highlight controversial and provocative issues in student-centered discussions that encourage students to reflect on their own

experiences, confront social inequities, and make changes in themselves and the world around them.

Literature Review

The following review of literature establishes the value and relevance of read-aloud literature and multicultural literature, the need for critical interactions with literature, and the potential power of literature in the lives of children and in education for a socially just and tolerant world.

Reading Literature Aloud

Reading aloud is an essential practice within the literacy curriculum of elementary schools and has long been recognized to have beneficial academic effects. Through read-alouds, children learn the joy of good literature, gain information and knowledge, develop a sense of story, increase vocabulary, expand their linguistic repertoire, awaken imagination, create a community with other learners, and expand their worldview (Moss, 2002; Trelease, 2001; Yenika-Agbaw, 1997). Reading aloud can also be viewed as a political and social opportunity to promote cultural diversity, engage in critical explorations of text, hold conversations, and ask questions about social issues, power, and social justice (Ballentine & Hill, 2000; Fox, 2001; Leland & Harste, 2002; Mitchell, Waterbury, & Casement, 2003).

Multicultural Literature

Multicultural literature comprises books that reflect diverse cultures other than those of the dominant culture and reflect a power differential between groups created by ethnicity, race, gender, ability, or economics (Botelho & Rudman, 2009; Cai, 2002). There are multiple rationale for utilizing multicultural literature in the classroom. Multicultural literature may heighten respect for individuals, acknowledge contributions of minorities, bring children in contact with other cultures, enhance students' self-concept and awareness of personal cultural heritage, help children realize inequities in society, and encourage students to detect prejudice and work towards its elimination (Barta & Crouthers, 1996; Bishop, 2007; Colby & Lyon, 2004; Yokota & Cai, 2002). Multicultural picture books can be used to teach the foundations of democracy, common good, cultural appreciation, social justice, caring and compassion, moral decision-making, and social responsibility (Owens & Nowell, 2001; Wolk, 2004).

Selection and Use of Multicultural Literature

Within the framework of critical literacy, the selection of text and use of open discussions are of utmost importance in the utilization of multicultural literature. Teachers have the power to affirm students' lives, language, cultural context, and voice as unique and important through the selections of the literature that is read. Quality multicultural literature should lead students to think critically about society (Cai, 2008; Henkin 1998). Multicultural literature used in the classroom should encourage positive portrayals of characters with authentic and realistic behaviors in contemporary and historical settings, support high literacy quality with strong plots and authentic illustrations, foster belief in cultural diversity, avoid perpetuating distorted views of differences and reinforcing prejudices and stereotypes, broaden students' experiences and vision, promote multiple perspectives, and invite reflections (Christensen, 2001; Leland & Harste, 2002; Norton, 2009). Class, along with race, gender, religion and language should be

considered in multicultural literature. Stories utilized should enrich a view of history, explore dominant systems of power, give voice to those traditionally marginalized, and show people taking action on social issues (Ciardello, 2004; Jones, 2004).

Effects of Multicultural Literature on Attitudes and Perspectives

In general, educators support the idea that the use of multicultural literature is one vehicle through which teachers can give children the opportunity to experience the lives of others and support and encourage tolerance and understanding among children. Rosenblatt (1995) believed that books might also change attitudes toward different races. Studies with older students found that exposure to multicultural literature positively affects students' attitudes toward race and ethnicity, self-esteem, and academic achievement across subject areas (Dressel, 2003; Wham, Barnhart, & Cook, 1996). However, because the perceptions of people different from themselves are learned and developed in the preschool and primary grades, more research is needed on the use of multicultural literature with elementary-age children. The findings from limited research conducted with elementary students exposed to multicultural storybooks tends to support a positive change in attitudes toward differences (Macphee, 1997; Vasquez, 2004).

Methodology

To answer the research question as to whether student perspectives of diversity and tolerance toward others different from themselves was altered as a result of being read aloud multicultural books, a critical ethnography study was conducted. The research study received approval from the Aurora University Institutional Review Board in 2005. The study was positioned as an investigation of everyday read-aloud school experiences of students in one fourth-grade classroom and an interpretation of the effect of those experiences.

The self-contained, fourth-grade classroom used in this study was in an elementary school within a large urban school district with a diverse student population. The ethnic diversity of the students in this class was 59 percent Caucasian, 25 percent Hispanic, 12 percent Middle Eastern first generation immigrant, 12 percent Eastern European immigrants, 4 percent Asian first generation immigrant and 4 percent Native American. Four of the students were classified as English Language Learners (ELL) and two students were identified as special education students with active Individual Education Plans (IEPs).

Twice a week, the teacher read aloud picture books and engaged the students in conversations about the books and their reactions to the books. The reading and the subsequent conversations were audio-taped and video-taped to explore the perspectives of the students during and after having these series of books read aloud to them. Students' written journal entries were also utilized as a data source. The read-aloud session followed the same format for each visit. During the read-alouds, students and the teacher stopped throughout the story to discuss their understanding and reactions to the text using partner "turn and talk" and whole-group share formats. Depending on the story, students shared a connection they had, a wondering or question, an inference, and their reactions to content, characters, and the author's message. Throughout the readings and at the end of the readings, the students wrote in reader workshop journals. On the other three days of the week during the reader's workshop time, the class participated in teacher-led book talks and book clubs. Books read aloud were left in the classroom and students had the opportunity to reread them or explore issues of importance to them within those books.

Additional multicultural fiction, historical fiction, and nonfiction books were also on display in the classroom and available daily during independent reading time. An anchor chart listing the books read for the research study was posted in the room, with new books added after each reading.

In addition, key aspects of establishing environments and curriculum that provide multiple experiences and value differences were incorporated (Kaser & Short, 1998). These included the teacher listening to students to gain a sense of their thinking and to support their learning. It also included students listening to each other and engaging in dialogue that involves inquiry and critical thinking. Systems were put in place to allow and encourage thinking out loud in order to take learners beyond their own ideas, to help them consider new perspectives and ways to view the world, and to help them share their interpretations and connections to life and cultural identities. The teacher made a conscious effort to construct an environment that was socially just and equitable and where students' questions around issues of diversity including culture, race, class, gender, fairness, and ability were given importance and continually discussed.

Multicultural picture books were selected as the format to engage students in critical literacy practices. Picture books allowed the teacher the opportunity to engage students visually and orally while providing an accessible way for all students to participate and begin to understand the issues of social justice regardless of reading or language abilities. Based on the guidelines established by the Cooperative Children's Book Center (2006), contemporary and historical fiction, and nonfiction literature that encouraged positive portrayals of characters with authentic and realistic behaviors was selected. Care was taken to use multicultural books that avoided stereotypes, portrayed the values and cultural group in an authentic way, showed people from different cultures working together, emphasized both similarities and differences, broadened children's vision and invited reflections, and showed multiple and contradictory perspectives. A final criterion supported by Leland and Harste (2002) was to enrich students' views of history by utilizing books that gave voice to those who traditionally have been silenced or marginalized and that showed people taking action on social issues. In order to ensure that students had the necessary historical understanding, books were read in a historical sequence examining Native Americans, African Americans, Asian Americans, Hispanic Americans, and various immigrant groups. The books were often linked to the social studies curriculum units of slavery, civil rights, the Holocaust, and war. A theme of tolerance and freedom permeated the selected text.

Data and Findings

The data were collected during twice-weekly visits over eight months. As fifty multicultural picture books were read aloud and discussed, data were collected via audiotapes, videotapes, student journals, and classroom observation with field notes. Transcriptions of discussions and journal entries provided the richest source of information for the study. Data were analyzed in relation to the guiding questions upon which this research study was designed. The researcher searched for regularities, patterns, and themes when reading the data and identified coding categories. As data analysis continued, three findings emerged that addressed the research questions. The ways in which the students made meaning about differences while interacting and responding to the multicultural literature read aloud is encompassed in the following findings.

In Finding One, the conclusion was that through listening to various multicultural picture books read aloud to them coupled with dialogic and written responses, students increased their awareness about the values, beliefs, and social practices of cultures other than their own and heightened their acceptance and respect for people different from themselves. This awareness of others resonated through the comments and writings of all the children. Britney's comment was shared by many students: "This book made me think that it's good that people are different because if everyone was the same, the whole world will be boring."

Although students began the study with various levels of understanding, the level of awareness for all students grew throughout the read-aloud sessions. After reading *Sister Annie's Hands* (Lorbiecki, 2000), a story about a black nun teaching in an all-white Catholic school, the increase in the perception levels of differences by students was apparent. This new understanding of differences was blended with a belief in "humanness" as voiced by Ashlee.

I think that means that Anna finally gets that Sister Anne is not just black but she's also human. I think this author wrote this book because she wanted us to know not to treat black people differently. I wish that nobody treated black people differently. Why could we not have got along with each other?

This heightened awareness also resulted in increased empathy by students toward others. This was often demonstrated through an expression of feelings of anger and sadness for others. Victoria shared her feelings of sadness in relation to a Native American boy in *Cheyenne Again* (Bunting, 2002). "I feel sad because they took away everything he cared about." Students also expressed an empathetic response that moved beyond similar feelings to a deeper understanding of being in the place of another. Cindy expressed this reaction to *Teammates* (Golenbock, 1992), a story about the racial prejudice experienced by Jackie Robinson: "It was mean that Jackie had to sleep in the bus alone. I would be very lonely, sad, hurt, punished in my heart." This experience of placing themselves in the shoes of another was a common reaction to books read about the Jewish experience during the Holocaust. April shared: "I have more schema because I know now how lucky I am not to be Jewish person because life for Jewish people is very hard." One Polish immigrant student, Lizzie, made a strong personal connection after reading about the treatment of Japanese Americans in the internment camps in three books; *Baseball Saved Us* (Mochizuki, 1993), *The Bracelet* (Uchida, 1993), and *So Far from the Sea* (Bunting, 1998).

I wonder if the war was not Japan and America but it was Poland versus America would they treat me the same way as they treated the Japanese? I think the author wrote the book so we would know the internment camps were horrible places and we as Americans should never treat anyone like that anymore.

In the Second Finding, data supported an increased understanding and acceptance by students of their own culture and of cultural similarities and differences. The students' knowledge and understanding of cultural heritage included ethnicity, as well as religion and family. Sophia, a student of Middle Eastern heritage, strongly expressed her belief on cultural acceptance: "I think everyone should be proud of your culture." The more students gained knowledge of cultural heritage, the more they gained respect for people of different cultures and respect for themselves.

While ethnicity mattered to students, other aspects of their own culture such as religion, family, and friends were of equal or greater importance to them. The following dialogue highlights this focus on religious beliefs:

Chelsey: “It doesn’t matter if your religion is different or if it is the same—it’s who you are.”

Jason: “I wonder why some people do not celebrate anything.”

Mark: “I do not understand how people cannot believe in God.”

Derrick: “Everyone is different.”

Hilary: “How can people not believe in anything? I thought people had to believe in something.”

Stephanie: “I think it is nice people have (their) own God and have something to worship in their own culture.”

Ashlee: “I believe in one God and everyone is different and if they do not believe it does not make them bad just different.”

Students valued the experiences of different racial, ethnic, and cultural groups while at the same time embracing the oneness of our nation’s heritage. Derrick’s final sharing supported the concept of diversity and oneness as a source of power: “I think the author wrote this book because she wanted us to know how people in different countries went to the United States to have a better life. I think it was a good idea for other people to come to America, because now we can be one strong country.”

Although the students’ understandings of differences were heightened, they were tempered by a belief in the universality of the human condition and a strong belief that everyone can and should be treated the same regardless of individual differences, ethnicity, or ability. The students did not comprehend the potential societal limitations placed on some groups and voiced a belief that all groups and cultures had the same rights and freedom as they did and that equal opportunities existed for all groups of people. Ethnicity and power differentials in society were not alleged by students.

For most of the students, this inclusionist view was expressed as all people having the same basic needs, feelings, and emotions. Victoria’s simple statement highlights this thinking: “I think the author wrote this book because she wanted people to know that everyone is the same.” Matt also succinctly stated that belief: “I think the author wrote the book because she wanted to tell us to treat others as you want to be treated. I learned that no matter how you are, you are the same as everyone else and don’t treat others bad that look different.”

Finding Three established ways in which the reading of various multicultural picture books aloud to students resulted in an increased knowledge and understanding of prejudice, bias, and tolerance. After reading books about the civil rights movement of blacks and Hispanics, the teacher queried the students on their new understandings. The dialogue that ensued highlights students’ new thinking and processing of the concept of stereotypes:

Ashlee: “My schema has changed because I never knew there was a thing called stereotype when people think that all of one kind of people all do the same things.”

Teacher: “What do you mean about stereotype?”

Trevor: “We should tell people to not judge other people or themselves by the color of their skin, to judge them by what is inside, and to always believe in themselves.”

Jason: “To accept everyone. To not think I’m better.”

Stephanie: “I learned that some people think that black people are bad people and they are called stereotype and it means that someone doesn’t like another race or something else.”

Teacher: “What does that mean for you?”

Britney: “It left me thinking about how the world would be like if everyone judged each other by how they look.”

Angelo: “I wonder why some people hate themselves because of the color of their skin and didn’t judge themselves by what is inside?”

Matt: “I learned that some people are stereotyped that means when you think all people of one color or race are bad or good.”

Christie: “What I feel and think is that I feel I should treat people with the golden rule.”

Derrick: “You should never be stereotyped because it doesn’t matter if the person is black or white and the person has a scary face it doesn’t matter what’s on the outside you have to look at what’s in the inside.”

Students expressed a change of thinking toward others along with a commitment to tolerance and personal non-prejudicial actions. Students moved from mere acceptance of differences to levels of avoidance of prejudicial behavior. Students expressed this understanding of prejudice as a sense of not judging people through visible features. As Laura clearly stated: “It doesn’t matter what you look like just how you play and if you have a good heart.” Comments by Thomas mirrored those of Laura: “I think the author wrote this book to tell people to not judge other people or themselves by the color of their skin, to judge them by what is inside and to always believe in themselves.” Angelo reiterated this thinking and included connections to racial and religious differences: “I learned if someone looks different you should not judge them by their color or religion. You should always treat people the way you want to be treated. You cannot judge them on their outside, but on the inside.” Cindy also voiced this thinking as she expressed: “I think the author wrote this book to tell people to not judge other people or themselves by the color of their skin, to judge them by what is inside and to always believe in themselves.”

Finally, through listening to and responding to various multicultural picture books read aloud to them, students were motivated in the direction of an increased understanding of and stance toward tolerance. As a final activity, the teacher asked the students to share what they had learned and how they had changed from reading all of these books. At this invitation, Christie expressed tolerance as a change of heart: “I think that what tolerance means is let people that are different into your heart instead of shutting them out.” Jason made a clear connection between tolerance and an elimination of hate: “I think that tolerance could be a good thing for people because they don’t want hate in the world and do what’s right in the world.” Hilary expressed her thinking as accepting and allowing those who are different to be included in her circle of friends: “Tolerance means that you are including people that might be different to be your friends and it means to be tolerant of someone or not be mean to different people.”

Although there was no method in place in this study to record any specific changes in student behavior, students strongly believed the reading of stories resulted in a change in their behavior. Amanda shared a strong link between the reading of stories to personal laws that guide behavior. “Everyone should treat each other with kindness and respect for everyone of all races and to say everybody can play and do what they want to do no matter what laws because you have your own laws, laws of yourself.” Sophia made the enthusiastic case for how the reading of books changed her personally. She expressed the changes in her knowledge and subsequent

changes in her behavior: "I'm different now because I know that a lot of people don't like a certain kind of person, so I learned to be nicer to all kinds of people. I also learned to stand up for me and for other people that would be picked on or disliked."

Overall, the findings substantiated that the use of multicultural literature coupled with dialogic and written responses did lead students to express and exhibit attitudinal changes. Changes occurred in students' perceptions due in part to the extended time given students to discuss and write their understandings. The time allowed during the read-alouds for students to write and talk amongst themselves provided them with the opportunity to articulate their understanding of diversity and to experience and respect the lives of others. In this study, the experience of engaging with a text through discussion and writing was transformative. Students exhibited heightened awareness, acceptance, and respect for people different from themselves; gained new knowledge about the values, beliefs, and social practices of cultures other than their own; and increased their empathy toward others. There was an increased understanding and acceptance by students of their own culture and of cultural similarities and differences. Finally, students did develop an increased understanding of prejudice, bias, and tolerance and moved from mere acceptance of differences to levels of avoidance of prejudicial behavior.

Study Implications

The innovative critical literacy practice demonstrated in this study has four important implications for education within our diverse society: 1) the need to provide an environment with multiple opportunities for students to hear, read and discuss multicultural literature; 2) the need for a critical literacy stance in reading and responding to multicultural literature; 3) the need for teachers to be adequately trained in critical literacy and multicultural literature; and 4) the need for classrooms that allow students the opportunity to respond to and act on their new understandings.

Today's classrooms are more diverse requiring educators to create spaces that foster meaningful and transformative learning. The importance of creating an inclusive classroom environment has been identified in the Standards of the English Language Arts jointly designed by the International Reading Association (IRA) and the National Council of Teachers of English (NCTE). These standards state that students should read works "that reflect the diversity of the United States population in terms of gender, age, social class, religion, and ethnicity" (NCTE, 1996, p. 28) and that teachers should consider students' interests carefully when choosing works for inclusion in the curriculum. The Standards recognize the necessity of utilizing multicultural literature and providing diversity in students' reading options. Multicultural literature should represent all groups of students within schools and classrooms including literature about culture, race, class, language, and ability differences. It is imperative that teachers share a range of multicultural literature and carefully select books that are anti-biased to the fullest extent possible.

As noted in this study, exposure to quality multicultural literature helps children appreciate differences among ethnic groups, develop new perspectives, and eliminate ethnocentrism. By reading stories about their own culture, children have opportunities to see how others go through experiences similar to theirs, to develop strategies to cope with issues in their lives, and to identify with their culture. Rudine Sims Bishop (2007) maintained that students who do not see their culture reflected in the literature they read may believe that they have little or no

importance in society and in school. This universal power of story needs to be acknowledged as a potent source of cultural understanding in all classrooms.

The second implication addresses the need for a critical literacy stance in reading and responding to multicultural literature. If students are expected to become socially responsible, teachers must help students explore views and topics that support and challenge their current thinking. The existence of multicultural literature in the classroom, therefore, is not enough. Students need to learn to analyze literature critically; question themselves to find out what they believe about race, class, and gender differences; and read literature closely to discern the meanings given to difference in our society (Flint, 2000). Blending reading of multicultural literature with written responses and active discussions requires that students observe and appreciate other cultures, discover their own ethnic identity, question issues of diversity, and move toward more empathy and tolerance of others. Multiple forms of responding serve as a means to help students use the narrative to learn about and comment on their own histories as well as experience a range of emotions that may eventually affect how they understand, confront, and overcome any acts of prejudice, intolerance, or racism they may encounter.

The third implication of this study is the need for teachers to be adequately trained in critical literacy practices and in multicultural literature. This study represents an opportunity and challenge for colleges and universities to include the use of multicultural literature and critical literacy within the required training of educators. Good teaching must be present if multicultural literature is to be valued and become a normal component of the reading curriculum (Davis, Brown, Leidel-Rice, & Soeder, 2005; Powell, Cantrell & Adams, 2001). Knowing how to select literature and help children read against the grain in the literature is an important skill for all teachers. Multicultural literature and literature-related activities must be placed in the curriculum and teachers must be skilled in selecting this literature and in developing teaching strategies that can be authentically used to accompany this literature. Teachers have the responsibility to teach using curricula in which diverse voices and stories are mainstreamed, rather than marginalized. Fang, Fu, and Lamme (2000) wrote that teachers themselves need experience as analytical critical readers of multicultural text so that they can engage children in dynamic discussions about ideas and issues. Teachers must also be taught to engage in and facilitate the complex realities of facilitating good talks with children and realize that all students, even young children, are capable of engaging in meaningful and complex discussions of literature (Heffernan & Berghoff, 2000; Möller, 2002; Shannon, 2002). Through the complexity of reading aloud coupled with classroom discussions, teachers can become co-learners as dialogue about the meaning of differences is left to the children.

Finally, this study highlights the need for classrooms that allow students the opportunity to respond to and act on their new understandings. There is a growing knowledge base of what critical literacy and teaching for social justice means in real classrooms. Cultural appreciation is important, but it is not enough. Critical literacy is required to support a curriculum in which children explore, understand, and work toward ending social injustice. Critical literacy teaching and learning helps prepare students to be thoughtful and informed world citizens who take on the personal investment in the well-being of others to truly become involved members of a larger community.

Literacy in the 21st century should include focus on global issues and problems as well as action that can help to resolve them. If we teach students to be literate without helping them to develop a commitment to construct a just and humane world, we will foster a nation and world in which

there is a threat to justice everywhere. A literacy education that focuses on social justice can make a major contribution to preparing students to be thoughtful and active citizens of their nation and the world. (Banks, 2003, p. 18)

Conclusions

Elementary school teachers are challenged to meet the needs of an increasingly diverse student population. Educators need to commit to helping their students address racial, ethnic, and linguistic equality as well as a respect for and an appreciation of diversity. In reading classrooms, teachers must, through the critical use of literature, forge a sense of community and interconnectedness within the diverse student population.

Educators are learning that Brazilian educator Paulo Freire (2000) was right that students need to read “the word and the world,” now more than ever. Educators must believe in this vision of critical literacy that equips students to engage in a dialogue with texts and society. Students need to read with questions, wrestle with ideas, and use literacy that builds on their lives, acknowledging their homes, families, languages, and struggles as worthy of study. Critical literacy practices with multicultural literature teach students to talk back to texts, to seek alternatives, to ask questions, and to confront inequality and untruths. By creating critical perspectives toward texts, students can hopefully transfer those skills to the larger society and to a more ongoing critical stance that leads to empowerment.

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About the Author

Suzanne Evans
 EdD, Assistant Professor
 School of Education
 National University
 La Jolla, CA
 sevans@nu.edu

Major research interests: Multicultural literature, critical literacy, literacy instruction, staff development in literacy

Reading Practices in Elementary Schools: Format of Tasks Teachers Assign

Thomas DeVere Wolsey, Diane Lapp, and Bruce Dow

Abstract

Teachers often use groups and various reading modalities (for example, independent reading, guided reading) to meet the needs of students with divergent reading abilities. The study described in this article explores the perceptions of teachers as to their grouping practices and reading formats when literacy tasks are assigned. The survey results indicate that teachers in the sample tend to value small-group oral reading configurations and partner work over whole-class or homework activities. Some whole-class oral reading is still used by some teachers.

Key Words

Reading format, grouping practices, literacy pedagogy, reading tasks, oral reading, read aloud, silent reading

Introduction

Andreas sat down with a group of his third grade classmates to read an article about bullying in schools. Yesterday, his teacher read aloud a story on the same topic while the entire class read along with her. Tomorrow, students will each choose one of four additional, topically related articles of varying levels of difficulty to read silently in class. But today, the small group of four students are taking turns reading the article and questioning each other about the author's main points. In Andreas's class, it is not uncommon to see students engaged in a variety of reading activities, depending on the instructional purpose for the reading, the difficulty of the text, or the choices they make about what they want to read. His teacher knows that students learn to read through deliberate instruction and through many opportunities to read. More specifically, Andreas's teacher designs instruction that supports students gaining the skills needed to read complex texts, and also texts they are able to read independently. She believes that for students to grow as readers, they must have time to read as well as instruction that models the strategies that are used by proficient readers when reading a wide array of texts.

For some time, teachers have been aware that reading proficiency is individual and situational. Reading difficulty has historically been described in terms relative to student capability when reading a given text (Betts, 1946; Treptow, Burns, & McComas, 2007). That is, some texts are those students can read independently or with relative ease, while others are so difficult they produce frustration for the reader, and still others are challenging but not overwhelming. Understanding this array suggests that students need both deliberate instruction and independent reading time in order to grow as readers. In addition to deliberate instruction, the value of reading independently has been shown to support literacy development (Anderson, Wilson, & Fielding, 1988) for all students, including English language learners (e.g., Krashen, 1996) and students who struggle with academic reading tasks (e.g., Fader, 1976; Fisher, 2004), while also promoting a positive school climate (e.g., Wolsey, Lapp, & Fisher, in press).

Instructional texts that are challenging but not overwhelming are those that require deliberate instruction in order to support student learning as a result of the reading task. Instruction often involves teaching informational content, while modeling the process of reading, and introducing the nuances associated with different types of texts. Because students acquire reading proficiency in idiosyncratic ways that are overlapping and incremental, a typical

classroom includes students whose skills and capabilities with literacy texts and tasks vary widely.

Groups for Reading Instruction

Deciding how to form groups for reading is often a conundrum for teachers in the elementary grades. In order to provide deliberate instruction, the tradition has been to group students with classmates whose specific proficiencies are similar. However, Paratore and Indrisano (2003) suggest that students tend not to benefit from homogenous groups, and elementary students express a preference for mixed-ability groups (Elbaum, Schumm, & Vaughn, 1997) even when whole-group or individual tasks are assigned more frequently by their teachers.

There seems to be mixed information on just how to assign groups. When students are placed in static groups by ability, the overall effect seems to be counterproductive to literacy learning tasks (Paratore & Indrisano, 2003). At the same time, Juel (1990) notes that primary-grade students tend to succeed when the texts they are asked to read are closely aligned with word-learning tasks to increase accuracy. However, when students are placed in literacy-learning, mixed-ability groups, high-achieving students may not benefit. Juel and Minden-Cupp (2000) conducted a study in four classrooms and determined that some differential instruction based on ability may be beneficial in the early part of the first grade year. Thus, the task of determining what student groupings will be beneficial and when to use various forms of student groups is not an easy task, and it is one that may vary from grade level to grade level and for specific curricular demands.

