

Critical Thinking and Diversity Experiences: The Case of An American Pacific Island University

Yukiko INOUE

*School of Education, University of Guam
UOG Station, Mangilao, Guam 96923 USA*

Abstract

Critical thinking is an important learning outcome for college students. A review of the literature shows that this skill is affected by a number of factors, including exposure to cultural diversity. The University of Guam (UOG) located in the western Pacific is multicultural and multilingual. Using data from focus groups, this study examined the perceived influence of diversity experiences on critical thinking among UOG students in the College of Professional Studies (Business, Education, and Nursing). The study participants defined critical thinking as the act of independently and systematically weighing evidence to make an evaluation and judgment, to determine merits, and to increase a desirable outcome. Diversity experiences helped the participants to develop sensitivity and awareness of self. The findings of this study confirm the results of prior studies on diversity and critical thinking. Educational importance of the findings was discussed in detail.

Key words: critical thinking, diversity experience, critical academic skills, focus group studies

Introduction

One of the most important aims of education, especially at the college level, is to foster students' ability to *think critically*, to reason, and to use judgment effectively in decision-making (McMILLAN 1987). Guiding students toward becoming *critical thinkers* has always been a primary goal of the university experience (GWARTNEY 2003); however, "Is critical thinking a way to think about subject matter, or is it a way of thinking about thinking? Is it a kind of knowledge or a skill or habit?" (p. 22). There is no agreed upon definition of critical thinking and many different instruments are used for its assessment (RYKIEL 2000). In management courses, "critical thinking skills are to do research, analyze data, critically evaluate the results, and present the findings in a well-argued paper or well-crafted presentation" (MALEKZADEH 1998, p. 590). "Critical academic skills are measures of student performance.... Critical thinking skills, speech, writing, reading, group interaction, and quantitative reasoning skills have many overlapping components" (LARSON and WISSMA 2000, p. 43). Critical thinking is an important learning outcome for college students, even though it seems that they are encouraged to learn or memorize what is written in textbooks.

Diversity is a characteristic of American higher learning; in fact, "one of the strengths of American higher education is its remarkable diversity" (RYKIEL 2000, p. 47). The profile of the student body in American higher education has drastically changed (MARCY 2004). Over the past three decades, people have witnessed the entrance of women

to American higher education in large numbers in the 1970s, the open recruitment of older students in the late 1970s and in the 1980s, and the active enticement of ethnic minorities in the 1980s and 1990s (MUSIL 1996). The Gladstone Web site (Summer Diversity 1999) has described “diversity” as follows:

The concept of diversity encompasses acceptance and respect. It means understanding that each individual is unique, and recognizing our individual differences. These can be along the dimensions of race, age, physical abilities, religious beliefs, political beliefs, or other ideologies. It is the exploration of these differences in a safe, positive, and nurturing environment. It is about understanding each other and moving beyond simple tolerance to embracing and celebrating the rich dimensions of diversity contained within each individual.

Diversity should be embraced and celebrated; students should be encouraged to integrate a multicultural perspective that helps them become critical consumers of culture because openness for cultural learning is at the heart of building a multicultural society (ORTIZ and RHOADS 2000). GARMAN’s (2004) study found that factors associated with the development of greater multicultural awareness and sensitivity are openness to diversity, self-reflection, and intercultural experiences.

A variety of studies examined the influence of diversity experiences on critical thinking. For instance, students’ involvement in diversity experiences during college have statistically significant positive effects on standardized measures of critical thinking skills (PASCARELLA, PALMER, MOYE and PIERSON 2001). Academic and social integration plays an important role in college students’ perceived gains in critical thinking and communication skills: critical thinking refers to the ability to think analytically and solve problems effectively, whereas communication skills are commonly referred to as the ability to write and speak clearly and effectively (LI, LONG and SIMPSON 1999). The relationships between diversity experience and academic progress are similar for minority and non-minority students (EIMERS 2001). Aspects of the general college experiences, rather than particular disciplinary differences, influenced cognitive development, including critical thinking (INMAN and PASCARELLA 1998).

