

INTERNATIONAL MINDFULNESS INSTRUCTIONAL DESIGN

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ABSTRACT

Implementing International Mindfulness Instructional Design (IMID) may ameliorate trauma that online Latino students' experience, and improve their comparative 44% virtual academic underperformance to their white online student counterparts.

Keywords: Instructional Design, Metacognitive Processes

INTRODUCTION

Online instructional design is the applied study of effective organization and delivery of information, materials and objectives to students, integrating an assessment of the student's learning results, with a view towards perfecting the online learning process. It is the bridge and guide between external knowledge and internalization of that knowledge. (As cited in Chaundry & Rahman, 2010, p. 193) "Glossary of term commonly used in distance education IGNOU (1997, p.29) defines instructional design as "generally referring to planning, development, delivery and evaluation of instructional system" (Romiszowski, 1989). Serving and fulfilling the learner's needs should be its primary concern. (As cited in Chaundry & Rahman, 2010, p. 194) "The greatest objective of instructional design is to serve the learning needs and success of students through effective presentation of content and fostering of interaction" (Chaundry & Rahman, 2010, p. 194).

This article proposes integrating mindfulness benefits through a multi-disciplinary collaboration with neurologists and psychologists to decrease environmental stress and trauma associated with formal online learning that in many instances traumatize Latino online learners, perpetuate Latino student underperformance, and otherwise detrimentally affect Latino online learners. The resulting "International Mindfulness Instructional Design" (IMID) for U.S. Latino online students would merge beneficial Mindfulness Brain Stress Reduction (MBSR) concepts as well as concepts from the participating disciplines. Recognized societal, organizational and/or cultural hegemonic biases, and resulting trauma affecting metacognitive processes in Latino online students, may be accounted for and ameliorated. Individuals within the expanding U.S. Latino population, a group that is presently seriously underperforming in online education could thereby provide greater contributions to societal institutions and organizations and more effectively integrate into and provide contributions to educational and academic advancement.

Not all cultures appear to be comfortable with the online medium. An assessment of the acculturation and comfort level using the e-commerce online shopping medium was significantly lower for European users than for American users. (as cited by Elias, 2011, p. 145)

"Nielson (2005) gives a simple example of the magnitude by describing one of the many related problems: "we tested 20 American ecommerce sites with both American and European users. The users' ability to successfully shop the site was 61% on average for the American users and 47% for the European users" (Elias, 2011, p. 198).

The existing virtual situational analysis may correlate to an indication that not all cultures may be currently as receptive to online instructional design. This concern is of paramount importance and must be suitably addressed or the primary objective of instructional design cannot be met using the online medium.

There is a real problem with U.S. Latino educational attainment. The U.S. Latino population is the fastest growing minority group in America (Malcom, 2010, p. 29). The US Census Bureau (2008) projects that nearly 30% of the U.S. population will be comprised of Latinos by 2040. Yet Latinos comprise the lowest educational attainment group in the United States (IES, 2009); achieving poorer educational attainment than African Americans (Malcom, 2010). Addressing the National Council of La Raza, United States Secretary of Education Arne Duncan remarked “While our public schools have more Hispanic students than Black students, just the opposite is true in college. Hispanic students are less likely than black students to enroll in college or get a degree. In 2005, only 11 percent of undergraduates were Hispanic” (Duncan, 2009). Insufficient numbers of Latinos are presently earning college and university degrees, yet by 2025 nearly one fourth of all American college students will be Latinos (Excelencia in Education, 2010).

When Latinos do attend post-secondary education, they are more prone to attend community colleges (National Center for Education Statistics, 2005) than members of other minority groups (Adelman, 2005). Two-thirds of Latino high school students attended community colleges; however, the majority of these also worked and had families (Kaupp, 2010). Unfortunately, Latino student online scholastic achievement was dismal; failing more, achieving poorer grades, and dropping classes at a rate two times greater than Latino students who attended face-to-face classes (Kaupp, 2010). Further while disparity of achievement existed between White and Latino students attending face-to-face courses, Kaupp (2010) also found a disturbing 44% difference in online academic achievements between White and Latino students (Kaupp, 2010).

