Annual Report for Assessment of Outcomes 2012-13

Subject Area Committee Name: CAS/OS_____

Contact person: Diane Shingledecker_____

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

For CTE: Degree or certificate* assessed: Spreadsheet: Career Pathways Certificate_____

*please attach a table showing the alignment of the degree or certificate outcomes with the College Core Outcomes (Please see Appendix A)

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 <u>changes that have been implemented</u> towards improving students' attainment of outcomes that <u>resulted from recent outcome assessments</u>.   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.

Over the past two years, the CAS/OS department has assessed the outcomes of our Administrative Assistant Degree (2011) and our Administrative Office Professional Degree (2012). We primarily used our CAS 246 capstone class in these assessments. At our October 2012 In-service SAC Meeting, we discussed the following concerns raised from these assessments:

- The transfer of skills acquired from other CAS/OS courses to work in the capstone course seems to be challenging and lacking in the depth we would expect.
- Students do not seem to be able to "think on their feet" and make independent decisions using critical thinking skills which is the goal of not only this course, but what we would expect from students completing the degree.
- Students, in particular, did not have strong enough PowerPoint and Excel software skills.

The SAC discussed these concerns and tried to answer the following questions:
- Why don't our students have the necessary background?
- How can we get them to use critical thinking skills to complete projects without specific directions?
- Is there a method of teaching that can enhance this skill or do we need to apply this aspect more frequently in other CAS courses that feed into this course?

At the end of this discussion, the SAC decided to implement the following changes this year:
1. Change recommended classes to required classes for our CAS 246 class. (Beginning Excel and Beginning Word) (Approved by Curriculum Committee in Dec. 2012)
2. Add additional recommended classes to our CAS 246 class. (Beginning Access, Beginning PowerPoint, Intermediate Word, and Intermediate Excel) (Approved by Curriculum Committee in Dec. 2012)
3. Work as a department toward enhancing students' PowerPoint skills. Embed PowerPoint assignments in more CAS classes. Advise students to take Beginning PowerPoint class if they do not have strong software skills in this area. (In December 2012, the SAC was notified that we needed to add an additional credit to our Administrative Office Professional Degree. We decided to add the credit as a CAS elective. Students will be able to fulfill this additional credit requirement by taking Beginning PowerPoint. We hope this will help us "steer" more students to this class.)

4. Work this year to add spreadsheet/document design scenarios to CAS classes that do not include step-by-step instructions. These projects will be geared to getting students to think independently and use critical thinking.

At the spring term In-service SAC meeting, assignments that had been designed and utilized this academic year by CAS instructors to address items 3 and 4 above were presented. (See Appendix A.) Electronic copies of these were made available to all SAC faculty throughout the district. It is our hope that they will be used in more CAS classes in future terms.

Since it will take some time to see the results of these changes, we decided to wait a few years before re-assessing our Administrative Assistant degrees. Instead, we decided to assess our Spreadsheet: Career Pathways Certificate this year. Our Advisory Committee has continually told us that strong Excel skills are extremely important in today's marketplace. With this in mind, along with our concerns about the depth of our students' Excel skills, we felt that we should concentrate our assessment efforts on this spreadsheet certificate.

For each outcome assessed this year:
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).
   - 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?
   - 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.
   - How you analyzed results, including steps taken to ensure that results are reliable (consistent from one evaluator to another.

In order to assess the three outcomes of the Spreadsheet Certificate, we utilized two existing student assignments from our Intermediate Excel (CAS 171) class. This course is the highest level spreadsheet class in the certificate coursework. The assessment was a direct assessment of student assignments from both on-campus and online CAS 171 Winter Term 2013 classes from across the district. This group of classes gave us a sample size of 47 students for Outcomes 1 and 2 and 39 students for Outcome 3. Using assignments completed during winter term allowed the assessment committee ample time to complete the learning assessments during spring term and analyze the results before the end of the academic school year. Please see Appendix B for the list of certificate outcomes and Appendix C for the Assessment Rubric used.

Each instructor teaching a section of CAS 171 uploaded the student assignments to Google Drive where evaluators could review and apply the rubric on their own time. All student work was cleansed of student names prior to uploading them for review.

To provide consistency in applying the rubric, the six instructors doing the assessment met as a committee and collaborated on how we would consistently review and assess each outcome. The six instructors included a mix of those who currently teach CAS 171 and those who do not currently teach this course. All reviewers have a good knowledge of the skills needed to succeed in CAS 171. After this meeting, we felt confident in our process and reviewed student assignments remotely and individually.

