

Research Process

For this project on the CC and CPM, research was completed in the form of two surveys. One was a survey for the staff and another was for the students at WNHS. Both surveys were created by the researchers by referencing several on-line surveys about the CC and CPM. Portions of some of these surveys were amended to better fit the population of WNHS. In both surveys, participants were asked to provide their opinions on the CC and CPM. The surveys remained anonymous so as to allow the participants the comfort of being able to provide their honest reflections. One such concern was having students voice a negative opinion about the CC or CPM and face the consequences doled out by their math teacher should s/he be a CC/CPM advocate. Anonymity, it was felt, best served the students and the research into the CC/CPM.

Setting and Sample

This survey was distributed at WNHS, a high school in Westerville, Ohio. Westerville is a suburb of Columbus and is a member of the Ohio Capital Conference (OCC). There are four grades (ninth, tenth, eleventh, and twelfth) and 1,379 students in this school. (These numbers were given to the researchers by the Assistant Principal and are believed to be an accurate and up-to-date reflection of WNHS as of February 2014.) Seven hundred and forty of these students are boys (53.7%), and 639 are girls (46.3%). In the ninth grade, there are 381 students (213 boys and 168 girls). Precisely, there are six Asians, 91 blacks (non-Hispanic), 13 Hispanics, 13 American Indians, 28 students identified as multiracial, and 240 whites (non-Hispanic). In the tenth grade, there are 337 students (175 boys and 162 girls). Specifically, there are five Asians, 71 blacks (non-Hispanic), 14 Hispanics, 28 identified as multiracial, and 219 whites (non-Hispanic). In the eleventh grade, there are 374 students (187 boys and 187 girls). In particular, there are nine Asians, 83 blacks (non-Hispanic), 10 Hispanics, two American Indian, 19

identified as multiracial, and 251 whites (non-Hispanic). Lastly, in the twelfth grade, there are 287 students (166 boys and 121 girls). The breakdown shows there are six Asians, 70 blacks (non-Hispanic), 14 Hispanics, one American Indian, 18 identified as multiracial, and 178 whites (non-Hispanic). *(Because of the students that identified as “multiracial”, some of the specific ethnicity breakdowns for each grade level may not add up to match the total number of students listed. As ethnicity did not play a role in this C.A.R. project, such discrepancies did not have any impact on the findings and were not, therefore, of any significant concern to the researchers.)*

In order to graduate from WNHS, students must have four math credits spaced out so they are taking at least one class each year. (Obviously, students must pass these classes with a 60% or higher in order to earn the credit.) The classes available are: Pre-College Mathematics, Algebra 1, Algebra 2, Algebra 3, Financial Algebra, Honors’ Algebra 2, Honors’ Algebra 3, Geometry, Honors’ Geometry, AP Calculus AB, AP Calculus BC, IB Math Studies SL, IB Mathematics SL, and IB Mathematics HL. A Math Lab is also offered to assist struggling students.

There were no restrictions on gender, age, and language on either of the surveys. Nobody was forced to do the survey, and it was not for points. Twelve of the 13 math teachers that received the survey completed it over the course of one week. A total of 851 students (or 61.7% of the student body) elected to participate in the student survey.

Instrumentation and Materials

The researchers came up with two separate surveys, one for teachers and one for students. The teacher survey was seven pages in length and contained 24 questions, while the student’s survey was two pages in length and contained 11 questions. The researchers anticipated low student participation if the survey was longer than the front and back of one sheet, which is why

this survey went through numerous revisions before reaching its final format. (*The student survey can be found in its entirety following the Annotated Bibliography.*) More specifically, the researchers wanted to see if students were confusing their understanding (and like/dislike) of CC with their approval or disdain for CPM. Prior to conducting the survey, when students were overheard expressing their opinion of the “new” math, it was unclear whether or not they were referencing the CC or CPM. As such, the researchers included several questions that would help determine whether or not students knew the difference. The staff survey was designed to ask tougher questions – and ones that the students would not be able to understand nor answer because they are not educators.

To assist the researchers, numerous on-line CC and CPM surveys were tracked down and parts of some were used in the teacher survey distributed at WNHS. (*The teacher survey can be found in its entirety following the student survey after the Annotated Bibliography.*) To keep the survey tailored to Westerville City Schools (WCS), the students asked many questions about the amount of training the teachers had concerning the CC. The researchers understood that, like with the students, not everyone was in nor taught a CC/CPM math class (as the curriculum is being phased in across all levels). As such, one of the first questions out of the gate asked if the class they were in (or taught) was a newer CC class that used CPM.

The information produced from these surveys and the data calculated by the researchers will be discussed in the next section.