Format of Reading Tasks

A number of literacy tasks in elementary school classrooms require students to process information visually or aurally. Aural processing occurs during read-aloud activities that require students to listen and comprehend a text read by others. This listening task supplements tasks that require students to process print on their own or with support. Listening comprehension is an important precursor and support for reading comprehension. Trelease (2006) speculates that listening comprehension exceeds reading comprehension by several grade levels; thus, students have the opportunity during read-aloud activities to process and construct meaning from texts that would otherwise be too difficult for them to understand. Similarly, students may be asked to view complementary photographs or other images found in children's literature and visually construct meaning from them.

Shared reading, guided reading, independent reading, buddy reading, reading in small groups, and reading aloud to students are all reading task formats used in elementary classrooms (Tompkins, 2003). These are combined with small-group, large-group, whole-class, and independent reading formats. Instructional decisions about group sizes take several forms, from individual student work to whole-class instruction; for example, Flood, Lapp, Flood, & Nagel (1992) reported that typical group configurations might take the form of whole-class, half-class, large groups of seven or eight students, small groups of three or four students, pairs, or individuals working independently. For example, in shared reading, the teacher reads aloud while students follow along in their own copies of the text. Guided reading involves smaller

groups of students reading by applying skills with specific teacher scaffolding and guidance to improve their move toward independence. Buddy reading and reading in small groups without the teacher present fosters student reading with support from peers. Reading aloud to students and independent reading are self-evident practices which need no further explanation.

To this list we can add whole-class oral reading. It is necessary here to distinguish between whole-class oral reading and teacher read-aloud activities. Whole-class oral reading typically follows a round-robin or “popcorn” style in which one student reads aloud while others are directed to follow along. Another variant in whole-class oral reading involves the teacher calling on students randomly, sometimes drawing a card with one student’s name on it from a deck containing all class members. Here it is important to note the difference between read-aloud activities and whole-class oral reading. A teacher read-aloud activity is enacted for different purposes than whole-class oral reading and involves a competent reader, such as a teacher, reading a text to students.

Whole-class oral reading strategies have persisted in classrooms for some time in elementary schools (Austin & Morrison, 1963) even though it has not enjoyed wide support from the research community (e.g., Beach, 1993). Whole-class oral reading activities seem unlikely to promote engagement or opportunities to read widely even though such practices persist in schools. Rather, students who have opportunities to read from multiple sources (Rose & Meyer, 2002) and to read using multiple instructional approaches are far more likely to become proficient readers of complex and content-specific texts. The opportunity to read and the guidance of expert teachers is likely to help, as well (Allington, 2002). Indeed, small-group reading, partner reading, and independent reading may provide more opportunities for actual reading of connected text while whole-class oral reading reduces that opportunity.

Several approaches to using small groups as a basis for reading instruction have emerged as a result of and in tandem with the findings on use of small groups, including both ability-based groups and heterogeneous groups. These include many of the structures described above as integral components (e.g., shared reading, guided reading, and so on). Cunningham, Hall, and Defee (1991) devised a system of dividing instructional time into four segments or blocks, with time for independent reading, work with a basal reader, writing, and word work. This approach, known as the four-blocks system, provides many opportunities for small-group work in reading as well as independent reading activities.

When groups are flexibly constructed, the membership is routinely changed to reflect students’ changing proficiencies, interests, work habits, and social interactions, small groups may promote achievement (e.g., Caldwell & Ford, 2002). Lapp, Fisher, and Wolsey (2009) suggest a system of overlapping heterogeneous groups with flexible needs-based groups based on routine assessment results. The intent is to create a practical classroom system whereby the students work with heterogeneous groups on many tasks with specific needs-based support for skill and strategy instruction.

The Study

Comprehension and struggling/striving readers are important research topics, and university faculty agree that this is an area of critical need (Cassidy & Cassidy, 2008). Because the opportunity to read appropriate texts is central to improving the proficiency of readers who struggle with some texts, the present study sought to describe current practices, as perceived by teachers, in relationship to these recommendations. Of interest were the types of reading tasks

students were asked to complete, such as reading with a partner, reading silently in class, reading at home, reading aloud to the class, reading with a small group, or rereading portions of texts. The study hypothesized that elementary students in general were often asked to read silently or in small groups amplifying the possibility for students to read often and with appropriate scaffolds for difficult texts. In this article, reading formats and reading tasks are terms used somewhat interchangeably to refer to the grouping or independent practices teachers assign for reading paired with an enactment of reading as an oral/listening or a visual/silent task.

Methods

This study describes current reading practices from teachers in a large western metropolitan area. The study used survey research to determine how teachers report their use of oral reading, reading in groups, reading as homework, and reading silently in elementary classes at the primary and upper-grade levels. Through survey research, the authors explored the approaches to reading activities that may exist between primary and upper elementary grades when students are asked to engage in reading activities. The survey was divided into three sections: demographics, student characteristics, and literacy instructional practices. Descriptive statistics were collected and aggregated to the level of grade bands. The use of grade bands facilitated larger sample sizes, and the researchers suggest further research examining the practices by grade level. Respondents who taught grades kindergarten and one through three were grouped in the primary grade band. Respondents who taught grades four through six were grouped in the upper elementary grade band.

Participants

Seventy-four teachers enrolled in a graduate seminar submitted surveys for this study. Twelve surveys were discarded either because of incorrect coding on the part of the participant or because the participant did not teach students in the target grades of the elementary school (i.e., kindergarten through sixth grade). Of the valid surveys (n=62), 92 percent were completed by teachers who had not earned a master’s degree but had units of college credit beyond the baccalaureate degree. Of the participants, 43 were primary grade teachers and 19 were upper elementary grade teachers. Based on their own perceptions of the population each teacher served, the largest group (58 percent) worked at schools they characterized as suburban, and the next largest group worked in urban schools (39 percent) (see Table 1). Most of the teachers who completed the survey were in the early stages of their careers, with 79 percent having five or less years of teaching experience and an additional 18 percent having between 6 and 10 years of teaching experience (see Table 2).

Table 1
Participant-Reported Teaching Demographics

Urban	24 (39%)
Rural	1 (2%)
Suburban	36 (58%)
Other	1 (2%)

Table 2
Participant-Reported Teaching Experience (years)

0-5	49 (79%)
6-10	11 (18%)
11-20	1 (2%)
20+	1 (2%)

Table 3
Participant Estimates of Students Who Speak a Language Other than English as a First Language

Estimated Percentage	Primary	Upper	Total
0-20	21 (40%)	4 (21%)	25 (40%)
21-40	10 (23%)	6 (32%)	16 (26%)
41-60	3 (7%)	2 (11%)	5 (8%)
61-80	3 (7%)	2 (11%)	5 (8%)
81-100	6 (14%)	5 (26%)	11 (18%)
Total	43	19	62

Table 4
Participant Estimates of Student Capacity to Complete Grade-level Homework

Estimated Percentage	Primary	Upper	Total
0-20	0 (0%)	1 (5%)	1 (2%)
21-40	5 (12%)	8 (42%)	13 (21%)
41-60	9 (21%)	3 (15%)	12 (19%)
61-80	14 (33%)	3 (15%)	17 (27%)
81-100	15 (35%)	4 (21%)	19 (31%)
Total	43	19	62

Participants were asked to describe the students with whom they worked. Most teachers believed that less than 40 percent of their students spoke a language other than English as the first language (see Table 3). However, when asked to describe their perceptions of students' capacity to complete grade-level homework, some difference between the grade bands emerged (see Table 4). While most primary grade teachers believed that the majority of students in their classes could complete grade-level homework, the distribution for upper elementary students was spread more evenly across the survey indicators. The largest group of teachers (47 percent) believed 0–40 percent of their students could complete grade-level homework. Because homework often involves a requirement to read in some form, these data help inform teachers' choices about reading tasks they assign as work to be done in class and as homework.

Instrument

A survey instrument was designed with 16 questions, 5 of which were written to elicit teachers' preferences for the types of reading tasks they preferred to use in their classes. Other questions addressed demographic and student characteristics, as described above. Rank-order questions sought to highlight the types of reading activities that teachers might prefer. If respondents had been asked to choose all appropriate reading approaches, responses might not emphasize preferred techniques. Rank-ordered choices ensure that the respondents will consider each approach, giving weight to those they prefer to use. However, it cannot be inferred that choices that do not rank highly are not used or are inappropriate for the student population with whom the teacher works. Some respondents added comments to their surveys, and one kindergarten teacher noted, "I teach Kdgn [sic]. So the majority of the reading is done through read-alouds or chorally. Independent work is often done in small groups with teacher guidance." This teacher's comment indicates her awareness of activities that would be most appropriate for students in the grade level she teaches.

Multiple-choice questions provided further insight into the rank-order choices respondents made. For example, in question 12, respondents indicated their preference, by rank order, for assigning reading tasks as homework, as a read-aloud to the whole class, as partner reading, and so on. Question 13 sought greater depth by asking a multiple choice question about the methods used for reading aloud in class (e.g., students reading aloud by taking turns, students listening to someone else reading aloud, etc.).

Data Analysis

The present study is exploratory and descriptive in nature, and data represent the self-perceptions of the participants regarding the instructional practices investigated. It reasonably can be assumed that teachers will present their conceptions of their own reading practices in a light they believe will be favorable. Thus, their perceptions are worthwhile indicators of how they approach instructional tasks that involve reading in their classrooms. Descriptive statistics for survey responses provide a useful indication of teachers' practices. Though averages for the entire group of upper and primary grade teachers are presented, they are of limited utility in determining the amount of reading tasks assigned by teachers from seven grade levels (kindergarten through sixth grade). The data are more useful in predicting preferred instructional approaches. Further study exploring the preference for reading task formats and the actual amount of time spent with students engaged in those tasks would be useful for future study.

Results

Respondents were asked to rank their choices from among the choices presented in Table 5a. Primary grade teachers preferred to assign students to read with small groups of students, while upper elementary teachers preferred that students read with a partner. Upper grade teachers also favored silent reading in class as a reading approach. Primary teachers were more likely to ask students to reread a text or portion of text, with this as the third-ranked choice; however, this choice was fourth among upper-elementary teachers. Upper-grade teachers favored reading in small groups as their overall third choice.

Table 5A
Teachers' Reading Task Preferences

Please rank the reading tasks on a scale of 1 to 6 according to how likely you are to assign the task. 1 is the most common reading task assigned in class and 6 is the least common reading task. Please use each number/rank only once.

Rank 1 (most common) to 6 (least common)	Urban N=36	Suburban N=17
Assign reading of connected text as homework.	Rank 5)	Rank 5)
Assign students to read aloud to the whole class.	Rank 4)	Rank 6)
Assign students to read with a partner.	Rank 3)*	Rank 1)
Assign students to re-read a portion of text (either orally or silently).	Rank 2)	Rank 4)
Assign students to read with a small group of other students.	Rank 1)	Rank 3)
Assign students to read independently or silently during class.	Rank 2)*	Rank 2)

Two reading tasks were ranked on average at 3.24.

Examined in a different way, the data were calculated by demographic indicators as reported by the participants. Urban and suburban results are provided; only two participants reported demographic environments other than urban or suburban. Table 5b shows average ranks for each reading practice preferred by teachers in urban and suburban environments. In most cases, the rankings for most common to least common practice are similar; however, suburban teachers reported that silent reading is slightly less common and small-group reading is slightly more common, while the teachers from urban schools reported the opposite.

Table 5B
Teachers' Reading Task Preferences

Please rank the reading tasks on a scale of 1 to 6 according to how likely you are to assign the task. 1 is the most common reading task assigned in class and 6 is the least common reading task. Please use each number/rank only once.

Rank 1 (most common) to 6 (least common)	Urban (n=17)*	Suburban (n=33)
Assign reading of connected text as homework.	1 (rank 6)	0 (rank 5)
Assign students to read aloud to the whole class.	5 (rank 5)	7 (rank 4)
Assign students to read with a partner.	6 (rank 5)	7 (rank 1†)
Assign students to re-read a portion of text (either orally or silently).	5 (rank 3)	9 (rank 3)

Assign students to read with a small group of other students.	4 (rank 1)	7 (rank 2)
Assign students to read independently or silently during class.	0 (rank 2)	7 (rank 1†)

fifty-two participants responded to the question, and two participants reported either "oral" or "other."

Two reading tasks were ranked on average at 2.27.

Because reading aloud is a common and useful literacy activity in elementary classrooms, the survey asked respondents to elaborate on the read-aloud practices of primary and upper grade teachers. With the exception of the turn-taking approach (i.e., whole-class oral reading) described in this question, the most common approach for read-alouds among primary teachers was for the teacher to read with the student following along (see Table 6). Interestingly, this was even more common among the upper grade teachers. A large group of teachers in both primary and upper elementary classrooms still prefer the approach with students taking turns reading aloud to the others. Primary teachers did indicate some preference for reading aloud while students listen, but do not read along. No upper -grade teachers favored this approach.

Table 6
Read Aloud Preferences

Read Aloud Approach	Primary	Upper	Total
Teacher w/student to follow along	22 (52%)	12 (67%)	34 (57%)
Students take turns reading aloud	15 (36%)	7 (39%)	22 (37%)
Audio with students to follow	0 (0%)	1 (6%)	1 (2%)
Students listen but do not follow along	5 (12%)	0 (0%)	5 (8%)
Total	42	18*	60*

* Some respondents selected more than one response.

When students struggle with a text, teachers indicated preferences for techniques to assist them with the material. Few teachers at any elementary grade level preferred listening or lecture as a way to assist students. In both upper-elementary and primary-grade teacher groups, there is a strong preference for having students work in groups when the text is very difficult (see Table 7). The second most common approach for both groups was to provide an alternate text.

Table 7
Teacher Preferences When Readers Struggle

Students	Primary	Upper	Total
Listen/lecture	4	0	4
Video	2	4	6
Reread text	9	3	12
Alternate text	25	12	37
Work in group with strong readers	35	13	48
Other	4	3	7

Because electronic texts are increasingly common in schools, researchers wanted to know how much reading teachers estimated, using time spent as an indicator, their students read on the Internet as a class activity (see Table 8). It was no surprise that primary teachers estimated that 0 to 15 minutes were spent reading on the Internet for class. However, the upper grade teachers also reported similar results, with 47 percent reporting the same amount of reading on the Internet and 36 percent reporting between 16 and 45 minutes.

Table 8
Internet Reading Tasks

Internet Reading/week	Primary	Upper	Total
0-15 minutes	31	9	40
16-45 minutes	7	7	14
46-60 minutes	3	1	4
1-2 hours	2	1	3
2+ hours	0	1	1

Discussion

The literature of the field describes the value of using small-groups, partners, and independent reading activities (e.g., Cunningham, Hall, & Defee, 1991; Lapp, Fisher, & Wolsey, 2009; Daniels, 2002), and this is reflected in the reading tasks teachers were most likely to assign at both upper and primary grade bands. This shift may be seen as an improvement over the reliance on whole-class oral reading activities reported by Beach (1993). Indeed, teachers at both upper and primary grades reported they were least likely to assign reading tasks as homework or to assign students to read aloud to the entire class.

Whole-class oral reading of the round-robin style or popcorn style appears to be out of favor or fading from the repertoire of elementary teachers' reading approaches, though these techniques are still used. Round-robin reading approaches may have class management benefits manifested as what appears to be on-task behavior, yet the outcome of such reading is that as one student reads while the teacher evaluates that reading, little specific instruction in reading skills is provided. In whole-class oral reading, in round-robin or popcorn styles, one student reads aloud while the others in the class are directed to read along silently. In practice, this is not what students do; often, proficient readers have read far ahead in the text and are thus not "with the class," and the less proficient readers have either drifted off the task or are worried about their turn to read aloud and display for the class their lack of proficiency with the task. Whole-class oral reading may also place an undue focus on the task of reading aloud (e.g., pronunciation) rather than on reading for comprehension (Rasinski & Hoffman, 2003). While there are important attention/capacity issues to consider, multisensory learning and instruction has deep roots that go back decades into the educational literature with many examples of successfully balanced integrations (e.g., Marzano, Pickering, & Pollock, 2001; Sadoski & Willson, 2006).

Similarly, the popcorn style of reading requires students to read very short sections of connected text. During reading, the teacher or a student calls the name of another student, who must then pick up reading where the previous reader left off. Popcorn reading is more problematic than round-robin reading in that students must read word-by-word to avoid being caught off-task. Reading word-by-word may work counter to goals for phrase reading and reading for comprehension. Where the practice persists, it may be attributed to the idea, noted

above, that it appears that students are all on task, engaged in the game of not getting caught on the wrong word.

With respect to a curriculum that addresses the widely divergent abilities, interests, and demands of a standardized curriculum, technology may offer some opportunities if teachers and school districts are willing to make such resources available. As teachers work to meet students' needs, the potential and possibilities of the Internet and allied technologies may be useful. Texts at varying levels and that appeal to many interests are possible.

Though the data reported here represent self-reported perceptions, the trend is clear: Teachers recognize the value of small groups and partner work as well as the value of working on literacy tasks in class. Teachers may need additional tools if they are to provide meaningful reading tasks that do not rely on whole-class oral reading. Observational data would also assist in clarifying the nature of small-group work relative to student abilities.

Implications

Partner reading, reading in small groups, and independent reading ranked in the upper three for both primary and upper grades. This held true when the data were analyzed by urban and suburban demographic groups rather than by grade level, as well. This trend is promising; however, it invites new questions to be asked about the instructional practices in use and those that are most effective in literacy instruction.

Though small groups and partners are often beneficial instructional strategies or routines, what students do when working with others is worth further examination. To what extent do students scaffold interactions for their peers? Do students working in heterogeneous groups compensate by doing the hard work of reading for those less proficient, or do they scaffold interactions such that the less proficient peer becomes increasingly competent with reading tasks? The present study makes no attempt to determine the extent of partner, grouping, and independent reading. As teachers face pressure to improve test scores, their use of small groups, partners or dyads, and independent reading time may change as well. How teachers negotiate the spaces between the demand for improved achievement on high-stakes measures and their desire to foster critical and proficient readers mediated by the reading formats they choose may help teachers, teacher educators, and publishers of basal reading materials make more informed decisions, too (e.g., Paugh, Carey, King-Jackson, & Russell, 2007).

These choices are similarly reflected in the choices teachers make about read-aloud formats to provide scaffolded reading experiences with students sharing the task by reading along with the teacher at times. The use of alternate texts to provide students with reading material that is comprehensible, yet challenging, is another positive indicator that teachers in the participant group were making thoughtful choices about the format of reading tasks in their classrooms. One concern was the little amount of time students spent reading from Internet sources as a reading activity in their elementary classrooms. In new times, the capacity of young readers to critically comprehend hypertexts may demand more attention if students are to successfully negotiate these cybertexts (New London Group, 1996).

Conclusion

As teachers work to improve the literacy experiences their students encounter in class, they must increasingly attend to the formats they choose for instruction. While a format, such as small-group oral reading, may be beneficial in one context, other formats may be more useful for different instructional purposes. The results of this study indicate that the elementary teachers in the metropolitan area are using a variety of approaches and relying more heavily on the promising formats of small-group work, partner or dyad work, and independent reading activities more frequently than the less useful activities of whole-class oral reading or assigning reading as homework. Andreas, the third-grade student described at the beginning of this article, experiences a wide range of reading formats planned to help him improve as a reader. How he navigates small groups, partner reading, read-aloud experiences, and other literacy activities is crucial to his success as a literate individual in the 21st century.

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About the Authors

Bruce Dow
 PhD, Specialization coordinator
 Richard W. Riley College of Education
 Walden University
 Minneapolis, MN
 bruce.dow@waldenu.edu
 Major research interests: elementary reading, technology in education

Diane Lapp
 EdD, Distinguished Professor of Education
 School of Teacher Education
 San Diego State University
 San Diego, CA
 lapp@mail.sdsu.edu
 Major research interests: adolescent literacy, early literacy, English language learners

Thomas DeVere Wolsey
 EdD, Adjunct Faculty
 School of Education
 National University
 La Jolla, CA
 tom.wolsey@natuniv.edu
 Major research interests: adolescent literacy, English language learners, technology, learning environments

Bilingual Education and Second Language Learning

Innovative Strategies that Work with Nondiverse Teachers for Diverse Classrooms

C. Kalani Beyer

Abstract

Today's classrooms are microcosms of the plurality of cultures, races, religions, and ethnicities in the world. Although classroom diversity is increasing, teachers still tend to be mainly nondiverse. Yet teachers must be skilled in teaching and helping all students. This article focuses on five innovative strategies, confirmed by research, that education professors can use to improve the instructional practices of nondiverse teachers in teaching diverse students. These proven innovative strategies include the following: (1) reducing prejudice and enhancing tolerance; (2) identifying the white identity model; (3) determining white privilege; (4) multicultural infusion; and (5) searching for personal roots.

Key Words

Multicultural, diversity, nondiverse, equality, strategies, prejudice, tolerance

Introduction

This article focuses on five innovative strategies that education professors can use to improve the instructional practices of nondiverse teachers in teaching diverse students. The goal of higher education must be to continually support teachers, enabling them to work in diverse classrooms, and teach them to apply proven multicultural strategies in order to help all students succeed. The purpose of this article is to verify through research five strategies that work in achieving this goal.

As the student population in the United States becomes increasingly diverse, the teachers of these diverse students continue to be mainly nondiverse and are becoming more homogenous as the number of teachers of color decreases (Hodgkinson, 1998; Nieto, 2000; Sleeter, 1998). Although it is predicted that close to 50 percent of the school population by 2020 will be nonwhite (Gollnick & Chin, 2009), there is a lack of meaningful multicultural understanding, interaction, and preparation of teachers (Banks, 1993; Cannella & Reiff, 1994; Delpit, 1995; Fereshteh, 1995; Gay, 1993; Villegas, 2007). To be responsive to the achievement and cultural gap and to ensure effective teaching and learning for a diverse student population, all teachers need to understand "existing barriers to learning that children and youth from low-income and racial/ethnic minority backgrounds consistently encounter in school" (Villegas, 2007, p. 372).

The majority of teachers are nondiverse or do not identify with any cultural group. Most of these nondiverse teachers are white, but many are members of ethnic or racial groups who do not have any connection with their cultural backgrounds. Furthermore, most teachers come from isolated ethnic groups or were involved in teacher professional preparation programs that did not involve direct meaningful interaction with different cultures (Cannella & Reiff, 1994; Fereshteh, 1995; Gay, 1993).

Federal law through the No Child Left Behind (NCLB) Act mandates that teachers be highly qualified. Although this criterion focuses on content pedagogy, it should also include teachers who exhibit strong understandings of multicultural teaching. Teachers should be able to relate to their students' experiences and culture as well as provide role models of successful members of the students' cultural background. However, school districts have not been

successful in hiring enough qualified diverse teachers to make a difference. Schools rely on university programs to prepare teachers to be successful in working with diverse students. In reality, this preparation is ongoing.

Multicultural Education

This paper draws its theoretical framework from the theory of multicultural education. Although conceptualizations of multicultural education vary, theorists and leaders in the field agree that the goal is to provide quality, equitable education for all students while working to eliminate prejudice and injustice (Cochran-Smith, 2004; Nieto, 2000). There are three broad goals to which most multicultural theorists ascribe (Banks, 1991–1992, 1992, 1993, 1994, 1997a, 1997b; Cortes, 1996; Dunn, 1997; Grant & Sleeter, 1997; Heller, 1995; Pai, 1993; Pang, 1992; Placier, Hall, & Davis, 1997; Tomlinson, 1992). These goals include teaching stakeholders in schools to appreciate diversity and accept pluralism, reduce prejudice, and infuse the curriculum with multicultural materials and concepts.

Teachers do not feel adequately prepared to teach multicultural topics or to understand differences in behavior, customs, language, and attitudes of students from diverse cultures (Cannella & Reif, 1994; Gayle-Evans & Michael, 2006). Lack of knowledge and understanding can lead to developing stereotypes and perceptions of cultural diversity as being intellectually inferior. Also, teachers often have limited knowledge about and experience with people from cultural/ethnic backgrounds different from their own and with individuals of different racial and ethnic backgrounds (Howard & Nieto, 1999; Sleeter, 2001). This discrepancy may hinder teacher's ability to successfully teach all students.

Most research prior to the 1990s, according to Bryk and Thum (1989) and Coleman (1966), focused on the lack of success of diverse students. One study (Irvine & Jordan, 1993) demonstrated that teachers did not perceive teacher-related and school-related factors as important causes of their students' failure. Today, however, schools and teachers are held accountable for the low proportion of success by diverse students. Many theorists and researchers (Bull, Fruehling, & Chattergy, 1992; Darder, 1993; Gay, 1995; Grant & Sleeter, 2007; Ladson-Billings, 1994) believe that for schools to be successful, teachers need this knowledge base and change in their beliefs and dispositions toward race and ethnicity. Change in teacher beliefs is essential. Unfortunately, when new ideas or strategies are presented that are not compatible with or that challenge their beliefs, teachers generally dismiss the ideas on the grounds that they are too theoretical, too impractical, or simply wrong (Raths, 2001). The required changes in teacher beliefs are defined as "fundamental changes which seek to reform core normative beliefs about race, class, intelligence and educability held by educators and others involved with our schools" (Oakes, Welner, Yonezawa, & Allen, 1998, p. 968). These changes are difficult as they require that teachers examine their beliefs about students, equality, race, and cultures. Fortunately, these attitudes and beliefs can be altered (Diez, 2007).

Teacher beliefs and expectations about students and their abilities along with teachers' personal prejudices impact their interactions with students and their ability to learn. Multicultural theorists and researchers (Ahlquist, 1991; Brown, 2004; Eberly, Rand, & O'Connor, 2007; Gayle-Evans & Michael, 2006; Ukpokodu, 2004; Villegas, 2007) are particularly concerned with teachers' and administrators' expectations that students adapt to the culture of the school. Stanton-Salazar (1997) related that diverse students have to be able to decode the dominant

middle-class construct that lies behind the education they receive in order to be successful. In most cases, he reported, diverse students must adapt an individualistic outlook and give up the collective one that is the basis of how their education occurs at home. This process places an extreme burden on the student. Moreover, researchers have found that diverse students are given the message at school that they cannot be culturally different and expect to succeed (Boddie, 1997; Fordham, 1988; Irvine, 1990; Milligan, 1995; Nieto & Bode, 2008).

