RESEARCH TERMS

Office of Institutional Effectiveness
Bakersfield College

HEADCOUNT AND ENROLLMENT

Academic Year
Three consecutive terms starting in summer and progressing to fall and finishing in spring.

Census
Census is the Monday closest to the point at which 20% of the class has been completed. For the primary terms, this date is typically the Monday of the fourth week of a semester based on 20% of 17.5 weeks = 3.5weeks rounded to four weeks); the number of students enrolled in a class on that date is the **enrollment** number used for reporting and apportionment. For short-term classes, the census date is calculated individually for each short term pattern.

Cohort
A selected population established for tracking purposes, usually a group of students entering together for the first time.

Enrollment
A student counted as enrolled in a course if an end-of-term grade notation is recorded on their official transcript (a, B, C, D, F, I, CR, NC, P, NP, W). If a student is enrolled in more than one class, they are counted as enrolled for each class. For example, a student enrolled in three classes will be counted three times in enrollment. For contrast, see **Headcount**.

Enrollment Count
The count of students enrolled in a section of a course. It is not to be confused with student count since students can be enrolled in more than one section. Students can also enroll multiple times in the same course.

Enrollments (End-of-Term)
A count of all students receiving a grade.

Enrollments (First Census)
An attendance accounting procedure that determines the number of actively enrolled students at a particular point in the term. See, **Census**.

Enrollment (Duplicated)
Total number of class enrollments. A student enrolled in multiple courses increases the count for each of those courses. This is a count of seats filled, not a count of persons filling them.

Full-Time Equivalent Faculty (FTEF)

Refers to the load factor associated with each section assignment. Each "FTEF" generally equals 15 units of instructional load, regardless of whether those units are taught by full- or part-time faculty. For example, two half time instructors would count as one full time equivalent faculty. FTEF can also be referred to as faculty load.

Full-Time Equivalent Student (FTES)

Approximately each 30 units of enrollment counts as one FTES, 1 FTES = 525 contact hours. FTES are derived from weekly student contact hours (WSCH) and are the workload measure most often used for apportionment purposes. FTES are subdivided into categories such as primary term and summer intersession FTES, credit and non-credit FTES, resident and non-resident FTES, and other categories. A very common term with several different meanings but even though the methodologies might be different, the purpose of the calculation is always the same; count how many students there would be if they only attended on a full-time basis. FTES was theoretically derived by considering that one student could be enrolled in courses for 3 hours per day, 5 days a week, for an academic year of 35 weeks—so basically a total of 525 hours per one FTES (3 x 5 x 35 = 525). Example: One semester-length (17.5 weeks) 3 unit course enrolling 35 students generates 105 student contact hours. This in turn is equivalent to 3.50 FTES. (35 x 3 x 17.5 ÷ 525 = 3.50)

Headcount (Unduplicated Enrollment)

A student enrollment count based on an individual student that identifies a student only once in the system – regardless of the number of units or courses in which that student is enrolled. For contrast, see **Enrollment**.

Lecture Hour Equivalent (LHE)

It is the first step in computing faculty load. It standardizes the number of lecture and lab hours taught by a faculty. 1 hour of lecture per week = 1 LHE; 1 hour of lab per week = 0.75 LHE.

Load

Represents the ratio between the faculty's hours of instruction per week ("faculty load") and the weekly hours of enrolled students in his/her sections. It is the total weekly student contact hours (WSCH) divided by the faculty member's load. This is also referred to as "productivity." In short, WSCH/FTEF = LOAD. The State productivity & efficiency measure for which funding is based is 525 WSCH/FTEF. The higher the number, the more students served by each **FTEF**, and the lower the cost to the district.

Weekly Student Contact Hours (WSCH)

The number of class hours each course is regularly scheduled to meet during a week multiplied by the number of students actively enrolled in the course. Contact Hour is the basic unit of attendance for computing FTES (full time equivalent student). Note that one student taking 15 units for 2 semesters of 17.5 weeks each would generate 525 WSCH or 1 FTES.