Research suggests that cultural factors affecting levels of anxiety in U.S. Latino groups, may serve as barriers to Latino online education. (Young et al, 2011) questioned whether there was a relationship between academic motivation and cultural differences by using academic motivation and achievement predictor models for European Americans, African Americans and Hispanic Americans (Young et al, 2011).

Cognitive processes in Latino families are influenced by societal interactions associated with immigration and acculturation (Varela & Hensley-Maloney, 2009), where acculturation represents the acculturation of the two group together (Berry, 2003). Symptoms and disorders associated with stress tend to plague Latino youth. Discrimination, poverty and limited access to health care or education for Latinos in the United States contribute to Latino anxiety (Varela & Maloney, 2007).

Racism and the resulting stress on “college students of color” help to define this group’s corresponding college experiences. (Reynolds, Sneva, & Beehler, 2010). Negative school experiences or societal messages questioning ability to succeed (Reynolds et al., 2010) negatively affect academic self-concept, belief in one’s ability to succeed and self-motivation. Perceived college campus racism significantly raises stress on affected student group members (Gonzalez, George, Fernandez & Huerta, 2005).

Research indicates that this trauma (Goodman & West-Olatunji, 2010) can detrimentally affect not only a student’s psychological perspective, but also a student’s physical state. Symptoms caused by discrimination have been documented in Latino learners’ physical and mental health. “Scholarship on hegemony and traumatic stress exposes the many barriers that African Americans and Latino American individuals face in society by demonstrating the mental and physical health effects of discrimination” (Goodman & West-Olatunji, 2010, p. 177). Symptoms associated with traumatic stress are counterproductive to learning and metacognitive processes in the targeted learner. “Some common symptoms of traumatic stress are exaggerated startle responses, flat affect, or diminished interest, withdrawing from peers, and thoughts or feelings that disrupt normal activities” (Goodman & West-Olatunji, 2010, p. 177). The resulting trauma and stress can predispose Latino, and other students whose groups are affected, to feel less connected to the materials or instruction (Goodman & West-Olatunji, 2010) ; and can demoralize students to the point where they feel powerless to affect any change within the existing construct. Groups who perceive themselves as victimized by environmental traumatic stress pass on coping mechanisms from one generation to the next. Leary (2005) as cited (Goodman & West-Olatunji, 2010)

“Resilience-strengths used to cope with and overcome barriers and oppression-is often transmitted intergenerationally among marginalized populations” (Leary, 2005). Hegemony, with its resulting assumptions, actions and expectations, may heighten and perpetuate Latino cross-generational cultural trauma, and deepen the inherent biases within the corresponding coping mechanisms. Of concern is that “Researchers in the fields of counseling, psychology, and public health have noted the deleterious influence of hegemony on the mental and physical health of culturally diverse individuals...systematic oppression may compound transgenerational trauma experienced by socially marginalized individuals because of endemic, long-term hegemony”(Goodman & West-Olatunji, 2010, p. 178).

Environmental traumatic stress producing unproductive mental states in Latino online learners can cause reversion back to relying on generationally passed, culturally transmitted, and oftentimes correspondingly biased, coping mechanisms; and can result in rationalizing group-related diminished status while simultaneously internalizing damaging negative-self-concepts. The cycle may become self-perpetuating (Goodman & West-Olatunji, 2010).

Research indicates that these unique traumatic experiences impede academic success for a number of Black and Latino students (Reynolds et al, 2010) and may erect barriers that diminish academic persistence and resulting graduation (Baldwin, Chambliss, & Towler, 2003). One multi-campus study found that affected students of color perceived the institutions’ campuses, rather than their white student peers, as being more racists and less accepting (Rankin & Reason, 2005); while other studies have found that affected students perceived discrimination from both faculty and students (Ancis et al.,2000; Utsey et al., 2002). This author would hypothesize that the phenomena represented by these problematic environmental or cultural findings may have some level of correlation to international instructional design. That is, if these factors affect physical campuses, they may also affect virtual campuses.

