

Annual Report for Assessment of Outcomes 2012-13

Subject Area Committee Name: Psychology

Contact person: Wayne Hooke

For LDC/DE: Core outcome(s) assessed: Self-Reflection/Cultural Awareness; Professional Competence/Critical Thinking

Please address the questions below and send to learningassessment@pcc.edu by **June 21, 2013** with Annual Report in the subject line

Note: Information provided in this report may be inserted into or summarized in Section 2C Program Review Outline.

1. Describe changes that have been implemented towards improving students' attainment of outcomes that resulted from recent outcome assessments. These may include but are not limited to changes to content, materials, instruction, pedagogy etc. Please be sure to **describe the connection** between the assessment results and the changes made.

The Psychology SAC assessed the core outcomes of self-reflection and community and environmental responsibility last year. We used a relatively complex design to explore the relationship between student traits, their own understanding of these traits in themselves, and the relationship of these traits to self-reported levels of performing environmentally responsible behaviors last year. The traits that were explored in our project were selected from those identified in peer-reviewed research connecting personality variables (like conscientiousness) to environmentally responsible behaviors (e.g., recycling, composting, taking public transportation, riding a bike, etc). A district-wide sample of 655 students from all currently offered psychology courses completed the survey.

Since the survey questions we used were not normed/standardized, we performed a factor analysis to determine the underlying variables that were measured in our survey. This factor analysis resulted in the following scales/subscales:

Community Responsibility Subscales

- ☐ importance of environmentalism
- ☐ oneness with nature
- ☐ awareness of personal impact
- ☐ noise awareness ☐

Conscientiousness Subscales

- ☐ self-efficacy
- ☐☐ orderliness ☐

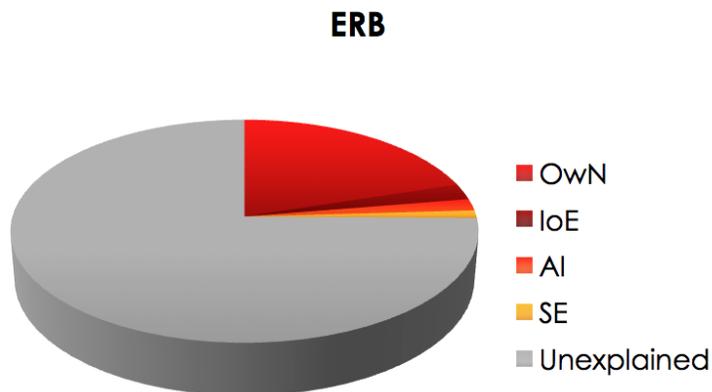
Openness Subscales

- ☐ intellect
- ☐ imagination
- ☐ artistic interest ☐

Environmentally Responsible Behaviors Subscales

- ☐ purchasing and environmental education
- ☐ recycling
- ☐ 'catch-all category' - retained in the analysis but not a consistent subscale

The contribution of these traits/sub-traits to the self-reported practice of environmentally responsible behaviors (ERB) was then analyzed by means of a multiple regression analysis.



As the figure above shows, about 75% of the variability in environmentally responsible behavior reported by our students remains unexplained by our survey variables. The only noteworthy contributor that we identified in this study was the subscale 'oneness with nature' (OwN). This subscale explains 11.8% of the variance in behavior and consists of three items:

1. I see myself as part of an inter-connected whole with the natural world.
2. I feel a sense of oneness with nature.☐
3. The natural world is not merely around us, but within us.

Our faculty was initially disappointed with these results, as we had been expecting this study to help guide us in developing additional academic content to support self-awareness and environmental responsibility while

covering personality in our mainline academic courses (Psy 201a/202a/215/216). The prominence of the trait 'oneness with nature' provided some obstacles for us – as it is more value-relevant than trait or state-relevant.

Lauren Kuhn, the primary instructor for Psy 240 (Personal Awareness and Growth), found the results of this assessment to be useful in considering how to enhance students' self-awareness and environmentally responsible behaviors in that course. Value exploration is a central element in personal awareness and growth. She created new course assignments, activities, and readings to assist students in exploring their values, experiences and attitudes about nature and environmental responsibility. These include:

Readings:

- Whole Earth Mental Health (<http://www.guernicamag.com/daily/katherine-rowland-whole-earth-mental-health/>)
- Top 10 Myths about Sustainability - Even advocates for more responsible, environmentally benign ways of life harbor misunderstandings of what "sustainability" is all about (Michael D. Lemonick / Scientific American 9mar2009)
- Is There an Ecological Unconscious? (http://www.nytimes.com/2010/01/31/magazine/31ecopsych-t.html?_r=0)

Assignments:

- 20 Things I've Learned (Appendix 1)
- Saving Ourselves from Nature Deficit Disorder (Appendix 2)

Activities

- Added a meditative walk on Mt. Tabor as a course experience/requirement

These changes have been fully implemented into the only section of Psy 240 that has been taught this year (Sp 2013). Effectiveness data have not been formally gathered nor analyzed, but student reception has been positive. Lauren Kuhn presented these course developments to the Psychology SAC at our spring meeting and distributed the relevant documents to all in attendance. The digital files are available to all Psychology faculty at our myPCC SAC group page.

Current Assessment Projects

Core Outcomes: Professional Competence and Critical Thinking

2. Describe the assessment design (tool and processes) used. Include relevant information about:
 - The nature of the assessment (e.g., written work, project, portfolio, exam, survey, performance etc.) and if it is direct (assesses evidence mastery of outcomes) or indirect (student's perception of mastery). Please give rationale for indirect assessments (direct assessments are preferable).

In the fall of 2012 a group of faculty who teach Psy 222 (Family and Intimate Relations) met to identify shared areas of concern in student performance in the course. The faculty agreed that developing critical thinking in

their students was a shared priority and that an essential element of critical thinking in psychology that their students may have trouble with was a basic understanding of the scientific method as applied in the social sciences. Ten multiple choice exam questions (see Appendix 3) were created to directly assess student comprehension of basic research concepts. The faculty's rationale for this process included:

- all instructors use a textbook that includes essential introductory topics in research and all instructors cover these topics to some degree in their classroom work
- diversity in how instructors run this course made using written artifacts (like a research project) unworkable at this time
- multiple choice exams are a recommended, established way to assess factual/conceptual understanding

One section utilized a pre-test/post-test structure to assess the direct effect of in-course learning compared to prior learning. Two sections total were included in the assessment.

- The student sample assessed (including sample size relative to the targeted student population for the assessment activity) process and rationale for selection of the student sample. Why was this group of students and/or courses chosen?

All students enrolled in Psy 222 in Spring 2013 were included in the assessment (two sections totaling 52/52 students). This course was chosen because the faculty involved in planning and conducting this project share the responsibility of teaching this course. The total enrolled population of the course at the time of measurement was included.

- Any rubrics, checklists, surveys or other tools that were used to evaluate the student work. (Please include with your report – OK to include in appendix). Where appropriate, identify benchmarks.

The instrument used to assess student understanding of essential research concepts is included in Appendix 3. There are no associated benchmarks/rubrics.

- How you analyzed results, including steps taken to ensure that results are reliable (consistent from one evaluator to another).