Weekly Student Contact Hours per Full-Time Equivalent Faculty

= Total FTES x 525 ÷ 17.5 ÷ FTEF

This calculation measures the efficiency of the student to faculty contacts. A higher result indicates more students served by fewer faculty hours; a lower result indicates fewer students served. This measure must be considered in relation to the type of class; some courses must meet other requirements that lower the student to faculty measure. For example, courses with limited enrollments due to regulations such as nursing clinical classes (limited to 12 students) will have a lower WSCH than a course taught using large group instruction.

ENROLLMENT STATUS & STUDENT CHARACTERISTICS

At-Risk Student
A student who is enrolled in basic skills course, on academic probation, or does not have an education plan.

Continuing Student
A student enrolled in the current term and was enrolled in the previous primary (fall, spring) term.

First-Time Student
A student enrolled in college for the first time after high school.

First-Time Transfer
A student enrolled at BC for the first time and who transferred from another institution of higher education.

Full-Time Student
Generally considered a student taking 12 or more units during a primary term (fall, spring). See, Full-Time Equivalent Student.

Part-Time Student
Generally a student taking less than 12 units during a primary term (fall, spring).

Returning Student
A student enrolled at BC after an absence of one or more primary (fall, spring) terms.

Special Admit
A student currently enrolled in a K-12.

Transfer Directed
A student who has successfully completed a transferable English and a transferable math course.

Transfer Prepared
A student who has earned 60+ transferable units with a 2.00+ GPA.

Transfer Ready

A student who is both **transfer directed** and **transfer prepared**.

COURSE TYPES

Basic Skills Course
Courses are defined as one or more levels below college level English and one or more levels below intermediate algebra. These courses include reading, writing, computation, learning skills, and study skills designed to ensure acquisition of those skills necessary for successful completion of associate degree, transfer and occupational courses. Courses designed to develop these skills are generally classified as pre-collegiate, basic skills, or both, and may be either credit or noncredit. Basic skills courses cannot transfer and do not count towards units for a degree.

Career & Technical Education Courses (CTE)
Courses designated by the California Community College State Chancellor's Office as occupational courses responding to economic development interests as evidenced by labor market information. These programs intend to lead primarily to employment rather than transfer. Older related terms include "vocational" or "occupational".

College Level Course
A course whose number is greater than 099.

Course
An organized pattern of instruction on a specified subject offered by a community college.

Day Class
Starts on or after 6:00am and before 4:30pm, with scheduled meetings on Monday through Friday.

Degree Applicable Courses
Units apply to the Associate Degree.

Distance Education (DE)
Instruction in which the instructor and student are separated by distance and interact through the assistance of communication technology.

Evening Class
Starts on or after 4:30pm.

Face-to-Face
Traditional classroom instruction, 51% or more of course delivery is done with the student and instructor in the same location.

Hybrid Course
A course that uses both communication technology similar to DE and face-to-face classroom instruction.

Learning Community
A learning community is two or more instructional courses that are linked and composed of a student cohort from the general student population. A learning community may also target special populations.

Learning Support Services
Learning support services provides learning and study skills resources for all students who wish to enhance their academic experience in preparing to meet their educational goals. These services include: academic computer lab, basic skills, library, tutorial center, and writing and reading center.

Special Program
A special program is composed of a limited number of students who are targeted to benefit from the services that are provided. A special program may have a learning community as a component.

Online Course
Course delivery is within guidelines of DE and 100% instruction in which the instructor and student are separated by distance and interact through the assistance of communication technology.

Section
An offering of a course.

Special Program
A special program is composed of a limited number of students who are targeted to benefit from the services that are provided. A special program may have a learning community as a component.

Transferable Courses
Coursework accepted by the CSU and/or UC systems as eligible for transfer credit.

MEASURES OF STUDENT SUCCESS

Baseline
Establishes the starting point against which progress can be measured; it is an initial measure taken before implementing changes, so that the effect of those changes can be judged. However, it is important to be aware of other things that might influence the ability to gauge success. For example, in a special program, are there pre-existing differences between the participating students and students not part of the program.

Benchmark
A benchmark provides a target or goal – it is where we want to go. For example, ask what the best colleges are doing (e.g., practices, policies, processes, programs), and establish the desired standard or goal based on those best practices. However, comparisons should be realistic in terms of such elements as number of students, student demographics, student readiness, resources, etc.

Cohort
A selected population established for tracking purposes.