Teachers need to understand the nature of the experiences that students bring to school in order to make connections and provide support between learning within and outside the school. Moreover, teachers need to make their delivery system responsive to how diverse students learn. Furthermore, teachers need to know how to make decisions about what is best for their given place, time, and circumstances with respect to cultural diversity. Finally, teachers need to be able to help students identify stereotypes and inaccuracies and to help reduce prejudice (Banks, 2001; Beyer, 1999; Zeichner, 1992).

Teachers who teach from a solid multicultural base demonstrate knowledge of various cultural and ethnic groups, address personal beliefs and attitudes, create safe environments and incorporate multicultural strategies (Cannella & Reiff, 1994; Gibson, 2004; Lipman, 1996; Ladson-Billings, 1994; Nieto, 2000). Studies of teachers who work successfully with diverse learners found that these teachers knew how to create a sense of belonging and identity, identified strengths in students, held high expectations and took responsibility for student learning (Araronsohn, Carter & Howell, 1995; Banks, 2001; Barrett, 1993; Gibson, 2004; Lipman, 1996).

It is essential, therefore, that teacher education programs provide school districts with opportunities for ongoing teacher professional development during time reserved for this purpose. Tatum (1992) developed four strategies for reducing teacher resistance and promoting student development. Her strategies included the following: creating a safe classroom environment for the teachers and students; providing opportunities for self-generated knowledge; providing an appropriate developmental model that teachers can use as a framework for understanding their own success; and exploring strategies to empower students as change agents. Acquiring the frames of reference and points of view of their ethnically and culturally different students through the study of the students' culture as well as knowing ways to apply this knowledge to the school setting helps teachers appreciate cultural pluralism in the classroom as a vital, creative, and enriching phenomenon (Gay, 1992; Gay, 1995; Mahon and Patrick, 1997; Mehan, Lintz, Okamoto, & Wills, 1995). Furthermore, for teachers to be effective in working with diverse children requires appreciating the uniqueness of each family and each child, acknowledging their own cultural biases, seeking new understandings and knowledge of cultures, and developing an awareness of cultural norms (Dennis & Giangreco, 1996). However, no amount of cultural awareness can make up for good teaching skills and instructional techniques as related to issues of cultural diversity.

Many researchers have expressed optimism that reeducating existing teachers and preparing new teachers can effectively change how teachers work with diverse students (Bell, 2002; Gonzalez, 1995; Lucas, Henze, & Donato, 1990; Swisher, 1992; Valli, 1995; Zeichner, 1992). Thus, ongoing professional development of teachers provided by teacher education programs must be an integral part of multicultural education so that teachers appreciate and learn the culture of their students in order to better develop pedagogical methods to help their students be successful.

Five Innovative Strategies That Work

Based upon the research in multicultural education for teachers and the author's experiences as a multicultural educator, five innovative multicultural strategies were utilized in preparing nondiverse teachers to effectively teach diverse students. The five strategies are the following: (1) reducing prejudice and enhancing tolerance; (2) identifying the white identity model; (3) determining white privilege; (4) multicultural infusion; and (5) searching for personal roots.

The success of these strategies in the development of teachers who use multicultural approaches was tested in a study investigating multicultural transformation in teachers (Beyer, 1999). A comparative study of two high schools within a high school district was conducted. One school functioned as the experimental school and the other as the control school. This research involved studying two similar schools and asking the following question: If one school implemented multicultural transformation reform, would that school then have greater success for its culturally diverse students? In this study, success was measured by grade point average, graduation rate, and extracurricular involvement.

This study investigated multicultural transformation professional development over the course of four years in these two high schools and measured the effect on student achievement. Through a content analysis, the schools were compared by the days spent on multicultural education, participation by teachers in a voluntary multicultural course, and the number of articles devoted to prejudice reduction in the student newspapers. The content analysis research method involved using a statistically significant rating. When an item in the content analysis related to one of the components of multicultural transformation reform, a rating was attached based on the proportion of times it had occurred. A numerical rating of "3" indicated that an event had occurred more than 80 percent of the time; a numerical rating of "2" indicated that an event had occurred between 40 percent and 80 percent of the time; and a numerical rating of "1" indicated that an event had occurred less than 40 percent of the time. Moreover, a rating of "3" indicated that there was a statistically strong relation for that item; a rating of "2" indicated that there was a statistically moderate relation for that item; and a rating of "1" indicated that there was a statistically weak relation for that item.

Out of 20 days of required professional development over the four years of the study, the experimental school had 14.5 days (a rating of 2.66) and the control school had 3.5 days dedicated to multicultural education (a rating of .31). At the experimental school, 91 percent of the staff participated in a 10-week graduate-credit multicultural education course (a rating of 3.42), while only 23 percent participated at the control school (a rating of .69). The experimental school had 30 issues of the student newspaper published with articles on prejudice reduction (a rating of 3.21), while the control school had only 5 issues (a rating of .36). This evidence led to the conclusion that multicultural transformation reform among teachers took place at the experimental school and not at the control school.

This transformation also resulted in the culturally diverse students being more successful at the experimental school than the students at the control school. The success of students was based on grade point average, graduation rates, and extracurricular participation. The data from student transcripts on grade point average and graduation, and the yearbooks for extracurricular activities, were subjected to z-tests to determine if the schools were similar during the pretest period. The quantitative data (grade point average, graduation rate, and extra-curricular involvement) were subjected to a two-tailed test of statistical significance. The z-test showed that the experimental school had a higher grade point average on the posttest: $z(508) = 3.56, p < .05$.

The z-test also showed that the experimental school had a higher graduation rate on the post-test: $z(508) = 4.00, p < .05$. Finally, the z-test showed that the experimental school had a higher extracurricular involvement on the post-test: $z(508) = 5.85, p < .05$.

There are five innovative strategies verified by the research discussed in the previous section that helped lead to the success of diverse students at the experimental school. The first strategy is "Reducing Prejudice and Enhancing Tolerance." Gordon Allport (1954), author of the seminal study on the concept of prejudice, argued that in order to reduce prejudice one needs to first understand the concept. This strategy helps educators understand the concept of prejudice so that they may help their students learn about and admit to their own prejudices. If educators begin to admit their own prejudices, face their denial, and approach students with the personal understanding that all people are prejudiced at some degree, they can move with guidance towards acceptance and the first step of tolerance. Educators must move past the shame of being prejudiced by taking action through identification and understanding of the degrees of prejudice so they can mature into more tolerant and peaceful teachers of diverse children. This change is often difficult, as it challenges long-held beliefs and questions competence (Ramirez & Gallardo, 2001).

This strategy works well in reeducating both nondiverse and diverse educators. Anti-racist education, which is an alternative means of dealing with improving tolerance, tends to focus on institutional racism and often leads to the perception that all white people are to blame for the problems of diverse groups in society (Manfield & Kehoe, 1994). Where anti-racist training focuses on the racism of whites, the anti-prejudice work embedded in this strategy assumes that everyone, no matter what their race, is in need of education to reduce prejudice. As a result, there is less resistance from nondiverse educators who resent being singled out as the only people in need of remediation. The result of this strategy is that the educators learn to reduce their cultural biases and prejudices through an open dialogue and honesty between teachers and students.

The second strategy is the "Identifying White Identity Model." While there are currently other versions of this model (Warren & Hytten, 2004), Gary Howard and Sonia Nieto (1999) were the first to conceptualize it. The object of this work is to encourage teachers to open themselves to both new ideas and perspectives. Doing so leads to teachers appreciating diversity and accepting pluralism, and being better able to respond to how diverse students learn. The first step in this strategy is to get teachers to understand that they respond to multicultural or diversity education by assuming a variety of identities. One identity occurs when someone has such an insular view of the world that he or she is incapable of being open to new information. A second identity occurs when someone thinks he or she knows what is best for other people. A third identity occurs when someone believes that racism is embedded in our society that nothing can be done to change society. A fourth identity occurs when someone exhibits a fascination with multicultural or diversity work but does not connect problems to his or her own privilege. The object of this strategy is to call for teachers to become transformative educators, which involves seeking to understand one's own privileges while continuing to acquire new information and participate in open dialogue with others. Through this strategy, the teachers learn to understand and acknowledge their own identity. This provides for open discussion on the way different people see issues of diversity. The object of this work is to encourage teachers to open themselves to both new ideas and perspectives. Doing so leads to teachers appreciating diversity, accepting pluralism, and being more able to respond to how diverse students learn.

The third strategy is “Determining White Privilege” (McIntosh, 1990). Since most teachers are nondiverse, this strategy helps generate the attitudes and dispositions that make it possible for teachers to understand and accept that the experiences of diverse students are different from their own experiences. Until educators are aware that they grew up in a privileged environment, it is difficult for them to understand the experiences of their students. This includes the students’ experiencing rejection of their culture, their mistreatment by society, lack of parental supervision, poverty, and other ways in which students have lived a life different from that of the teacher. Without this training, it is difficult for the teacher to respond to the needs of the student in a way that will lead to the student succeeding in school.

The fourth strategy is “Multicultural Infusion” (*REACH*, 1996). This strategy involves preparing teachers to develop lessons that incorporate multicultural principles. Since classroom teachers are expected to address more curriculum than time allows, infusing curriculum with multiple purposes is one way to cover all that is required. This strategy involves using an interdisciplinary approach so that the teacher covers multiple curriculum areas at the same time. With this approach, the opportunity to infuse multicultural education occurs in every lesson. An additional advantage of this approach is that the students and teachers learn about differences and come to appreciate diversity and accept pluralism. The teacher creates opportunities for students to connect what they know from their culture with the curriculum, empowers students to engage as change agents, and enables students to have the opportunity to learn how to self-direct their education.

The final strategy is “Searching for Personal Roots” (Sleeter, 2008). This strategy helps teachers reconnect with their cultural heritage. They need to acquire cross-cultural competence, which involves understanding their own attitudes, actions, and beliefs and the potential impact on relationships with diverse students. The primary purpose of this strategy is to evoke empathy and compassion in educators for the experiences of their own cultural group and in the end for them to transfer these feelings toward the cultural groups of their students. Often this education involves reviewing the foundations of democracy and social justice. Too often nondiverse groups rationalize that the success of their group occurs without special consideration. When educators learn through this strategy that the experience of their group is very similar to that of the groups to which their students belong, there is a better chance that the attitudes and dispositions of the educators will change toward embracing diversity.

Implementation of Multicultural Strategies

This section provides specific activities that the author has used to reeducate teachers through required professional development in the experimental school during the four years of the study. These five activities exemplify the implementation of the five multicultural strategies and provides ways in which current nondiverse teachers can enhance the learning of their diverse students.

The first activity falls under strategy one, Reducing Prejudice and Enhancing Tolerance. To prepare for the first strategy, teachers read “An Educator’s Guide to Reducing and Enhancing Tolerance” (Beyer, 1996–1997). This article identifies the five degrees of prejudice. First-degree prejudice is separation on the basis of affinity or avoidance of people. Second-degree prejudice is the use of language in an inclusive or exclusive manner. Third-degree prejudice is discrimination in favor of or against a person. Fourth-degree prejudice is violence or the support of violence for

or against people or property. Fifth-degree prejudice is genocide, which occurs when being in favor of one group and hating the other group leads to an attempt to wholesale murder of the members of the other group. After reading the article, teachers in cooperative groups discussed their involvement in each of the degrees of prejudice, whether as a participant or as having had the prejudice used in their favor or disfavor. In the case of the fifth degree, participants shared examples of the prejudice. Next, on chart paper teachers wrote their names under the degree of prejudice and provided a brief description of what they discussed in the group. Once the groups finished the activity, they were asked to volunteer why their name was under a particular degree by sharing their story. Whether they volunteered or not, just the act of having their name next to each of the degrees of prejudice helped them take ownership and was the first step in reducing their participation in prejudice in the future.

The second activity exemplified the strategy of the White Identity Model. After teaching the four identities to teachers through readings, lecture, and multimedia presentation, teachers participated in both small group and whole group discussions and wrote a self-reflective essay on which identity they felt most represented their response to multicultural or diversity education work at the moment. Next, they were asked to devise a plan to move in the direction of a transformative educator. Through this strategy, teachers learned to understand and acknowledged their own identity. This provided for the opportunity to openly discuss the way different people saw issues of diversity. The object of this work was to encourage teachers to open themselves to new ideas and perspectives. This led teachers to appreciate diversity and accept pluralism and to be more responsive to how diverse students learned.

The activity associated with the third strategy, White Privilege, was based on reading and discussing the article “White Privilege and Male Privilege: A Personal Account of Coming to See Correspondences Through Work in Women's Studies” (McIntosh, 1988) and completing a survey. Drawing on this article, this researcher modified a survey created by the California Teachers Association based on situations to which being privileged or not being privileged would likely or unlikely be true. With a partner, teachers responded to the situations by marking whether the situation was always true (5), sometimes true (3), or seldom true (1). The tally of the scores indicated that the higher the score, the more privileged the participant. Having teachers volunteer to explain their scores generated discussions that led them to better understand their privileges or lack of privileges. Small group discussions and a self-reflective essay completed the exercise.

The fourth activity was used to demonstrate the Multicultural Infusion strategy, which involved preparing teachers to develop lessons that incorporated multicultural principles. The first task of this activity was to educate teachers on the following multicultural principles: multiple perspectives, culture sharing, bridging communities, enhancing tolerance and reducing prejudice, and promoting social justice. Once the teachers understood these multicultural principles, they were ready to construct lessons that embedded one or more of these principles in the curriculum they taught. Where lessons already existed, the process involved altering the lesson. The first step in the process was to determine which multicultural concept to highlight, based on the following considerations: the significance and importance of the principle, the prior experience of students, and the goals of the lesson. The second step was to ensure that before the teachers actually taught their lessons they knew how to provide direct instruction of the multicultural education concepts to their students. When the teachers prepared their students, they introduced the concept, brainstormed with the students as to what they believed the principle meant, categorized the meanings the students raised, identified relationships between

the categories, synthesized and defined the principle in terms of the student understandings, and discussed the application of the principle to the lesson. The third step involved infusing the multicultural principle into current lessons by identifying the original lesson and goals and activities and the multicultural principle. Next, the teachers were taught to incorporate the multicultural concept into the activities and goals. Finally, they needed to identify the resources and social action component if appropriate. Step four involved teaching the lesson and checking to see if the students could identify the multicultural principle. Step five involved evaluating the lesson and repeating steps three to five, analyzing for student understanding, generalizability, and transference.

The first step in the activity used to exemplify the final strategy, Searching for Personal Roots, was to invite guest speakers to share their personal roots. These presentations prepared teachers for a research assignment that helped them reconnect with their cultural heritage. The benefit of this assignment was that they would acquire cross-cultural competence, which involved understanding their own attitudes, actions, and beliefs. This in turn would lead to better relationships with their diverse students. Areas that could be explored and included in the research report were the following: history of the cultural group to which the candidate belonged both in this country and the country of origin; major contributions to the world or to this country, including famous persons from the group; different perspectives of the stereotypes and generalizations as related to their cultural group; and family traditions, customs, and heritages. When the teachers investigated their immigrant history, they addressed a series of questions. They investigated why their ancestors left their home country (for those with immigrant pasts) or their region/state/community (for those with migrant pasts); what the “pull” or “push” was involved in the move; what life was like in their family’s original home; what type of community their family came from (village, town, city, countryside); where their family first settled when they made their move; how their family was treated upon arrival; how long it took their family to assimilate to the culture of their new home; and what customs, traditions, or beliefs from the original heritage still existed in their family. The result of this work was greater understanding from the teachers of their own past and a greater appreciation for the heritages of their students.

Conclusion

While there have been other studies of multicultural strategies used to prepare teachers for diverse classrooms, this study provides strategies that have been verified by research. More important, these innovative strategies have proven successful at reeducating teachers, which in many cases is harder to accomplish than training new teacher candidates. However, while the evidence for the success of the use of these strategies is robust for teachers already in a school setting, there is no evidence as yet to support that these strategies work for educating credentialing candidates in universities. Currently, these strategies are being used in university classes for teacher candidates, and data are being obtained to verify the success of these strategies in training candidates to become teachers. Utilizing these strategies, these courses have received high evaluation from the teacher candidates. Once the data have been collected, evidence will be available to determine the success of these strategies in educating teacher candidates for diverse classrooms. The research to verify that strategies that work shared in this article is just the beginning of studies that need to be done to ensure that teachers are qualified to successfully teach diverse students. This study is important for generating future research that

compliments and extends the continued study of successful teacher strategies to prepare nondiverse teachers for diverse classrooms.

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About the Author

C. Kalani Beyer
 PhD, Dean
 School of Education
 National University
 La Jolla, California
 cbeyer@nu.edu

Major research interests: History of education (Hawaiian and Native American) and multicultural education.

Can Balanced Bilingualism Be Achieved in a Multicultural Society? Second and First Language Implications

Peter Serdyukov

Abstract

Based on practical needs of multicultural, multilingual societies and using existing theories and practices of bilingual education as well as innovative approaches in second and foreign language teaching and learning, we propose some realistic steps for establishing balanced bilingualism, raising efficiency of SL teaching and learning, and improving teacher preparation.

Key Words

Bilingualism, interculturalism, asymmetry, second language, foreign language, instructional methodology, innovative approach, intensive learning.

Introduction

Globalization brings people and cultures together, producing, among other things, various asymmetries (Note, 2009). Second language instruction in countries accepting immigration has always been a complicated asymmetric issue affecting the newcomers' first language and also the host population's second or foreign language learning, in addition to causing intercultural conflicts and involving high costs. Second Language (SL) instruction falls into several categories: ESL (English as a Second Language), EFL (English as a Foreign Language), and FL (Foreign Language). For the purposes of this paper, ESL refers to the teaching of English to non-native speakers within the United States. EFL refers to the teaching of English to non-native speakers in other countries where English is not the first language. So, the difference between ESL and EFL is primarily environmental. FL refers to the teaching of any languages other than the first language in any country; thus, in the United States it would include teaching of languages other than English to native English speakers. Often unsuccessful, lengthy, and cost-inefficient ESL, EFL, and FL learning practices persist while there are proven approaches in SL methodology that could be used effectively at all levels of language study and across all three of these categories. Despite their differences, which are primarily environmental, all of these approaches have a common methodological foundation, which allows us to apply the best practices of some to all of the others. This paper discusses the interaction between the first and the second languages within the context of interculturalism, analyzes issues facing second language learning in the USA (ESL and FL), proposes practical ideas for improvement, and offers realistic suggestions for developing a balanced bilingual society.

Balanced Bilingualism

As citizens of practically every country in the world come from many different ethno-cultural and linguistic backgrounds, it is important, based on interculturalism, to acknowledge and respect cultural and linguistic differences among ethnic groups in each country and help members of these groups maintain their identity (Bennett 1998; Storti 1994). Yet it is equally important that these groups acknowledge cultural and linguistic traditions of the host country.

Interculturalism can become a platform for mutual and reciprocal relationships among various cultural groups inhabiting the same country.

To ensure peaceful and comfortable life in a multicultural society, all groups in a particular nation have to accept the need for some unifying principles and forces that ensure their well-being and allow this country to maintain its identity as distinct nation. One of these principles is coexistence, and one of the major forces is a common language. We claim that this should be a two-way process; that both the accepting majority and integrating minority enjoy mutual respect for their cultural traditions and languages, and all accept the law of the country. We contend that it is possible and desirable to maintain one's individual cultural and linguistic identity while at the same time participating fully in the accepting country's life in a common language together with other citizens who may represent the majority or come from other ethnic groups. In other words, we argue for additive bilingualism as a goal for the country's citizens, regardless of their first languages, and claim that a symmetrical, balanced model of a multicultural society is the ultimate goal for a prosperous nation (Kinberg & Serdyukov, 2006).

A balanced bilingualism, in our view, is a situation where it would be possible for the majority of a society's members to be fully proficient in two languages—in their first language and in an SL, whether it is a majority language or a language of some integrated cultural group—actively using them in any life situation, easily passing from one language to another without confusing different linguistic systems. It could also include a FL.

Balanced bilingualism is difficult to attain and maintain because of a number of social, psychological, and economic factors, as well as political ones. The question thus arises: Are there enough advantages to this goal to pursue it? Some studies indicate that there are cognitive advantages to balanced bilingualism. For example, Lee (1996) shows that bilinguals are able to think more flexibly about language, have stronger metacognitive and metalinguistic skills, and are better able to achieve control over their cognitive processes. As Latham (1998) points out, this research is by no means universally accepted. However, the preponderance of research findings points to the likelihood that balanced bilingualism brings few cognitive disadvantages and probably confers many cognitive advantages.

There is also research that indicates that balanced bilingualism offers sociolinguistic advantages. For instance, Kinberg (2001) found that students in a two-way (Spanish/English) immersion program were comfortable communicating with peers, whether the language used was English or Spanish. These students also had friends from both cultures and saw cultural awareness as an advantage of knowing another language. In an earlier study, Cziko, Lambert, and Gutter (1980) had found that students in immersion programs perceived fewer social barriers between themselves and the target-language culture over time. If this research is correct, then it may be that environments, such as immersion programs that promote the use of both languages, also promote the development of social skills and communicative competence (e.g., Hadley, 2000) in both languages. The Canadian experience in establishing a bilingual society is another example of the practical implementation of this concept.

Besides the cognitive and social benefits of bilingualism, there are also economic benefits. For instance, in many cases, the SL has an instrumental and pragmatic value, so that bilingualism results in such economic advantages as admission to prestigious universities, higher-status employment, access to certain government positions, and a wider variety of employment options (e.g., Abu-Rabia, 1999; Wee, 2003).

As may be seen from this discussion, bilingualism likely confers many benefits on the individual. Does it also confer benefits on a society? We argue that bilingualism does indeed offer advantages to a society in two important ways.

One way in which a society benefits from bilingualism is by tapping into the skills and abilities of all of its members, regardless of first language. For instance, the demographic situation in the United States and many European countries is changing dramatically. The increasing diversity of U.S. society in particular makes it arguably impossible to ignore the range of cultures, languages, and ethnic backgrounds that now make up this society. One important way to utilize the skills, knowledge, and economic potential of those who emigrate is to ensure opportunities for them to function in their own language. This is accomplished best in a society that embraces bilingualism. In other words, as Hanson (2003) points out, a society functions best when, instead of marginalizing its linguistic minorities, it includes them at all levels. Balanced bilingualism promotes such inclusion. But the major advantage of such an approach is peace and well-being of the whole nation.

Another important way in which societies benefit from bilingualism is related to the increased globalization of most aspects of human life, but especially communication. Businesses, governments, and other organizations are widening their horizons to win world markets. Moreover, businesses are increasingly taking a more global perspective with respect to decisions in such areas as factory locations, relocation of personnel, and advertising. This perspective brings with it the need to communicate with members of other language communities (e.g., LoBianco, Liddicoat, & Crozet, 1999). Effective communication is greatly facilitated by an understanding of other cultures and languages, and the consequences of not having such an understanding can be grave.

Models of Language Acquisition

ESL and FL education² serve as a bridge between various nationalities and cultural groups within the nation. ESL in the U.S. is going through a tumultuous process under the bilingual education umbrella because the political forces and educational principles that influence policy are often at odds concerning program goals. Bilingual education focuses almost exclusively on SL learning for immigrants while leaving English-speaking students outside of this domain. For example, Krashen's additive model did not focus on the concept of bilingualism for native English speakers (Krashen, 1996). This asymmetry is enhanced by commonly limited cooperation between two instructional methodologies, SL and FL, and very few if any collaboration between SL and FL educators. Mass FL education outside the U.S., however, often demonstrates outstanding results though generally produces uneven outcomes depending on the instructional methodology applied and other factors. In Europe, for instance, foreign languages, sometimes up to three, are a common practice in school curriculum (Kinberg & Serdyukov, 2006). To be multilingual is a tradition in many countries.

There are many reasons for ineffective SL learning. One explanation is that language is a specific system that is extremely difficult to understand and interiorize. It is well known, however, that all languages have certain similarities based on their function to convey meaning

² We differentiate between second and foreign language learning; however, in this context they both perform the same connecting function.

and be used for communication. Therefore the acquisition of the SL, at least for children, should be similar to the first one irrespective of the language type.

Assuming that first and SL acquisition are similar processes implies a corresponding similarity in the underlying language acquisition structure. That is, it suggests that the same understanding of language that informs first language acquisition also informs SL acquisition. Cummins (2001) developed a model of underlying proficiency that captures this notion. He argues that, rather than first and SLs being informed by a separate underlying proficiency (SUP), both of the bilingual's languages are informed by a common underlying proficiency (CUP).

Another model of language acquisition, Universal Grammar (UG) (e.g., Chomsky, 1968; Haegema, 1994), also assumes the similarity of the processes common to first and SL. According to this theory, there is a set of universal principles that underlies all languages. Languages vary with respect to the ways in which those principles are instantiated; however, they do not violate them. Within the UG framework, learning an SL is a matter of learning the ways in which the target language parameterizes the principles that the learner already knows from his or her first language. Similar, to the CUP model, the UG model assumes that the basic linguistic knowledge that lays the foundations of the first language also underlies the second. If this is true, then Chomsky's model, like Cummins' model, predicts that second-language academic skills can be enhanced by the development of already-existing first-language academic skills. It is a well-known fact that every next language is easier to master; the problem is usually the first SL/FL. Therefore, the difference between the first and SLs should not be a significant interfering factor for learning another language.