An American Pacific Island University

As a U.S. institution of higher learning in the western Pacific and as the only four-year university in Micronesia, The University of Guam (UOG) serves the communities of Guam, Micronesia, and the neighboring regions of the Pacific and Asia. Just as the United States has higher participation rates for women than for men in higher education (BANK 1995), as seen in Table 1, so at UOG the number of female students (1851, or 62%) is larger by far than that of male students (1137, or 38%). In fall 2003, the total student enrollment reached almost 3000 with a full time faculty base of 181 (UOG Human Resources Office). UOG students come from Guam, the U.S. mainland, the various islands of Micronesia, the Philippines, India, Korea, Japan, China, and Taiwan. Approximately 90% of the student body is either indigenous (called “Chamorros”), or Asian and Pacific Islander decent (see Table 1), while approximately 60% of the faculty is from a Caucasian background (Human Resources Office). UOG is a diverse university campus within the Western Association of Schools and Colleges (WASC), as expressed

by Manuel Esteban, co-Chair of the WASC accreditation team, who visited UOG in 2000: “People in the mainland talk about diversity, and most struggle just to get a student body that is representative of a region. But here you have an exceptionally diverse population, both in terms of the students, the faculty, and the administration” (Triton’s Call, March 29, 2000, p. 2).

Table 1. Ethnic and Gender Profile of Students (Fall 2003).

Gender	
Male	1137
Female	1851
Ethnicity	
Am. Indian/Alaskan	5
Amerind/Alaskanative	1
Asian-Thailand	2
Asian-Chinese	40
Asian-Filipino	965
Asian-Indian	10
Asian-Japanese	27
Asian-Korean	76
Asian-Other	7
Asian-Vietnamese	2
Asian/Pacific Islander	15
Black Non Hispanic	15
Chamorro (CNMI)	1
Chamorro (GUAM)	13
Chamorro-Guam	1309
Chamorro-Saipan, Rota, Tinian	56
Hispanic	21
Micronesian-Chuukese	54
Micronesian-Kosraen	10
Micronesian-Marshallese	8
Micronesian-Palauan	80
Micronesian-Ponapean	12
Micronesian-Yapese	16
Other	33
Pacific Other	25
Philippine-Other	1
Tagalog	9
Vietnamese	2
White Non Hispanic	171
Yapese	2
Total	=====
2988 records listed	2988

Source: Registrar’s Office, University of Guam

Teaching at UOG is challenging and UOG provides an excellent setting for the study of cultural diversity and critical thinking. Two principal objectives of this study were:

- To achieve a better understanding of how undergraduate students define critical thinking.
- To achieve a better understanding of the perceived influence of diversity experiences on the development of critical thinking among undergraduate students.

Methodology

Sample and Data Collection

Focus groups were used for data collection in this study. The participants for the focus groups were identified and recruited from the UOG undergraduate students enrolled in the fall 2003 semester in the College of Professional Studies. The College consists of the School of Business, the School of Education, and the School of Nursing. Six to eight students were selected based on the student rosters of each of the three schools—as recommended by KRUEGER and CASEY (2000): “The ideal size of a focus group for most non-commercial topics is six to eight participants” (p. 73).

Three focused interviews were conducted—one for each school. A focused interview is a special form of in-depth interviews in which the researcher attempts to focus the discussion on a particular experience (KRUEGER and CASEY 2000). The homogeneity of participants is, in general, an assumption of focus groups. This has the advantage of high face validity, but the generalization of focus group data can be limited. The goal of the focus study is to understand respondents’ points of view and to be able to communicate these to the audience, so from a strict sense (KRUEGER and CASEY 2000):

one cannot generalize, but what we suggest is the concept of transferability. That is, when a person wants to use the results, he or she should think about whether the findings could transfer into another environment. What we suggest is that you consider the methods, procedures, and audience and then decide the degree to which these results fit the situation you face. (p. 203)

To ensure that participants actually show up for the session, the following steps were taken: the establishment of convenient meeting times and places; the sending of a reminder e-mail one week before the scheduled session; and the telephoning of each potential participant two days before the session. Videotaping was used as recommended by WIERSMA (2000): “If focus groups are used, videotaping can be effective. It is difficult for an observer to pick up the entire discussion because of the rate at which it occurs” (p. 249). Videotapes also allow the researcher to review repeatedly for the purpose of obtaining more information. Because of the exploratory nature of this study, specific hypotheses had not been established. Each session continued about 80 minutes.

Findings and Discussion

On the days of the sessions, 5 female and 2 male ($n = 7$) students (3 Chamorros, 2 Phillipinos, 1 Chinese, and 1 Micronesian) showed up from the School of Education. From Business, 3 female and 2 male ($n = 5$) students (2 Chamorros, 1 Phillipino, 1 Chinese, and 1 Korean) came. From Nursing, 6 female and 2 male ($n = 8$) students (3 Chamorros, 2 Phillipinos, 1 White, 1 Indian, and 1 Pacific Islander) showed up. Most of the participants were juniors and seniors.