Two comparisons will be made using the chi-square statistic to analyze the results. The chi-square statistic is the appropriate one to use when assessing the attainment/non-attainment of outcomes. The two comparisons are:

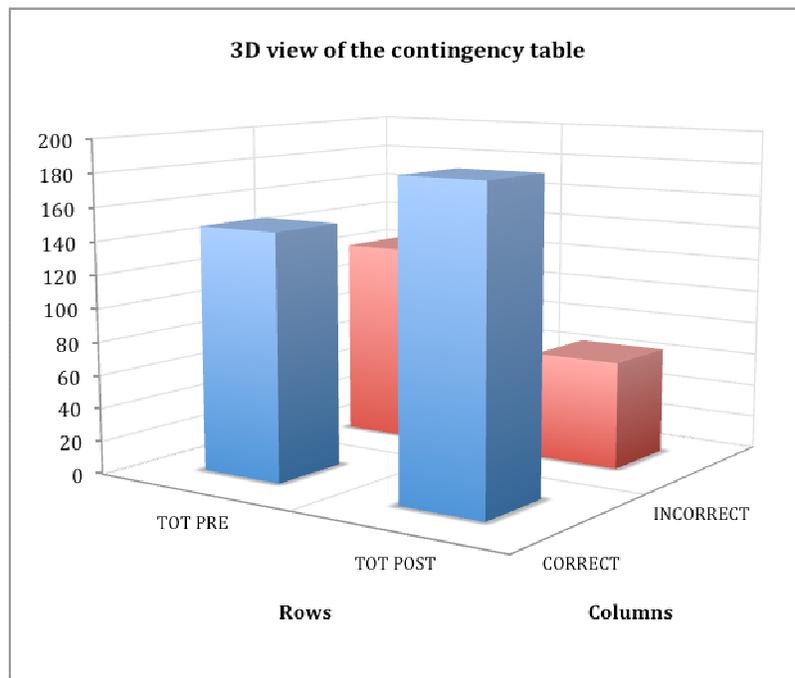
1. within a section – comparing pre/post data to evaluate the relative weights of prior and in-class learning .
2. between sections – are student performances comparable across sections?

Overall student performance will be explored by tracking the percentage of correct answers. The same ten items were used in both sections of the course for this assessment, ensuring reliability.

3. Provide information about the results (i.e., what did you learn about how well students are meeting the outcomes)?
- If scored (e.g., if a rubric or other scaled tool is used), please report the data, and relate to any appropriate benchmarks.
 - Results should be broken down in a way that is meaningful and useful for making improvements to teaching/learning. Please show those specific results.

A pre-post test was utilized in one section of Psy 222 this spring in order to assess the relative contribution of prior learning and in-class instruction/experiences on the student acquisition of a basic understanding of ten essential research-related concepts. The summary data are included in Appendix 4.

A comparison of the overall scores obtained in the pre-test and the post-test show that students had a more accurate understanding of the basic conceptual elements of social science research at statistically significant levels at the end of the term than at the beginning ($p < 0.0001$).

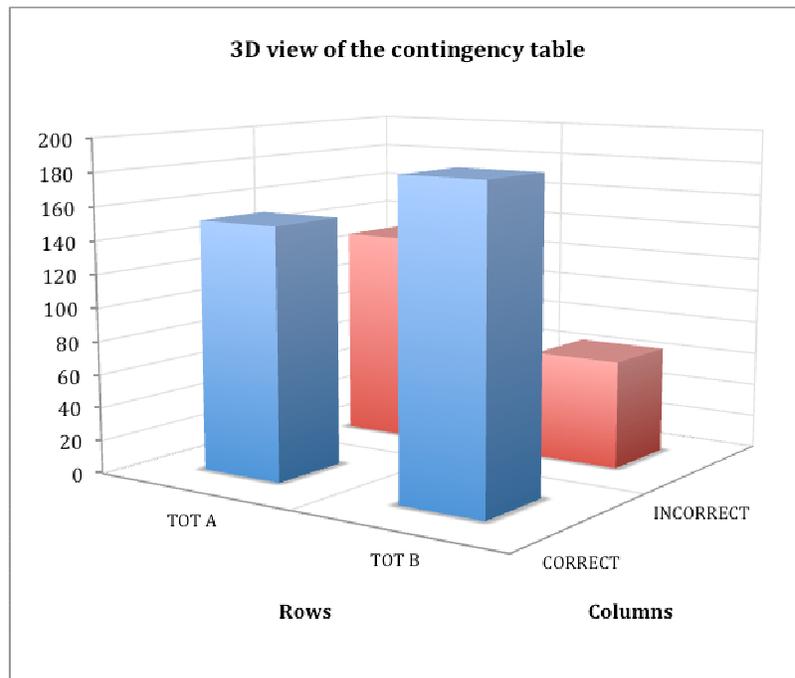


A visual inspection of the contingency table data above reveals that the improvement in student understanding of the essential research concepts, while being statistically significant, was not notably large (there were 37 [out of 250] more correct answers in the post-test). A more detailed analysis of the scores (see Appendix 4) reveals:

- only 3/10 items showed statistically significant improvement between the pre-and the post-test (topics: sampling, experimental design, meta analysis)

- 5/10 items showed high rates of correct answers in the pre-test (correlational design, self-serving bias, archival data, informed consent, and peer review) which resulted in a limiting, ceiling effect on the possibility of improvement through instruction
- 2/10 items showed low success rates in both the pre- and post-tests (developmental designs, validity/reliability)

A second group comparison was conducted in this assessment project. As two sections of Psy 222 were offered this term, the relative class performances were compared. Student performance between the classes was statistically different ($p < 0.0001$).



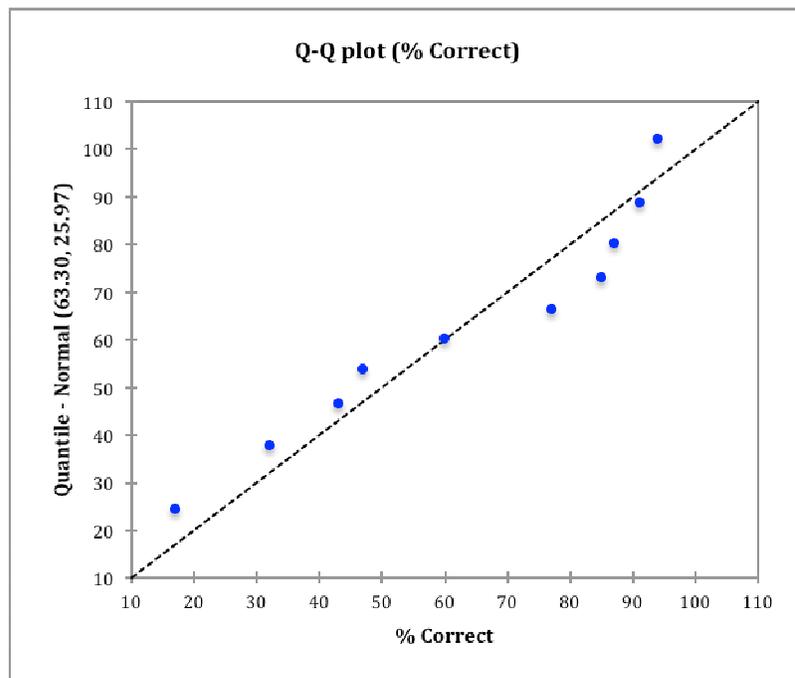
The overall differences between the two sections are very similar to the differences between the pre- and post-test results in the section that utilized the pre-test (compare the two above figures). Further, the specific items that showed statistically different results (see Appendix 5) were, with one exception, identical as well (sampling, experimental design, and the meta analysis questions were different pre/post and between sections; while correlational design was only different between sections). This suggests either: 1) section differences in the curricula; or 2) the pre-test may have functioned as an advance organizer which led students who took the pre-test to learn covered/cued material at higher rates.

The Psy 222 faculty have not established a benchmark for acceptable performance in this course around student understanding of basic research concepts and their application in critical thinking. A review of the summary descriptive statistics reveals that students in Psy 222 are not finishing the course with an adequate understanding of basic research concepts:

- only 63% (336/530) of student answers to questions about basic research concepts were correct

- only 17% of students correctly answered the question about validity and reliability
- the standard deviation in student success between test items scores is 27 percentage points – indicating that it cannot be concluded that students have consistently achieved the basic course outcome expectations in this area

To further support the conclusion that overall student attainment of this outcome is inadequate, several tests of normality were conducted on the percentage correct scores (Shapiro-Wilk, Anderson-Darling, Lillifors, and Jarque-Bera). Each test concluded that the overall results did not statistically differ from a normal distribution.