Human prejudices affect instructional design. “The role of the international learning leader changes in different stages of organizational evolution. In launching and growing an organization, leaders externalize their own assumptions and embed them gradually and consistently in the mission, goals, structures and working procedures of the group (Gallos, 2008, p. 367). Instructional designer’s cultural, organizational, or individual biases have seeped into designed courses. Burnham (2005) recognized instructional designers embed their experiences and attitudes into structured educational settings, thereby affecting how the design is approached and created for and by different cultural social personas. Inquiry into the factors and dynamics affecting effective international instructional design must include a self-assessment of the designer’s biases in interaction with the targeted learner’s cultural parameters (Rodgers, Graham, & Mayes, 2007).

“Concerning those who are involved with creating online instruction for people of other cultures, the research questions are ... Are they aware of the differences between themselves and the cultural group for whom they are designing instruction? If so, how did they become aware of these differences? What importance do these differences assume in their thinking? How does an understanding cultural difference affect instructional design practice? Definitions of ‘culture’ are complex and contested among theorists. Of the little that has been published regarding the cultural aspects of online instruction and instructional design, too often the researchers have automatically imposed existing theoretical dimensions of cultural variability”(Rodgers et al., 2007, p. 199-200).

Failure to take cultural nuances into account may alienate learning groups or render the designs ineffective (as cited in Rodgers et al., 2007) Subramony (2004) points to “a severe lack of attention among instructional designers as a whole towards important issues of cultural diversity resulting in the alienation of many learner groups” (Subramony, 2004, p.21).

Further, traumatic stress associated with the process of online learning affects individuals differently. The inherent bias in conceptualizing and defining academic underachievement in terms of a learner’s individual or cultural shortcomings has acted as a self-fulfilling prophecy and perpetuated delivery of

ineffective instructional design and traumatic stress (Ford, Harris, Tyson, & Trotman, 2002; Wycoff, 1996). If the instructional designer is uninformed or fails to account for the cues which detrimentally affect discriminated groups, international instructional design can be diminished.

Insufficient scientific research has been done to address and remedy disparity represented by 44% Latino online learner underperformance (Kaupp, 2010). Lack of research has detrimentally affected international instructional design leadership and limited design effectiveness. Notwithstanding, two things seem clear. First, hegemonic factors negatively affect learning in marginalized groups (Goodman & West-Olatunji, 2010). Second, neither organizational bias, societal-cultural bias, nor individual bias will assist international instructional design (Goodman & West-Olatunji, 2010). In many cases, unknowing or unintended paternalistic hegemonic societal biases divest individual motivation and create a traumatic situation for learners within the perceived subservient or inferior culture. If the goal is to assist online Latino students in the process of learning, these hegemonic influences must first be recognized and thereafter accounted for so as not to impede but rather to assist the stated goal (Goodman & West-Olatunji, 2010).

The proposed IMID international instructional design solution arising by the interplay between hegemonic bias and resulting environmental learner trauma can be approached and analyzed from a cross-disciplinary perspective. Duke University neuroscientist Dr. Ahmad Hariri currently teaches a cross-disciplinary graduate student requirement course for clinical psychology focusing on the relationship between anxiety and brain function, known as "Looking Inside the Disordered Brain". He states "Using a three-pronged rubric of anatomy, behavior, and disorder, the students delve into the four major parts of the brain." (Hariri, 2012, p. 15). Duke is also currently undertaking an MBSR research study to further shed light upon its potential benefits. An International Instructional Design leadership strategy incorporating International Mindfulness Instructional Design (IMID) notions by integrating MBSR mindfulness benefits through cross-disciplinary correlation, may result in and help to evolve concepts and strategies meriting inclusion into best practices for applicable international instructional design. Cross-disciplinary incorporation into and collaboration with Latino MBSR instructor/neurologists and psychologists may ameliorate recognized societal, organizational and/or cultural biases that in many instances cause trauma to and perpetuate Latino student underperformance. That collaboration, integrating the beneficial aspects of each field, can also contribute to the resulting international instructional design for online Latino students and serve to address and potentially reverse that online Latino student underperformance.