There may be individual issues affecting learning an SL. Commonly mentioned issues relate to student anxiety in the FL classroom, lack of effort, low motivation, poor language learning habits, and so on. Schwarz (1997) identified three other factors: learning disability, undiagnosed learning disabilities, and a specific language learning disability. Sparks and Ganschow's Linguistic Coding Deficit Hypothesis (Sparks & Ganschow, 1993), states that difficulties with FL acquisition stem from deficiencies in one or more of the three linguistic codes in the student's native language system, whether phonological, semantic, or syntactic. These deficiencies result in mild to extreme problems with specific oral and written aspects of language and can be addressed. The first approach is that if, for instance, the phonological code is the problem, the sound system of the target language must be explicitly taught. The second is to adapt the FL learning to principles of instruction known to be effective for students with learning disabilities.

From a pedagogical point of view, the inability of ESL learners to reach SL academic proficiency in a reasonable time, commonly only by the seventh year of study (Cummins 1982), speaks poorly of the instructional approach used for the purpose. There are numerous examples demonstrating fast and quality learning outcomes in FLs, which can be attributed to effective methods and efficient teachers. One of them, common in many countries, is a standard one-year only program to prepare foreign students for academic success in university classes taught in the national language. Massive bilingualism in EU is another example. Psychologically and methodologically, if a person is proficient in the mother tongue, there is no excuse for him or her not to be proficient in another language, except for lack of purpose, motivation, and a good teacher.

The linguistic environment in FL or ESL learning also plays a major role that cannot be overestimated. It will be discussed below.

Alternatives to Current Methodologies

What we know from research and practice of SL teaching and learning, nevertheless, points to the fact that the main problem is not so much the factors identified above but the instructional methodology. It would be beneficial to look at what FL methodology has accomplished so far. There are numerous proven facts demonstrating that an FL can be learned effectively and in a short time. One of the most documented and researched approaches is intensive FL teaching (sometimes also called accelerated) that demonstrates outstanding outcomes. Different modifications of this approach have seen an increasing use since 1960s. We believe, however, there is a marked difference between these two terms, discussed in our “Accelerated Learning: What it is It?” article (Serdyukov, 2008). Here we will use the term “intensive” to refer primarily to educational systems based on Lozanov’s suggestopedia (Lozanov, 1978; Kitaigorodskaya, 1995; Serdyukov & Serdyukova, 2004). From these sources the following major foundational principles of intensive FL instruction can be derived:

- ∞ Learner-centered approach (manifested in course objectives and practical outcomes, learning process focus, choice of learning activities, communication mode, instructor attitudes and performance in the class).
- ∞ Specific structure and organization of the course and its content that makes it a consistent, “whole” experience for students.
- ∞ Effective content presentation in various formats and modalities.
- ∞ Situated learning that uses real-life situations as the basis of all learning activities and, especially, in developing professional competence.
- ∞ Immediate application of new knowledge in authentic situations.
- ∞ Continuous active collaboration, communication, and cooperation among students in multiple small and big group activities.
- ∞ High level of intrinsic motivation developed and constantly supported through emotional involvement of each student in team work and in learning process.
- ∞ Instructor’s suggestive, supportive, and efficient teaching style, incorporating relentless involvement with the class, and immediate, objective, and stimulating feedback.
- ∞ Systemic use of educational technology in classroom and home work for content acquisition and skill development, for communication and collaboration, and for maintaining students’ high level of cognitive, physical and emotional state during the course.
- ∞ Application of suggestive techniques, such as relaxation, ritual structure of classroom activities, positive environment, emotional involvement and music.
- ∞ Combination of intensive work and total relaxation.

Application of intensive FL methodology in any environment and at all levels demonstrates not only that people can effectively develop proficiency in a target language in a relatively short period of time, but also that instructional methodology and its effective implementation are a primary factor of both success and failure of FL teaching and learning. SL instruction, regrettably, does not fully use the advantages of the up-to-date FL methodology that has a long and rich history of effective learning outcomes. We know, however, that student success in developing proficiency in another language greatly depends on the pace of the learning: It is quite possible to focus on this process for a limited time (Csikszentmihalyi 1982)

even if it is time and labor consuming, and students usually stay in concentrated intensive classes until successful completion, while in traditional classes the majority of students fail and drop out due to the drudgery of extended learning.

If a student with a negative experience in learning an FL at school and in the college but without learning disability is placed in an intensive class, it is almost certain that he or she will reach the expected level of proficiency. It is our experience, both in learning in an intensive French class and in teaching intensive EFL classes, as well as observing a great number of intensive classes in these and other languages, that student failure to accomplish the course objectives happens rarely. Lack of success can be explained almost exclusively by improper application of the method. Intensive learning, to produce the desired effect, truly requires a systemic approach in its implementation, a specially prepared instructor, a classroom designed and equipped according to the method's guidelines, a course created in line with the principles of intensive learning, and a consistent realization of its fundamental rules. Occasional use of even powerful elements of this methodology cannot make the expected outcomes possible.

Along with the integration of innovative FL methodologies in SL learning, a great enhancement to the pursuit of balanced bilingualism could be a free national Internet-based program that would help anybody develop practical language skills via making effective use of advanced methodological approaches together with current technologies, such as streaming video, computer applications, linguistic games, simulations, automated tests, wikis, and blogs. It should be available for schools and individual students and serve as a gathering point for all ESL and FL learners.

Speaking about children, it is well known that they acquire conversational proficiency in second languages surprisingly fast and without too much effort. Their major problem is developing academic language proficiency that is a prerequisite for their successful general education (Cummins 1981). Various instructional models have been used for achieving this proficiency (e.g., pull-out, immersion, two-way maintenance, etc.). In many cases, they were inefficiently applied, such as the pull-out approach which could have produced fast results due to the concentrated focus on the SL. Evidently, methodology used in teaching SL learners in the pull-out classrooms is usually ineffective. International FL practices that are typically pull-out models in which students are commonly isolated from their first language during learning produce outstanding outcomes. Immersion in the target language is by far the most effective way of learning a FL. Yet, in the U.S. the preference for ESL is the two-way maintenance model because it is intended to preserve students' first language, which undoubtedly slows down SL development.

The universal rule of effective FL learning states: *Exclude the students' first language as much as you can, create a prevailing target FL environment in the classroom, help students learn to speak and think in the target language—and the results will come soon.*

Certainly we agree there might be situations when the first language use is acceptable in the SL classroom, such as when it is necessary to translate a complicated foreign message or a difficult word into the first language for convenience's sake; when it might be more efficient to give parallel translation of the text at the initial stage of communicative competence; or when classroom management issues require clear explanation in the native language. Yet, from the point of view of communicative approach, the dominant linguistic environment in the FL classroom must be in the target language. Successful examples of total immersion in bilingual families abound where one of the parents speaks exclusively one language and the other parent speaks the other; the result is a bilingual child. There are also interesting experiences in adult

education when students are isolated from their first language both physically (e.g., on a ship) and situationally (a ban on first language imposed and strictly maintained 24 hours a day), which leads to enormous progress in communicative competence in a matter of a few days (Serdyukov, 2008). This is the most radical case, yet it demonstrates that immersion in the target language by excluding the first language does serve the purpose. Regrettably, this opportunity is often underestimated by the educators.

Nation (2001) discusses this issue, suggesting several reasons why learners use the L1 when they should be using the L2. These reasons include low proficiency in the L2, the naturalness of using the L1 to do certain jobs, shyness in using the L2, or simply a lack of interest in learning the L2. Here are two most important of several ways of dealing with these obstacles to L2 use:

- ∞ Make the L2 an unavoidable part of the task.
- ∞ Inform learners of the learning goals of each task so that they can see how using the L2 will help them achieve a clear short term learning goal.

Nation (2001) also discusses a balanced approach in which he sees a role for the L1 but also recognizes the importance of maximizing L2 use in the SL classroom, which supports our view of concentrating on the target language for faster results.

Lack of success or little success in developing SL proficiency can thus be explained by social, cultural, and pedagogical factors. First of all, society must be interested in supporting bilingualism and create opportunities for all people to learn a SL. It is helpful to compare the EU and U.S. societal attitudes: Whereas in European countries an FL is compulsory in all schools, and in some countries there are already two or even three mandatory FLs, in the U.S. only ESL is required for the non-English speakers alone, while an FL for native English-speaking students remains a matter of choice or availability in the school curriculum. Culturally, learning an FL is a tradition in some societies; for example, Russians have always believed that to be a cultured person one has to know at least one FL. In the multilingual Europe, speaking in several languages is a clear necessity. Americans, on the contrary, customarily believe it is not worthwhile to learn an FL, as the whole world speaks English anyway (Bernhard, 1998). To succeed in integrating balanced bilingualism the U.S. society has to develop the concept of SL value for all its members.

Environmental Factors Influencing Second Language Learning

While additive bilingualism benefits all citizens, learning a new language is important for an individual for a variety of reasons that depend on whether one is a native or a non-native speaker of the dominant language. For the native speaker of English in the U.S., learning a new language affords greater cultural awareness and more professional opportunities, among other advantages. For the non-native speaker of English in the U.S., learning English is a matter of survival. Exactly how does one maintain one's own (non-English) linguistic identity in a society in which English is the language of business, education, and government? We claim that the family and ethnic community should play a crucial role in the process of becoming bilingual, supporting bilingualism instead of restraining it by either approving the first language alone or, on the contrary, stimulating only SL use. Children from families that support additive bilingualism will

be more likely to achieve a successful balance between individual and national identities than will children from families that do not support it. We are also convinced that the view that SL proficiency should take many years to develop is counterproductive and in disagreement with contemporary methodological theory and practice.

Language environment plays an important role in the extent to which languages influence one another. However, its influence is often mitigated by other factors, one of which is the language of the family, home, and local community. It is logical to conclude that, in this case, the effect of family, home and language community alleviated the fact that these participants lived in a second-language dominant community. This suggests that family and cultural community may have a strong influence on the degree to which SL influences first language.

We posit at least six major interrelated factors that influence the balance between first and SL use: (1) family (i.e., the support and use of the first language by parents and other family members); (2) community (community-based activities and learning); (3) houses of worship (teaching and conducting religious services either in the first language or in both languages); (4) mass media in the first language (e.g., ethnic newspapers, TV, and radio); (5) reading (books and other printed material in the first language); and (6) school or workplace (training for and performing on the job in both languages) (Kinberg & Serdyukov, 2004).

We argue that the more environments in which the first language is used, the weaker will be the influence of the SL, and vice versa. If we define balanced bilingualism as the ability to use both languages with about equal proficiency in about the same number of contexts, how can we help SL learners achieve this goal? If our model of balanced bilingualism is correct, the greater the number of contexts in which one uses a language, the more proficient one will be in that language. So, for instance, in an environment in which the SL is dominant in most contexts, maintenance of the first language is enhanced if it is used within the family, classroom, first-language community, house of worship, and so on. In an environment in which the first language is dominant, the SL is enhanced if, besides in the outside world, it is used in the classroom and supported by the family.

One practical example of how this may be accomplished is evident through the use of a two-way bilingual program. In such a program, the first and SLs both serve as the medium of instruction; the language of instruction varies by day, by time of day, by content area, or (where there is more than one instructor) by instructor (Kinberg, 2001). As we know, these programs offer the opportunity to develop and maintain proficiency in both languages, since both are used in a variety of contexts. Even if a particular classroom is not designated as a two-way bilingual classroom, it is certainly possible to plan activities, events, and projects that make use of more than one language. This approach is more efficient, however, in the advanced stages of SL development. The initial stages should be as intensive as possible to boost the students' proficiency to the sufficient level of language proficiency that will ensure his or her successful and prompt integration in the mainstream educational classes.

Another way in which we might promote proficient balanced bilingualism is through community involvement. For instance, in the case of a second-language-dominant larger community, the first-language community might attract people to the events that are conducted in the first language. Likewise, in the case of a first-language dominant community, those who are learning a SL or FL might hold events that take place in that language (Kinberg & Serdyukov, 2004).

Conclusion

SL learning must be a two-way process, like a two-way maintenance bilingual education model that requires a SL to be developed simultaneously with maintaining the first language for all non-English speaking students. So, in promoting bilingualism, society has to be fair and support SL learning not only for immigrants but also for the local population. Unfortunately, this is not the case, because it is often influenced by political factors. A society can be peaceful, successful, and equitable to its members only if it is balanced. Any imbalance, whether caused unintentionally or deliberately, when dictated by special group interests, leads to the societal imbalance that immediately creates a tension due to the shift of equilibrium and dooms any promising progressive initiatives. This must be understood by the governments and by all cultural groups co-existing in a nation and must be explained to all members of the society. No one can reap a benefit at the expense of others for a long time; eventually, it will be revoked.

Therefore we can identify four major goals in attaining national balanced bilingualism:

- ∞ The concept of balanced, symmetrical bilingualism and bilingual education for all citizens has to be accepted and become a part of the national social order.
- ∞ Schools need to adopt effective instructional methodologies and technologies that ensure fast and productive SL and FL development.
- ∞ The efforts to use existing innovative approaches or design more advanced ones should be enhanced.
- ∞ To implement new learning models, teachers capable of producing tangible outcomes ought to be prepared. This can be done by updating existing teacher preparation programs, integrating in them effective FL methodologies, and offering professional development events conducted by experts in innovative learning.

Integration of the principles and practical recommendations presented here may help improve SL learning outcomes and reduce the time for developing proficiency, thus producing both educational and economic effects while helping to more expeditiously integrate immigrants into society. This would significantly benefit social and intercultural relationships within the nation.

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About the Author

Peter Serdyukov

Doctor of Pedagogic Sciences, PhD, Professor

Department of Teacher Education

School of Education

National University

La Jolla, CA

psurdyuk@nu.edu

Research interests: Distance education, online learning, adult learning, accelerated and intensive learning, instructional design, ESL methodology, bilingual education, professional development

Language as Tool for a Global Education: Bridging the Gap Between the Traditional and a Global Curriculum

Gladys N. Focho

Abstract

Students in developing countries such as Cameroon are being taught the hard facts of academics, oblivious of the importance of a global education for global citizenship. Features of a global curriculum such as cross-cultural awareness, global issues, universal values, critical thinking, and experiential learning are minimized in the official curriculum. This paper sets out to identify what constitutes a global education curriculum and how it could be integrated in English language teaching without jeopardizing the official curriculum. This is possible because English is not subject specific, permitting the use of material from any subject area to teach language skills.

Key Words

Gglobal education, global curriculum, global citizenship, global issues, integrated learning, official curriculum, content proper, content carrier

Introduction

The debate on global education is an ongoing one, and the benefits of such an education can hardly be overemphasized. With the world becoming a global village and with high job mobility across countries and continents, students who are the future generation should be global citizens capable of living and working effectively anywhere in the world that is characterized by ethnic diversity, cultural pluralism, and interdependence. Conversely, people must be able to accept and tolerate people of other cultures in their midst. Furthermore, a global citizen should be conscious of global issues important to the planet and not only one country or region and should be able to see the interrelatedness between global and local issues and relate global issues to local contexts. Such examination of issues and events from different perspectives (perspective consciousness, or multiple images of the world) helps people understand how the world really works and how their actions affect others far away and vice versa.

It is also vital for students to be able to examine their own values and attitudes and develop knowledge and skills to fight prejudice and discrimination and to participate actively in a global community both at the local and international levels (Osler & Starkey, 2005; Roux, 2001). Therefore, it becomes imperative for students to be educated to become global citizens with regard to cross-cultural sensitivity, awareness of global issues, cultivation of universal values, development of critical thinking skills, and experiential learning. This is the essence of global education. It is the education of the whole child with special emphasis on the affective domain often minimized in the regular curriculum. Students need to develop empathic understanding for people of other cultures and concern for what is happening around the world. In the introduction to her book, Suarez-Orozco (2007) underlines the gap between what is taught in schools and the realities of the world. A global approach to education is an attempt to bridge this gap.

What, then, are the implications of a global education? Why do teachers not include it in their teaching programs, and how can it be integrated in the school curriculum?

The English Class and Global Education

There is still a controversy as to why the English class should be singled out for global education. Some skeptics believe it is a storm in a teacup, since other disciplines address global issues. But this is not evident in curriculums across nations. In the Cameroon school system, for instance, the regular curriculum as defined by the Ministry of Secondary Education comprises single subjects such as biology, chemistry, math, history, geography, economics, citizenship and English language. The observation is that aspects of global education appear in some subjects at different levels as relevant to the course in question. Biology, for example, covers HIV/AIDS, malaria, and other health issues; in history is found issues of war, peace, and conflict resolution; geography highlights natural disasters and environmental protection; economics deals with world economies, poverty, and food security; and citizenship may cover such issues as human rights, social justice, and community service. English, French, Spanish, and German are the only subjects that may contain a lot of global issues in the form of comprehension passages or in prescribed literature textbooks.

However, despite attempts to include global issues in the school curriculum, it is not done in a conscious or systematic manner. The evidence is that many other aspects of global education remain conspicuously absent or dormant. Some examples are gender and discrimination, peace education, critical thinking, and universal/moral values. Moreover, the Anglophone subsystem of education in Cameroon tends toward specialization, permitting students to concentrate on only a few subjects of their choice at a higher level. This diminishes the opportunity for a continued global education as contained in a wide variety of subjects. English and the other languages remain the only universal subjects for a possible continuity of global teaching and learning. Recalling what Jacobs and Cates (1999) state, global education should be a regular and consistent part of the curriculum and not thrown in randomly. This can be achieved in the language classroom.

I agree with Maley's (1992) observation that some English textbooks (as is the case in Cameroon) treat global issues superficially, dwelling more on the linguistic aspect. Yet it is evident that English (or any language class) offers the ideal opportunity for the realization of a global education. Teachers must be able to seize the said opportunity to integrate global issues in their teaching. Naturally, language teaching/learning is incomplete without a social context, given its role as a factor in human social, political, and economic behavior. And because language is not subject specific, it provides a convenient context in which to discuss topics of concern to students and address all global issues. The "content proper" (which is essentially grammar and vocabulary and the language skills) is usually taught using the "content carrier," which consists of issues in everyday life (Medgyes, 1998). This implies that any text or subject matter could be used as a basis (content carrier) for teaching the content proper and not just those topics found in the textbook.

Silver (1991) and other experts in content-based language teaching buttress this point of using a content to teach language skills. To illustrate, take the grammar point *until*. To contextualize this point, it is not enough to say "You won't watch TV *until* you do your homework." The teacher could follow up with a global issue such as gender as content. Discussion on gender issues can lead students to say: "There won't be gender equality *until* girls are given equal opportunities to succeed."

According to Cates (1990), schools, especially in developing countries, focus on rote memorization, are tied to national syllabuses, and succumb to exam pressures, thereby

encouraging passive learning. Such an approach stifles active learning, critical/creative thinking, and the development of problem-solving skills that are aspects of global education. But the very nature of English language teaching permits a variety of activities that can be exploited to enhance the above. Such regular activities include dialogues, role plays, simulations, debates, speeches, essay writing, creative writing, group/pair work, projects, and interviews (Jacobs & Cates, 1999). In addition, the English class provides an “open space” that is nonthreatening where students can feel free to express themselves, think critically, and question assumptions and traditions (Tarasheva, 2005). This is in accordance with the OSDC (Open Space for Development and Enquiry) approach developed by proponents of development education. This approach encourages students to seek alternative or new but viable solutions to solve the world’s problems.

Another rationale for using global issues as content in language teaching is that it reduces boredom and monotony. Many teachers, such as Tarasheva (2005), experience some hostility from students toward recurrent topics. New topics and recent happenings can naturally find their place in the language class and inject new vitality in the students. The renewed interest in varied subjects in the English class observed by Prodromou (1992) in the nineties is still sustained today. Students still show more interest when content comprises relevant and burning issues.

Moreover, Cates (1997) and others believe there ought to be a reason why English is thought of as a foreign language (EFL), a second language (ESL), or to speakers of other languages (ESOL). This school of thought proposes the rationale for teaching the above should be global education, similar to the idea of content and language integrated learning (CLIL). This idea appears to fall in line with other aspects of English language teaching such as English for academic purposes (EAP), English for specific purposes (ESP), English for science and technology (EST), English for business and economics (EBE), and a host of others. The purpose of EFL, ESL, or ESOL should be that of humanizing English language teaching (Maley, 1992) through global education.

Thus English language teaching has a flexible content that gives room for a mixed pedagogy and curriculum and a holistic dimension to global education (Marshal, 2007).

The Global Curriculum

Some champions of global education propose that a global perspective be incorporated as a dimension that runs throughout the teacher education curriculum to allow all teachers to have a grasp of its content and how to integrate it in their courses (Bruce, Podemski, & Anderson, 1991). Others believe it should be a subject on its own with a defined syllabus. What obtains in teacher education in Cameroon is the absence of an integrated approach to training on global education.

The current practice in Cameroon, as already established, is that some topics are added in the program as relevant to specific courses. Consequently, many teachers have a limited view of what constitutes the global education curriculum as a whole, since it is not fully acknowledged in the teacher training program. For this reason, it was necessary to make a synthesis of what is sometimes referred to as the global curriculum.

Cross-Cultural Awareness

One of the goals of global education is cross-cultural awareness and sensitivity. As Roux (2001) says, students should be aware of specificities and similarities in other cultures, traditions, religions, and beliefs different from their own. Students who understand that a different culture is not necessarily bad, inferior, or superior become more tolerant of others. They learn to view issues from a multidimensional perspective while harnessing those issues that cut across cultural barriers. Psychologists believe that strong cultural misunderstanding and complexes inevitably lead to high levels of cultural intolerance, hatred, tribalism, racism, conflicts, violence, and eventually war and different forms of killing. Multicultural education recognizing cultural diversity and these differences common in our classrooms today is a good starting point for such education (Banks, 2008). This is particularly true in many African countries with a plethora of tribes often leading to tribal tensions, wars, and genocides.

Cross-cultural awareness, therefore, helps correct misunderstandings of different cultures, fosters cross-cultural cooperation, and forms global citizens who can face everyday challenges of the current society characterized by a culturally diverse, multilingual, and globally interconnected world (Gay, 2000; Merryfield & Wilson, 2005). It teaches young people to avoid stereotyping others and simplifying their cultures. It also helps youths dissipate exotic views of themselves and their own cultures and to simply see themselves as part of humanity. The emphasis is on appreciating beauty in diversity in the human race by viewing the world with a cultural lens.

Global Issues

Another emphasis of a global education is the awareness and understanding of burning issues and events that may affect or have the potential of affecting our own lives and the lives of people around the globe. It is being aware of the state of the planet with regard to environmental protection and sustainable development, globalization and world economies, human rights and social justice, gender and discrimination, conflict resolution and peace building, population and food security, democracy and good governance, health, sanitation and HIV/AIDS, rural development and poverty reduction, war and natural disasters, uses and misuses of ICTs, volunteering and community service, and a host of others. Students must therefore not only focus on knowledge acquisition but also be conscious of the state of the world (Mansilla & Gardner, 2007). An understanding of the nature, causes, or effects of any of the above at both the individual level and that of the planet at large leads to a greater commitment to safeguarding the world and its people and making the world a better place to live in. Osler (2005) postulates that such concern will provoke the building of a culture of peace and respect of the rights and welfare of all.

Knowledge of global issues is not only theoretical understanding of the above issues but also drawing inspiration from practical life events related to them. For example, the election of President Barack Obama provides a unique opportunity for students to draw lessons on racism and human rights, cross-cultural awareness, honesty and hard work, elections and democracy, good governance and peace and a host of others. Similarly future global citizens must be inspired from other world events and learn to protect the environment, fight for peace and justice, seek gender equality, use technology for the benefit of man, and strive to reduce poverty, war and diseases.

The understanding of global issues thus seeks to bring students to the realization that anything happening around the world has the potential of affecting them directly or indirectly.

Similarly, their actions or what goes on in their own environment could have an effect on others. War or poverty in other countries, for instance, should not be quickly dismissed as having nothing to do with the individual. It could lead to an influx of refugees or immigrants that might generate job scarcity, food shortage, crime, and insecurity or even incite nationals to go to war too if suffering from the same injustices. Surely the above will affect many, even in a country of peace and affluence.

Universal Values

For people to live in peace and global understanding there must be respect for universal values. In every culture or society, important values are upheld, including human dignity and respect for all; truth, honesty, and justice; love, compassion and empathy; sacrifice and the welfare of the needy; striving for excellence; and the dignity of labor. Global education helps build a system of values that focuses on the human personality as well. It speaks to human emotions and conscience, preparing students to be responsible toward others and all creation by being effective members of the family, community, nation, and world. These positive personality traits will definitely minimize the incidence of such social ills as fraud, embezzlement, greed, oppression, cheating, apathy, killing, and egocentricity. Such ills have been known to generate conflict within and between families, communities, and whole nations. From the perspective of Landorf, Rocco, and Nevin (2007), self-examination and experiencing values and attitudes such as tolerance and respect toward others become critical for students who need to cultivate a culture of universal human values. Because there is no evidence of this in the regular school curriculum, a global approach to teaching offers a unique opportunity to address this aspect of global education.

Critical Thinking/Leadership Skills

Most often, the focus of education is success in exams and the development, of critical thinking skills is minimized. Evidently, education must also seek to enhance the language of critical thinking which includes truth seeking, being self-critical, and taking a systematic approach to information processing. Students should also be educated to have an open mind and sound judgment to be able to analyze, interpret, and evaluate information. They should be able to draw inferences and transfer information to different contexts. A student who sees self as capable of good reasoning will form independent opinions on global issues based on knowledge, make the right choices, and question the status quo if need be. He or she will be more aware of various options for participation and of his or her responsibility and capability of bringing changes locally, nationally, and internationally to improve the state of the world. A critical thinker will think of the future and want to protect or improve on the present.

One who thinks critically is more creative and resourceful, has strong skills in the languages, math, science, and ICTs; develops love for lifelong learning and a drive for excellence; understands the importance of a strong work ethics for success; works well both independently and in a group; possesses leadership skills; has a better understanding of world geography and politics; has a better appreciation for the differences among people; has a good understanding of his or her country in the global context; and is more flexible, democratic, and eager to build bridges of respect and cooperation across national and international boundaries. With such global competence, the individual is endowed with problem-solving skills vital for survival in today's complex world.