This Q-Q plot visually depicts the comparison between test item performance and a normal distribution. If actual student performance on each item was perfectly normally distributed, each blue dot would fall exactly on the dotted, diagonal line. The Q-Q plot is included here because it provides some empirical information about where Psy 222 faculty might establish a benchmark for student understanding of basic research concepts. The four-or-five topmost items are the likely candidates – with the top four being the strongest candidates (because they more closely approximate a vertical line rather than a diagonal line). Using this rationale, a reasonable benchmark for a multiple-choice test could be set at 80% or higher.

Inspecting the items that fell above and below this benchmark (items above this benchmark: self-serving bias, archival data, informed consent, and peer-reviewed literature; below this benchmark: sampling, experimental design, correlational design, developmental designs, validity and reliability, and meta analysis) reveals that no item that measured a technical (how-to) aspect of research was answered by students at an acceptable frequency.

4. Identify any changes that should, as a result of this assessment, be implemented to help improve students' attainment of outcomes. (These may include, but are not limited to, changes in curriculum, content, materials, instruction, pedagogy etc).
 - Research shows that testing facilitates learning. The pre-test may function as an advance organizer, cueing students what is important to learn. The pre-test could be routinely administered.
 - Include a rubric-scored, student-generated essay or presentation that demonstrates effective critical thinking rather than a multiple-choice exam. A multiple choice exam can effectively measure concept acquisition/recognition, but does not demonstrate the student has achieved the ability to effectively utilize these concepts effectively in critical thinking.
 - Increased coordination regarding the curricular elements related to understanding research concepts and critical thinking instruction/activities between instructors who teach Psy 222 in order to better ensure students in all sections can successfully achieve essential course outcomes
 - Faculty should establish unequivocal benchmarks for student attainment of basic research concepts and for their successful application in critical thinking.
 - Technical (how-to) aspects of research need significantly more emphasis in Psy 222. The low-level of student understanding of these basic research concepts strongly suggests that students will not reliably be able to apply them in critical thinking tasks. For example, more lecture material on these topics should be added; worksheets, classroom, and homework activities should be created and utilized.

5. Reflect on the effectiveness of this assessment tool and assessment process. Please describe any changes to assessment methodology that would lead to more meaningful results if this assessment were to be repeated (or adapted to another outcome). Is there a different kind of assessment tool or process that the SAC would like to use for this outcome in the future? If the assessment tool and processes does not need to be revised, please indicate this.
 - Measure the same concepts during the pre/post test, but use different, equivalent items because some of the improvement in the post-test scores may be the result of taking the same test twice – the method used this year cannot account for that possibility/limitation.
 - When using multiple-choice formats, more items than one should be used when measuring complex constructs to better capture student understanding.
 - Conduct further assessments to get-at the ceiling effect that was found: e.g., are these test items just easier or do students enter the course with this knowledge?
 - Capture data in fall or winter terms, rather than in spring because data-gathering at the end of spring term does not leave faculty groups adequate time to evaluate/interpret the data in order to come-up with thoughtful ways to improve the course/program.

- Utilize a rubric-scored, student-generated essay or presentation that demonstrates effective critical thinking rather than a multiple choice exam. A multiple choice exam can effectively measure concept acquisition/recognition, but does not demonstrate the student has achieved the ability to effectively utilize these concepts effectively in critical thinking.

Core Outcomes: Cultural Awareness and Critical Thinking

2. Describe the assessment design (tool and processes) used. Include relevant information about:

- The nature of the assessment (e.g., written work, project, portfolio, exam, survey, performance etc.) and if it is direct (assesses evidence mastery of outcomes) or indirect (student's perception of mastery). Please give rationale for indirect assessments (direct assessments are preferable).

Three faculty members who teach PSY 202A (second course in the two-term introductory sequence) formed a subcommittee to plan an assessment project to explore the core outcomes of cultural awareness and the critical thinking in the teaching/learning of this course. This course is taught from a socio-cultural perspective, and both cultural awareness and critical thinking are crucial outcomes. One peer-reviewed article was chosen as a student reading: "The Cultural Shaping of Depression: Somatic Symptoms in China, Psychological Symptoms in North America". The article was distributed to all nine instructors teaching PSY 202A during spring term (2013) for use in their sections. In order to facilitate student acquisition of the outcomes, a list of questions was developed to accompany the article (Appendix 6). Instructors were asked to distribute the questions to their students. Two multiple-choice questions – a direct assessment – were to be included in the sections' final exams.

Multiple Choice Questions:

Cultural Awareness question:

Disregarding possible confounds, Ryder, Yang, Zhu, Yao, Yi, and Heine (2008) found that

- A. participants in Toronto reported significantly more psychological symptoms as compared with participants in Changsha.
- B. cultural differences in somatic symptoms were more inconsistent and dependent on assessment method.
- C. Both A and B are true.
- D. Both A and B are false.

C is correct answer

Critical Thinking question:

In the Ryder et al article (2008), possible confound(s) that may compromise the authors' findings is/are

- A. outpatients knew that they were at treatment sites to discuss psychosocial problems.
- B. help-seeking strategies may have resulted in only certain types of depressed patients seeking treatment.
- C. both treatment centers were in urban settings.
- D. All the above are true.

D is the correct answer

A fuller description of the plan and design of this assessment project can be found in Appendix 7.

- The student sample assessed (including sample size relative to the targeted student population for the assessment activity) process and rationale for selection of the student sample. Why was this group of students and/or courses chosen?

Two out of nine PSY 202A courses were included in this assessment: a face-to-face class with 23 students, and an online class with 30 students (53 total). Out of the seven remaining sections, three instructors did not respond to the assessment task; one face-to-face class was cancelled; another online class offered the assessment task as optional (only one response was submitted so it was discarded). Two classes responded only to the essay question and so were not included in this analysis.

- Any rubrics, checklists, surveys or other tools that were used to evaluate the student work. (Please include with your report – OK to include in appendix). Where appropriate, identify benchmarks.

There are no associated benchmarks/rubrics for this multiple-choice assessment. The actual items are included above (this section).

- How you analyzed results, including steps taken to ensure that results are reliable (consistent from one evaluator to another).

Overall student performance will be explored by tracking the percentage of correct answers. Comparisons of the instructional delivery method (face-to-face or distance learning) will be made using Fisher's Exact Test (a contingency table statistic similar to the commonly used Pearson Chi-Square that is best used when expected cell sizes are below ten). Reliability will be ensured by using the same items, administered at the same time, in both sections.

3. Provide information about the results (i.e., what did you learn about how well students are meeting the outcomes)?

- If scored (e.g., if a rubric or other scaled tool is used), please report the data, and relate to any appropriate benchmarks.
- Results should be broken down in a way that is meaningful and useful for making improvements to teaching/learning. Please show those specific results.

Student performance across instructional delivery method (face-to-face and distance learning) was not statistically different for either question/outcome (the p-value for the cultural awareness question = 0.57 and the p-value for the critical thinking question = 0.44). There is therefore no reason to interpret the small differences in the two sections'/delivery modalities' performance.

Overall, 85% of respondents selected the correct answer for the critical thinking question. Neither the Psychology SAC nor PCC has established clear guidelines/standards for how to interpret student performance on multiple choice exams for purposes of documenting the achievement of course outcomes, so there is no clear benchmark to apply in this case. That being said, 85% suggests a reasonable overall level of success for a single test item. The overall success rate of these students in correctly answering the cultural awareness question was 58%. This level of student outcome attainment is concerning.

