

## Skyline College Research Brief

### Fall 2008 District Segmentation Study

Purpose: To get a better understanding of the underlying segments of students on the three SMCCD campuses, using course-taking behaviors.

Methodology: Although there are numerous methods of segmenting a population of students, customers, or clients, the method summarized here could best be described as a “theoretical” or “behavioral” segmentation. The student population on each campus was segmented through a tree-based methodology, where the population is divided by values on key variables and then further subdivided in a stepwise fashion. This technique is very well suited for exploratory analyses such as the current undertaking, where deriving meaningful and logical segments is more valuable than determining the most statistically distinct segments (which often defy description).

This segmentation methodology is used quite commonly in industry, where customer segmentation is a hallmark of companies with effective marketing and customer relationship management practices. While it is often easier to define a customer or student in terms of their personal characteristics, far more valuable information often exists in closer observation of their actions. In our context, the strongest behavioral measurement is students’ course-taking decisions – these formed the main variables in the segmentation analysis. This segmentation is based on Fall 2008 census course data.

Key note: the segmentation is “hierarchical”, which means that once a student is selected for a segment, they are not available for identification in a later segment.

#### Key Findings:

- Most notably, single course takers represent 41% of the total student population in the District (see Table 1 – Segment 1).
- The next variable used to segment the remaining student population was the taking of “clearly CTE” courses. Although it can be difficult to distinguish between courses that might be CTE or transfer (e.g., Accounting, Computer Science), there are a host of courses that are definitely CTE – e.g., Automotive Technology, Drafting, Fire Sciences, Nursing, Respiratory Therapy, etc. Segment 2 in Table 1 reveals that another 11% of SMCCD students are taking 2+ courses, at least one of which is a “clearly CTE” course.
- After Segments 1 & 2, the remaining 50% of the student population were next segmented by whether or not a student was taking a Basic Skills course in Fall 2008. Note that this doesn’t consider whether the student took Basic Skills before Fall 2008, or placed such that they should take it. Another 18% of the SMCCD student population is in this Segment 3 – taking 2 or more courses, at least one of which is a pre-transfer English, Math, or ESL course.

- Segments 4 through 6 divide the remaining population students based on whether their 2+ non Basic Skills courses result in zero to 5.9 units (Segment 4), 6.0 to 11.9 units (Segment 5), and 12.0 or more units (Segment 6). Taken together, Segments 4 through 6 account for 29% of the SMCCCD student population.
- Interesting cross-college comparisons:
  - Cañada has more single course-takers (45%) than CSM (41%) or Skyline (38%).
  - Cañada also has slightly more students taking 2+ courses where at least one is pre-transfer (21%) than CSM (17%) or Skyline (17%).
  - Taken together, Skyline and CSM have significantly more students in Segments 4 through 6 (34%-Skyline, 33%-CSM) than does Cañada (21%).
- Table 2 displays the age and degree-holding status of the students in the various segments. This check of the segments against demographics reveals that the segmentation is clearly resulting in different types of students being in different segments.
  - For example, with the Segment 1 single-course takers, 65% of the students are over the age of 25 and 32% already have an AA degree or higher. Conversely, 72% of the Segment 3 multiple course takers with at least one pre-transfer course are under the age of 25.
- Tables 4 through 9 provide the top departments for enrollments for each segment by college. Reflecting the different course mixes and student populations on the three campuses, there are interesting differences between the colleges in the top-enrolled departments in each segment – especially with the Segment 1 Single Course Takers:
  - At Cañada, 20% of the single course takers in Segment 1 (Table 4) are taking ESL, with 13% in P.E., 8% in Biology, and 7% in Math and Early Childhood Education.
  - At Skyline, the highest department for single course takers was P.E. with 10% of the students, followed by Automotive (8%), Math & English (7%) and Biology (6%).
  - At CSM, the largest department for the single course-takers was Music (8%), followed by Art (7%), Math & P.E. (5%), and Accounting & Fire Sprinkler Technology (4%).
- Table 10 & 11 give the course enrollments and FTES by segment at the three colleges. Taken together with Table 1, we see some interesting trends.
  - First, while not surprising, the Segment 1 Single Course Takers represented 43% of the unique students in Fall 2008 (Table 1), but only 17% of the course enrollments (Table 10) and 19% of the FTES (Table 11).
  - Conversely, Segments 4 to 6 represent 29% of the unique students but 41% of the course enrollments and 40% of the FTES.