

CLEP & DSST

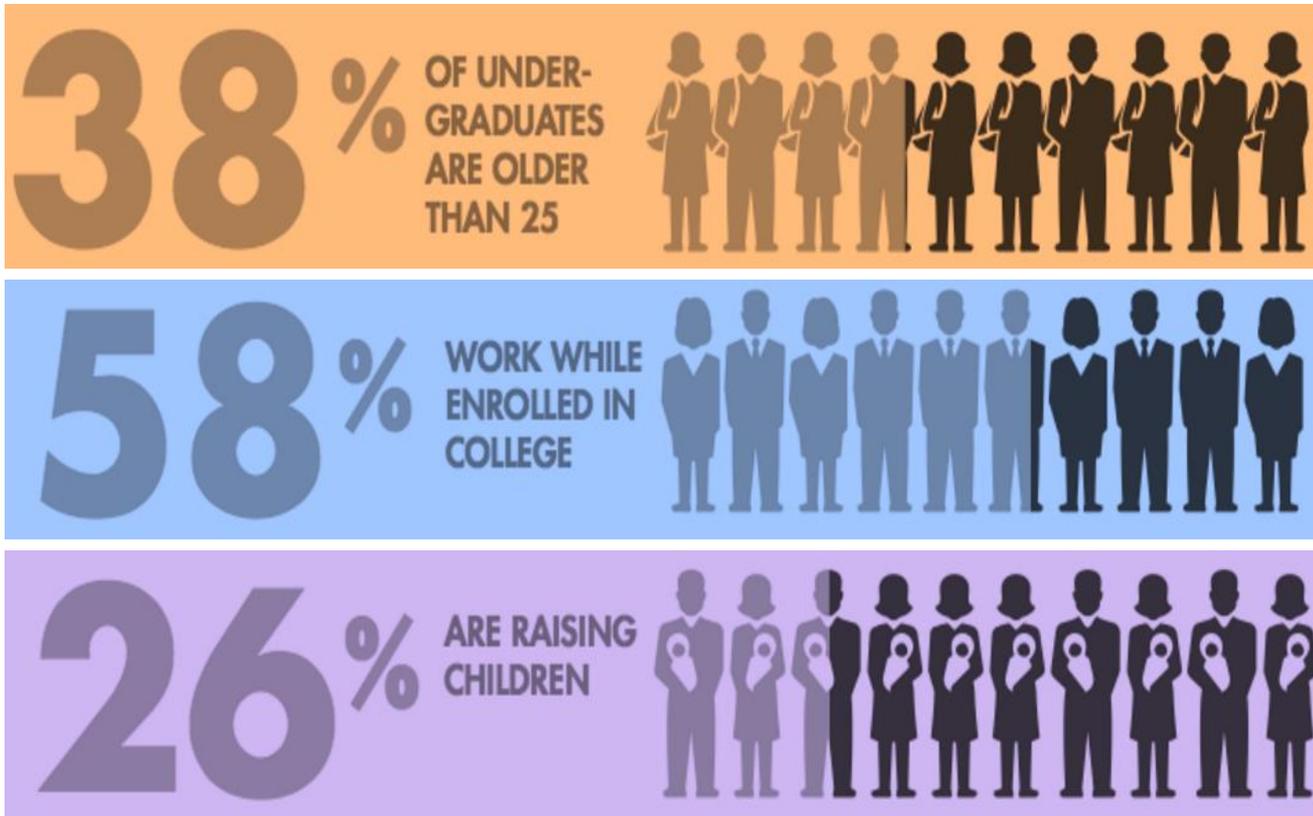
Colorado Department of Higher Education
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Agenda

- ▶ Today's Student
- ▶ CLEP and DSST Overview
- ▶ Test Development
- ▶ Scoring and Standard Setting

Today's Student

Today's students are older and juggling more than just education



Source: Lumina Foundation – *Today's Student*

Today's students are paying their own bills and struggling financially

38% of students with additional financial, work and family obligations leave school in their first year

NEARLY HALF OF FIRST-YEAR STUDENTS LIVE AT OR BELOW POVERTY, MAKING FINANCES A HUGE CONCERN.