4. Identify any changes that should, as a result of this assessment, be implemented to help improve students' attainment of outcomes. (These may include, but are not limited to, changes in curriculum, content, materials, instruction, pedagogy etc).
 - Include a rubric-scored, student-generated essay or presentation that demonstrates effective critical thinking rather than a multiple-choice exam. A multiple choice exam can effectively measure concept acquisition/recognition, but does not demonstrate the student has achieved the ability to effectively utilize these concepts effectively in critical thinking.
 - Include a rubric-scored, student-generated essay or presentation that demonstrates satisfactory cultural awareness. Multiple-choice measures are not optimal for measuring the implementation of complex skills/understanding.
 - Include more structured, focused follow-up to the assigned discussion questions. Students could benefit from additional instruction.
5. Reflect on the effectiveness of this assessment tool and assessment process. Please describe any changes to assessment methodology that would lead to more meaningful results if this assessment were to be repeated (or adapted to another outcome). Is there a different kind of assessment tool or process that the SAC would like to use for this outcome in the future? If the assessment tool and processes does not need to be revised, please indicate this.
 - When using multiple-choice formats, more items than one should be used when measuring complex constructs to better capture student understanding. Complex outcomes, like those of interest here, cannot be comprehensively or reliably measured with a single item. Not all

faculty were in agreement about adding more items to a final exam: while this would increase the accuracy of the measurement of this outcome, it would also give the achievement of that outcome additional weight on the exam. Further discussion is required to resolve this issue.

- Capture data in fall or winter terms, rather than in spring because data-gathering at the end of spring term does not leave faculty groups adequate time to evaluate/interpret the data in order to come-up with thoughtful ways to improve the course/program.
- Utilize a rubric-scored, student-generated essay or presentation that demonstrates effective critical thinking rather than a multiple-choice exam. A multiple-choice exam can effectively measure concept acquisition/recognition, but does not demonstrate the student has achieved the ability to effectively utilize these concepts effectively in critical thinking.
- Involve more faculty earlier in the assessment planning process to achieve better agreement and participation.

Appendix 1: Psy 240 Assignment #1**PSY 240: "TWENTY THINGS I'VE LEARNED" ASSIGNMENT****RELATED TO THE COMMUNAL/ENVIRONMENTAL DIMENSION OF GROWTH**

Based on 1) the three assigned articles you will have read related to this dimension of growth; 2) the "Saving Ourselves from Nature-Deficit Disorder" paper you are writing for this unit; and 3) the Meditative Walk on Mt. Tabor experience in addition to the follow-up group process exercise, complete the following assignment.

List and briefly describe 20 things you have learned.

At least half of the items should be supported by research (fact-based). The rest may be what you have learned about yourself (more humanistic; perhaps based on anecdotal evidence or your personal experience, observations or reflections).

Type your list of 20 things, numbering each item. Each item should be 1-2 paragraphs.

Be authentic and specific. From a scientific, fact-based perspective, what have you learned? From a humanistic perspective, what have you learned? In referencing any one or all of the articles, **tell me in your own words/demonstrate to me/show me what you learned and how you may have connected that knowledge to what you have learned in reading the other articles, writing the N-DD paper, or experiencing the walk on Mt. Tabor. Provide specific examples to illustrate. Connect it to what you already know.**

Items that are more complex in terms of knowledge you have assimilated, insights you have had or observations you have made will be worth more points and consequently will be awarded an overall higher grade for this paper. Yes, that will be a subjective assessment on my part, and as is stated in the syllabus, you may always feel free to constructively challenge those assessments. ☺

You will determine the length of this assignment, based on the criteria listed above.

This paper will be due on M 6/3, the last day of class before finals week.

Appendix 2: Psy 240 Assignment #2**SAVING OURSELVES FROM NATURE-DEFICIT DISORDER**

In this assignment, type answers to the following questions listed below: 1-4 and 7-12. Include answers to other questions if you are so inclined. Cite sources appropriately if necessary (refer to writing format for papers on page 6 of your syllabus). List the number and write out the question before responding to it. The length of this assignment will vary depending upon your responses; I'm leaving it up to you. This will be part of your P&A grade.

1. Can you recall and describe your favorite childhood place in nature? Where was it, how did you find it, how did it feel when you were there and what became of it?
2. Do your own children, or children you know, have fewer experiences in nature than you or your friends did at their age?
3. If children are not spending as much time outdoors, what are the top five reasons?
4. How do the physical, cultural, political and legal barriers separating children from nature differ in inner-city, suburban and rural neighborhoods?
5. Which of these barriers can be safely reduced by parents? Who can lower the other obstacles?
6. What are some ways that nature "amplifies" or changes the perception of "time" for children and adults?
7. Can you identify accessible "nearby nature" in your neighborhood or community? What is it? Where?
8. When introducing children to nature where is the balance between imparting information and encouraging joy and wonder?
9. What is the role of grandparents, aunts, uncles, mentors and other members of your family in helping children experience nature?
10. Can you identify institutions and organizations in your community that can help you, other parents/adults you know, and children get outside?
11. What are the health benefits of nature experiences to children and adults?
12. What role should nature experiences play in education?

***These questions were taken from the "Discussion Points" section of the book Last Child in the Woods: Saving Our Children From Nature-Deficit Disorder by Richard Louv, Algonquin Books of Chapel Hill, 2008.

Appendix 3: Psy 222 Quiz Questions

Psychology 222

Research Quiz

1. For a project in her statistics class, Jody goes to the mall to ask those who are there some questions about their relationships. Jody is using a:
 - A. data sample
 - B. representative sample
 - C. convenience sample
 - D. sequential sample

2. In which type of research design do researchers attempt to control the conditions of the study, intentionally manipulate one or more variables, and measure changes in other defined variables in order to determine *cause and effect*?
 - A. experimental research
 - B. correlational research
 - C. variable research
 - D. descriptive research

3. A study measured the personality trait of neuroticism and the level of couple satisfaction and found that the higher one partner scored on a neuroticism scale, the lower the couple satisfaction was. Which of the following designs best describes this research?
 - A. experimental research
 - B. correlational research
 - C. variable research
 - D. descriptive research

4. Dr. Roberts wants to study the development of the personality trait of 'conscientiousness' throughout adulthood. He gives a 'conscientiousness' measure (test) to a group of 20, 30 and 40 year olds. In five years, he gives the test again to the previous participants, now ages 25, 35, and 45. He also adds in a new group of 20 year olds. He plans to continue this process of testing previous respondents and adding new groups of 20 year olds for 30 years. Dr. Roberts is utilizing which type of developmental design?
 - A. cross-sectional
 - B. sequential
 - C. longitudinal
 - D. retrospective

5. In scientific study, research that measures the actual behavior or event that it claims to is said to demonstrate _____ and research results that are consistent (replicated) across studies or applications, are said to demonstrate _____.
- A. representativeness – accuracy
 - B. validity -- reliability
 - C. accuracy -- representativeness
 - D. reliability -- validity
6. A study of a couple's division of labor finds that each partner overestimates his/her own contribution. This is an example of:
- A. experimenter effects
 - B. researcher bias
 - C. self-serving bias
 - D. recall bias
7. A _____ is a type of research that attempts to see if there is a true group difference being detected by individual research projects. A specific hypothesis is made and research data is collected from more than one existing research study that has attempted to answer the same or similar hypothesis.
- A. variable analysis
 - B. correlational study
 - C. cross-sectional study
 - D. meta-analysis
8. For his research study Will looks at U.S. Census data from 1920, 1940, 1960 and 1980. He is using:
- A. archival information
 - B. correlational data
 - C. experience sampling
 - D. standardized procedures

9. When Stuart agrees to be a research participant for a study carried out in his psychology class, he is told about the research procedure, the purpose, potential risks, and that he is free to withdraw at any time. The researcher is meeting the ethical guideline of:

- A. beneficence
- B. informed consent
- C. legal consent
- D. justice

10. Matty's instructor assigned a research paper utilizing *peer-reviewed* research sources. This means that:

- A. Matty can look to Glamour magazine as a source as the readership is represented by her peers
- B. Matty can only use research sources listed in text books because the author of the text book has the expertise to interpret the research that Matty does not have.
- C. Matty can only use research sources that are published in a professional journal that uses an editorial process in which the research is evaluated and approved by other experts within the same field prior to publication.
- D. Matty can use any research that she can find on the internet

Appendix 4: Psy 222 Pre-Test/Post-Test Data

Numbers in each cell represent totals for each category. Asterisks indicate statistically significant changes from the pre-test to the post-test – indicating a significant contribution of the course to the final levels of student outcome attainment.