Experiential Learning

Global education encourages learning through personal experiences. It is generally acknowledged that learning by doing leads to greater understanding. Therefore, teachers should not be glued to the traditional methods of teaching consisting principally of lectures, textbook readings, practice exercises, assignments, and tests. Extra effort should be made to use audio-visual materials and other ICTs, the laboratory, and the library where possible. In addition, activities should include excursions, debates, exposés, speeches, and creative writing. Students could also be given such assignments as participating in cultural activities, community service, interviews, school exchanges, seminars, workshops, conferences, or any other project they can identify.

Experiencing, even if superficially, what others go through leads to greater empathic understanding and social responsibility, which according to Andrzejewski and Alessio (1999) is a tenet of global citizenship. More and more youths lack the spirit of sacrifice and community service, and this habit ought to be inculcated through school activities.

Experiential learning promotes global citizenship by preparing students to be responsible citizens. For Merryfield and Kasai (2004), this is the first goal of global education. Schattle (2008) underlines this point by stating that a global citizen ought to be aware of oneself and the world, be responsible to others and the planet, and participate in the affairs of the community wherever he or lives. Citizenship education should therefore provide students with knowledge, skills, and attitudes to act in the future to bring democratic change and social justice (Banks, 2004).

Therefore, the global curriculum as summarized above has as its objective to mold global citizens with shared moral values and a global responsibility to bring global solutions to the world's problems. Such a curriculum favors an "inclusive global education" characterized by a curriculum and pedagogic approach that recognizes the diversity of all people and strives to teach peace and social justice (Landorf & Nevin, 2007).

Integrating the Global Curriculum in the Language Class

It would appear there is a lot of literature on the importance of integrating global education in the language class, but not enough evidence on how it is actually done by language teachers, especially at the secondary and high school levels. Tarashava (2005) reports on an innovative course for media students at the New Bulgarian University, which focuses on news analysis of global issues that are reported in the British media. Hillard (2005) also had a special project on global education for students in a language institute in Argentina. In both cases, the beneficiaries were a select few, which defeats the purpose of globalizing global education. Other studies, including that of Mansilla and Gardner (2007), indicate that global education is taught piecemeal within different subjects the different levels in no systematic manner. In Cameroon, there is no evidence of any special projects or attempts to teach global education except as identified in the syllabuses of various subjects. I maintain that English language teachers could be encouraged to integrate global issues throughout, since it is the only subject that runs through all the levels.

Reasons abound why English language teachers do not integrate the global curriculum in their lessons, some of which have been mentioned earlier. For those who find it difficult to deviate from the national syllabus, here are some proposals. It should be recalled that the syllabus and the textbook are separate entities, the latter complementing the former. Teachers

should therefore not be glued to the textbook, which may not cover enough of the global curriculum.

For example, the ministerial order of 2004 defining the English syllabus for Francophone secondary general education clearly spells out competencies to be acquired by students at any given level. This is in relation to the following content: listening, speaking, reading, writing, pronunciation, grammar, vocabulary, and the communicative framework. The understanding is that these features should be taught irrespective of where the material comes from, the textbook being only a guide. It is for this reason that various textbooks are recommended for each school to make their choice. This approach makes it possible for teachers to bring extra material out of the specific textbook used. Unfortunately, teachers have the habit of drawing schemes of work based on and using exercises in the textbook only, thus limiting dynamism and creativity.

The Teaching of English as a Foreign Language (TEFL) will be taken as reference, to make some suggestions on integrating the global curriculum in language teaching. Particular reference is made to the 2nd class and the textbook used. Students at this level are in their fifth year of secondary education and of learning English as a foreign language. The textbook chosen by the English department for this class is called *Go For English 2nd*. The following global issues feature in the form of comprehension passages: the environment (planting trees and preserving the forest), energy (the importance of oil), and health (safe drinking water). Obviously, a lot of burning and current global issues have been left out that need to be integrated. There is little on speaking and listening. Essay writing includes the following: formal/informal letters, newspaper articles, articles for school magazines, reporting a match, autobiographies, and describing a process. Grammar and vocabulary generally are based on ordinary events in the students' immediate surroundings.

The content of the above textbook leaves a wide gap between the regular curriculum and a global curriculum. The question is how to merge the two without drifting too much from the official program. In teaching this class, I plan my work following the syllabus, which emphasizes the four language skills—listening, speaking, reading, and writing—and also grammar, vocabulary, communicative framework, and supplementary reading. For each week, I try to include listening and speaking activities based on a global issue or event. For reading, writing, grammar, and vocabulary, I use the material in the textbook and complement them with a global issue. Following is a description of my attempt to integrate global issues in Unit I of the textbook”

Listening

There is no emphasis on listening so in the first week, the students listened to a story on tribal differences. This was a prelude to speaking about their tribal origins, prejudices, and tolerance. The next three weeks focused on gender differences, violence at school and a topical global news item from the radio or television.

Speaking

Speaking activities for each week were closely linked to the global topic under listening. In the first week, listening activities on tribal differences were immediately followed by discussions on the striking features of students' various cultures, and issues on prejudices and tolerance. The second week focused on problems related to girl's education, the third week was a dialogue on peace building, and the last week a debate on an identified topical news item. Activities (oral, written, or physical) could focus on cross-cultural

awareness/understanding, a global issue/event, universal values, critical thinking/ leadership skills, or experiential learning.

Reading

The reading text is on the forest as a natural resource. In relation to the text, the role of the forest as a source of food to our local communities was discussed. In addition, the issue of population and food security was brought to focus. For subsequent weeks, short texts on environmental protection and sustainable development, rural development and poverty alleviation were exploited.

Writing

The focus on writing in this unit was an official letter. Global issues exploited here were health, sanitation and hygiene (a letter to the principal about improving cleanliness of the school), ICT (a letter to the Minister of Secondary Education on the need for Internet in the school), and youth citizenship (a letter to the local parliamentarian on the importance of youth participation in community projects. Finally there was a project in which students assessed the state and causes of environmental pollution in the town and wrote a letter to the town mayor about it while proposing solutions.

Grammar

Grammar points in this first unit include *used to*, *used for*, *used for the . . .*, *like*, *such as*, and *for example*. These points were contextualized using such global issues as HIV/AIDS, ICTs, universal values, and leadership qualities. A typical example in the textbook goes thus: “Yesterday, *for example*, I forgot my textbook.” Students are encouraged to make sentences like these: “A computer is *used for* research.” “Unprotected sex, *for example*, helps to transmit HIV.” A good leader must have qualities *such as* creativity.”

Vocabulary

For vocabulary, we have *what’s wrong with*, *what’s the matter with adjectives ending in –al*, and *adverbs ending in –ally*. I chose to use the same global issues in grammar above to contextualize them. For usual activities, the teacher chooses words or sentences related to the identified global contexts. For example: Fill the blank space with the correct form of the word in parenthesis “Helping all citizens to Know their HIV status is a _____ concern. (nation)” Such exercises are always followed by a brief discussion on the issue.

Communicative Framework

In this unit, the focus is on: making suggestions using *how about*, *why don’t . . .*, and *shall we . . .*. The above global issues were still used as context. Students make suggestions on how to reduce the spread of HIV/AIDS/STDs, malaria etc., on how to reduce gender discrimination, how to improve critical thinking skills, how to master English being a global language, and so forth.

Supplementary Reading

Since there is no suggestion for supplementary reading, I introduced the following: Students were expected to read and summarize a newspaper article on a global issue, a magazine article on a gender issue, a poem on peace, violence, or war, or a short story on racial discrimination.

It should be noted that teachers could also exploit international events as global issues. One example is the election of Barack Obama as the first black president of America. I used it to integrate global issues as follows:

Listening:

Short biography of Obama (students identify his success stories)
Excerpts of his inaugural speech (students identify a catch phrase)
Excerpts of Martin Luther King Jr. "I Have a Dream" speech (students identify what his dream was and how it is related to Obama's being president)

Speaking:

Question and answer session centered on:
Why Obama's being president is historical
What inspiration each individual can draw from this event
If an Aglophone (from a minority group in Cameroon) can one day be president
Dramatization of excerpts of Martin Luther King's speech.

Reading:

Excerpts of either of the above speeches used for reading activities

Writing:

Individual "I Have a Dream" speech, bringing out what your dream for Cameroon in the future is
Conduct interviews on what dreams people have for a future Cameroon.

Grammar:

Fished from the speeches
Used grammar points from the textbook and contextualized using speeches

Vocabulary:

Fished from the speeches
Used other vocabulary focus from the textbook like forming adjectives and adverbs from nouns

Communicative Framework:

Expressing individual present values and future aspirations

Supplementary Reading:

Full texts of both speeches with assigned tasks

Apart from such isolated events, a good source of constant flow of materials and opportunities is national and international days. Some examples are Human Rights Day (Dec. 10), Women' Day (March 8), World Television Day (Nov. 21), International Day of Disabled Persons (Dec. 3), just to name a few.

From the above, it can be concluded that integrating global education in the language class in a systematic manner is a feasible task. Instead of relying on special projects or curricula on specific global issues, the above suggests an all-inclusive approach that could be used at the discretion and creativity of the English teacher at any given level. It should be borne in mind that interest and motivation can be heightened by using a myriad of activities that exist for language teaching (see Appendix). Since it may not be practical to teach all language skills plus grammar, vocabulary, communicative framework, and supplementary reading each week, it is up to the teacher to decide how often to integrate the above in his or her language class: weekly, bimonthly, or monthly.

With regards to critical thinking and universal values, the teacher is called upon to highlight them in a similar manner by bringing out students' opinions, attitudes, values, and convictions and orientating them toward the ideal. Experiential learning as already indicated is best achieved in out-of-class activities. For instance, for narrative essays, students could be assigned to attend a local event before writing the essay (e.g. "reporting a football match," which is an essay topic in the *seconde* textbook).

The key, therefore, is integrating both the language skills and the global curriculum in our schemes of work and lesson plans throughout the year without undue deviation from the national curriculum.

Conclusion

The benefits of a global education are inestimable. Competence in English language and global education empowers students intellectually, personally, and socially. The interesting and current topics involved motivate students, reduce monotony, and help them use active vocabulary while keeping abreast with past and present world events. It develops critical thinking and self-evaluation. It helps students to avoid cultural shock and to actively contribute in improving the world at all levels. And the language class is definitely a means of achieving this goal.

This implies that English language teachers (and language teachers in general) have the opportunity and responsibility to implement the global curriculum. Consequently, the teachers themselves must be abreast with global issues and events, they must be creative and dynamic, and they must be committed to the cause of educating future global citizens.

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About the Author

Focho Gladys Ngwi,
PhD, Teacher

Department of English

Lycee Classique de Dschang, Cameroon

ngwifocho@yahoofr

Major research interests: Global education, teacher effectiveness, English as a foreign language

Appendix

Some Useful Activities for Teaching Language Skills

Listening

- ∞ Passage, poem, or song for listening portraying a different culture.
- ∞ Students listen to a story centered on a global issue. (The teacher can make up one.)
- ∞ Students listen to sketch, speech, debate etc highlighting a global issue.

- ∞ Ask students to listen and write down such global concepts as dictated.
- ∞ Ask students to follow an important event on TV/radio with a global significance.
- ∞ Students listen to instructions and fill a grid with required information (e.g., countries, gender equality, UN organs, world languages etc.).

Speaking (integrate global curriculum as in above)

- ∞ Question and answer sessions
- ∞ Students make oral sentences
- ∞ Picture reading/interpretation
- ∞ Dialogues/role play
- ∞ Debates
- ∞ News presentation
- ∞ Interviews
- ∞ Exposés
- ∞ Speeches
- ∞ Storytelling
- ∞ Match commentaries
- ∞ Description of incidents, things, people, places
- ∞ Counting
- ∞ Naming of objects, people, places
- ∞ Introducing self and others
- ∞ Verbal summary of a text, poem, song or discussion
- ∞ Reading aloud/poetry recitations

Reading (a passage on a global issue)

- ∞ Brainstorming
- ∞ Question and answer session
- ∞ Multiple choice questions
- ∞ Sentence completion
- ∞ True/false questions
- ∞ Yes/no questions
- ∞ Treating vocabulary from text
- ∞ Treating grammar from text
- ∞ Skimming/summary exercises
- ∞ Asking questions on text
- ∞ Information transfer from text to charts, graphs and vice versa
- ∞ Agreeing/disagreeing with writer's view
- ∞ Silent reading
- ∞ Giving personal opinion/judgment/prediction
- ∞ Reading extra material (e.g. novels, poems, drama, newspapers, magazines, journals on a global issue, etc.)

Writing (selected activities could focus on global issues)

- ∞ Spelling/dictation
- ∞ Rewriting scrambled words/sentences/paragraphs
- ∞ Making sentences from substitution tables/graphs/charts/pictures, etc.

- ∞ Sentence combination (using connectors)
- ∞ Sentence expansion (adding words, ideas)
- ∞ Sentence reduction (eliminating words)
- ∞ Asking questions (*wh* questions, questions with tags, questions beginning with auxiliaries and modals)
- ∞ Transformation drills (question/statement, active/passive, etc.)
- ∞ Cloze exercises
- ∞ Sentence completion
- ∞ Punctuation exercises
- ∞ Asking for permission, making excuses, short notes, etc.
- ∞ Dialogues/sketches
- ∞ Poems/short stories
- ∞ Descriptions, speeches, letters, argumentative essays
- ∞ News, articles for newspapers, magazines, journals, etc.

Grammar

Most of the activities above could be used for grammar.

Integrate global issues when using the exercises below to contextualize grammar points. (e.g., Use *'until'* or *'unless'* to fill the blank space.

There will be no gender equality _____ girls are given equal opportunities to succeed.)

- ∞ Multiple choice questions
- ∞ Sentence completion
- ∞ Cloze exercises
- ∞ Oral drills
- ∞ Rewriting scrambled words/sentences/paragraphs
- ∞ Making sentences from substitution tables/graphs/charts/pictures, etc.
- ∞ Sentence combination (using connectors)
- ∞ Sentence expansion (adding words, ideas)
- ∞ Sentence reduction (eliminating words)
- ∞ Asking questions (*wh* questions, questions with tags, questions beginning with auxiliaries and modals)
- ∞ Transformation drills (e.g., active/passive, affirmative/negative, singular/plural, etc.)
- ∞ Completing tables (e.g., tenses, noun/verb, adjective/adverb, etc.)
- ∞ Making sentences with grammar points
- ∞ Dialogue completion
- ∞ Punctuation exercises
- ∞ Pronunciation exercises
- ∞ Correcting sentences with grammatical mistakes

Vocabulary

Contextualizing vocabulary points could also be geared toward global issues and events.

Many of the exercises above could be used to teach the following aspects of vocabulary:

- ∞ Definitions
- ∞ Explanations
- ∞ Visual aids
- ∞ Demonstration

- ∞ Matching exercises
- ∞ Labeling
- ∞ Synonyms
- ∞ Antonyms
- ∞ Homophones
- ∞ Meaning in context
- ∞ Denotative/connotative meaning
- ∞ Idioms/proverbs
- ∞ False cognates
- ∞ Odd word out
- ∞ Classification (words from same family)
- ∞ Generic words and their components (e.g., *furniture: table, chair, cupboard*)
- ∞ Dictionary use
- ∞ Translation

The Motivational and Attitudinal Characteristics of Highly-Proficient L2 Speakers: Implications for foreign language teaching and learning

Lisa M. Basista and Robyn A. Hill

Abstract

This study examines the various motivational factors and, to a lesser extent, attitudinal factors, that four near-native L2 speakers identified as leading to their high levels of fluency. Through reflective Second Language Learner Autobiographies, participants explore the role key constructs such as attitudes, motivation and sociocultural beliefs played in their L2 acquisition. A follow-up Likert-scale questionnaire ranks the common themes that were identified as leading to high proficiency. This study examines each of the commonly identified factors and then provides an analysis of the implications for second-language pedagogy.

Key words

Foreign language teaching, second language pedagogy, motivation, proficiency, language learner

Introduction

In order to properly frame this study, it is necessary to examine the state of foreign language education in the United States and around the world. A cursory Internet search of terms such as “foreign language shortage” generates a list of articles from several states in the union, as well as a half a dozen countries. The lament is the same; there is a dearth of teachers and other professionals with excellent second language proficiency. This crisis was, perhaps, most sharply felt in the United States following the tragic events of September 11, 2001 when the Federal Bureau of Investigation made a public appeal for volunteers capable of translating and interpreting Middle Eastern languages because their on pool of cultural experts was inadequate (Hebel, 2002). The fact that the United States was caught off guard in this area is not surprising. For decades, the U.S. record on foreign language education has been sorely lacking.

An examination of the structure of most foreign language programs in the United States, both at the secondary and university levels reveals that the general approach to teaching other languages is so structurally and pedagogically flawed that failure is the norm. To date, the majority of the traditional emphasis in language teaching and learning has been on the component parts of the language structure, especially grammar and vocabulary (Berhardt & Hammadou, 1987; Tedick & Walker, 1994). Not only is the general structural design of the system flawed, but the poor quality or utter lack of adequate foreign language teacher training also exacerbates the problems (see Hammadou & Berhardt, 1988). Unfortunately, despite new innovations in the teaching of foreign languages, including sophisticated interactive software, as well as consistently updated standards from the American Council on the Teaching of Foreign Languages emphasizing communicative skills and a broader cross-cultural component, the design of many foreign language programs continues to emphasize what Hammadou and Bernhardt (1988) called teaching “*about* the language rather than *with* the language” (p. 306). Reagan and Osborn (1998) noted, “Since no one could seriously expect the current approach to foreign language education to succeed, then the system is in fact expected, at least to some degree, to fail” (p. 50).

Nevertheless, despite the odds against it, examples of success indeed exist. This leads us to the fundamental questions of this particular study: Why is it that some people can reach high-

levels of proficiency in a second language while others in the same instructional or social setting struggle to utter even the simplest of sentence structures and what are the implications for improvement in foreign language and second language education? (In the United States second language education is commonly understood as English as a Foreign Language (ESL), while foreign language education refers to the study of languages other than English.)

To say that someone has a “gift” for language learning seems far too simple an explanation for something as complex as second language (L2) acquisition. Over the last four decades, the focus of many research studies has been the cognitive variations of second-language learning. Individual differences in learning style and strategies are constructs that can often be defined and perhaps even quantified. Not as easily measured, however, are the many affective factors that play an equally important role in the acquisition of a second language. Language learning orientation, motivational style, attitudes, and various other sociocultural constructs were identified as specific factors to consider in the examination of second language acquisition.

Motivational Factors

The study of motivation and its role in second language acquisition has generated a tremendous amount of data since the late 1960's. In contrast to many other research areas, studies of motivation in Second Language Acquisition (SLA) have been characterized from the beginning as well articulated and theoretically sound. Dornyei and Skehan (2003) describe the early influential work of Wallace Lambert, Robert Gardner, Richard Clement and their associates as critical in establishing a sound, data-based and empirically tested tradition for L2 motivational research. This Canadian social-psychological approach to L2 motivation is based on several important tenets, including the fact that attitudes toward the L2 community have a strong influence on L2 acquisition. Few people want to learn the language of a “low status” community. R.C. Gardner (1972), one of the first researchers to examine language learning from a social and psychological viewpoint, points out that personal attitudes and motivation are highly influenced by the societal and cultural norms in which one lives. He explains that in societies where learning more than one language is not just common but generally taken for granted, everyone seems to learn two or more “as a matter of course” (p. 131).

Equally important are the language learners underlying reasons for acquiring the L2. Is there a desire to communicate with the target language group or are the reasons for learning the L2 centered more on practical reasons, such as the ability to read technical journals or perhaps to advance professionally? In one of the first and best-known studies of motivation in second language learning, Gardner and Lambert (1972) identified two motivational orientations for second language learning: *Integrative* and *instrumental*. The authors concluded that integratively oriented learners generally want to acquire the second language in order to converse with, find out about, and perhaps even emulate speakers of the target language. Integrative learners usually have positive feelings toward the target language group and culture and may wish to integrate themselves into both areas. The instrumentally oriented learner, on the other hand, generally seeks to acquire the second language for more pragmatic reasons such as job advancement or because it is expected either professionally or socially. Getting to know or understand the people or culture of the target language group is not typically of interest. Gardner and Lambert (1972) concluded that integratively oriented learners tended to attain higher levels of proficiency in the L2 than those with an instrumental orientation.

Other researchers have challenged the idea that instrumentally oriented learners may not achieve as well in a second language. H. Douglas Brown (2007) points out that in countries such as India, where English has become an “international language” (p. 171) and where Indian English is commonly spoken, the L2 can be acquired quite successfully for instrumental purposes alone.

There has been much debate over the relevance of integrative and instrumental orientation, but researchers do agree that it is important to distinguish orientation from motivation. H. Douglas Brown (2007) illustrates the importance of this distinction when explaining that within either orientation, one can exhibit either high or low levels of motivational intensity. For example, an individual learner may be only slightly motivated to learn within a particular context, while another learner with the same orientation may be very driven to succeed.

Similar to integrative and instrumental orientations are the constructs of intrinsic and extrinsic motivation. Brown (2007) refers to Jean Piaget and others when he states, “human beings universally view incongruity, uncertainty, and disequilibrium as motivating” (p. 173). He explains that it is perhaps the challenge to find meaning that allows intrinsically motivated learners to succeed, and uses Stephen Krashen’s “input + 1” theory as an example.

That is not to say, however, that only those with intrinsic motivation will succeed. Researchers, such as Ushioda (2008) are quick to point out that we should not dismiss extrinsic motivation as less effective or desirable. She explains that in many educational contexts (for instance success on an exam or to further academic or career success) extrinsic motivation should be positively valued. Just as we learned that both integrative and instrumental orientations toward second language learning can lead to fluency, individuals with strong external motivation can and sometimes do develop fluency in a second language. What could be significant is the extent to which the underlying motivation is internally (coming from within the learner) or externally (coming from teachers, peers or societal norms) imposed.

Another important consideration when examining the affective domain of second language acquisition is that of society and culture. Ushioda (2008) refers to Gardner and Lambert’s work when she explains that language learning entails much more than simply acquiring a particular body of knowledge, or specific set of skills. In addition to a second language, the learner must also be willing to identify with a second culture and to acknowledge and emulate very subtle aspects of behavior. Gardner and Lambert (1972) speculated that the L2 learners’ underlying attitudes toward the target culture and people would have a significant influence on their motivation and ultimately success in learning the language. H. Douglas Brown (2007) mirrors this thought when he posits that positive attitudes toward self, the native language group and the target language group all enhanced proficiency in the L2.

Schumann (1978) and others also identify assimilation and acculturation as key influences on language learning. The extent to which a language learner identifies with and becomes a part of the target culture is critical to developing the “second identity” (in Brown 2007, p.194) so often referred to in the literature. Language and culture are tightly interwoven and we would be remiss to ignore this relationship when examining second language acquisition. While going through the acculturation process, a language learner may experience both language and culture shock. Shuman (1978) explains that these occur when the coping and problem-solving mechanisms a learner normally uses no longer work in the new culture. If the language learner cannot move through the naturally occurring stages of culture shock, the resulting stress

and disorientation could divert attention away from the language learning task and delay or even block the acquisition process.

This study has important implications for English as a Second Language (ESL) and foreign language classrooms. Both present and past literature highlight the importance of the L2 learner's attitude and beliefs toward the second language and culture. These attitudes seem to either promote or hinder the development of an intrinsic motivation to learn the L2. Further, as the research study data will show, L2 motivation can be highly influenced both by the mode of instruction and by the instructor.

The purpose of this study is to identify and examine the various attitudinal and motivational factors that four highly proficient L2 learners feel led them to a high-level of proficiency in their second language, in order to address the following research question:

What attitudinal and motivational factors do near-native second-language learners report as leading to high-proficiency? With that in mind, this study evaluates and adds to the literature on L2 motivation by using previously established constructs as a vehicle for understanding the motivational and attitudinal factors identified by participants as leading to their high levels of L2 acquisition.

Methodology

A qualitative design was selected in order to implement a holistically applied research and to allow for reflective and introspective responses by the participants. The study asked participants to identify, reflect upon, and subjectively describe specific events that they had experienced in various social and linguistic settings, which lent itself quite naturally to a qualitative research design. In her book, *Qualitative Research And Case Study Applications in Education (2001)* Sharan Merriam posits that the key philosophical assumption upon which all types of qualitative research are based is the view that "reality is constructed by individuals interacting with their social worlds" (p.6). Shermann and Webb (1988) mirror this belief when they state that qualitative research "implies a direct concern with experience as it is 'lived' or 'felt' or 'undergone'" (p.7). Through the use of autobiographical journals, participants were able to describe at length the various factors that they identified as influential as they "lived" through the experience of acquiring a second language and second identity.

The Participants

A criterion sample consisted of four highly proficient second language learners, who were selected to participate in the study. Each was assigned a pseudonym for use throughout the research process. Three of the four participants learned English as a second language and the fourth is a native English speaker with Spanish as an L2. Although this researcher did not evaluate the language proficiency of the participants, each was selected because of his/her demonstrated ability in the second language. Two of the participants received an advanced degree (masters or doctorate) from an accredited U.S. university and have successfully written either a master's thesis or a doctoral dissertation in their second language. The third participant received a Master's degree from a non-U.S. school that used English as the medium of instruction. The fourth participant received two PhDs in his native country, where general

education classes were taught in Russian, but almost all subjects pertaining to the study of English as a second language were conducted in English. He has published extensively (both books and articles) in the English language.