Mindfulness Based Stress Reduction (MBSR) Dr. Gus Castellanos, M.D., retired neurologist and teacher of the Mindfulness Based Stress Reduction (MBSR) class at Best Life Counseling in Palm Beach Florida, states "If you are unsure about meditation, or have doubts about its effectiveness for you, consider the results of a new study from Massachusetts General Hospital and Harvard Medical School. The researchers performed MRI scans on the brains of 16 healthy participants two weeks before they enrolled in an MBSR course and two weeks after completing the eight-week course to compare how certain structures may have changed with even this brief training. The MRI scans showed significant and beneficial changes at a cellular level. The hippocampus, an area of the brain that is important in learning and memory, showed an increase in gray matter brain cell mass. Other regions of the brain, like the amygdala, which governs stress and anxiety, showed a decrease in activity.

Why is this important? This demonstrates that the brain is undergoing some very real shifts and actual physical changes, which are likely responsible for why people report reduced tension, stress, pain and other physical symptoms, and feel psychologically and physically better. These changes in the brain structures demonstrate that the reported improvements in people's health and well-being are not just because they are spending time relaxing" (Castellanos, 2012, p. 1).

Application of MBSR and brain function is currently being studied across multi-disciplinary platforms. Jon Kabat-Zinn designed a popular MBSR intervention to deal with chronic pain issues or stress-related disorders. MBSR programs typically last from 8-10 weeks with classes lasting 45 minutes per day (Castellanos, 2012). MBSR classes have assisted nurses to heighten empathy for those they serve while preventing the caregivers from having the patient's negative emotions affect

them and have elevated self-compassion and reduced stress in caregivers (Evans, 2004) significant issues affecting mental health. Evidence suggests that targeted brain functions may be increased by advanced meditation, as one recent study targeting meditation on compassion highlighted increased neural functions in the part of the brain detecting emotional cues by advanced meditators as compared to novice meditators (Neuro Report, 2005). Another recent 8-week MBSR course, focusing on correlations between brain function and the immune system, provided evidence of greater positive affect and increased production of antibodies after receiving meditation training (Neuro Report, 2005). Yet another study showed evidence of improved stress regulation, decreased anxiety, depression and anger, and accelerated decrease of the stress-causing cortisol hormone levels in Chinese undergraduates after only 5 days of meditation in 20 minute time-frames, as compared to another group of students who participated only in relaxation. (Neuro Report, 2005).

Educators are also increasingly becoming aware of, and incorporating, short MBSR techniques into their classes throughout the U.S. with beneficial results. Example include improved academic functioning while decreasing psychological disturbances and symptomatic anxiety in children (Neuro Report, 2005); significantly decreasing adolescent aggressive behavior (Neuro Report, 2005); reducing symptoms associated with ADHD in adolescents (Neuro Report, 2005).

The proposed design, International Mindfulness Instructional Design, IMID, may ameliorate Latino student stress and trauma associated with formal online learning, create empathy and establish student trust. IMID would contain power point presentations to communicate scientific recognition of trauma affecting Latino and other affected online student groups; release pertinent MBSR studies and key information on a daily basis for reflection; and incorporate an internal course I.D. blog as part of the organizational culture. Latino Neurologists and Psychologists are to be incorporated into the IMID design to provide targeted learners positive Latino professional role modeling and to internalize recognition of professional possibilities for the Latino online learner. International Mindfulness Instructional Design (IMID) meditative podcasts developed by MSRB coaches would be part of the international instructional design, in cooperation with and presented by Latino Neurologists and Psychologists. These professionals should explain the neuroscience and document beneficial neurological and physical changes shown to have beneficially affected various groups as a result of integrating MBSR and guide online students on how to achieve those beneficial meditative learning states.