| | | | |
|----------|---------|-----------|-------------|
| Q1 Pre | Correct | Incorrect | Sampling* |
| Q1 Post | 7 | 20 | |
| | Correct | Incorrect | |
| | 19 | 6 | |
| Q2 Pre | Correct | Incorrect | Exp Design* |
| Q2 Post | 13 | 14 | |
| | Correct | Incorrect | |
| | 21 | 4 | |
| Q3 Pre | Correct | Incorrect | Corr Design |
| Q3 Post | 21 | 6 | |
| | Correct | Incorrect | |
| | 23 | 2 | |
| Q4 Pre | Correct | Incorrect | Dev Designs |
| Q4 Post | 6 | 21 | |
| | Correct | Incorrect | |
| | 3 | 22 | |
| Q5 Pre | Correct | Incorrect | Valid/Relia |
| Q5 Post | 6 | 21 | |
| | Correct | Incorrect | |
| | 6 | 19 | |
| Q6 Pre | Correct | Incorrect | Self-Serv B |
| Q6 Post | 22 | 5 | |
| | Correct | Incorrect | |
| | 22 | 3 | |
| Q7 Pre | Correct | Incorrect | Meta Analy* |
| Q7 Post | 8 | 19 | |
| | Correct | Incorrect | |
| | 19 | 6 | |
| Q8 Pre | Correct | Incorrect | Arch Data |
| Q8 Post | 23 | 4 | |
| | Correct | Incorrect | |
| | 24 | 1 | |
| Q9 Pre | Correct | Incorrect | Inf Consent |
| Q9 Post | 21 | 6 | |
| | Correct | Incorrect | |
| | 24 | 1 | |
| Q10 Pre | Correct | Incorrect | Peer Rev |
| Q10 Post | 21 | 6 | |
| | Correct | Incorrect | |
| | 24 | 1 | |
| TOT PRE | CORRECT | INCORRECT | TOTAL* |
| TOT POST | 148 | 122 | |
| | 185 | 65 | |

Appendix 5: Psy 222 Section Comparison

| | Correct | Incorrect |
|------|---------|-----------|
| Q1 A | 4 | 24 |
| Q1 B | 19 | 6 |

Sampling*

| | Correct | Incorrect |
|------|---------|-----------|
| Q2 A | 11 | 17 |
| Q2 B | 21 | 4 |

Exp Design*

| | Correct | Incorrect |
|------|---------|-----------|
| Q3 A | 18 | 10 |
| Q3 B | 23 | 2 |

Corr Design*

| | Correct | Incorrect |
|------|---------|-----------|
| Q4 A | 6 | 22 |
| Q4 B | 3 | 22 |

Dev Designs

| | Correct | Incorrect |
|------|---------|-----------|
| Q5 A | 11 | 17 |
| Q5 B | 6 | 19 |

Valid/Relia

| | Correct | Incorrect |
|------|---------|-----------|
| Q6 A | 23 | 5 |

Self-Serv B

| | | |
|------|----|---|
| Q6 B | 22 | 3 |
|------|----|---|

| | Correct | Incorrect |
|------|---------|-----------|
| Q7 A | 6 | 22 |
| Q7 B | 19 | 6 |

Meta Analy*

| | Correct | Incorrect |
|------|---------|-----------|
| Q8 A | 22 | 6 |
| Q8 B | 24 | 1 |

Arch Data

| | Correct | Incorrect |
|------|---------|-----------|
| Q9 A | 24 | 4 |
| Q9 B | 24 | 1 |

Inf Consent

| | Correct | Incorrect |
|-------|---------|-----------|
| Q10 A | 26 | 2 |
| Q10 B | 24 | 1 |

Peer Rev

| | CORRECT | INCORRECT |
|-------|---------|-----------|
| TOT A | 151 | 129 |
| TOT B | 185 | 65 |

TOTAL*

Appendix 6: Psy 202A Cross-Cultural Article and the Discussion Questions:**Here is the article:**

The Cultural Shaping of Depression: Somatic Symptoms in China, Psychological Symptoms in North America?

http://www.chp.concordia.ca/content/downloads/articles/Ryder_Yang_Zhu_Yao_Yi_Heine_Bagby_2008.pdf

Questions for the article: Cultural Shaping of Depression: Somatic Symptoms in China, Psychological Symptoms in North America

These questions are to accompany the article to facilitate discussion, and to help students attain a deeper understanding of the article.

1. Is depression culturally shaped?
2. How would the experienced symptoms differ from culture to culture? China and North America?
3. Are there any cross-cultural differences in symptom reporting between the above two cultures?
4. What are the factors that contribute to the different symptoms experienced in the two cultures?
5. Would the reporting of symptoms in the two cultures differ depending on the method of reporting ? self report , interview etc..
6. Why might a culture emphasize certain symptoms and ignore others?

Appendix 7: Psy 202A Plan Background

Current Assessment in PSY 202A

Core Outcomes: Cultural Awareness and Critical Thinking

Psychology 202A is the second in a sequence of the introductory course in psychology. This course was chosen for assessment since it is taught from a multi-cultural perspective and meets cultural literacy requirements.

Faculty rationale:

The instructors who teach PSY 202A are teaching the course from a multicultural and socio-cultural perspective and focus. Cultural competence and Critical thinking is necessary for the understanding of cross-cultural comparisons, cross-cultural research articles and the scientific method they follow.

The contents of PSY 202A, lend themselves to cross-cultural components and to increased cultural awareness, and critical thinking.

The faculty involved in this current assessment project agreed that cultural awareness and critical thinking need to be assessed.

Design our task :

- Look for and choose 2 or 3 articles that deal with a psychological disorder from a cross-cultural perspective.
- Find articles specifically on "Depression" and the expression of symptoms in different cultures, to use in PSY 202A ,Intro to psychology Part II.
- Choose one article out of the three to use in the current assessment for the sake of simplicity.
- Identify the instructors teaching PSY 202A during Spring term. There were nine sections of PSY 202A and the average class has 28 students. There were both online and face to face courses.
- Develop discussion questions for instructors to give to students, to facilitate the understanding of the article.
- Develop two multiple choice (MC) questions that tap on cultural awareness and on critical thinking respectively, and one essay question as an alternative to use in some classes.
- Test for the knowledge and information retained from the article at the end of the term, by giving two multiple choice (MC) questions or the essay question during final's week.
- Analyze the results for the MC questions, and the essay question.

Method:

From the three articles chosen, one on China, one on Mexico and one on Sweden, [we decided to use only one: The Cultural Shaping of Depression. The decision to use one article instead of two or three was for simplicity.](#)

The article was sent out to all nine instructors teaching Psychology 202A during Spring term 2013. The article was to accompany the chapters on psychological disorders and their treatment.

Discussion questions were sent out to the instructors to give to students to accompany the article, and to facilitate and deepen the understanding of the article. To be used when covering the chapters on psychological disorders, and their treatment.

The two multiple choice (MC) questions, and one essay question were sent out three weeks before the end of the term, and the instructors were to administer either the MC questions or the essay with the final test during final's week.

Data collection:

PSY 202A instructors received the two MC questions and the essay question. They were to administer to students either the MC questions, or the essay question with the final test during final's week.

The data was collected by the PSY 202A instructors, the answers to the MC questions and the essay question were sent to faculty member Marlene Eid at the end of the term.

The answers to the MC questions were the only data analyzed at the end of this term, Spring of 2013. The essay question might be analyzed in the Fall of 2013.

Out of the 2 who implemented the MC , one class was an online class, the second was a face to face

Out of the nine instructors, one class was cancelled, 3 did not participate , 2 implemented the MC questions and 3 the essay question

Out of the 3 who used the essay question, 2 required the students to answer the essay question, and one offered it as optional (this one will not be included in the analysis of the data).

Out of the 2 classes who implemented the essay as a requirement, one was an online class the second was face to face.