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.

Outcome 1: Be prepared for entry-level jobs in the area of bookkeeping assistant, data entry, office assistant, and bank teller.
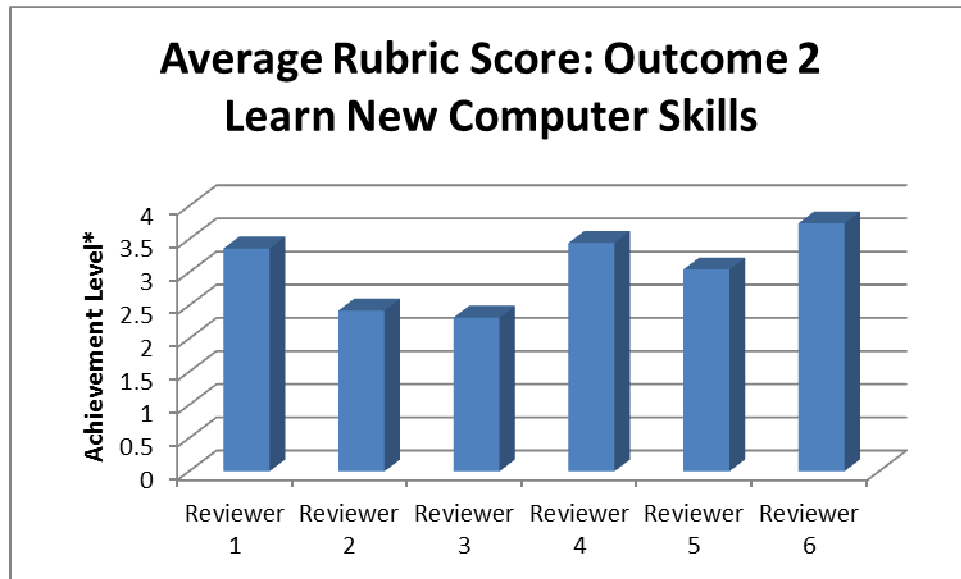
The following graph summarizes the assessment of this first outcome:

* Achievement Levels: 1= Beginning, 2= Developing, 3= Competent, 4= Mastery
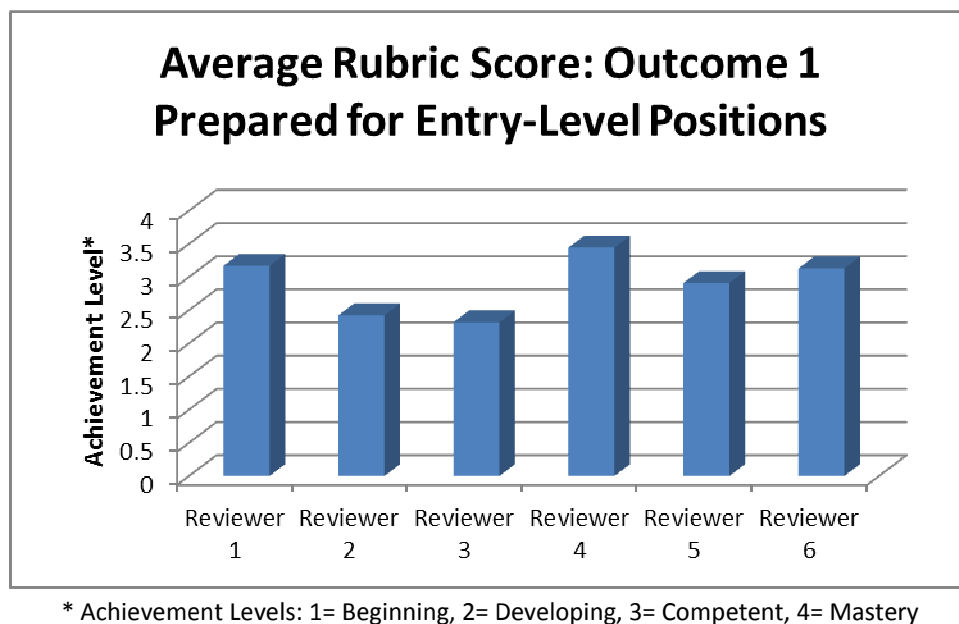
For Outcome 1, the overall achievement level for the assessed students was 2.9. This suggests that most students are developing or moving towards competency. In this intermediate class, it was a little surprising that students were not already competent and moving towards mastery. Some of the hindrances to moving towards mastery included proofreading errors, a lack of professional formatting, and struggles with correctly utilizing absolute references, as well as, the VLOOKUP function. In more complex spreadsheet assignments, students often get so focused on the formulas and functionality, that they forget to fine-tune the spreadsheets to have them measure up to professional standards.