 **47%**

FINANCIALLY INDEPENDENT;
NOT SUPPORTED BY PARENTS

 **42%**

LIVE NEAR OR BELOW
POVERTY

 **25%**

BACHELOR'S RECIPIENTS
GRADUATE WITH AT LEAST
\$24,000 IN DEBT

Source: Lumina Foundation – *Today's Student*

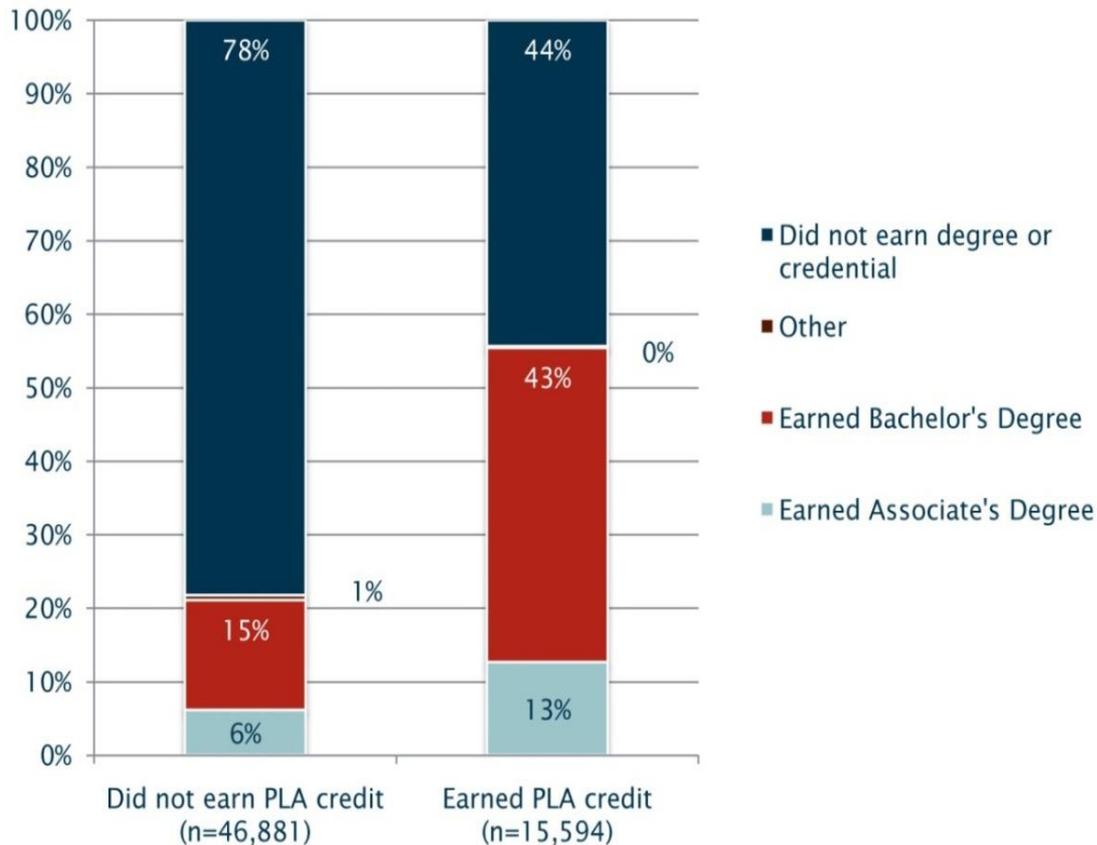
CLEP and DSST Overview

Why CLEP and DSST?

- ▶ CLEP and DSST are Prior Learning Assessment (PLA) programs that allow college students, adult learners, veterans and active duty service members to save time, save money and graduate sooner.
- ▶ Research has shown that passing a CLEP or DSST exam instills confidence and accelerates degree completion rates.
- ▶ All exams are rigorously developed, and faculty experts participate in each step of the development process.
- ▶ Institutions have granted credit for CLEP and DSST since the 1970s.



PLA effect on graduation rates



Persistence

Time to Degree Completion

Degree Attainment

Source: *Fueling the Race to Postsecondary Success*. CAEL, March 2010.