Topic 1: Definitions of Critical Thinking

When asked what critical thinking meant to the participants, the typical answers of the students in the School of Business were “judgments and evaluations, involving life experiences, human interactions, and cultural awareness and, oftentimes, involving analytical thinking,” supporting MACPHERSON’s (1999) definition: critical thinking is the ability to perform assessment tasks based on evaluation and judgment. The participants’ points of view are similar to LARSON and WIERSMA’s (2000) categories of critical academic skills (problem solving, culture and society, oral communication, and group interaction). Students in Education defined critical thinking as “analysis, synthesis, and evaluation following Bloom’s Taxonomy of educational objectives that reflects successive degrees of cognitive domain,” supporting LI, LONG and SIMPSON’s (1999) definition: “Critical thinking refers to the ability to think analytically and solve problems effectively” (p. 44). Students in Nursing defined critical thinking as “a situation analysis, which involves the way of knowing outside the box; in the nursing program, education is nothing but a process, involving rationales, principles, comprehensions, formulated goals, and alternative solutions.”

The definitions of the participants can be summarized as follows: critical thinking might be the act of independently and systematically weighing evidence to make an evaluation and judgment, to determine merits, and to increase a desirable outcome using cognitive skills and strategies. The goal of critical thinking is to arrive at a judgment, whereas problem solving is a process that comprises many decision points at which a judgment must be made (MACPHERSON 1999). Perhaps, for college students, to practice critical thinking is as important as being able to solve math problems, just as math skills apply to the everyday situation, critical thinking is a life-skill.

Topic 2: Diversity Experiences and Critical Thinking

When asked how or what diversity experiences influenced the perceived development of critical thinking, the typical answers of the focus group participants were as follows:

Biased generalization

- Prejudices, biases, and stereotypes are everywhere, even at UOG. People use a stereotype because of its easy application. Coping with these negative factors, I have learned how important for us to share our own cultural experiences in order to develop positive relations.
- Through interactions with ethnically diverse students and the faculty, I have particularly learned that we should not generalize people. We do, for instance,

Koreans are like this, or Japanese are like this.... This kind of generalization is wrong and dangerous.

- Many of the UOG students have dual-ethnic backgrounds (half Chamorro and half Filipino, for example), so we have a tendency to understand other cultures, and at the same time I have learned the importance of becoming confident with my own self-identity.

Stereotypes are “examples of categories of people... most stereotypes end up as negative labels placed on individuals simply because they are members of a particular group” (CUSHNER, McCLELLAND, and SAFFORD 2000, p. 82). People use a stereotype (which is a biased generalization), not because it is widely known and perpetuated, but because people have learned it as part of their culture from generation to generation (LEFRANCOIS 1999). Specifically, “Knowledge of cultural diversity is largely constructed from stereotypical images fostered by families, friends, communities, and media” (SOMMER 2002, p. 276). It may be that issues that are most deeply related to a sense of self are the most profound cultural experiences on campus. As SOMMER (2001) put it, “Faculty and students bring their personal cultural experiences, biases, prejudices, and expectations to the classroom. Encouraging dialog and openness about cultural similarities and differences among faculty and students offers a tremendous opportunity” (p.276). Through these experiences, students can explore perspectives outside their own range of experiences, increasing their cultural awareness.

Beyond black and white

- When talk about diversity in the United States, discussions usually involve the black and white populations. Here in Guam and at UOG the term *diversity* extends beyond black and white, including Asians and Micronesians.
- I appreciate the diverse population of the UOG students. Through class meetings and field experiences as well as out-of-class experiences (e.g., clubs, and social activities), I have learned that even facial expression and body language can help us understand one another.
- We have been aware of the differences in race and language since we are very young; UOG is valuable because we are able to practice cultural sensitivity, and critical self-reflection.
- Non-traditional aged students are welcome. They have lots of life experiences and thus associating with them helps us to enhance survival skills as well as people skills.

Most race discussions in the U.S. tend to end up as black and white, as if no one else really existed (KNEFELKAMP and DAVID-LANG 2003). The issue of race at UOG involves an eclectic sampling of ethnic backgrounds represented in the university community, providing a rich environment for student’s challenges in developing a critical consciousness relating racial, cultural, and ethnic diversity. Self-reflection and cultural critical consciousness, in GAY and KIRKLAND’s (2003) words, “are imperative to improving the educational opportunities and outcomes for students of color. They involve thoroughly analysing and carefully monitoring both personal beliefs and instructional behaviors about the value of cultural diversity” (p.182). Critical reflection is “a personal and challenging look at one’s identity as an individual person and as an active professional”(HOWARD 2003, p.201). As WARD (2002) put it, “Meaningful field experiences that further the expansion of

knowledge and appreciation of people coming from various cultural backgrounds” (p.22).