Appendix 8: Alternate Draft of the 202A Report**Annual Report for Assessment of Outcomes 2012-13**Subject Area Committee Name: Psychology _____

Contact person: _____

For LDC/DE: Core outcome(s) assessed: _____

For CTE: Degree or certificate* assessed: _____

*please attach a table showing the alignment of the degree or certificate outcomes with the College Core Outcomes

Please address the questions below and

Send to learningassessment@pcc.edu by **June 21, 2013** with Annual Report in the subject line

For each outcome assessed this year: Core Outcomes: Cultural Awareness and Critical Thinking. Current Assessment Project in PSY 202A courses, Spring of 2013.

Design: Mona Johnson, John Olmsted, and Marlene Eid during SAC meeting of Fall of 2012

Article search: Mona Johnson, Rachel Stone, and Marlene Eid.

Multiple Choice Questions: Written by Mona Johnson. Essay Question: Written by Marlene Eid

Discussion Questions: Written by Marlene Eid.

Implementation of the design, Collection of Data Spring of 2013: Marlene Eid

Development of Appendices: Marlene Eid

Statistical Analysis (Appendix E): Wayne Hooke

Writing of this Report: Marlene Eid.

2. Describe the assessment design (tool and processes) used. Include relevant information about:

- The nature of the assessment (e.g., written work, project, portfolio, exam, survey, performance etc.) and if it is direct (assesses evidence mastery of outcomes) or indirect (student's perception of mastery). Please give rationale for indirect assessments (direct assessments are preferable).

As part of the assessment the psychology discipline and PCC is conducting, three faculty members who teach PSY 202A, Part II in the sequence of the Introduction to Psychology courses, agreed to measure whether or not the cultural awareness outcome and the critical thinking outcomes were met in the teaching/learning of this course. The PSY 202A course is taught from a socio-cultural perspective, and therefore taps on the cultural awareness, and the critical thinking outcome is crucial for the cultural awareness and the understanding of the scientific method. Students' performance and understanding of these (outcomes) the three faculty members agreed to look for three peer reviewed articles that dealt with the issue of "depression" from the perspective of three different cultures China, United States and Sweden. One article was chosen to use in this current project of assessment: The Cultural shaping of Depression: Somatic symptoms in China, Psychological symptoms in North America. The article was sent to all nine PSY 202A instructors during Spring term, to give to their students. In order to facilitate the understanding of the articles, a list of questions was developed to accompany the article and sent to PSY 202A instructors to distribute to the students (See Appendix A for Article and Discussion Questions) To assess the students' performance and measure their achievement and understanding of both course outcomes, two multiple choice questions (MC) that would tap on both

the cultural awareness and the Critical thinking outcomes respectively were developed and administered to students during final's week . (See Appendix B for more details on the design).

- The student sample assessed (including sample size relative to the targeted student population for the assessment activity) process and rationale for selection of the student sample. Why was this group of students and/or courses chosen?

-The PSY 202A course was chosen for this assessment since it is taught from a socio-cultural perspective, and therefore taps on the cultural awareness outcome, and the critical thinking outcome. Critical thinking is crucial for the understanding of cultural awareness, and the understanding of the scientific method.

- One of our main SAC assessment objectives this year was to include more faculty in the process. There were nine (9) PSY 202A courses offered in Spring 2013. All nine instructors were informed of the learning assessment, the method in which it will be conducted, and the assessment tools to be used to measure performance. Although we all agreed essays are better for assessment, we decided to have multiple choice questions as an option for instructors who do not use essays.

-The students included in this assessment are enrolled in two out of the nine PSY 202A courses. A face to face class with 23 students, and one online class with 30 students. Two sections totaling 53 students. These are the ones analyzed in this report, and are the ones who responded to the multiple choice questions.

Out of the seven remaining, 3 instructors did not respond to the assessment task. One face to face class was cancelled; another online class offered the assessment task as optional (one student responded only) it was disregarded, two other classes responded to the essay question and the two were one online, and one face to face PSY 202A class (might be analyzed in the future).

Peer reviewed article used for the assessment, the students have to read and discuss the article by responding to questions that were developed to enhance the understanding of the article (See **Appendix A** for **article and developed discussion questions**).

The article was sent out to the instructors in the first part of the term, for the instructors to distribute and to use with the chapters on psychological disorders.

The discussion questions were developed and sent out to instructors to give to students to facilitate and deepen their understanding of the article.

- Any rubrics, checklists, surveys or other tools that were used to evaluate the student work. (Please include with your report – OK to include in appendix). Where appropriate, identify benchmarks.

The Instrument used to assess students' understanding of the cultural differences in the expression of the depressive symptoms and the understanding of the confounds in the research article, is a test comprised of two multiple choice questions. (See **Appendix C** for the test questions)

The test comprised of the two multiple choice questions was sent out to the PSY 202A instructors three weeks before the end of the term to be used as part of the testing during final's week.

There are no associated benchmarks/ rubrics.

- How you analyzed results, including steps taken to ensure that results are reliable (consistent from one evaluator to another).

Comparisons were used using a Chi-Square and Fisher's Exact test. Reliability was ensured by using the same items in both sections: Same article, same questions used for discussion, and same questions used to assess performance and understanding and were administered during final's week in both classes.

The Chi-Square statistic is the appropriate one to use when assessing the achievement of outcomes. A between section comparison is also used in the analysis of the results with a specific focus on comparisons of the same item between classes. The Fisher's Exact test is more appropriate to use in the current assessment for it applies to a simple analysis of a simple table with percentages.

3. Provide information about the results (i.e., what did you learn about how well students are meeting the outcomes)?
 - If scored (e.g., if a rubric or other scaled tool is used), please report the data, and relate to any appropriate benchmarks.
 - Results should be broken down in a way that is meaningful and useful for making improvements to teaching/learning. Please show those specific results.

The tool used to assess the understanding of the two core outcomes; the Cultural Awareness and the Critical Thinking, is two multiple choice questions given to students during final's week. Each question tapped on assessing one of the core outcomes, question number one tapped on cultural Awareness and question number two tapped on Critical Thinking.

- -- Here are the class results for the two multiple choice items (psy202). Class # 1 (C1)
 - Item 1 (differences in reporting question) 12 / 23 students have the correct answer (52%)
 - Item 2 (possible confounds question) 21 / 23 students have the correct answer (91%)
- --Here are the results for the two multiple choice items (online course, students have access to article during exam). Class # 2 (C2)
 - Item 1 (differences in reporting question) 19 /30 students have the correct answer (63%)
 - Item 2 (possible confounds question) 24 /30 students have the correct answer (80%)

Data Analysis: (See Appendix D)

The data analysis applies the two classes that implemented the MC questions.

Here are the results for both classes.

- Face to face (F2F) and Online or Distance Learning (DL)

| | | <u>F2F</u> | <u>DL</u> | | |
|--|---|------------|-----------|--|--|
| • <u>Item # 1 Cultural Awareness Outcome</u> | | C1 | C2 | | |
| | -Differences in reporting symptoms (item 1) | | | | |

| | | | | | | |
|-----------|-------|--------------|-------|--------------|-------|------------|
| Correct | 12/23 | (52%) | 19/30 | (63%) | 31/53 | 58% |
| Incorrect | 11/23 | (48%) | 11/30 | (37%) | 22/53 | 42% |

- Item # 2 Critical thinking outcome

-Possible confounds (item 2)

| | | | | | | |
|-----------|-------|--------------|-------|--------------|-------|------------|
| Correct | 21/23 | (91%) | 24/30 | (80%) | 45/53 | 85% |
| Incorrect | 2/2 | | 6/30 | | 38/53 | 15% |

- TOTAL
- | | | |
|-----------|----|----|
| Correct | 33 | 43 |
| Incorrect | 13 | 17 |

- To analyze the data our psychology member and Learning Assessment Council (LAC) member Wayne Hooke analyzed the results & recommended the Fisher’s Exact test. (See Appendix E)
- The most significant results confirmed by the statistical analysis are that the mastery of the critical thinking core outcome is reflected in the performance of both classes for item number 2 that taps on the possible confounds, with 80% correct answers in the online class and at 91% in the F2F class.
- The performance of both classes as to the cultural awareness outcome of understanding the differences of reporting the symptoms is above average for both classes, with a slight advantage in one of them. This second result could be due to the mode of dealing with the article and the discussion questions. The slight difference increase in the performance of the online class could also be due to the fact that the article was available to the students while taking the multiple choice questions.