Overview of CLEP and DSST Programs

- ▶ Recommended for credit by the American Council on Education (ACE)
- ▶ Computer-based exams that provide real-time scores
- ▶ Offer a flexible environment to fulfill general education requirements
- ▶ Allow students the ability to leverage skills they already have
- ▶ Give students a broader path to degree completion
- ▶ Support active duty service members through the Fully Funded initiative

	CLEP	DSST
Exam titles offered	33	34
Cost per exam	\$80	\$80
2- and 4-year institutions administering and granting credit	2,900	1,900
Exams administered annually	177,000	55,000
Developed by	The College Board	Prometric

CLEP exam titles

History and Social Sciences

- American Government
- History of the United States I
- History of the United States II
- Human Growth and Development
- Introduction to Educational Psychology
- Principles of Macroeconomics
- Principles of Microeconomics
- Introduction Psychology
- Introductory Sociology
- Social Sciences and History
- Western Civilization I
- Western Civilization II

Business

- Information Systems
- Principles of Management
- Financial Accounting
- Introductory Business Law
- Principles of Marketing

Composition and Literature

- American Literature
- *Analyzing and Interpreting Literature*
- *College Composition*
- *College Composition Modular*
- English Literature
- Humanities

Science and Mathematics

- Calculus
- *College Algebra*
- Precalculus
- College Mathematics
- Biology
- Chemistry
- Natural Sciences

World Languages

- French Language
- German Language
- *Spanish Language*

DSST exam titles

Business

- Business Ethics and Society
- Business Mathematics
- Human Resource Management
- Introduction to Business
- Introduction to Computing
- Management Information Systems
- Money and Banking
- Organizational Behavior
- Personal Finance
- Principles of Finance
- Principle of Supervision

Humanities

- Ethics in America
- Introduction to World Religions
- Principles of Public Speaking
- Art of the Western World

Math

- Fundamentals of College Algebra
- Principles of Statistics

Physical Science

- Astronomy
- Health & Human Development
- Environment and Humanity
- Principles of Physical Science I

History and Social Sciences

- A History of the Vietnam War
- The Civil War and Reconstruction
- Criminal Justice
- Foundations of Education
- Fundamentals of Counseling
- General Anthropology
- Human/Cultural Geography
- Introduction to Law Enforcement
- Lifespan Developmental Psychology
- History of the Soviet Union
- Substance Abuse

Technology

- Fundamentals of Cybersecurity
- Technical Writing

Test Development

Faculty subject matter experts are key component of CLEP test development

- ▶ 29 standing test development committees
- ▶ All committee members are college faculty who teach relevant courses
- ▶ Faculty are drawn from
 - ▶ All regions of the U.S.
 - ▶ Four-year and two-year institutions
 - ▶ Public, private, and proprietary institutions
- ▶ Committee members usually serve for 4 years
- ▶ Participate in test design, item development and review, form development, standard setting, and other activities

CLEP test development is a rigorous, multi-step process

- ▶ Interpret results of curriculum surveys
- ▶ Define content specifications for the exam
- ▶ Write, review, and approve exam questions for pretesting
- ▶ Pretest questions in live CLEP exams
- ▶ Complete DIF analyses and other analyses of pretest data
- ▶ Review and approve operational test forms
- ▶ Conduct a standard setting to set credit-granting scores

Faculty subject matter experts are key component of DSST test development

- ▶ Multiple committees for each test development task for each test refresh, formed every 3 years – 20-25 members total for each test
- ▶ Committee members participate in test design, item development and review, form development, standard setting, and/or other activities
- ▶ All committee members are college faculty who teach relevant courses
- ▶ Faculty are drawn from
 - ▶ All regions of the U.S.
 - ▶ Four-year and two-year institutions
 - ▶ Public, private, and proprietary institutions
- ▶ Many committee members serve for multiple 3-year refresh cycles