The participants recognized that working on group projects with ethnically diverse students promote their critical and creative thinking skills. This point of view supports LYNN’s (1998) observation: “One of the richest vehicles for enhancing student learning in the classroom is the diversity of students themselves” (p.123). DAVIS (1993) recommends giving assignments and exams that recognize students’ diverse backgrounds and special interests. In addition to the diversified student population (in terms of ethnicity and social status), non-traditional-aged students are greatly increasing in American higher education. UOG is not an exception. As the participants described, “It is beneficial to tap the knowledge and experiences of non-traditional students, allowing younger students to learn from older students, and vice versa” (FINKEL 1999, p.33).

Based on the discussion above, as THOMPSON, MARTIN, RICHARDS and BRANSON (2003) reviewed, critical thinking is a process that is reflective and imaginative; an intellectual function of adulthood, and a necessity for personal survival; and an interpretation, analysis, inference, evaluation, and explanation, which make up the interactive process of critical thinking.

Teachers as facilitators

- UOG is small and students have lots of opportunities to interact with professors, learning a particular subject. Students also learn their critical approaches to teaching. UOG professors know student names, which makes it easier for the students to communicate with them.
- Good teachers facilitate students to think critically and analytically, providing knowledge and applications useful in real world situations, and using a classroom as community.
- Learning from ethnically diverse teachers is beneficial. Integrating their own cultural experiences into the learning climate makes the teaching process even better. Some professors’ instruction is based on the culturally pluralistic curriculum, using up-dated textbooks.

The participants appreciated the fact that UOG is small, which enables them to have informal contact with the faculty. Ongoing contact outside the classroom provides strong motivation for students to perform well in class, and students who come to office hours can get benefit from the one-to-one conversation and attention (DAVIS 1993). Students are rewarded by taking a more up-dated curriculum that teaches them about diversity, integration, globalization, and critical thinking (MALEKZADEH 1998). WARD (2002) maintains that teachers should be facilitators and authentic individuals who share relevant personal experiences in terms of racism, positive human relations, and critical thinking. Indeed, “Effective teaching strategies for multicultural education emphasize educating students to become critical thinkers.... Students are encouraged to discuss, debate, disagree, and ultimately teach one another” (SOMMER 2001, pp.277-278). Palmer’s notion of “we teach who we are” has significant implications for teachers of today’s learners (HOWARD 2003, p.198). Therefore, “Teachers knowing who they are as people, understanding the contexts in which they teach, and questioning their knowledge and assumptions are as important as the mastery of techniques for instructional effectiveness” (GAY and KIRKLAND 2003, p.181).

Conclusion

This study was not intended to generalize but to understand the participants' points of view on two topics. Even though the findings are unique to the participants, this study has revealed:

- Ethnic diversity provides students with opportunities to enhance cultural sensitivity, which in turn can enrich the intellectual development including critical thinking.
- Students gain insight into how to maintain their own high ethnic values and behaviors and how to think about cultural and racial matters scholarly and critically.
- Students learn to attach positive feelings to multicultural experiences so that they feel respectful toward other ethnic and cultural groups, developing critical reflection.

In the final analysis, *diversity* is given in a university such as UOG, and such diversity represents an opportunity and a potential source of enrichment in higher learning. In other words, the findings of this focus study suggest that UOG is the best equipped to help students move from a denial or a minimization of difference to an acceptance, an adaptation, and an integration of cultural diversity into their own worldview. Faculty members at an institution of higher education like UOG must continuously challenge their perceptions and attitudes as well as their pedagogic practices in the classroom. In responding to the multicultural nature of UOG, the future study should focus on the faculty members' actual practices of diversity and critical thinking.

Acknowledgments

This study was supported in part by grant from the University of Guam (The 2003 President's Research Award). The author also acknowledges the assistance of the following faculty members of this University: M. Hattori-Uchima of the School of Nursing, R. McNinch of the School of Business, and J. Sanchez of the School of Education.

References

- BANK, B. J. 1995. Gendered Accounts. *Sex Roles: A Journal of Research*, 32(7-8): 527-544.
- CUSHNER, K., McCLELLAND, A. and SAFFORD, P. 2000. *Human Diversity in Education*. McGraw-Hill.
- DAVIS, B. G. 1993. Diversity and Complexity in the Classroom: Considerations of Race, Ethnicity, and Gender. Retrieved May 20, 2004, from <http://teaching.berkeley.edu/bgd/diversity.html>
- EIMERS, M. T. 2001. The Impact of Student Experiences on Progress in College: An Examination of Minority and Nonminority Differences. *NASPA Journal*, 38(3):

386-409.