Completion
A student who completes a class and receives any grade of A, B, C, D, F, CR, NC, I, P, NP. Students who drop or withdraw from a class are not considered to complete. See, **Success**.

Institutional Average
The current average level for a measure at the institution.

Institutional Set Standards
The minimum level for a measure at the institution.

Matriculation
A process which may include admissions, orientation, assessment and testing, counseling, and student follow-up to ensure that all students complete their college courses, persist to the next academic term, and achieve their educational objectives. Also known as Student Success and Support Program (SSSP).

Persistence
Students who continue at BC from the previous primary term. Term-to-term persistence is calculated for two adjacent primary terms (e.g., fall to spring). Annual persistence is from one year to the next (e.g., fall to fall).

Persistence Rate

The ratio of students who continue enrollment from term to term. Persistence can be measured from fall term to fall term (across two academic years), or fall term to spring term (within an academic year). Persistence is often confused with retention, which refers to maintaining enrollment within the term. For the calculation, the first term includes students enrolled in any course at census, regardless of the final grade received in that course. The next term count includes those same students enrolled in any course at census, regardless of the grade received. The persistence rate is the percent of students enrolled in the next term out of students enrolled in first term. For example, if 100 students are enrolled in a fall term, and 75 of those students subsequently enroll in the following spring term, the fall-to-spring persistence rate is 75%. If 60 of those students enroll in the subsequent fall term, the fall-to-fall persistence is 60%.

Retention

Student stays in the course to the end of the term and receives a grade. The numerator is the number of enrollments with a grade of A, B, C, D, F, P (Cr), NP (NC); the denominator is the number of enrollments at census (receiving any grade). The retention rate is the percent of students retained out of the total enrolled. For example, in a class of 50 students where 5 students withdraw after census, the retention rate is 90%.

Success

Student successfully completes the course (receives a grade of A, B, C, P (Cr)). The numerator is number of enrollments with a grade of A, B, C, P (Cr); the denominator is the number of enrollments at census (receiving any grade). Note that students dropped prior to census are not included in this calculation. The success rate is the percent of students successful in courses out of the total enrolled. For example, in a class of 50 students where 30 students receive a grade of A, B, C, or P, the success rate is 60%.

Transfer Directed

A student who has successfully completed a transferable English and a transferable math course.

Transfer Prepared

A student who has earned 60+ transferable units with a 2.00+ GPA.

Transfer Ready

A student who is both transfer directed and transfer prepared.

Transfer Velocity

The percentage rate at which a group of students, who all started at the same time (commonly refered to as a **cohort**), successfully transferred within an identified period of time since their start date.

Transfer Volume

The number of students who transferred in a given year, regardless of which year they started. Transfer volume can increase for a number of reasons, including growth in the base size of the college.

STATISTICAL RESEARCH TERMS

Dependent Variable

A dependent variable is what you measure in the experiment and what is affected during the experiment.

Effect Size

Effect size is the magnitude, or size, of an effect. Statistical significance (i.e., $p<0.05$) only tells us there was a difference between two groups or more based on some treatment. It fails to tell us the magnitude or the size of the difference. To measure the size of the difference, effect size needs to be calculated. There are several types of effect size. The commonly used effect size to measure mean difference between two groups is the standardized mean effect, typically reported at Cohen's d.

Independent Variable

An independent variable is the variable you have control over, what you can choose and manipulate. It is usually what you think will affect the dependent variable.

Mean

Mean is the average score. For example, on a scale of 1 to 5, out of 10 scores if 2 people choose answer #5, 2 people choose answer #4, 3 people choose answer #3, 2 people choose answer #2, and 1 person chooses answer #1, the mean is 3.2. [Mean = ((5*2)+(4*2)+(3*3)+(2*2)+(1*1))/10].

Median

A median is the score that splits all the scores exactly in half. Half of the scores are above the median, and half the scores are below the median. For example, on a scale of 1 to 5, out of 10 scores if 2 people choose answer #5, 2 people choose answer #4, 3 people choose answer #3, 2 people choose answer #2, and 1 person chooses answer #1, the median is 3. [5 5 4 4 3 MEDIAN 3 3 2 2 1].