Fisher’s Exact test shows the data as follows:

C1 is the first PSY 202A class represented in BLUE

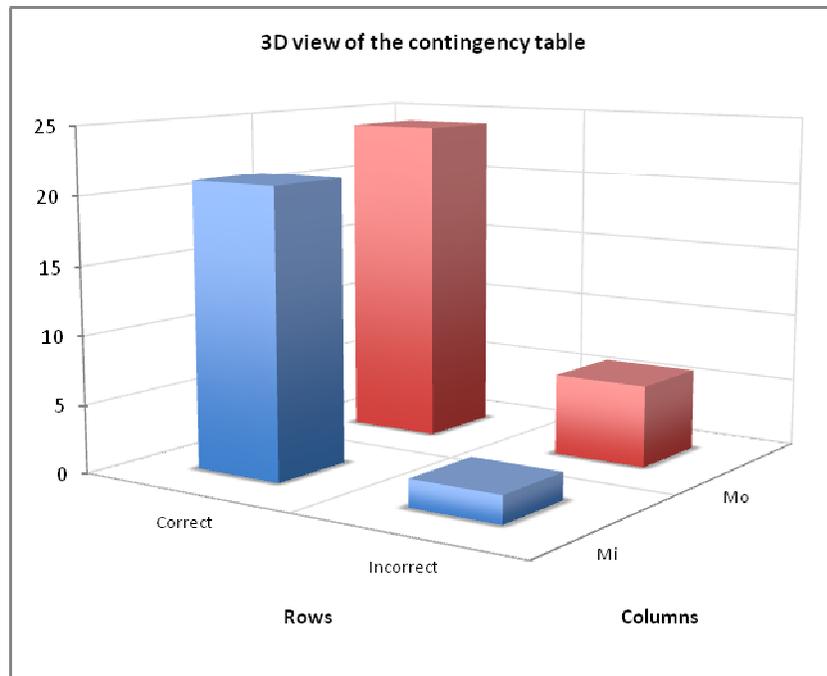
C2 is the second PSY 202A class represented in RED

This is an analysis of item number 2 (Critical Thinking)

Contingency table:

| | C1 | C2 |
|-----------|----|----|
| Correct | 21 | 24 |
| Incorrect | 2 | 6 |

3D view of the contingency table:

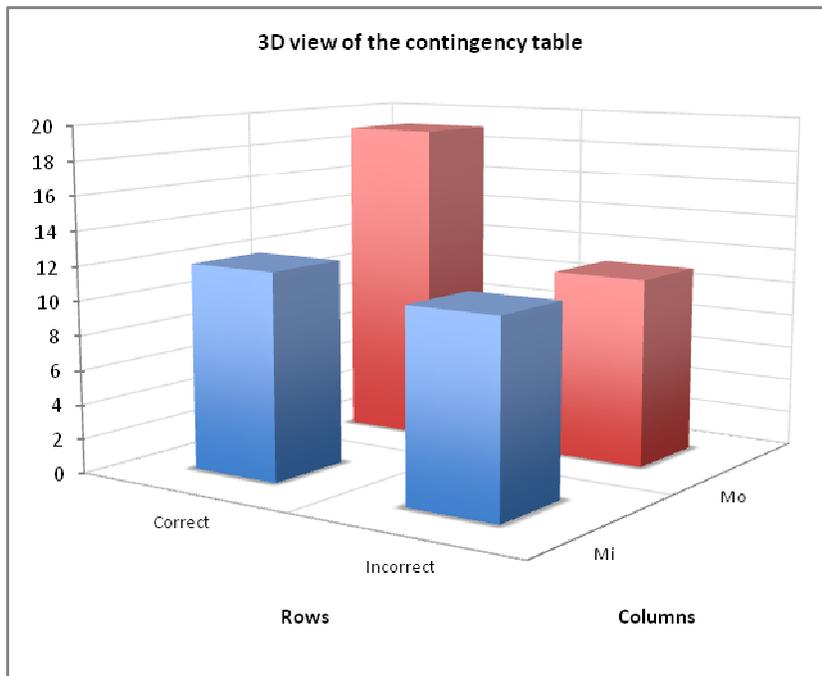


This is an analysis for item 1 (Cultural Awareness)

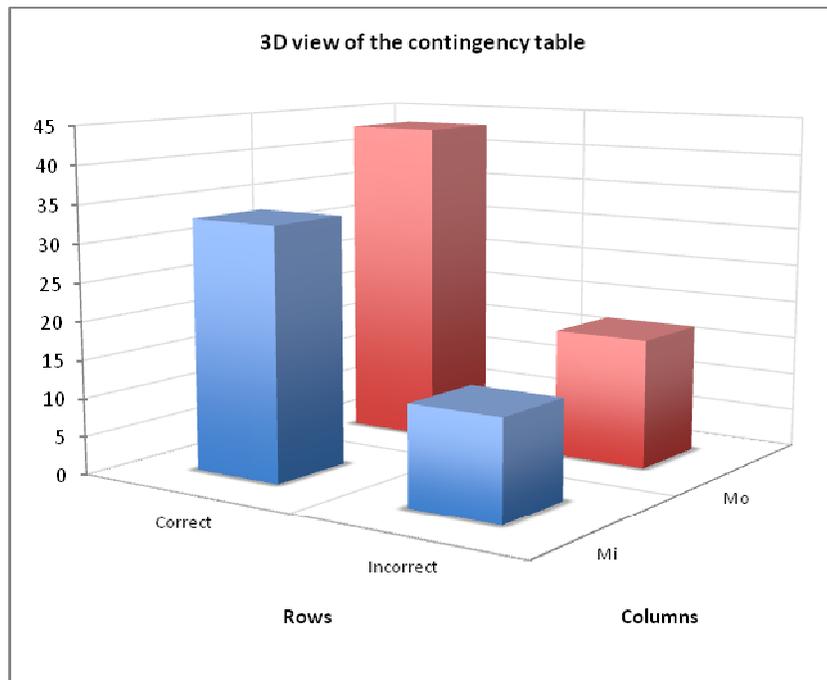
Contingency table:
item 1

| | C1 | C2 |
|-----------|----|----|
| Correct | 12 | 19 |
| Incorrect | 11 | 11 |

3D view of the contingency table:



A 3D of the contingency table for both correct and incorrect items in each class



The overall student attainment of both outcomes is adequate and could be improved. The attainment of each separate core outcome, the Critical Thinking outcome and the Cultural Awareness outcome, is better reflected in the contingency tables dedicated to each item. The boost in the overall attainment is due to the students' performance on one item, the critical thinking one. The cultural awareness performance or understanding is reflected by a slightly above average understanding of the item.

4. Identify any changes that should, as a result of this assessment, be implemented to help improve students' attainment of outcomes. (These may include, but are not limited to, changes in curriculum, content, materials, instruction, pedagogy etc).

In this current assessment project the analysis of the results of each specific item indicated different attainment of the core outcome tested in both classes. It gave us an overall idea about the attainment of each core outcome.

Improve on deepening the understanding of the cultural competency in order to facilitate the performance and attainment of the cultural awareness outcome, and the critical thinking outcome. Have a follow – up and check how helpful the questions for the discussion were in allowing the students to understand the material. Have the students write the questions they would like to explore in the content they are studying.

Increase tools to help faculty develop cultural competency, a skill needed to facilitate the achievement of the goals and the attainment of the core outcome of cultural awareness. The SIIC Summer Institute on Intercultural Communication seminars would help with this task.