All four participants have worked or are currently working at a professional level where daily business is conducted in the L2. It should be noted that all four participants began the study of their second language after the age of ten, with two of the four beginning the acquisition process in late adolescence. A brief biographic description of each of the selected participants follows:

1. Carolina: A 33 year-old female born in Brazil with Portuguese as her first language. She holds a Master's degree in Teaching English to Speakers of Other Languages (TESOL) from a fully accredited U.S. university and is currently enrolled in a TESOL doctoral program. She is an ESL teacher at the community-college level in Southern California. Carolina began her study of the English language in Brazil at the age of 12.
2. Rose: A 35 year-old female born in Mexico with Spanish as her first language. She holds an MA in Computer Systems from a fully accredited Mexican university. She is currently working part-time as a computer systems consultant in order to stay at home with her young children. Rose began her study of the English language in Mexico at the age of 10 and has attended private school in both Mexico and the U.S.
3. Alexandra: A 44 year-old female born in the United States with English as a first language. She holds an MA in Spanish (with Distinction) from a fully accredited U.S. university, a certificate in translation (English/Spanish) and a certificate of superior competence in the Spanish language from the government of Spain. Her Ph.D. is in Education, Culture and Society from the University of Utah. She is currently working as an Associate Professor (Second Language Methodologies) at the university level in Southern California
4. Ivan: A 62 year-old male born in Russia with Ukrainian Russian as his first language. He holds a PhD in Applied Linguistics and a Doctorate of Pedagogic Sciences in Educational Technology Applications from two fully accredited Russian universities. He has published extensively both books and journal articles in English and often presents at educational conferences worldwide. He is currently working as a full professor (Second Language Methodologies) at the university level in Southern California.

Instruments

This study asked four highly proficient second language learners to reflect on their L2 acquisition process and to identify specific attitudinal and motivational factors that they felt contributed to their high-levels of fluency. Two research instruments were used; the first, a second language acquisition autobiography (SEE APPENDIX A) that used a writing prompt and asked participants to explore the following:

- ∞ Feelings toward the target language and culture
- ∞ Willingness to communicate in the target language
- ∞ Sources of motivation
- ∞ Reinforcement for speaking L2
- ∞ Experiences that had a positive (or negative) affect on confidence in target language

Two field experts reviewed this initial instrument for validity prior to implementation. After collection and analysis of the language autobiographies, a second instrument was developed to further explore the themes that were common to several or all of the participants in the language autobiographies. This was a Likert-scale questionnaire (SEE APPENDIX B) that measured the role, whether positive or negative, that the L2 speakers felt the identified motivational and attitudinal factors had played in their L2 acquisition.

Procedures

Study participants were selected based on their perceived fluency in a second language. Each prospective participant was contacted via telephone, in person or by email and given the rationale and details of the study. It was explained that privacy would be protected through the use of pseudonyms, and that they could withdraw from the study at any time. The data were collected in two forms: the Second Language Acquisition Autobiographies written by the participants and the four-point Likert scale questionnaires that were given approximately one week after the review of the autobiographies. Data from the first phase was reviewed and common themes were identified. Next, those themes were presented to the participants in the form of a Likert-scale questionnaire. The participants were asked to rank the theme's level of importance in regard to their second language acquisition on a scale of one (having almost no influence) to 4 (having significant influence). Both research instruments provided the research with a list of clearly identified factors that seemed to influence second language acquisition. It is hoped that this data can have a direct pedagogical implication in foreign language classrooms.

Data Analysis

The first step of the data analysis process came from the language learner autobiographies, which were coded for major and minor themes. Three areas that came out clearly were: (1) teachers make a difference (2) learning activities are crucial (3) culture seems to play a more important role in an immersion setting.

Three of the four participants described very positive experiences with their second language instructors. They said that they “loved” their teachers and that the instructors “really knew how to motivate the students.” One participant explained that she switched majors in college because she was so attracted to the Spanish language program. She explained, “I loved the easy-going communicative approach of the Spanish classes. In fact, after two semesters of dealing with aloof and somewhat snobby French professors, I decided to switch my major from French to Spanish“. Other participants described their instructors as “fun” and “pretty” and “motivating.”

Participants also described how they had been motivated by the learning activities in their L2 classrooms. One participant gave this example: “My classes were so fun. We sang songs, ate American (junk) food and had many authentic learning opportunities.” Another participant showed how damaging it can be to be unmotivated when he explained, “English was a mandatory subject in Soviet schools. My classes used the grammar-translation method and were so boring; I was not motivated at all. I believe that it was not the approach alone to blame, but also unmotivated teachers.”

Several participants also raised the topic of culture. They described how learning about the culture helped inspire them to become proficient. One participant gave this example: “ I enjoyed the music, traditions, history and literature from the start and these inspired me to learn English.” Others explained that they were not really interested in the culture until becoming a part of it. This sentiment is clearly expressed by one participant when she states, “after moving to the U.S. I really wanted to learn about the cultural subtleties so as to not appear ignorant.”

After the identification of the major and minor themes, a follow-up Likert scale was developed. Table 1 shows the results of the items completed by the four participants. The overall mean scores for each question were calculated with “1” indicating “Strong Positive Effect “, and “5” indicating “Strong Negative Effect “. The mean responses have been ranked in order of preference and the survey questions are written below the table.

Table 1
Results of Likert-Scale Questionnaire

	No	Overall
1. Self-confidence as a language learner		
2. Extroversion/Introversion		
3. Instructional setting/teacher		
4. L2 culture		
5. Willingness to communicate		

As can be seen in table 1, 100% of participants felt that their willingness to communicate in the L2 was a contributing factor to their high level of fluency in the language. Most said that

they wanted to communicate with their instructors and classmates and that their teachers had motivated them to communicate in the L2, thus acquiring high levels of proficiency. Many participants also identified “self confidence as language learner” as a factor influencing their motivation in the L2. These results seem to suggest that the influence of the L2 instructor and his or her methodology is crucial to successful L2 acquisition.

The data from the Likert-scale seemed to support the original conclusions from the language learner autobiographies, as well as the selected literature.

Discussion

Through a comprehensive review of past and present literature on L2 motivation, along with data gathered from four highly proficient L2 learners, this study identified several motivational and attitudinal factors that seem to lead to high levels of fluency. The major findings are, as follow:

1. Teachers make a difference in L2 motivation. All participants discussed the type of teachers they had worked with. Most gave examples of positive interaction that had led to a love of the L2 language and culture. Not one participant cited the textbook or curricular program as having a similar positive influence. This finding strongly supports Dornyei & Skehan’s (2003) notion that the way a learner feels about the learning environment will highly affect his/her L2 acquisition. Further, the majority of participants described a strong intrinsic motivation to learn their L2. This motivation seemed to be connected to their positive interactions with their L2 teachers and the L2 community. One might conclude that teachers can promote both an intrinsic motivation and an integrative orientation in L2 students that will likely lead to higher levels of proficiency.
2. Learning activities are significant and should correspond to the methodological approach. Participants all discussed the types of learning activities that they experienced in the L2 classroom. Three of the four participants described interactive, engaging activities that motivated them to communicate in the L2. The fourth participant also mentioned the learning activities as influencing motivation, though in a negative way. His experience with the grammar-translation approach was, in his words, “a waste of time.” Again, this data supports the review of literature, which concludes that the way a learner views the method of instruction (either engaging or ineffective) will have an influence on L2 motivation
3. L2 Culture is important. The question of culture was a major theme in the autobiographies, but it did not seem to play as influential a role in English as a Foreign Language (EFL) settings, as in ESL contexts, though the fourth participant did emphasize that, in Russia, it has always been considered prestigious and advantageous to speak a foreign language. Thus, culture was a motivational factor. Nevertheless, more data would need to be collected to further explore the constructs presented in the literature review regarding the key role that culture seems to play in L2 motivation.

Implications and Suggestions for Future Research

The results of this study seem to suggest a strong connection between the affective and instructional domains of language learning. Past research has focused mainly on L2 motivation from a broader perspective, generally borrowing from motivational research outside of the L2 domain. Few studies have been conducted to see what motivation looks like in an actual second-language classroom setting, and even less if we focus specifically on the teacher's role (Ruiz-Funes, 2002). In 1991, Dornyei began to question the multifaceted nature of motivation in an educational setting and has proposed several taxonomies that take into account the very special factors involved when studying L2 motivation within a classroom context. Now, it is imperative to move beyond simple identification and evaluation of these constructs and to put theory into practice in the teaching and learning of second languages.

This paper implicates the realm of teacher beliefs when it comes to motivation and indicates that educators must move away from thinking of motivation as extrinsic, such as the old "carrot-and-stick approach" (Guilloteaux, 2008) of offering rewards and punishment, and begin to develop specific instructional strategies that will enhance motivation at an *intrinsic* level for students (Guilloteaux, 2008). The important role of the many attitudinal and motivational factors involved in second language acquisition cannot be ignored. As educators, it is crucial that we consider both the intrinsic and extrinsic components of the affective domain and allow them to drive, at least in part, our instructional practice.

From an epistemological standpoint, this study also asks us to consider what we really mean by "learning" and "knowing" a foreign language, a question originally posed by Reagan (2002) in his examination of constructivist practices in the foreign language classroom. By more closely aligning the sociocultural aspects of knowledge construction with theories of intrinsic motivation, teachers may be more informed about the pedagogical decisions that they make in designing and implementing lessons in the foreign language classroom.

Moreover, we can look to Crookall and Oxford (1988), who suggested that "Learning a second language is ultimately learning to be another social person" (p. 136). The strong feelings of identification with the target culture expressed by the study participants indicates that notions of identity would also be a powerful tool in shaping foreign language teacher practice to more successfully maximize students' intrinsic desire to assimilate the target culture. Ideas for future study might include:

1. The examination of how instructional practice affects student motivation to learn a second language.
2. A comparison of various instructional delivery methods to see how they affect student motivation to learn an L2.
3. An evaluation of foreign language and second language teacher training programs to see how the question of motivating students is addressed.
4. A comparison of the role of L2 culture in EFL vs. ESL settings.
5. An exploration of the role that home (or family) culture plays in studying a foreign language.

Ultimately, we hope that the data from this study may serve to inform teacher practice by enabling them to better understand and then tap into the key components of L2 student

motivation, thus transforming their classrooms into places where more authentic second language acquisition may occur.

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About the Authors

Lisa M. Basista
M.Ed, Adjunct Professor
TESOL Department
Alliant International University
San Diego, CA
Email: lmbasista@alliant.edu
Major research interests: Foreign Language Pedagogy, Teaching English Language Learners, Teacher Education

Robyn A. Hill
PhD, Associate Professor
Teacher Education Department

Appendix A
Second Language Learner Autobiography
Second Language Acquisition Autobiography
For Participants with English as an L2

The purpose of this Second Language Acquisition Autobiography is for you to reflect on your experience of learning English as a non-native language in order to discover what attitudinal and motivational factors you feel enabled you to reach a near-native level of proficiency. Please be as detailed as possible and include narrations of personal experiences or events that you believe affected your attitude or motivation to learn English.

Please use the following guidelines when writing your Second Language Acquisition Autobiography:

1. Why did you decide to learn English? How old were you when you began the acquisition process? Why were you motivated (or not motivated) to learn it? Did you learn English in another country or in a country where it is spoken?
2. How did you learn English? Did you study it formally in school, or was it acquired in a more natural, immersion-type setting? What type of instruction did you receive in the language? If outside of a school setting, from whom did you receive instruction? How did the way you learned English motivate you or not?
3. How did you feel about the target culture before and while learning English? Did your feelings change after becoming proficient?
4. What attitudinal and motivational factors do you feel contributed to your success in acquiring English?

Appendix B
Likert-Scale Questionnaire
Attitudinal and Motivational Factors Inventory

Directions: In order to further explore the various attitudinal and motivational constructs that may have affected your L2 acquisition, please take a moment to complete the survey. You should circle the number that most closely represents the effect that you feel the identified factor had on your language acquisition. Then, on the second page, please write a brief explanation as to why you valued the factor as you did.

FACTOR	1 Strong Positive Effect	2 Some Positive Effect	3 No Effect (Not sure)	4 Some Negative Effect	5 Strong Negative Effect
Self-confidence as a language learner	1	2	3	4	5
Extroversion/ Introversion	1	2	3	4	5
Instructional setting/Teacher	1	2	3	4	5
L2 Culture	1	2	3	4	5
Willingness to communicate	1	2	3	4	5

Assessment and Evaluation

Learner-Centered Assessment: A New Tool

Melinda Campbell

Abstract

Educators and course developers have long regarded the goals of increased student interactivity and highly developed critical thinking as key factors in superior student performance and satisfaction. With these goals in mind, this paper proposes a new pedagogical tool that promises increased student engagement and peer interaction, accelerated development of critical thinking skills, and opportunities for self-assessment in relation to course learning outcomes. The Q&A Forum, in which students ask and answer original questions related to course content, is a new method for producing student-centered learning and generating peer criticism and commentary to accompany interactive discussion assignments.

Key Words

Learner-centered assessment, student-centered learning, learning-design application, pedagogical philosophy

Introduction

Pedagogical scholars and commentators have been hard at work articulating guidelines and sets of criteria for effectiveness and excellence in teaching, and their efforts toward systematization and standardization are frequently aimed at teaching in the online format (Hirumi, 2005). But while the virtual explosion in the number of courses, as well as entire educational programs being offered through web-based platforms, has been accompanied by a voluble increase in the discussion of pedagogical procedures, goals, and guidelines, there is a noticeable silence when it comes to spelling out clear and specific ways to implement them (Xu & Morris, 2007). The purpose of this paper is not to add to the mounting pile of generalized pedagogical principles and criterial *desiderata*; instead, it offers some practical ideas for filling the lacunae in this conversation. What is missing, what is needed, are concrete, well-defined, and innovative learning and assessment tools that can be used across varying venues to implement the pedagogical goals outlined by numerous authors and sought by institutions across the board, from public and private purveyors of academic degrees to large corporations and small businesses seeking advanced employee training. Xu and Morris (2007) point out that regardless of the mode of delivery, be it onsite or online, course content is based on designated learning outcomes and course goals; however, in online formats, an increased focus on interactivity in relation to content delivery is needed to compensate for the loss of the valuable real-world, real-time, socio-intellectual interactions that are part and parcel of face-to-face learning situations.

In keeping with the goals of increased student interaction as well as overall improvement of student performance and satisfaction, this paper proposes a new pedagogical tool that promises a higher degree of student motivation and engagement with course content as well as a superior form of asynchronous peer interaction. The Q&A Forum replaces what many online instructors require as a second posting or an augmentation to a main discussion-board or threaded discussion post, usually referred to as “peer comments.” In addition to increasing motivation, engagement, and interactivity, implementation of the Q&A assessment tool in online, hybrid (courses that combine onsite meetings with online instruction), and face-to-face learning environments aims to produce significant progress in the achievement of long-established pedagogical goals, such as accelerated development of critical thinking skills,

affordance of opportunities for self-assessment in relation to course learning outcomes, initiation of learner-centered assignments and activities, and delineation of reliable pathways to student success, including perception of assessment consequences as meaningful and fair (Hirumi, 2005).

There is broad agreement among researchers, instructors, and course developers about the generalized criteria for success in education. A survey of pedagogical goals applicable to most higher-education learning situations might typically include the following: (a) learners' needs must be central; (b) expected course learning outcomes, learning objectives, and course goals should be fully stated at the outset of a course; (c) course assignments or "learning events" should be designed and sequenced in line with course learning outcomes; (d) rationales for how assignments relate to the achievement of learning goals should accompany assignment descriptions; (e) the delivery of course elements such as content modules, instructional materials, learning activities, and assessment tools should be aligned to distinct learning environments; (f) learning elements should be geared toward engaging multiple learning styles; (g) timely, useful, and individualized feedback must follow all important or graded student work; (h) course assignments and activities should engender high levels of interpersonal interaction at all levels (instructor-class, instructor-individual student, student-student); and (i) evaluative summaries and grade justifications should align with learning objectives and follow a logical and standardized rubric that is published at the start of the course (Edmondson, 2007; Fabry, 2009; Koszalka & Ganesan, 2004; Saulnier, Landry, Longenecker, & Wagner, 2008). Although the learning tool presented here was created for use in an online course, it can easily be adapted to other delivery platforms. Following Fabry (2009), with careful attention to research in pedagogical theory and effective learning-design strategies, comparable learning experiences in hybrid learning environments as well as face-to-face courses can be generated to reach the desired goals of all stakeholders in the broader endeavors of higher education.

The Q&A Forum

The Need for Interaction

There is widespread acknowledgement that successful education, whether online or face-to-face, relies on both good teaching and effective learning design, and both entail reliable and meaningful interaction between instructor and students as well as (student) peer interaction, cooperation, and collaboration (Chickering & Gamson, 1987). Moreover, essential to success in learning is positive and quantifiable demonstration of student comprehension of course content. In online venues, combining the two overarching goals of critical interaction and effective assessment has led to the near-universal adoption of the asynchronous, text-based interactive "threaded" discussion assignment or "discussion board." Bliss and Lawrence (2009) point out that the discussion board provides an interactive framework in which learners can become part of a "community of inquiry" and thereby build social networks and avenues of communication that are unavailable in traditional pedagogical situations, where students submit individual written work to the instructor, who then responds to each student privately with feedback and assessment scores. Bliss and Lawrence also maintain that discussion-board assignments foster use of higher-order critical thinking skills such as analysis, synthesis or creation, and evaluation (Bloom, 1956; see Krathwohl, 2002 for a recent overview and revision of Bloom's taxonomy). Beyond this, discussion boards allow instructors to function as both facilitators *and* teachers—stimulating,

encouraging, acknowledging, and reinforcing student contributions and also guiding, correcting, augmenting, and redirecting student discussion.

Perhaps the most touted aspect of the discussion board is its capacity to generate and foster communication among students, a feature considered to be integral to the learning process, particularly in higher education, where good communication skills are essential to success (Buzzetto-More & Alade, 2006). In real-time, face-to-face classrooms, casual student interaction is natural and unforced; students do not take much coaxing to engage in question-and-answer sessions or even lively debates, given the right topics. However, despite the opportunity for enhanced interactivity, the online classroom faces certain obstacles. Students are isolated and, by definition (as partakers in distance learning), at a distance from one another; hence getting students to interact and engage with each other in substantive conversations can pose a challenge. Ascough (2002) develops the argument that asynchronous threaded discussions are one of the best ways to ensure student-to-student interaction at a deep level. Because students are all responding to the same set of questions or discussion prompts, and because they are able to read each others' responses as well as the instructor's comments to individual posts, there is a feeling of communal activity.

Pedagogically speaking, each learning environment can take something from the other: Online courses need to ensure that the possibilities for communication and interaction enabled by the online format are realized by requiring students to work in teams or in groups to share ideas; onsite classes must not overlook the advantage of having all members of the class together, in person, for an extended time by using that situation to get students involved in group activities as well as class discussions. There is no reason that onsite classes could not incorporate discussion-board assignments into their curriculum; the same sets of questions could be assigned, but the sharing and discussing of responses could be done in class through group activities or general class discussion instead of posting them to online forum.

Turning now to a consideration of online classes, despite all of the positive features of discussion boards and interactive discussion assignments, with students' schedules and life priorities being what they are in today's world, there is a tendency for students to treat the discussion board merely as a repository for their completed assignment ("post-and-go"). Without specific directives in place requiring students to communicate or collaborate in some way on the assignment, many students will skip the extra step of reading their peers' contributions or engaging with the class through critical commentary. Gagne, Briggs, and Wager (1992, as cited in Ascough, 2002) affirm that instructors and course developers must intentionally build features into the course that motivate students to interact and require them to engage with other students as part of an assignment or class activity. For this reason, most instructors who use the discussion board as a learning and assessment tool include an addendum to the assignment: peer comments. The typical discussion-board assignment will consist of two parts: (1) answering, in essay format, a certain number of questions or elaborating on certain themes, concepts, or topics covered in course readings or lecture materials; and (2) critically commenting on the posted responses of at least two other students in the class. The discussion board, augmented by peer comments, has become, along with a final paper or research project, an accepted standard assignment in most online courses. While interactive discussions are here to stay as an essential component of any college- or university-level online course, there remains a need for increasing the amount and upgrading the level of peer interaction that is integral to these discussion-format assignments.

Questions, not Comments

An examination of the peer-comment element of the discussion board in light of the foregoing review of universally accepted criteria for effective teaching, and in particular for teaching online, reveals that the entire concept of *peer comments* needs revitalizing. All too often, peer comments end up being polite but relatively insubstantial remarks that are usually positive evaluations that do no more than acknowledge the commenting student's agreement with what a peer said in her or his post. Here is the language I used in some recent courses to explain the peer-comment portion of the discussion-board assignment:

After you have posted your main response to the discussion-board questions, comment on at least two of your peers' responses to the questions addressed in this discussion. Your peer comments should be more substantive than just saying, "Good post," or "I enjoyed reading your response." Such comments should include supporting statements, i.e., reasons why you find the comment interesting or insightful, puzzling or mistaken, etc. You may also want to ask specific questions or follow up particular points raised by other students in the class. Peer comments should contain original analysis and supported evaluation.

Despite such explicit instructions, peer comments in my courses continued to be generally lacking in content, genuine critical analysis, or consequential evaluation; in course after course, peer comments remained, in sum and substance, politically correct "pats on the back." Informal discussions about teaching and student performance with colleagues have only confirmed my observations: despite constant encouragement to make peer comments substantive and critical, student performance on this assignment is poor. What should be critically astute comments, or at least meaningful questions, are instead haphazard, off-the-cuff remarks that are little more than empty compliments. It is difficult to make the peer-comment assignment really useful or consequential; yet research shows that generating interaction among students in the online environment is crucial.

In an attempt to better achieve the purpose of the peer-comment element of the discussion board, I developed the "Q&A Forum," a new kind of learning tool that, while relating back to the topics and student posts of a particular discussion-board forum, is a separate assignment from the discussion board. It can be treated as a follow-up to the previous interactive discussion, or it can be a place to add new material and commentary to the same set of topics. There is also the opportunity to build into the Q&A Forum a venue for audio clips or audio-enhanced images as well as video clips.

Here is how the Q&A Forum works within a four-week, accelerated-pace, online-course format: The day after discussion-board posts are submitted, students are asked to post an original question related to the content for the unit (i.e., what was covered in the most recent discussion thread) that, ideally, incorporates a critical response or inquiry directed at a peer's recent discussion-board post. Here, in the "question" section of the assignment, each student must think of his or her own question and, if possible, tie that question to a response or responses to the instructor's content-related prompts in the previous discussion board. The specific content of the question is left open: A student may relate another student's discussion-board post to an issue not mentioned in that discussion but that the student considers interesting or important, or a student may, in referring to another student's post, critically question the instructor's rationale for posing a particular issue or for placing emphasis on one topic rather than another. Or, a student may

introduce a completely new subtopic or side issue related to the general topic that has not been addressed at all.

Allowing students to come up with their own questions and challenging them to be thoughtful and original while also remaining on topic has the desirable effect of bringing the students into broader and deeper consideration of the topics at hand without overloading them with excessive reading and writing assignments. In a four-week course, for example, realistic expectations about how much a student can read, comprehend, and begin to master must be kept in mind. Instructors are well aware of the dangers of work overload, especially in abbreviated-learning formats and online courses, which are often populated by a majority of students who work at full-time jobs and are busy raising families and conducting adult lives. Instead of adding to the number of discussion-board questions that must be answered by every student, often in what turns out to be rote reporting from textual materials or other reference sources, the questions in the Q&A are a way of opening up the topics to a variety of perspectives as well as bringing in relevant issues and considerations that may have been glossed over in the discussion-board assignment or not adequately addressed simply because of lack of time and the need to move on to new material.

For the “answer” part of the assignment, each student must respond to a peer question within 48 hours. (Timing of the connected assignments can be adjusted according to the overall time frame of the particular course.) Students must not answer their own question, and each question will receive a single answer: once a question has been answered, it is to be considered “off the table.” Students looking for a question must move on to one that has not been answered. The guidelines for the Q&A answer are designed with two specific purposes in mind: (1) Increased engagement is fostered because the time frame for completing the assignment is relatively short, and students must be on their toes and tied into unfolding events (i.e., the posting of the questions) within the course to choose a question they find interesting. Moreover, they must check back into the course frequently to find the right balance between waiting until all students have asked their questions, surveying them for what they deem to be a good question, and postponing participation too long and missing the chance to answer a question they like or feel prepared to answer. (2) Beneficial competition is sparked by the one-answer-per-question rule; students are anxious to find a good question, and they are motivated to respond before someone else takes it. Also, because the students have (it is hoped) become familiar with the list of original questions, some of which they may have felt unprepared or even challenged to answer, others of which they found easy to answer or perhaps overly simplistic, they will be interested to see how others have answered them. Knowing that the class is engaged with the assignment, students will also be encouraged to write original, on-point, and thoughtful responses.

This question-and-answer thread takes the place of the peer comments that are usually required in discussion boards and is reviewed and scored or graded separately from the discussion-board responses. In all four of the courses in which I have implemented it, the Q&A Forum was much more effective than the peer-comment assignment in getting students to actually engage in some sort of content-driven and critically astute dialogue. I was often pleasantly surprised by the high quality and originality of the work submitted. The results of an informal survey of students in two courses in which I used the Q&A Forum show student opinion to be overwhelmingly positive. I chose to give individual feedback to students when I graded this assignment, but it may be advantageous, as one student suggested, for the instructor to make his or her comments to the Q&A Forum posts public. (See Appendix A for the specific

language used in the description and guidelines for a Q&A Forum assignment in an online course.)

Advantages of the Q&A Forum

The Q&A Forum is better at achieving the goal of peer interaction and critical discussion than merely requiring students to post peer comments; it can do everything peer comments are meant to do and more. Deeper engagement with peer work is guaranteed because the main task of the assignment is to answer another student's original question. Since students must each answer a different question, they will not only be eager to read through all of the questions to find one they want to answer but also be prompt about completing the assignment, as the sooner they engage, the greater the selection of questions. The last person to post his or her answer will be left with the final unanswered question. Seeing the list of available questions visibly dwindle as the due date draws near creates a real-time indicator of students working together as a class on the same project. Students enjoy the mildly competitive "race" to answer their preferred question. If they move precipitously, they will not have the advantage of seeing the entire list of questions; if they wait too long, they may miss their chance to answer the question of their choice. This kind of dynamism is a good way to engage students.