Outcome 2: Learn new computer applications and office skills.

The following graph shows the results of the assessment of our second outcome:
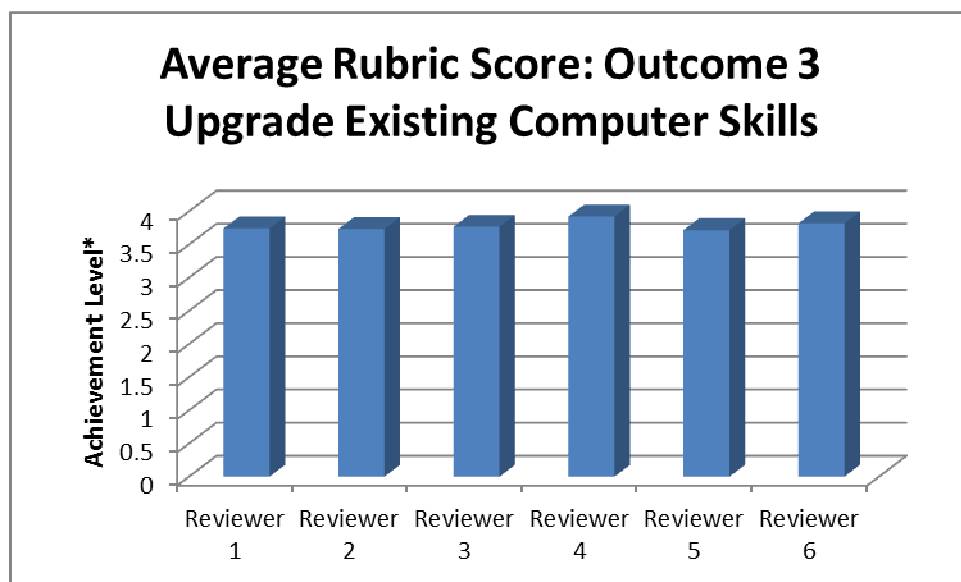
**Average Rubric Score: Outcome 2
Learn New Computer Skills**

A bar chart titled "Average Rubric Score: Outcome 2 Learn New Computer Skills" showing Achievement Level* on the y-axis (0 to 4) for Reviewer 1 through Reviewer 6. Reviewer 1 ≈ 3.5, Reviewer 2 ≈ 2.5, Reviewer 3 ≈ 2.5, Reviewer 4 ≈ 3.5, Reviewer 5 ≈ 3.2, Reviewer 6 ≈ 3.8.

* Achievement Levels: 1= Beginning, 2= Developing, 3= Competent, 4= Mastery

For Outcome 2, the overall achievement level for the assessed students was 3. This shows that the majority of students reached competency and some are at mastery level or moving toward it. This indicates that students are learning the functionality and essential features of Excel 2010, and they are able to use this software to produce quality spreadsheets. Since the same assignment was utilized for Outcomes 1 and 2, the same concerns about absolute references and the VLOOKUP function apply here.

Outcome 3: Upgrade existing computer applications and office skills.

The following graph summarizes the assessment of our final outcome:

**Average Rubric Score: Outcome 3
Upgrade Existing Computer Skills**

A bar chart titled "Average Rubric Score: Outcome 3 Upgrade Existing Computer Skills" showing Achievement Level* on the y-axis (0 to 4) for Reviewer 1 through Reviewer 6. All reviewers ≈ 3.8-4.

* Achievement Levels: 1= Beginning, 2= Developing, 3= Competent, 4= Mastery

For Outcome 3, the overall achievement level for the assessed students was 3.8. Many students are moving towards or have reached the mastery level for this outcome. Students clearly upgrade their computer skills as they work towards the completion of our Spreadsheet: Career Pathways Certificate. This suggests that most

are prepared for entry level computer software work. The assessment did show that the MS Office skill set of differentiating between linking and embedding continues to be challenging for some students.