DSST test development is a rigorous, multi-step process

- ▶ Develop curricular outline and identify widely used texts for references
- ▶ Define content specifications for the exam
- ▶ Write, edit, review, and approve exam questions
- ▶ Pretesting of items to begin with 2017 refresh cycle when reuse of well-performing items can begin; to date, ongoing analyses and monitoring of item performance; swap out of up to 10% of items if statistically problematic and any impact on candidates after the fact is addressed
- ▶ Assemble, review and approve operational test forms
- ▶ Conduct a standard setting to set credit-granting scores (% of items that must be answered correctly in order to pass with the 400 scaled score)

Scoring and Standard Setting

Reported CLEP and DSST scores are scaled scores

	CLEP	DSST
Scale score range	20–80	200—500
ACE recommended credit-granting score (C-level score)	50	400

▶ Deriving a scaled score

- ▶ Calculate “raw score” (number of questions answered correctly)
- ▶ Convert raw score to “scaled score” by statistical process

▶ Benefits of a scaled score

- ▶ Maintains consistency of scores over time by adjusting for slight differences in difficulty between test forms
- ▶ Student score not dependent on specific form or performance of other testers

Standard setting: Credit-granting scores for CLEP and DSST

- ▶ Web-based standard setting conducted for each exam
- ▶ Panel of faculty judges participate
- ▶ Two cut scores (C-level and B-level) established through standard setting process
- ▶ Process ensures exam standard remains aligned to college course standard
- ▶ If there is a change to existing standard, C-level cut score remains constant (though raw score corresponding to that score may change)

The Psychometric Side: A little technical information

Barbara S. Plake, Ph.D

Distinguished University Professor

University of Nebraska-Lincoln

Topics to be covered

- What is Standard Setting?
- What are “scaled scores” and how are they to be interpreted?
- How are scores from different test forms made comparable?

What is Standard Setting?

- It is a process by which the “Standard” (or passing score or cut score) is set; setting the standard; “standard setting”
- How is this different from what is done with classroom tests?
 - Higher stakes (score on this test has more impact than the results from one classroom test or quiz)
 - Need to use a methodology that meets psychometric standards (Standards for Educational and Psychological Testing, 2014; AERA, APA, NCME)

Methodology for Standard Setting

- Norm-referenced approach: give test to a representative sample of students and determine the average score of “C-level students” (not favored as it isn’t tied to content of the exam and is dependent on sample)
- Criterion-referenced approach: panelists are recruited and trained to provide estimates of how C-Level students would likely perform on the test questions (considered technically sound if carried out appropriately)

Why Isn't 70% correct an appropriate standard for these examinations?

- 70% (or any other percentage) is considered arbitrary
 - 70% of what??
 - If the examination has easy questions, this is a low standard
 - If the examination has hard questions, this is a very high standard

What are “scaled scores” and how are they interpreted?

- Raw (number right) scores on the examinations are hard to interpret; don't know how many questions, how hard are the questions, how students performed on the test overall
- By converting the raw scores to scale scores, interpretation is enhanced.
 - Some common scaled scores: IQ, SAT, ACT

What is the conversion from raw to scaled scores?

- Raw scores are converted using a mathematical formula so that they all have the same mean and variation (standard deviation)
- If you know the mean and standard deviation, you can interpret the relative performance of the student's score
- There is often a raw score to scaled score conversion table available (in a technical manual)

How are scores from different test forms made comparable?

- Statistical methodology called “equating” is used; there are many methods, depending on the type of test
- Basically, a link is established between the test forms
 - Sometimes there are common items across the test forms; these common items form the link between the forms

Equating of test forms

- The statistical process adjusts the overall test performance based for the performance on the common items and how the examinee did on the non-common items to establish equivalent scores across all the test forms.
- These equivalent scores are then converted to scaled scores; the scores are considered to have the same meaning regardless of which test form the examinee took

How does this information affect your task today?

- As faculty in the classes being discussed, your task is to consider if performance on the relevant CLEP or DSST test might warrant credit for your course.
- Most important considerations are how well the content of the test reflects the content of the course and the level of expectation for your students

Considerations that might not affect your tasks today

- These tests are developed using sound test development practices that reflect that state of the art.
- The basic process used to set the cut scores (standard setting) is technically sound and meets current technical standards.
- The methodology for creating scaled scores is technically appropriate.

Questions?

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