The structure of this assignment also stimulates students to pay more attention to what others in the class are doing, because the assignment suggests that the question refer back to one or more peer posts in the previous discussion board; this provides a strong incentive to read through a number, if not all, of the previous discussion posts. By contrast, the peer-comment assignment can be fulfilled by simply reading two other posts in order to make two comments; students are given no real motivation to go beyond this effort. The Q&A Forum assignment gives students a self-interested reason to read through more of their peers' discussion-board posts: They will want to craft a relevant and interesting question, so they will be likely to read through various posts to find one that helps them come up with good ideas. Also, the suggestion that a good way to formulate a relevant question is to refer to another student's discussion-board post will lead to critical thinking skills kicking into gear, because the student's own grade is affected by successfully using analysis and creativity in relation to the ideas and arguments of others.

Koszalka and Ganesan (2004) make the well-supported point that active peer collaboration and social interaction on specific instructional tasks or course assignments is a significant factor in successful learning in online environments (and it can be asserted that the same holds true for onsite classroom situations). They claim that learning takes place in other ways than simply taking in and comprehending new information. Learning takes hold when the needs of learners are addressed, and learning

grows out of conversation and shaping of understanding through interactions with the content and others in the learning environment. Thus, the instructional design focus of online instruction must be to engage learners purposefully and strategically in integrated interactions with content, activities, peers, and with the instructor ultimately facilitating the learning process (p. 244).

The Q&A learning tool advances these specific goals and aims to meet the purposes of successful learning as specified in the well-known ARCS model of motivational design

(discussed in ChanLin, 2009; see also Hirumi, 2005; Keller, 1987): (1) gaining and sustaining students' *attention*; (2) making course content and modalities *relevant* to students' needs and interests; (3) building students' *confidence* in their own abilities; and (4) greater student *satisfaction* with their learning experience. The Q&A Forum assignment's task of coming up with original questions is in line with the first two motivational principles: students will be curious to read what others are thinking about, and because the questions originate from the students they questions are bound to be relevant to their needs and interests. Furthermore, the Q&A Forum offers a great platform for multimedia participation. Students who have the technological capability (and this does not require much) could pose their question by inserting an audio or video clip of themselves addressing the class. Or, in order to provide motivation and background for the question, a student may want to link to or even embed a video clip or insert an image. These kinds of posts will certainly gain students' attention. The instructor could lead the way in this media-enhanced direction by introducing and explaining the assignment in a video clip. Encountering audio or video clips that feature a student first framing and then asking his or her question would positively enhance student engagement both with each other and with course content; students would undoubtedly enjoy hearing or seeing their peers address the class and be highly motivated to peruse all the questions before responding. This is also a terrific way to address the issue of how to get disconnected, at-a-distance learners to bond as a class, since they are responding to a real person heard, or seen and heard, in the clip.

Relevance to students' needs and interests is clearly achieved in the act of students asking their own questions, whether in the traditional written style or, if possible, in a media-enhanced format. A student's confidence is boosted by having others in the class actually do research on questions that the student deems important or interesting, and it is boosted in a way that a simple compliment or word of praise expressed in a peer comment cannot do. It is also obvious that there is a great deal more satisfaction to be gained from a learning experience in which the student has contributed to course content and steered class discussion and the learning of others (as well as his or her own learning) toward a successful attainment of course learning outcomes and goals.

In addition, the Q&A Forum features opportunities for productive facilitation by placing more of the responsibility for learning on the student; it fosters reflective, enlightened, and innovative teaching by allowing for an open approach that takes into account learners' needs, the instructor's own considered educational beliefs and teaching practices, and current research in pedagogical theory and learning design (Donald, Blake, Girault, Datt, & Ramsay, 2009; Serdyukov & Serdyukova, 2009). Strategic alignment of learning tasks and course objectives (and consistently reminding students of this relationship) is an important but too-often-overlooked pedagogical goal. This is especially crucial in distance education, where students must work independently and be self-motivated to stay on track (Edmondson, 2007; Harmon & Hirumi, 1996). Interactive discussions are productive, but students can grow weary of the same activity week after week. Varying the types of activities and styles of assignments in a course has at least two sure benefits: boredom is alleviated, and students with different learning styles can become more engaged.

Effective, and especially media-enhanced, use of the Q&A can help fulfill the educational purposes of colleges, universities, and other institutions of higher learning because it is an excellent and innovative way to place students at the center of the educational process and bring them together in their learning experience, enabling them to construct knowledge for themselves while operating in a community of inquiry that not only solves problems together but also

promotes self-discovery (Saulnier et al., 2008). Beyond this, the use of a carefully crafted rubric (see Appendix B) that sets standards for successful completion of the assignment, lays out guidelines for how to achieve those standards, and articulates how the assignment relates to course learning goals and outcomes aids in student self-assessment on the path to problem solving and self-discovery (Buzzetto-More & Alde, 2006).

The Q&A Forum exemplifies student-centered learning: Students get the chance to take control of the direction of class discussion as well as their own learning by generating their own questions. They also are free to choose a particular discussion-board post to refer to or critique in their question as well as determining which student-generated question they want to answer. Thus student-to-student, student-to-content, and student-to-instructor interaction are all in play. In the answer phase of the assignment, students will be more enthusiastic and expansive in constructing a response because it is to a question they have chosen to answer rather than one they have been compelled to answer. Because the questions are intended to be thoughtful and original creations of their peers, students are highly motivated to craft answers that display equal creativity and thoughtfulness. The instructor also benefits because he or she will get a better idea of what interests students and what they want to know, and, a not insignificant bonus, reviewing and evaluating the assignment will be much more enjoyable and surely more rewarding than going through dull and repetitive responses and reactions to the same questions the instructor has posed many times over.

One unexpected outcome of the Q&A assessment tool that I have observed in my classes is that students reveal much more about themselves and relate their personal experience to course content and concepts in ways that are surprisingly insightful and often quite moving. The special feature of this format, the invitation to share one's own ideas through posing original questions to the entire class, not only opens up the "classroom" conversation in new ways but also helps create a real-life connection between the students and what they are learning.

Conclusion

Educators, pedagogical theorists, instructional designers, and, not to be left out, the all-important stakeholders in the enterprise of higher education—the learners, the students—all share a number of goals in their respective efforts to make the educational experience successful, meaningful, efficient, and satisfying (among many other things). It is important to set out criteria for excellence in education and guidelines for well-designed instruction, and a great deal of useful research is being conducted to help accomplish these ends. As a concrete contribution to this broad undertaking, the Q&A Forum assignment was developed and herein described and offered for use in the hope that its implementation will aid in the achievement of the numerous and laudable goals that so many have worked so hard to determine and define. In line with the recommendations of Koszalka & Ganesan (2004), this learning-and-assessment tool incorporates numerous types of resources and learning media, integrates a variety of interactions and levels of interactivity, and calls upon forms of thought and communication that go beyond ordinary classroom exchanges. This new assessment tool is offered as a building block in a framework for the future.

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About the Author

Melinda Campbell

PhD, Associate Faculty

Department of Arts & Humanities

College of Letters and Sciences

National University

La Jolla, California

mcampbell@nu.edu

Major research interests: Metaphysics of perceptual phenomena, aesthetics, epistemology of critical thinking, philosophy of pedagogy

Appendix A
Sample Language from an Online Course— Philosophy 100:
Introduction to Philosophy

Description of the Assignment

This assignment has two parts:

(1) Part 1: The Question - Ask an original question. The parameters here are two: (a) the question should address a specific issue related to the content covered anywhere in this unit or concern any concepts or principles covered in the unit, or it may be a critical response/inquiry directed at one or more of your peers' DB posts for the unit; (b) keep in mind that the response to your question will be limited to around 350 words maximum, so the question should not be too broad. Narrowly focused questions that include some rationale for why this is an interesting or important question to consider are best.

All questions must be posted by the due date listed in the course syllabus for Q&A: Unit I, Part 1 (Question). This will usually be one day (24 hours) after the DB for the unit is due.

(2) Part 2: The Answer - Answer someone else's question (i.e., do not respond to your own question). Each question should have only one answer (and points will be deducted if you answer a question after someone else has already answered it). If a question has already been answered, then move on to one that has not been answered. There will be as many questions as there are students in the class (ideally); there should be the same number of responses. This part of the assignment is designed to encourage you to get engaged with what your peers are doing: You will want to wait until all questions are posted to find a question you would really like to answer; however, if you wait until the last minute, the question you like may already be taken.

Note: If it should happen that there are no unanswered questions (and the Question due-date deadline has passed), it means that someone has either answered two questions or has answered a question but not asked one. Only in such a case should you answer a question that has already been answered. The goals here are to open the discussion up to a broad range of topics and to increase peer interaction.

All responses must be posted by the due date listed in the course syllabus for Q&A: Unit I, Part 2 (Answer). This will usually be two days (48 hours) after the Questions are due.

This assignment is worth 5 points, and your score will be based on the originality, focus, and substance of your question as well as the effort and insight evident in your response to one of your peers' questions.

Please note that late work cannot be accepted for this assignment.

The Assignment

(1) Part 1: Come up with an original question based on any (or any combination) of the following:

- ∞ a specific issue related to the content of the reading for this unit;
- ∞ concepts or principles introduced or elaborated in this unit;
- ∞ ideas about the meaning, purposes, or social, political, moral, or aesthetic impact of the areas of philosophy covered in this unit;
- ∞ your critical response to one of your peers' DB posts for this unit.

(2) Part 2: Choose one question to answer:

- ∞ Answer someone else's question (i.e., do not answer your own question).
- ∞ Do not answer a question that has already been answered.
- ∞ Your response should be (approximately) a minimum of 200 words and a maximum of 350 words.
- ∞ Do your best to respond to all aspects of the question asked.
- ∞ Remember to support opinion with reasons why: facts, statistics, expert opinion, personal experience, etc.
- ∞ If you refer to a particular image or idea or argument from another author, remember to cite your source.

In your questions and answers, work for substantive, analytical, and critical inquiry and commentary (note that being critical may be negative or positive). Some things to think about may be how well a particular point of view stands up to close scrutiny, what assumptions (about the nature of the world, about human life and thought, based on political, ethical, or religious ideologies, etc...) such points of view carry, what implications follow from such perspectives, and so on.

Student Evaluations of Courses and Teachers

Nataliya Serdyukova, B. Charles Tatum, and Peter Serdyukov

Abstract

Student course evaluations are an important factor in determining the quality of teaching and learning. They are an essential measure of student satisfaction and allow instructors and administrators to obtain the feedback necessary for reflecting on teaching and for updating the course and its delivery. Investigation of student evaluations, particularly of evaluation of instructors, may offer an insight into faculty teaching effectiveness, initiate professional development using self-assessment and reflection, and contribute to course renovation and academic rigor. This study investigates the course evaluation form used at National University and explores the reliability and validity of the student course ratings. The study shows a high degree of reliability and validity, which suggests that these course ratings can be applied to improving teaching and making decisions about faculty promotion, reappointment and merit.

Key words

Evaluation, assessment, feedback, instructional quality, teaching effectiveness, faculty development, rating reliability, assessment validity

Introduction

Student course evaluations are an important factor in determining the quality of teaching and learning. These evaluations are supposed to measure student satisfaction, which is often given a large amount of credibility in colleges and universities. They also allow instructors and administrators to obtain the feedback necessary for reflecting on teaching quality and for updating the content and delivery of courses, all of which should improve learning outcomes. The results are often used by the instructors, departments, schools, and the university administration for institutional assessment and maintaining instructional quality. Instructors are sometimes obligated to report their evaluations for reappointment, promotion, and merit. Moreover, an investigation of what and how is evaluated by the students may (a) offer insight into faculty teaching effectiveness, (b) initiate professional development using self-assessment and reflection, (c) contribute to course renovation and academic rigor, (d) produce a better understanding of student learning and evaluation criteria, and (e) positively affect student learning performance, outcomes, and attitudes. Of particular interest is the student evaluation of instructors themselves, which can cause both excitement and concern. There are various views and interpretations of the value of student evaluations; therefore, this issue needs further study because of its critical importance for those who teach and for the administrators who use these evaluations when making decisions on faculty advancement and awards.

Brief Literature Review of Student Evaluations

Student evaluation research has been reported in many publications, and it is beyond the scope of this article to do an exhaustive review. The interested reader can obtain a greater

explication of the principles and foundation for student evaluations in Richardson (2005), Huitt (1995), and Stockham and Amann (1994). The literature is consistent on the following points:

1. Learning is an active process and student involvement is an integral part of that process.
2. Student characteristics and behaviors impact perception of and interaction with the teacher.
3. Teachers view their teaching with regard to the paradigms of their students in order to facilitate change and build for growth.
4. Teachers recognize that students can make important contributions to the teaching/learning process.
5. The teaching/learning process is dynamic and should change over time and with context.

It follows from these principles that teaching and learning involve an interaction between the instructor and students: Student participation and input may serve as valuable feedback for the instructors, and instructors' feedback to students contributes to student growth and development. "Student evaluations can be an important measure of teacher behaviors and teaching methods when they are related to a product or output measure of student learning and growth" (Gordon, 2001, 5). Student feedback is a critical tool for continuous professional development by faculty and improvement of their teaching. Gordon also writes, "Students need not be silent partners in the improvement of teaching in higher education. In actively seeking students' responses to instruction, colleges and universities are sending the important message that they honor and support the teaching-learning process" (p. 4).

The benefits of student evaluations are numerous. First, they are easy and inexpensive to administer. Second, they give an impression of objectivity (they produce a quantitative value) in comparison with more "subjective" measures, such as unsolicited letters or comments by outside observers. Third, there are few alternatives to student evaluations if one wants to assess teaching effectiveness (Huemer, 1990).

Student evaluations of their professors may have a twofold purpose (see Reasons to Adopt, 2006): (1) they are used for *formative evaluations* (i.e., enable teachers to improve their teaching and bring certain changes into their classes), and (2) they supply *summative evaluations* (i.e., provide evidence for professors' achievements for future promotion and evaluation). Student evaluations seem to meet these two purposes well because researchers tend to agree that student evaluations are highly reliable (i.e., students are consistent in their ratings of instructors) and valid (i.e., student ratings correlate positively with other measures of teaching effectiveness). Cashin (1990) concludes that "student ratings tend to be statistically reliable, valid, and relatively free from bias, probably more so than any other data used for faculty evaluation" (p. 6). The validity of student evaluations has been widely discussed, and Gordon (2001) suggests evaluations can be affected by student prior subject interest, workload difficulty, expected grade, reason for taking course, class level, overall graded point average, year in school, course enrollment, and teacher rank. A common technique for assessing validity is to demonstrate that course ratings correlate with student performance, and studies show

that there is a consistent positively correlation between student evaluations and student performance as measured by exams, grades, etc. (see Cashin, 1990; Huemer, 1990).

Thus, the evidence suggests that student evaluations of instruction provide valuable information. Nonetheless, Rice (2009) cautions that “student evaluations have their limits. They should never be the only means of evaluating faculty members . . . and faculty members who actually want to become better teachers—and who believe that good teaching skills are not bequeathed to them in perpetuity with the awarding of a Ph.D.—should read them over and over again. We cannot see ourselves as others see us . . . They enable academe to maintain quality instruction in the classroom and, equally important, to sustain a conversation about teaching.”

Hoover-Dempsey (2009) goes on to add: “analyze the information . . . look for patterns in students’ comments—identify trends, note what you have done well and what needs improvement.”

The literature on student evaluations is vast and complex, and many subtle relationships and interactions are embedded in the data. Research has shown that certain disciplines tend to be rated more highly than others. Arts and humanities courses, for instance, are rated higher than social sciences and biological sciences, which are rated higher than business and computer sciences, followed by mathematics, engineering, and physical sciences (Javakhishvili, 2009). Javakhishvili further claims that if a student does not have interest in subject but takes the class because it is required, she or he might give a lower score to a professor than a student who is very much interested in a class that he or she has taken. It is reasonable, therefore, to suggest that the more difficult the subject matter and the less motivated the student, the lower the evaluation an instructor should expect.

A common criticism of student evaluations is that students tend to give higher ratings when they expect higher grades in the course (Cashin, 1990). Thus, student evaluations seem to be as much a measure of an instructor's leniency in grading as they are of teaching effectiveness (Huemer, 1990). Many believe that this is a cause of grade inflation (Goldman, 1985). Another criticism is that student evaluations encourage professors to dumb down courses in an effort to keep students happy at all costs (Ryan, Anderson, & Birchler, 1980), which results in lower academic rigor and decreased learning outcomes. This argument is supported by Ory & Ryan (2001), who suggest that among the unintended consequences of student evaluations are (a) instructors alter their teaching in order to receive high ratings (lower content difficulty, provide less content, give only high grades), and (b) students reward poor teaching by believing they can give high ratings in return for high grades. If this is indeed the typical situation, it compromises academic rigor and instructional quality.

In addition to what has already been discussed, the literature reveals a few other important facts about student course evaluations that are critical to accurate interpretation and use of the information:

- ∞ Centra and Creech (1976) found that smaller classes have higher ratings. Normally, smaller classes with fewer than 15 students tend to have higher ratings than larger classes.
- ∞ Results with low response rates should be treated with caution. If there are fewer than 10 responses, the data need to “be interpreted with particular

caution” (Cashin, 1990). Likewise, so would any course in which the response rate was less than half of the enrollment.

- ∞ Improved student learning or students’ perception that they have “learned a lot in the class” improve the ratings. Since a primary purpose for teaching is student learning, there is also a high positive correlation between student ratings and student learning (Javakhishvili, 2009).
- ∞ Evaluation forms on which low ratings are given without explanation, or where the complaints are directed at the professor's beliefs, the harshness of the grading, the difficulty of the course, or the professor's personal characteristics (such as physical appearance, clothing style, or personality) might be discounted (Huemer, 2001).
- ∞ Students appreciate instructors who know what they are talking about and who also care about them (Ory 2001). It is commonly believed that that good entertainers receive higher ratings than do less showy but better instructors. However, students normally define excellence in teaching using a criterion expressed in the phrase, “hardness of head and softness of heart” (Goldsmid, Gruber, & Wilson, 1977).

Purpose of the Study

Given that course evaluations are widely used and often misinterpreted, it is important that studies be conducted to demonstrate the accuracy and consistency of these evaluations. National University (NU) has been using a comprehensive system of student evaluations for many years. The system was recently revised to incorporate instructional changes at NU (e.g., more online classes) and to update the student-rating categories to reflect a wider range of student concerns. In particular, the new system now has students rating the effectiveness of the technology used in online classes and allows the student to rate not only the instructor (assessment of teaching) but also the course content and a self-assessment of learning. The study examines the reliability and validity of these ratings and performs a comparative analysis across types of classes (online, onsite, etc.), student level (undergraduate versus graduate), different schools/colleges, and faculty ranks.

Method

Course evaluation data were supplied from the Office of Institutional Research and Assessment from July 2007 to February 2008. Every class that was taught at the university during this time frame was evaluated by a total of 32,393 students (many students evaluated multiple classes so the data do not reflect 32,393 unique individuals). The data set included information on the following variables: course, month taught, school/college, department, type of class (online, onsite, web-based), campus, level (undergraduate versus graduate), enrollment, response rate, faculty rank, class grade-point average (GPA), and a rating for each of the 30 items for which the students were asked to respond. The items that the students rated fell into five general categories: (a) student self-assessment of learning (7 items), (b) student assessment of instruction

(teaching) for all classes (11 items), (c) student assessment of instruction (teaching) for online classes only (6 items), (d) student assessment of course content (3 items), and (e) assessment of web-based technology (3 items, online classes only). Students used a 5-point Likert-type rating scale (strongly disagree to strongly agree with a “not applicable” option).

Results

Reliability Analysis

The student course assessment instrument attempted to measure four different areas: Self-Assessment of Learning (SAL), Assessment of Teaching (AT), Assessment of Course Content (ACC), and Assessment of Web-Based Technology (AWT). A reliability analysis showed the extent to which the items that made up each of these areas were internally consistent (i.e., the items, in general, measured the students’ ratings in these areas in a consistent fashion). The reliability index used was Cronbach’s Alpha (α). Alpha levels of .70 or higher indicate reasonable reliability.

Onsite Questions

- ∞ SAL: The 7 questions in this area were highly reliable ($\alpha = .93$). Moreover, there were no individual items that stood out as problematic (e.g., highly skewed ratings, low correlation with other items).
- ∞ AT: The 11 questions in this area were also highly reliable ($\alpha = .96$) and there were no individual items that stood out as problematic.
- ∞ ACC: The 3 questions in this area were reasonably reliable ($\alpha = .84$). There were no individual items that stood out as problematic, although in general these items were not as consistent as the SAL and AT items.

Online Questions

- ∞ SAL: Same as Onsite
- ∞ AT: The first 11 questions were the same as the onsite questions. Additional 6 questions were especially tailored for the onsite classes. These additional questions were highly reliable ($\alpha = .91$), and no individual items stood out as problematic.
- ∞ ACC: Same as Onsite
- ∞ AWT: The 3 questions in this area were very reliable ($\alpha = .90$). There were no individual items that stood out as problematic.

Comparative Analysis

This analysis showed how different groups (e.g., schools, faculty ranks, class types) compare with respect to critical variables (e.g., GPA, student assessment of learning, assessment of teaching). In general, the analysis revealed a few important facts (see Tables 1-4 in the Appendix). The common conception that online classes receive lower evaluations than onsite classes was confirmed (see Table 1). Also, the GPA for online classes tends to be lower than for onsite classes (see Table 1). As to be expected, the GPA for graduate classes was higher than for undergraduate classes (see Table 2), but the

assessment ratings for graduates versus undergraduates were very similar (also see Table 2). Comparisons among the college/schools revealed very little (see Table 3), except that the College of Letters and Science (COLS) did the best job of balancing low GPAs with high assessment ratings. Finally, full-time and associate faculty (compared to adjuncts) did better at keeping the GPA low and the assessment ratings high (see Table 4).

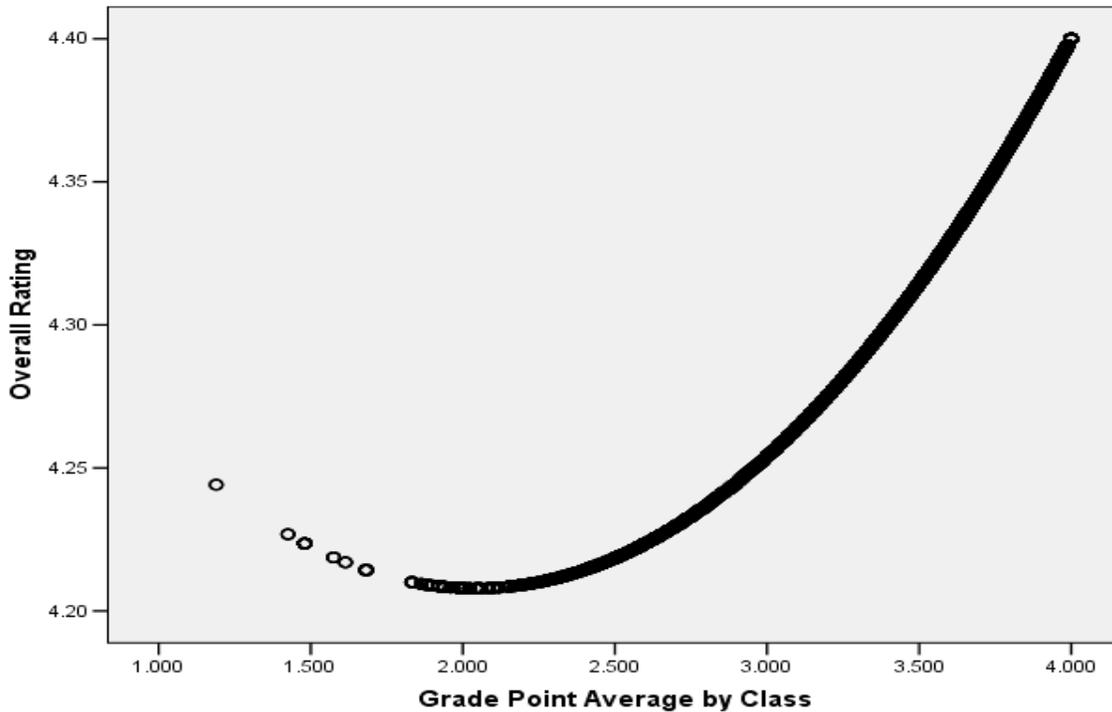
Validity Analysis

One way to assess validity is through factor analysis. Factor analysis is a statistical technique that shows whether items tend to fall into meaningful clusters. Ideally, if the assessment instrument were valid, we would expect the items listed for Student Assessment of Learning (SAL) to form one unique factor, items under Assessment of Teaching (AT) to form another unique factor, and items under Assessment of Course Content (ACC) to form a third unique factor. (Assessment of Web-Based Technology could not be included because only the online students received these items.) The set of assessment questions did not yield a three-factor solution. Instead, two distinct factors were uncovered. In general, the items listed under AT formed one factor, and the items under SAL and ACC formed the second factor. Although this factor analysis was not completely consistent with the expected factor structure, the results give some credence to the validity of the assessment because the factors suggest that the instrument measures teaching ability and some combination of learning and course content.

Another way to examine validity is to see if the assessment instrument is related to other variables as expected. In the comparative analysis the ratings were related to the type of class and faculty rank in ways that we would expect a valid instrument to behave (e.g., online classes get lower rating, full-time and associate faculty get higher ratings).

Another variable of interest is grades. Although most instructors believe that assessment ratings are related to grades, the empirical data have not always supported this presumed relationship. However, most studies have only looked at linear relationships and have not considered the possibility that the relationship might be curvilinear. Indeed, when we look at the function that relates GPA to the question that asks for an overall assessment of the teacher (“Overall, the instructor was an effective teacher”), we see a non-linear trend (see Figure 1). The traditional Pearson correlation coefficient was not significant ($r = .007$, $p = .242$) and the linear trend was not significant [$F(1, 30396) = 1.37$, $p = .242$]. The curvilinear (quadratic) trend, however, was statistically significant [$F(1, 30395) = 44.25$, $p < .000$]. This finding and the positive nature of the relationship shows that student satisfaction was positively related to grades in that students who earn higher grades tend to give their instructors higher evaluations. As noted below, this finding can be interpreted in at least two ways. One way to view these results is to argue that student ratings are associated with student performance and thus supports the validity of the assessment instrument.