Mode

A mode is the most commonly-appearing score. The mode identifies where most people score. For example, on a scale of 1 to 5, out of 10 scores if 2 people choose answer #5, 3 people choose answer #4, 2 people choose answer #3, 2 people choose answer #2, and 1 person chooses answer #1, the mode is 4, because more people chose that answer than any other.

Percentile

Percentile is most often used for determining the relative standing of an individual in a population or the rank position of the individual. The pth percentile is the number such that p% of the data falls below it and (100 - p)% stands above it. For example, if a score is in the 86th percentile, it is higher than 86% of the other scores.

Population
The collection of all individuals or items in a statistical study.

Qualitative Research
Qualitative research involves an in-depth understanding of human behavior and the reasons that govern human behavior. Unlike quantitative research, qualitative research relies on reasons behind various aspects of behavior. Simply put, it investigates the why and how of decision making, as compared to what, where, and when of quantitative research. Hence, the need is for smaller but focused samples rather than large random samples, which qualitative research categorizes data into patterns as the primary basis for organizing and reporting results. Unlike quantitative research, which relies exclusively on the analysis of numerical or quantifiable data, data for qualitative research comes in many mediums such as focus groups, in-depth interviews, uninterrupted observation, bulletin boards, and ethnographic participation/observation.

Quantitative Research
Quantitative research refers to the systematic empirical investigation of social phenomena via statistical, mathematical or computational techniques. The objective of quantitative research is to develop and employ mathematical models, theories and/or hypotheses pertaining to phenomena. The process of measurement is central to quantitative research because it provides the fundamental connection between empirical observation and mathematical expression of quantitative relationships. It is conclusive in its purpose as it tries to quantify the problem and understand how prevalent it is by looking for projectable results to a larger population in order to determine whether the predictive generalizations of the theory hold true. Data is collected through a variety of ways such as surveys (online, phone, paper), audits, points of purchase (purchase transactions), and click-streams.

Range
The range of a set of data is the difference between the largest and smallest values.

Research Agenda
A list of research questions or issues that the organization would like to see answered/researched, in support of the goals of the organization. A research agenda prioritizes research projects and activities based on organizational needs and goals.

Significance
Tests of significance answer these questions: is the finding reliable, and can I have confidence in the finding? A finding's reliability is established by a process of elimination; you gain confidence in the finding if you can rule out the possibility that the finding occurred by chance. A measure of significance indicates the number of times out of 100 that the finding would occur by chance; that likelihood is indicated by the significance level or p-value. For example, a p-value of .03 indicates that the finding would have occurred by chance 3 out of 100 times. To determine whether a finding is statistically significant, compare the p-value to the alpha-level, which is most often set at .05, meaning that the finding would have occurred by chance 5 out of 100

times. If the p-value is LESS THAN the alpha-level, the finding is statistically significant (p-value of .03 is less than alpha-level of .05 = statistically significant. However, the alpha-level can be set to different values, depending on circumstances; the US Census Bureau, for example, uses an alpha level of .1 in its tests of significance, meaning that the results include a 10% risk of being incorrectly identified as significant. Note that in statistics, significance does not mean important or meaningful as one might expect, making it important to consider effect-size statistics as well, in order to understand the practical importance of the difference.

Standard Deviation

Standard deviation measures (on average) how far away each number is from their mean. It is the average of the squared differences from the mean. A low standard deviation indicates that the data points tend to be very close to the mean; high standard deviation indicates that the data points are spread out over a large range of values.

T test

T test assesses whether the means of two groups are statistically different from each other. One-sample t test compares the sample mean with a benchmark data. (Independent or paired) two-sample t test compares the means of two samples. Small P-value (< 0.05) indicates that the difference is statistically significant at 5% significance level.

Weighted Average

The weighted average is an average in which each quantity that is being averaged is assigned a weight. Weightings determine the relative contribution of each quantity to the average. For example, given two English classes, the straight average score for Engl-125 is 50 and the straight average score for Engl-126 is 90. There are 10 students in Engl-125 and 90 students in Engl-126. The straight average of 50 and 90 is 70 (the average of the two class averages). However, this does not account for the difference in number of students in each class. The average student grade can be calculated by weighting the class averages by the number of students in each class (10*50+90*90)/ (10+90) =86.