- FINKEL, D. 1999. Enhancing Student Involvement and Comprehension through Group and Class Discussions. *Journal on Excellence in College Teaching*, 10(3): 33-48.
- GARMAN, A. M. 2004. Changing Perspective Teachers' Attitudes/Beliefs about Diversity: What are the Critical Factors? *Journal of Teacher Education*, 55(3): 201-213.
- GAY, G. and KIRKLAND, K. 2003. Developing Cultural Critical Consciousness and Self-Reflection in Preservice Teacher Education. *Theory into Practice*, 42(3): 181-187.
- GWARTNEY, D. 2003. Teaching Thinking in the Information Age. *Oregon Quarterly: The Northwest Perspective University of Oregon* (pp.21-26). Spring 2003.
- HOWARD, T. 2003. Culturally Relevant Pedagogy: Ingredients for Critical Teacher Reflection. *Theory into Practice*, 42(3): 195-202.
- INMAN, P. and PASCARELLA, E. 1998. The Impact of College Residence on the Development of Critical Thinking Skills in College Freshmen. *Journal of College Student Development*, 39(6): 557-568.
- KNEFELKAMP, L. and DAVID-LANG, T. 2003, Encountering Diversity on Campus and in the Classroom. Retrieved May 20, 2004, from <http://www.diversityweb.org/Digest/Sp.Sm00/development.html>
- KRUEGER, R. A. and CASEY, M. A. 2000. *Focus Groups: A Practical Guide for Applied Research*. Sage Publications, Thousand Oaks, CA.
- LARSON, E. and WISSMAN, J. R. 2000. Critical Academic Skills for Kansas Community College Graduates: A Delphi Study. *Community College Review*, 28(2): 43-56.
- LEFRANCOIS, G. R. 1999. *The lifespan*. Wadsworth Publishing Company, Belmont, CA.
- LI, G., LONG, S. and SIMPSON, M. E. 1999. Self-Perceived Gains in Critical Thinking and Communication Skills. *Research in Higher Education*, 40(1): 43-60.
- LYNN, M. 1998. Teaching through Diversity. *College Teaching*, 46(4): 123-27.
- MACPHERSON, K. 1999. The Development of Critical Thinking Skills in Undergraduate Supervisory Management Units. *Assessment and Evaluation*, 24(3): 273-284.
- MALEKZADEH, A. R. 1998. Diversity, Integration, Globalization, and Critical Thinking in the Upper Division. *Journal of Management Education*, 22(5): 590-603.
- MARCY, M. B. 2004. When Diversity and Dollars Collide: Challenges for Higher Education. *Innovative Higher Education*, 28(3): 205-218.
- McMILLAN, J. H. 1987. Enhancing College Students' Critical Thinking: A Review of Studies. *Research in Higher Education*, 26(1): 3-29.
- MUSIL, C. M. 1996. The Maturing of Diversity Initiatives on American Campuses. *American Behavioral Scientist*, 40(2): 222-232.
- ORTIZ, A. M. and RHOADS, R. A. 2000. Deconstructing Whiteness as Part of a Multicultural Educational Framework. *Journal of College Student Development*, 41(1): 81-93.
- PASCARELLA, E. T., PARMER, B., MOYE, M. and PIERSON, C. T. 2001. Do Diversity Experiences Influence the Development of Critical Thinking? *Journal of College Student Development*, 42(3): 257-271.
- RYKIEL, J. D. 2000. Does the Community College Experience Affect Critical Thinking and Moral Reasoning? *The Michigan Community College Journal*, 6(2): 47-60.
- SOMMER, S. 2001. Multicultural Nursing Education. *Journal of Nursing Education*, 40(6): 276-278.
- Summer diversity internships and objectives [Summer Diversity]. 1999. Retrieved

August 10, 2004, from <http://gladsstone.uoregon.edu/~asuumca/diversityinit/definition.html>

- THOMPSON, S. D., MARTIN, L., RICHARDS, L. and BRANSON, D. 2003. Assessing Critical Thinking and Problem Solving Using a Web-Based Curriculum for Students. *The Internet and Higher Education*, 6(2): 185-191.
- Triton's Call (UOG campus paper), March 29, 2000, p. 2.
- WARD, C. M. 2002. Preparing K-12 Teachers to Teach for Social Justice. *Multicultural Education*, 9(4): 22-24.
- WIERSOMA, W. 2000. *Research methods in Education*. Needham Heights, MA: Allyn & Bacon.