“Scientific research has shown that simply focusing on our own breath has a profound effect on human physiology, slowing respiration, lowering blood pressure levels and reducing harmful levels of stress. It also has a proven ability to help students concentrate. A slew of studies conducted both in the U.S. and Canada have demonstrated that elementary school children who engage in as little as a few minutes of directed mindfulness exercises a day were more attentive in class, got better grades and exhibited less aggression and other behavioral problems than those without the training. Kids in America are chronically over stimulated. That is why they need ways to center themselves in an increasingly frenetic world. From school districts in the San Francisco Bay Area to Lancaster, Pa., to Nashville, Tenn., teachers have found that a little mindfulness training goes a long way toward improving the classroom environment. Educators who are looking for information on how to integrate these practices into their curriculum can go to non-profit organizations like Mindful Schools and the Association for Mindfulness in Education”(Schiffman, 2012, p. 1-2).

In conclusion, implementing International Mindfulness Instructional Design (IMID) as an international instructional design strategy by incorporating MBSR best uses, may serve to ameliorate online Latino student stress and trauma associated with formal online learning. Virtual meditation delivered through podcasts may increase their metacognitive processes and stimulate neuro-architectural conditions that facilitate learning in that medium. This author recommends the development and implementation of virtual MBSR podcast delivery, in part because these emulate and can partially substitute for the oral tradition of educational delivery in many Latino cultures. The podcasts should be produced incorporating Latino Neurologists and/or Psychologists to explain the neuroscience and documented beneficial physical changes benefitting various groups that have utilized

MBSR and to guide students on how to achieve those beneficial meditative learning states. Individuals pertaining to this ethnicity will be included as part of the design to create empathy to establish trust as well as to provide positive Latino professional role modeling and open recognition of professional possibilities to the Latino online learner.

Implementing an international mindful instructional design may increase Latino students' white brain matter. Consider the finding by (Gray, 2012,) with "Just a few hours of meditation training may change your brain for the better, a small, new study finds "Researchers using imaging technology have found that people develop measurable changes in the white matter of the brain after learning "mindfulness meditation. Also called 'integrative body-mind training' it involves periods of intense focus and concentration (Gray, 2012, p.1). As cited by Gray,

"The notable physical changes suggest that short-term meditation can improve self-control, mood, stress response and immunity response," said Michael Posner, a co-author of the study and a professor emeritus at the University of Oregon, in Eugene. The study was published online June 11 in the journal *Proceedings of the National Academy of Sciences* (Gray, 2012, p. 1).

"Key areas of the brain were measured before and after the meditation training, which involved 30 minutes of either integrative body-mind training or relaxation training over a two-week period. The training totaled five hours for each group. The researchers found evidence of measurable changes in white matter associated with a part of the brain network related to self-regulation -- the anterior cingulate cortex -- after short exposure to focused meditation. The same changes did not occur after relaxation-oriented meditation, which emphasizes sequential relaxation of different muscle groups. The authors note that many problems, including addiction and mental disorders such as attention-deficit hyperactivity disorder (ADHD), anxiety, depression, schizophrenia and borderline personality disorder, involve the anterior cingulate cortex. They say that understanding the impact of learning, training and human development on white matter in the brain could lead to new ways to improve or prevent these mental disorders"(Gray, 2012, p. 1).

This author recommends further 'mindful neuro educational research' be conducted that is cross disciplinary to study of the configurations of white brain matter in Latino students going through traumatic online instructional design that is culturally biased designed primarily by the dominant Anglo culture pedagogy and compare the configurations of white brain matter in Latino students going through an international instructional design such as IMID .

"This study builds on other work that has confirmed that you can demonstrate structural changes in the brain," said Dr. Nicholas Schiff, an associate professor of neurology and neuroscience at Weill Cornell Medical College, in New York City."What's so impressive to me is that, in this study, they actually quantify that there's evidence for changes in the structure of the brain and a dynamic process at work," Schiff said. "It's very important to characterize how the adult brain modifies in response to the environment. This study is a substantial contribution" (Gray, 2012, p. 1).

Finally studies, in this author's opinion, should be emulated by the scientific community to determine and refine effectiveness in dealing with the prejudices that have affected academic progression for Latino populations and to continually refine best practices in the delivery of international online instructional design.

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