Figure 1. The Nonlinear Relationship Between Grades and Student Ratings



Discussion and Conclusions

The results showed that the rating instrument used at National University was both reliable and valid. These findings are mostly consistent with the findings from other researchers (e.g., Cashin, 1990; Huemer, 1990; Richardson, 2005). If the objective is to assess teaching effectiveness, the evaluation ratings used here are more than adequate. Of course, as noted above, there are caveats to using course evaluation data (e.g., they should not be the only means of evaluating faculty, they should be used to identify trends rather than to define performance as fixed in time, and moderating factors such as class size, academic discipline, student motivation, class difficulty, and response rate should be considered). But, in general, users of these ratings can be confident that they have a solid foundation for assessing teaching and learning.

One of the more interesting findings in this study was the nonlinear relationship between grades (GPA) and the rating of the instructor. As noted above, studies have not always found a positive relationship between grades and students evaluations. Part of the problem may be that these researchers were only searching for a linear correlation, and if the relationship were curvilinear, the standard correlation coefficients would not be significant. In this study, we showed that there was a significant nonlinear relationship, and when a more traditional linear correlation was performed, it was not significant. Examination of the nature of the function (Figure 1) reveals that the relationship between grades and teacher rating is stronger at the higher grade levels (GPA of 3.0 or higher). At the lower grade levels (GPA less than 2.0) the relationship appears to be in the opposite

direction (i.e., students with low grades rate their instructors higher than students with slightly higher grades). This latter trend should be interpreted with caution because the number of students who fall into these grade levels was a small and highly select sample.

A more interesting question relates to how we should interpret the rating/grade relationship. One argument is that this confirms the validity of the ratings because it shows that high ratings are associated with high student performance. An opposing argument is that this reflects student bias rather than validity. In other words, students are biased toward giving high ratings to those instructors who give high grades. This issue is too complex to be resolved with the basic design of this study, but it does suggest a possible direction for future research.

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About the Authors

Nataliya Serdyukova
PhD, Associate Professor
Department of Mathematics and Natural Sciences
College of Arts and Sciences
National University
La Jolla, CA
nserdyuk@nu.edu
Research interests: Teaching and learning methodology, physics instruction, adult education

B. Charles Tatum
PhD, Professor
Department of Psychology
College of Arts and Letters
National University
La Jolla, CA 92037
ctatum@nu.edu
(858)642-8476 (voice)
(858)642-8715 (Fax)
Research Interests: Adult education, accelerated learning, program evaluation, organizational psychology

Peter Serdyukov
Doctor of Pedagogic Sciences, PhD, Professor
Department of Teacher Education
School of Education
National University
La Jolla, CA
pserdyuk@nu.edu
Research interests: Distance education, online learning, adult learning, accelerated and intensive learning, instructional design, ESL methodology, bilingual education, professional development

Appendix

Table 1
Comparison of Mean Ratings for Different Types of Classes (Online, Onsite, Web Class)

Class Type	GPA	Overall Assessment	SAL	ACC	AT Onsite	AT Online
Online	3.16 (.81)	4.09 (1.17)	3.97 (.83)	4.10 (.86)		4.12 (.95)
Onsite	3.24 (.87)	4.51 (.92)	4.29 (.83)	4.30 (.90)	4.50 (.78)	
Web Class	3.42 (.48)	3.94 (1.09)	3.75 (1.08)	3.90 (1.05)		4.01 (1.05)
Total	3.21 (.84)	4.32 (1.07)	4.15 (.85)	4.21 (.89)		

Note: Standard deviations are in parentheses. Overall Assessment refers to the last item under Assessment of Teaching (“Overall, the instructor was an effective teacher”). SAL = Student Assessment of Learning, ACC = Assessment of Course Content, AT = Assessment of Teaching.

Table 2
Comparison of Mean Ratings for Different Student Levels (Graduate and Undergraduate)

Class Type	GPA	Overall Assessment	SAL	ACC	AT Onsite	AT Online
Online	3.16 (.81)	4.09 (1.17)	3.97 (.83)	4.10 (.86)		4.12 (.95)
Onsite	3.24 (.87)	4.51 (.92)	4.29 (.83)	4.30 (.90)	4.50 (.78)	
Web Class	3.42 (.48)	3.94 (1.09)	3.75 (1.08)	3.90 (1.05)		4.01 (1.05)
Total	3.21 (.84)	4.32 (1.07)	4.15 (.85)	4.21 (.89)		

Note: Standard deviations are in parentheses. Overall Assessment refers to the last item under Assessment of Teaching (“Overall, the instructor was an effective teacher”). SAL = Student Assessment of Learning, ACC = Assessment of Course Content, AT = Assessment of Teaching.

Table 3
Comparison of Mean Ratings for Different Schools/College

Class Type	GPA	Overall Assessment	SAL	ACC	AT Onsite	AT Online
COLS	3.00 (.74)	4.35 (1.03)	4.18 (.83)	4.24 (.89)	4.38 (.85)	4.36 (.95)
SHHS	2.32 (1.58)	3.86 (1.32)	4.03 (.89)	4.01 (1.08)	4.00 (1.08)	3.96 (1.18)
SMC	3.36 (.79)	4.10 (1.22)	4.07 (.87)	3.97 (.95)	4.22 (.90)	4.18 (.97)
SOBM	2.98 (.79)	4.30 (1.04)	4.11 (.85)	4.15 (.90)	4.32 (.88)	4.31 (.96)
SOE	3.44 (.83)	4.33 (1.07)	4.14 (.85)	4.22 (.88)	4.35 (.86)	4.33 (.95)
SOET	3.23 (.44)	4.27 (1.08)	4.24 (.85)	4.20 (.89)	4.35 (.84)	4.31 (.97)
Total	3.21 (.84)	4.32 (1.07)	4.15 (.85)	4.21 (.89)	4.35 (.87)	4.32 (.96)

Note: Standard deviations are in parentheses. Overall Assessment refers to the last item under Assessment of Teaching (“Overall, the instructor was an effective teacher”). SAL = Student Assessment of Learning, ACC = Assessment of Course Content, AT = Assessment of Teaching.

Table 4
Comparison of Mean Ratings for Different Faculty Ranks

Faculty Rank	GPA	Overall Assessment	SAL	ACC	AT Onsite	AT Online
Adjunct	3.29 (.75)	4.30 (1.08)	4.13 (.86)	4.19 (.90)	4.33 (.88)	4.30 (.97)
Associate	3.25 (.78)	4.43 (.93)	4.23 (.83)	4.28 (.91)	4.40 (.80)	4.43 (.94)
Full-Time	2.93 (1.00)	4.39 (1.00)	4.19 (.81)	4.27 (.85)	4.42 (.80)	4.44 (.89)
Total	3.21 (.84)	4.32 (1.07)	4.15 (.85)	4.21 (.89)	4.35 (.87)	4.32 (.96)

Note: Standard deviations are in parentheses. Overall Assessment refers to the last item under Assessment of Teaching (“Overall, the instructor was an effective teacher”). SAL = Student Assessment of Learning, ACC = Assessment of Course Content, AT = Assessment of Teaching.

Best Practices

Teaching Introductory Statistics and Probability Online in a Pace Format: Some Best Practices

Michael V. Steinberg

Abstract

This paper presents a summary of a multiyear experience of teaching the online course of Introduction to Probability and Statistics (MTH 210), developed and later upgraded by the author. The paper focuses on various aspects of teaching the online pace course, including its structure, textbook, class management, assessment, and ways of improvement. The parts of the course that are most difficult for the students and require the instructor's special attention are discussed.

Key Words

Online course development, probability and statistics, threaded discussion, online assessment

Introduction

Statistics enjoys arguably the highest popularity among the mathematical courses, since many students perceive it as an area of knowledge they need in their professional activity, while subjects such as algebra seem rather abstract to them. Nevertheless, the Introduction to Probability and Statistics, although an elementary course, is not too easy, for at least two reasons. First, the course is scheduled in the pace (4 weeks) online format, which makes it harder in certain respects. Second, the students have to deal mostly with word problems, whereas in algebra courses more attention is paid to formal exercises.

Introducing the Student to the Course

The first impression students receive of the class and of the instructor may affect their attitude for the whole course. Therefore, establishing steady contact with the students is highly important. These contacts should start about two weeks before the class with an e-mail reminder of which edition of the textbook they need to purchase and what may happen if they procrastinate. (Actually, the students are supposed to know all that, but not all of them really do!) Student responses often show that they value the instructor's attention.

One day before the class starts, the students gain access to the class site. In addition to providing the syllabus, homework assignments, threaded discussion topics and so on, it is good to provide class members with a detailed description of the class rules, due dates for all assignments, dates of exams, methods of communications, and assessment information. The best place to present such a document is in Doc Sharing, because that allows the instructor to check which of the class members have downloaded it. Each student should print it out and keep it for reference. This way the instructor will answer many questions the class members may ask in advance. One may say that all this information should all be in the course syllabus. That might be true, but then the syllabus would be overloaded with details, and, worse even, it would have to be updated for each class.

The Textbook

Elementary Statistics by Mario Triola was initially chosen for the onsite course and then adopted for the online form. This textbook was selected because of its clarity of presentation, understandable explanations, and carefully picked problems. We started with the 8th edition (Triola, 2001) and are now using the 11th (Triola, 2008). Quite naturally, the volume of the textbook is growing with each edition, which makes the task of helping the students work with the book increasingly important.

The Reading and Lectures

The MTH 210 online course includes the usual components (lectures, reading, assignments, discussion, exams, self-check questions, flash cards etc.) One task of the shell is guiding the student through the voluminous textbook over a short period of time. Therefore, the reading part specifies which sections and pages must be read by the student.

The lectures contain about as much material as would be covered if this course were taught on site. They also give the student the information needed to complete the homework. (The lectures are supposed to be fully independent from the textbook, but this is not possible in reality, at least because the symbols and notations used by different authors are not identical.)

Although the lectures were not designed for this purpose, they may serve as a lifeline for a student who could not get the textbook on time. Such student can begin to study while waiting for the book to arrive.

Formula Sheets

An online student taking an exam at home is free to use any materials, including the textbook. However, when time is limited, using a book turns into a burden rather than help, because much time is spent on searching for the necessary information. Such information presented in a concise format will allow the student more time to think over the exam questions. Most textbooks contain a list of important formulas; nevertheless, it is good to create custom formula sheets for a specific course. Our course includes four such sheets (one for each week) with formulas and rules. The students have confirmed the formula sheets' efficiency.

Preventing Frequent Mistakes

There are always some topics in every course that are especially difficult for the students. One goal of the lectures is to explain such topics in more detail and providing more examples in addition to those presented in the textbook. In the MTH 210 course, these topics include but are not limited to the following:

Sampling error. Here is an example illustrating the concept of sampling error: Several random samples of the same size are drawn from the same population. Their means were compared to the population mean. The student can clearly see that all of them are different. Hence, a sampling error varies from sample to sample and cannot be avoided.

Arranging a data set in a given number of classes. The student has to understand that while the number of classes is assigned, the lower limit of the first class as well as the class width may vary. The value obtained by dividing the data range over the number of classes may be rounded

up to any convenient number as far as it does not result in an empty upper class. Therefore, it is good to show two or more versions of breaking the same data set into a given number of classes.

Weighted mean. While solving problems on weighted mean, some students confuse the variable (x) with the weight (w). Therefore, the instructor should put an emphasis on preventing such errors.

Independent events. Students often overlook the fact that two events are dependent if event A *may be* the cause of event B. It does not need to really cause event B.

Multiplication rule. Perhaps the most common stumbling block in applying this rule is the probability of multiple occurrence of a specified versus unspecified event. Thus, the probability of two randomly selected persons being born on a specific day of the week is $1/49$, but the probability of them being born on the same (unspecified) day of the week is $1/7$. This difference should be explained to the students by several examples. Incidentally, students grasp the concept of selecting with or without replacement much easier.

The rule of at least one. This rule is especially important for learning discrete probability distributions. A common error is confusing the probability of *at least one* and the probability of *exactly one*. The students must be cautioned against this.

Counting. It goes without saying that the hardest thing for a student here is choosing the right counting rule. The course shell contains a chart that guides the reader through this choice. Nevertheless, confusing the Permutation and Combination rules is a frequent mistake. The instructor should remind the students about it, especially before an exam.

Normal distributions. While students have a relatively easy time mastering the technique of finding the area under the normal curve for a given z -score, they are often taken aback finding the z -score for a given area. That happens mostly because the commonly used table of standard normal distribution is designed for problems of the first type and is rather inconvenient for the second. Meanwhile, it is not difficult to compose a table where the area serves as an entry and the z -score is the outcome.

Confidence intervals. Most textbooks explain the techniques of constructing confidence intervals but pay little or no attention to their applications. This may leave the learner with a feeling of dissatisfaction with a result that seems ambiguous. It is important to show the students that interval estimate may be more efficient than point estimate because it helps to choose the safer decision. This can be demonstrated by examples such as the following:

Example 1. A dentist is going to open a new office in a small neighborhood. He ordered research to find out how many times per year a resident sees a dentist and what the annual cost of dental care per person is. The survey resulted in 95% confidence intervals (2.6, 3.2) for the number of visits and (\$415, \$706) for the dental care cost.

(A) What number of visits must be taken into account to figure out the size of the office space the dentist needs to rent?

If the mean number of visits was assumed to be 2.6 and in fact it is greater, the office will be overcrowded, which is not good for the business. On the other hand, if the mean of 3.2 visits was assumed and in fact it is smaller, there will be extra space, which is not as bad as overcrowding. Therefore, the dentist must use the upper limit: 3.2 visits per year per capita.

(B) What amount of money must be taken into account to figure out projected income? This time, a prudent answer will be the lower limit, or \$415.

Example 2. A student association at a college figured out that 7.5% to 9.5% of all students usually join it. If the present number of students at the college is 13,000, how many booklets should the association print in order to accommodate all prospective members?

The given confidence interval is (0.075, 0.095). The safer decision would be $13,000 \times 0.095 = 1,235$ booklets. It is better to have extra copies than run out of them.

Large vs. small samples. The authors of some textbooks (for instance, Larsen 2006) use the criterion of large and small samples ($n \geq 30$ or $n < 30$ respectively). This allows replacing the population standard deviation with the sample standard deviation for constructing confidence intervals and hypothesis testing if a sample is large. Such technique is not accurate, but it results in a 6% error for $n = 30$ and 4% error for $n = 50$, which is acceptable for inferential statistics.

Other authors, including Triola (2008), stand on more strict positions and do not use such classification; instead, they consider the cases of known versus unknown population standard deviation. It is obvious that in reality this population parameter is hardly known in advance. In case it is unknown, the student's distribution must be used instead of the normal. That is absolutely correct and not too complicated. There is only one obstacle: a 4-week course does not leave a chance to cover the student's distribution. Therefore, we have no other choice but consider only large samples, apply the approximate technique, and use the normal distribution.

Homework Assignments

The students must complete four homework assignments. It was already mentioned that these assignments consist mostly of word problems rather than just exercises. The answers to the odd problems can be found in the book, while the answers to the even problems are given on each assignment page. This way a student can always check the answer to a problem and ask for help if necessary. Showing all work on each problem involving calculations is a strict requirement; a bare answer earns no credit.

Setting deadlines for homework assignments needs careful balancing. In almost every class, a couple of students receive their textbooks with delay and cannot complete the first assignment on time. Therefore, giving one or two day of slack on the first assignment deadline may help them catch up with the class. The same thing can be recommended about assignments #2 and #4, since students have to do the homework and prepare for the exam at the same time.

Threaded Discussion

It is generally known that threaded discussion is an important element of online education.

However, it may be shaped in various ways. In the discussed course, the discussion board consists of two parts.

Think and Answer

A week assignment includes four questions of the following types:

What is wrong about this statement?

Examples:

- ∞ The United Nations Organization declared that the world's six-billionth inhabitant was born on October 12, 1999 in Bosnia.
- ∞ An auto dealership opened on February 28 and sold 2 cars on that day. During the whole March, it sold 80 cars. The manager claims that they increased their monthly sales 40 times.

Explain in a paragraph or two.

Examples:

- We define probabilities for various normal distributions. However, we use one single table (Standard Normal Distribution Table) for all of them. Explain why that is possible.
- Why cannot a confidence level be 100%?

True or false?

Examples:

- Health insurance policy is designed in such a way that a healthy person has a negative expected value, and an ailing one has a positive expected value.
- A coin is flipped twice. $P(\text{two heads}) + P(\text{two tails}) = 1$.

If we fail to reject the null hypothesis, we reject the alternative hypothesis.

As can be seen from these examples, we tried to avoid questions that could be answered by copying a paragraph from the textbook. The students are required to give a justified answer to each question; not necessarily absolutely correct. Answer like "true" or "false" will not earn full credit.

Open Forum

This part is intended for questions and answers concerning mostly homework assignments. In a 4-week course, it is especially important for the instructor to answer such questions promptly. Besides, if one student has stumbled over a problem, so could others. Therefore, posting the answer in this forum benefits the whole class.

The instructor's answer should contain not the full solution of the problem, like in a solution guide, but a carefully measured hint that gives the students the general idea and direction, leaving the rest of the work to them. To do it without delay, it is very helpful to have a bank of such hints. Certainly, this bank can be only created gradually, as the questions are coming in, but it will serve as long as the current edition of the textbook is in use. Unfortunately, the bank must be created from scratch as soon as a new edition was adopted.

We always encourage students to answer their classmates' questions. This is one of the most valuable activities in an online course. Those who do it receive some extra credit. Open Forum in online mathematics courses takes on some of the functions of a chat room. The pace of

discussion in such courses is slow; every entry, be it a question or an answer, takes time to both create and understand.

One more important function of Open Forum is peer support. There are always some students who at the very beginning feel frustrated with the amount of work, or start a mathematics course after a very long break, or received the textbook with a delay. Certainly, the instructor must reassure such students, but if this is done by classmates, such encouragement is even more valuable.

Assessment

In the current MTH 210 course, students take a midterm and a final exam. Overall, almost three-fourths of the questions involve calculations. Grading student work just by the final answers is not efficient, since a student may make an error in the last step. Hence, the instructor must see the whole work. Not everyone is able to enter all details of the solution into the answer box. Therefore, we ask each student to submit the detailed work by fax, e-mail, or dropbox. This method gives the instructor the opportunity of tracing the whole process of solving a problem and give a partial credit to the student. Of course, that takes significantly more time than grading multiple-choice answers (which can be made automatic), but it is much more fair and balanced. This approach also makes it easy for the instructor to explain to a student what was wrong in his/her answers.

The time allowed for an exam is another sensitive issue. It must be sufficient for an average student to answer all questions, but not excessively long. It may be good to collect the information about the time spent by each student on the current exam, find the mean and standard deviation σ and assign the time interval equal to $+\sigma$ for the next class.

We don't set the system to kick out the student after the time expired. Instead, we deduct 1% of the exam score for every 10 minutes of overtime. This is definitely not much, yet it gives the desired effect: the students have to watch the clock, but it does not make them too nervous.

Authentication

Since the instructor never meets the students in person, the issue of assessment becomes one of the most acute in online education. It is true that the instructor may develop a certain idea about a student's personality just by the style of his/her emails, the type of questions, the quality of homework and threaded discussion postings, and so on, but we still have to rely on the principle "one who wants to learn will learn."

The means of remotely controlling the testing process were discussed, in particular, by Mitry and Smith (2009). However, all of those methods require additional video equipment that is not easily available at this time. Therefore, we need to focus on what is possible now.

An online student is free to use any available materials, including the notes, completed homework, and even the textbook. A student who is not properly prepared may resort to some kinds of illicit assistance, such as using a tutor's help during the exam and getting information from classmates.

The first of these cases requires someone who is familiar with the material and can help promptly. We assume that a real professional tutor will never agree to do so. A person who took the same course some time ago and remembers something is of little use. The same applies to inexperienced tutors who need to read the textbook before solving a problem. Using help from

such persons is hardly better than calling for a friend's help in the TV game show *Who Wants to Be a Millionaire?* This narrows significantly a pool of possible candidates for synchronous assistance.

The second case is much more probable and therefore deserves more attention to prevent it. Such prevention could be achieved by individualizing the exam assignments. Thus, each student may be given an individual code, with each assigned problem being dependent on this code. Such a measure, although efficient, would, however, make understanding the problem difficult for some students. Also, it would make grading much more complicated for the instructor.

Having two or three versions of the exam and changing them during the exam day could be more realistic. Such change would not affect the exams that were already opened. Unfortunately, the eCollege platform does not allow quick replacement of an exam. It can be only modified question by question, which is possible but takes some time. Actually, it is possible to create a bank of tests, but each of them needs to be assigned an equal number of grade points, which will cause confusion in the gradebook.

Class Mean GPA as a Measure of Efficiency

This integral characteristic is an important tool of assessing both the class performance and the instructor's grading policy. However, this measure must be used with caution, as we can see from Table 1.

This table presents the grade list for a class of 25 students. The total scores are listed in Column 2, and the letter grades are entered in Column 3. Column 4 contains the numerical equivalents of the letter grades. The average of Column 2 is 80.1, which would result in a "B" grade for an individual student. The average of Column 4 is 2.4, which, in turn, is equivalent to a "C" for an individual. This disparity comes, evidently, from the differences of scales. (Indeed, the commonly used grade correlation table contains the classes 90 – 100, 80 – 89, 70 – 79, 60 – 69, and 0 – 59; the last class being much wider than the rest of them.) Nevertheless, such disparity, if any, results in a grade discrepancy not exceeding one level (e.g., B vs. C etc.).

Another kind of discrepancy has a purely formal nature. If a poorly performing student withdraws from the class, his/her record will be removed from the grade list. If such a student remains on the roster and gets a "D" or an "F," this grade must be taken into account, and then the average score or GPA drops. Thus, if we remove the F's (Rows 1 and 2) from the grade list, the averages of Columns 2 and 4 will rise to 82.7 and 2.7 respectively. That means the students who withdraw from a class before it is too late may affect the average GPA and even cause apparent grade inflation. In our opinion, the average GPA should be calculated with a "0" for each "W" in the grade roster.

Using Microsoft Excel and Graphing Calculators

A modern statistics course must include work with large data sets. This is not difficult with a popular and widely known application like Microsoft Excel, which possesses the necessary statistical functions. It is possible to assign small projects, at least in descriptive statistics. Perhaps, constructing confidence intervals may be feasible too if time allows. (The issue of time is critical in a short course.) Assignments of such kind would be easy to individualize in order to prevent plagiarism.

Table 1. A grade list for a class of 25 students.

#	Total Score	Letter Grade	Numerical Equivalent
(1)	(2)	(3)	(3)
1	47.1	F	0
2	54.1	F	0
3	61.2	D	1
4	62.0	D	1
5	66.0	D	1
6	68.2	D	1
7	69.1	C	2
8	75.3	C	2
9	76.2	C	2
10	78.5	C	2
11	78.9	C	2
12	84.8	B	3
13	85.1	B	3
14	86.6	B	3
15	87.2	B	3
16	87.6	B	3
17	88.1	B	3
18	89.0	B	3
19	89.0	B	3
20	88.9	A	3
21	90.9	A	4
22	96.1	A	4
23	96.6	A	4
24	96.7	A	4
25	99.5	A	4

Another area of application for information technology is solving problems on normal distribution. We already see some students abandoning the tables of standard normal distribution, which are a necessary element of every textbook, and resorting to graphing calculators or Excel. They obtain more accurate results and spend less time. It is clear that the said tables will eventually share the fate of tables of logarithms or trigonometric functions. That time may already be coming.

A Textbook for Short Courses

Today students in a statistics class have to work with a textbook written for a full-semester course, picking out the required sections and subsections from the 800-page volume. Once the short course has been established and proved its viability, it may be the proper time to think

about a textbook for such courses, written by a recognized author. The advantages of such book over a custom text are obvious.

From Asynchronous to Synchronous Method of Teaching

Introduction of the “virtual classroom” method will significantly enrich the instructor’s toolkit. In particular, it will make possible group work, which, in turn, can make the learning process active, and therefore more efficient, as stated by Lee and Famoye (2006). Besides, oral communication with the instructor can benefit students who acquire information better by hearing than by reading.

The class meetings hardly need to be like full-scale lectures. The instructor needs to cover the most important issues and/or answer questions, leaving the rest for independent work. Of course, in order to attend a virtual classroom, each student must have the appropriate equipment and know how to use it. It should be kept in mind that synchronous teaching methods lack the flexibility of the current online teaching. Therefore, the latter must remain available as an option.

Conclusion

Online mathematics classes, especially statistics classes, are becoming more and more popular. The online Introduction to Probability and Statistics course has proved its viability and effectiveness. Many students have stated that they learned much in this class.

To estimate the results achieved by the student, we need to distinguish between the immediate outcomes and the long-term skills. The immediate outcomes placed in the list of terminal course objectives are tested by the formal course assessment tools. The long-term skills retained by former successful students include but are not limited to the following:

- ∞ Perceive and interpret statistical information coming from the work documentation and from mass media
- ∞ Select trustworthy sources of information
- ∞ Use the concepts of mean and standard deviation
- ∞ Understand the probabilistic nature of insurance, gambling, etc.
- ∞ Understand and interpret interval estimate, including the concept of margin of error in various polls
- ∞ Understand the concept of statistical significance

We believe that the suggestions offered above will help the instructor increase the level of efficiency of his/her teaching of elementary statistics in the virtual classroom.

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About the Author

Michael Steinberg
PhD, Certified Core Adjunct
National University
Los Angeles
michael.steinberg@natuniv.edu

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