Use a different type of measurement to assess the understanding of the cultural awareness outcome:

Multiple choice questions are not the best at measuring the attainment of cultural understanding and cultural competency.

Use a rubric maybe to score the effectiveness of critical thinking rather than a multiple choice MC question. Again a MC is not the best at demonstrating critical thinking.

Faculty could establish information sharing in a preliminary session at the beginning of the Fall term to coordinate curricular pieces of the course.

Have all PSY 202A faculty volunteer their classes for testing and emphasize the importance of assessment for student success.

When more buy-in from faculty, essays should be the preferred mode of testing.

5. Reflect on the effectiveness of this assessment tool and assessment process. Please describe any changes to assessment methodology that would lead to more meaningful results if this assessment were to be repeated (or adapted to another outcome). Is there a different kind of assessment tool or process that the SAC would like to use for this outcome in the future? If the assessment tool and processes does not need to be revised, please indicate this.

If this assessment is to be repeated these are the recommendations:

- Have a clear agreement on the design and method used for assessment.
- Have a less rushed process. Allow instructors to have all the tools before the start of the term.
- Make sure all instructors are summarizing and discussing the article in the same way.
- Include more than one class at least one more face to face class and one more online PSY 202A classes.
- Use more than one multiple choice question to measure attainment of each outcome.
- Use alternative means of testing such as essay and scoring rubric
- Develop the discussion questions with participation of more PSY 202A instructors (outside the group responsible for the current assessment project).
- Enforce the use of not just the tool of testing but the way of testing (article available or not available while testing)
- Ask the students about how helpful were the discussion questions in facilitating the understanding of the concepts.

Conclusion and Next steps:

- Take into consideration the above recommendations

- As a first step maybe to analyze the essay question that was answered by 2 other PSY 202A classes (one online and another Face to Face) this term, then compare the results to the results of the current assessment project.

-The second step would be to work on professional development to improve curriculum and learning.

-Third step would be to implement what is learned to improve the teaching/learning

-The fourth would be to assess again after implementation of new tools of teaching learning and assessment.

Appendix A

Cross-cultural Article and the Discussion Questions:

--Here is the article:

The Cultural Shaping of Depression: Somatic Symptoms in China,
Psychological Symptoms in North America?

http://www.chp.concordia.ca/content/downloads/articles/Ryder_Yang_Zhu_Yao_Yi_Heine_Bagby_2008.pdf

--Questions for the article: Cultural Shaping of Depression: Somatic Symptoms in China, Psychological Symptoms in North America

These questions are to accompany the article to facilitate discussion, and to help students attain a deeper understanding of the article.

- Is depression culturally shaped?
- How would the experienced symptoms differ from culture to culture? China and North America?
- Are there any cross-cultural differences in symptom reporting between the above two cultures?
- What are the factors that contribute to the different symptoms experienced in the two cultures?
- Would the reporting of symptoms in the two cultures differ depending on the method of reporting? Self report, interview etc...
- Why might a culture emphasize certain symptoms and ignore others?

Appendix B

Current Assessment in PSY 202A

Core Outcomes: Cultural Awareness and Critical Thinking

Psychology 202A is the second in a sequence of the introductory course in psychology. This course was chosen for assessment since it is taught from a multi-cultural perspective and meets cultural literacy requirements.

Faculty rationale:

The instructors who teach PSY 202A are teaching the course from a multicultural and socio-cultural perspective and focus. Cultural competence and Critical thinking are necessary for the understanding of cross-cultural comparisons, cross-cultural research articles and the scientific method they follow.

The contents of PSY 202A, lend themselves to cross-cultural components and to increased cultural awareness, and critical thinking.

The faculty involved in this current assessment project agreed that cultural awareness and critical thinking need to be assessed.

Design our task:

- Look for and choose 2 or 3 articles that deal with a psychological disorder from a cross-cultural perspective.

- Find articles specifically on "Depression" and the expression of symptoms in different cultures, to use in PSY 202A, Intro to psychology Part II.

- Choose one article out of the three to use in the current assessment for the sake of simplicity.

- Identify the instructors teaching PSY 202A during Spring term. There were nine sections of PSY 202A and the average class has 28 students. There were both online and face to face courses.

- Develop discussion questions for instructors to give to students, to facilitate the understanding of the article.

- Develop two multiple choice (MC) questions that tap on cultural awareness and on critical thinking respectively, and one essay question as an alternative to use in some classes.

- Test for the knowledge and information retained from the article at the end of the term, by giving two multiple choice (MC) questions or the essay question during final's week.

-Analyze the results for the MC questions, and the essay question.

Method:

From the three articles chosen, one on China, one on Mexico and one on Sweden, [we decided to use only one: The Cultural Shaping of Depression](#). [The decision to use one article instead of two or three was for simplicity.](#)

The article was sent out to all nine instructors teaching Psychology 202A during Spring term 2013. The article was to accompany the chapters on psychological disorders and their treatment.

Discussion questions were sent out to the instructors to give to students to accompany the article, and to facilitate and deepen the understanding of the article. To be used when covering the chapters on psychological disorders, and their treatment.

The two multiple choice (MC) questions, and one essay question were sent out three weeks before the end of the term, and the instructors were to administer either the MC questions or the essay with the final test during final's week.

Data collection:

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The data was collected by the PSY 202A instructors, the answers to the MC questions and the essay question were sent to faculty member Marlene Eid at the end of the term.

The answers to the MC questions were the only data analyzed at the end of this term, Spring of 2013. The essay question might be analyzed in the Fall of 2013.

Out of the 2 who implemented the MC, one class was an online class; the second was a face to face

Out of the nine instructors, one class was cancelled, 3 did not participate, 2 implemented the MC questions and 3 the essay question

Out of the 3 who used the essay question, 2 required the students to answer the essay question, and one offered it as optional (this one will not be included in the analysis of the data).

Out of the 2 classes who implemented the essay as a requirement, one was an online class the second was face to face.

Appendix C

--Below is a short essay question and 2 multiple choice questions to give to your students (to include or add) in your tests at the end of the term, regarding the article: The Cultural Shaping of Depression. Choose either the essay or the multiple choice option.

Multiple Choice Questions:

Cross-cultural question:

Disregarding possible confounds, Ryder, Yang, Zhu, Yao, Yi, and Heine (2008) found that

- A. participants in Toronto reported significantly more psychological symptoms as compared with participants in Changsha.
- B. Cultural differences in somatic symptoms were more inconsistent and dependent on assessment method.
- C. Both A and B are true.
- D. Both A and B are false.

C is correct answer

Critical thinking question:

In the Ryder et al article (2008), possible confound(s) that may compromise the authors' findings is/are

- A. Outpatients knew that they were at treatment sites to discuss psychosocial problems.
- B. Help-seeking strategies may have resulted in only certain types of depressed patients seeking treatment.
- C. Both treatment centers were in urban settings.
- D. All the above are true.

D is the correct answer

Short Essay Question:

What is the main difference in depression symptoms' reporting between the two cultures of China and North America? Explain why these experiences of symptoms differ.

Appendix D

Analysis of Data

Item 1: Difference in reporting symptoms (Cultural Awareness outcome)

Item 2: Possible Confounds (Critical Thinking outcome)

C1 and C2 represent the two classes analyzed in the current assessment project.

C1 is represented in the graphs with the color Blue.

C2 is represented in the graph with the color Red.

| | | | | |
|--------|-----------|-------------|-------------|-------------|
| Item 1 | | C1 | C2 | 58% Correct |
| | Correct | 12/23 (52%) | 19/30 (63%) | |
| | Incorrect | 11/23(48% | 11/30 (37%) | |
| Item 2 | | C1 | C2 | 85% Correct |
| | Correct | 21/23(91%) | 24/30(80%) | |
| | Incorrect | 2/23(9%) | 6/30(20%) | |
| Total | | C1 | C2 | |
| | Correct | 33 | 43 | |
| | Incorrect | 13 | 17 | |