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).

Based on the above analysis and what we learned from our past two administrative degree assessments, we need to continue to emphasize spellchecking, proofreading, and formatting in our classes. In this intermediate-level Excel class, we will look into adding peer-review of completed spreadsheets. The process of using a critical-eye to review another's completed spreadsheet may help students to more closely scrutinize their own work to make it more professional. Having the students use the rubric from this assessment would reinforce what instructors look for in mastery-level work.

As for Excel-specific skills, we need to look at adding more assignments that reinforce the use of absolute references, as well as, differentiating between linking and embedding. We also need to spend more time making sure that all students understand how to correctly use the VLOOKUP function. These suggestions will be shared at the Fall In-service SAC meeting and a plan for implementing them will be developed.

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.

The rubric's levels of achievement that we used in the previous two years' assessments continued to be effective this year in determining how our certificate students are performing. The wording of the Spreadsheet: Career Pathways Certificate Outcomes 2 and 3 was challenging to assess. The wording of Outcome 1 lead itself to a list of specifics reviewers could readily measure. Rewording Outcomes 2 and 3 so that a list of specifics for these two outcomes could also be compiled would be helpful if this assessment were repeated. The rest of the assessment process including uploading the files to Google Drive and having a reviewer group meeting was successful and should be repeated in future assessments.

CAS/OS Assignments in Response to Learning Assessment Findings

Class Name	Class Number	Term Used	Assignment/ Classroom Tool	Assignment Description
Basic Computer Skills	CAS 133	Beginning Fall 2012	Integrated Project	Integrates Word, Excel, Access, and PowerPoint in a PowerPoint presentation.
Beginning Excel	CAS 170	Winter/Spring 2013	Analyze Excel Spreadsheets	What's wrong with These Spreadsheets? Handouts. Provides opportunity for students to analyze spreadsheets to find errors in formatting and formulas.
Beginning Excel	CAS 170	Winter/Spring 2013	Excel Style Guide	Excel Style Guide used to provide style guidelines for spreadsheet data and charts. Provides checklist for students to use to evaluate spreadsheets.
Beginning Word	CAS 216	Winter/Spring 2013	Analyze Word Documents	What's wrong with These Documents? Handouts. Provides opportunity for students to analyze memos, letters, tables, and footnotes and find errors in formatting and text.
Business Editing	OS 220	Fall 2012	PowerPoint Presentation	Students design PowerPoint Presentation of Grammar Rules. Gives students opportunity to teach rules to others and put PowerPoint skills to use.
Office Systems and Procedures	OS 245	Spring 2013	PowerPoint Presentation	PowerPoint Presentations Gone Wrong! Students create a PowerPoint presentation about how NOT to use PowerPoint.
Office Systems and Procedures	OS 245	Spring 2013	PowerPoint Presentation	Students give oral report at end of their job shadow experience utilizing PowerPoint.

CAS Spreadsheet Certificate Links to PCC Core Outcomes

CAS Spreadsheet Certificate Outcomes	PCC Core Outcomes
Be prepared for entry-level jobs in the area of bookkeeping assistant, data entry, office assistant and bank teller. • Error free data entry • Professional formatting • Industry standard formulas • Industry standard functions • Tables • Absolute & Relative References • Define named ranges	Critical Thinking & Problem Solving Professional Competence
Learn new computer applications and office skills. • Use current version of software	Critical Thinking & Problem Solving Professional Competence
Upgrade existing computer applications and office skills	Critical Thinking & Problem Solving Professional Competence

Appendix C

Assessment Rubric	Levels of Achievement			
Course#: CAS 171 **Assignment/Project:**	**Beginning = 1**	**Developing = 2**	**Competent = 3**	**Mastery = 4**
Program Outcomes	Limited knowledge and application of skills.	Basic comprehension of knowledge of skills.	Competent application of essential features and concepts	Thorough mastery of advanced concepts.
Be prepared for entry-level jobs in the area of bookkeeping assistant, data entry, office assistant and bank teller. • Error free data entry • Professional formatting • Industry standard formulas • Industry standard functions • Tables • Absolute & Relative References • Define named ranges *Assignment: Tutorial 8, Case 4*				
Learn new computer applications and office skills. • Use current version of software *Assignment: Tutorial 8, Case 4*				
Upgrade existing computer applications and office skills *Assignment: Bright Light Case Problem*				