Postsecondary Data Partnership
Tableau Dashboard Analysis Quick Guide

Dashboard Tool Overview

American Institutes for Research

March 2020

Overview

The [Postsecondary Data Partnership (PDP) Tableau dashboard tool](#) reports key performance indicator (KPI) and other key data. The dashboards are intended to aid in the discovery of notable trends and insights in the data and to facilitate communicating these findings to institutional stakeholders, identifying areas for improvement, setting goals, and designing and implementing initiatives. Each dashboard allows you to look at an institution's progress toward student success through the lens of a different KPI or other important metric. The dashboards also allow you to filter and disaggregate the data across a variety of relevant student-level characteristics.

This quick guide contains general information on using the [PDP Tableau dashboard tool](#). It begins with the general purpose of the dashboards along with a menu of the available suite of dashboards. Next, it provides definitions for KPIs and other important PDP concepts. It then presents information on the student-level filters and dimensions available to refine and disaggregate the dashboards and introduces subgroup gap analysis. Finally, it highlights important considerations to keep in mind when using the dashboards.

For questions regarding technical support for the [PDP Tableau dashboard tool](#) (e.g., login issues), contact PDP customer support at PDPService@studentclearinghouse.org. You can reach the Postsecondary Partnership Research Center at 703-742-4427.

Menu of Dashboards

The following is a list of available dashboards along with a brief description of each.

- **Executive Summary**: This dashboard provides a comprehensive summary of KPI metrics and enrollment data.
- **Enrollment**: This dashboard provides 12-month enrollment counts and key characteristics for students enrolling for the first time at an institution by cohort year.
- **Credit Accumulation Rate**: This dashboard provides the proportion of students meeting select credit accumulation thresholds during their first 4 years of enrollment by cohort year.
- **Credit Completion Ratio**: This dashboard provides the proportion of credits that students earned of the credits they attempted during their first year of enrollment by cohort year.
- **Gateway Course Completion**: This dashboard provides the proportion of students who completed their required math or English gateway courses in their first year of enrollment by cohort year. It is limited to students who were required to complete math or English gateway courses.
- **Retention/Persistence**: This dashboard provides first-to-second-year retention and persistence rates by cohort year.
- **Retention/Persistence Term-to-Term:** This dashboard provides term-to-term retention and persistence rates by cohort year for the first 2 years of enrollment.
- **Outcomes**: This dashboard provides completion rates and other outcomes for students by cohort year.

- **Transfer**: This dashboard provides student rates of transfer from the cohort institution and other related outcomes, such as credentials earned pre- or post-transfer by cohort year.
- **Time to Credential/Credentials Conferred**: This dashboard provides the count of credentials awarded along with the average time to completion for credentials awarded by the institution by academic year.

Important Dashboard Concepts

The following is a list of important concepts to understand when using the dashboards.

- **Cohort year:** The year in which students first enrolled at the institution, inclusive of all terms (e.g., fall, spring, summer).
- **Cohort:** A cohort includes all undergraduate students who attempted at least one course for the first time at an institution in a given cohort year. Students in the cohort may be first-time undergraduate students or new transfer students. They may be enrolled at any program level, including credential-seeking, college remedial, or developmental; adult basic skills (English as a second language, Adult Basic Education, or Adult Secondary Education/GED); and non-credit vocational[1] students. Cohorts exclude current dual-enrollment students (i.e., students who took a course or courses at the institution while simultaneously attending high school). However, they include past dual-enrollment students meeting other inclusion criteria. Cohorts include fall-entry students who enrolled in summer work (e.g., summer bridge programs or developmental/remedial coursework) before their first term of enrollment with credential-seeking status.
- **Cohort-based measure:** These measures track students who entered an institution during a specific cohort year.
- **Non-cohort-based measure:** These measures include all students in a given academic year, regardless of when they first enrolled at an institution.
- **Enrollment**: Enrollment is cohort-based and is the count of students enrolling for the first time at the institution in a given cohort year. Enrollment is tracked in the executive summary and enrollment dashboards.

Key Performance Indicators

The dashboards track the nine KPIs defined below. The KPIs fall into two categories: early momentum metrics and outcomes over time.

Early Momentum Metrics

These KPIs are cohort-based and look at important predictors of success in a student's first year of enrollment.

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[1] Cohorts _include_ non-credit vocational (NCV) students enrolled in courses that could lead to an occupational certificate, industry certificate, or other type of credential of economic value, as well as those students who are simultaneously enrolled in credit-bearing courses. Cohorts _exclude_ NCV students enrolled only in personal enrichment courses.

- **Credit accumulation rate**: The credit accumulation rate measures the share of entering credential-seeking students who successfully completed enough credits to satisfy yearly credit thresholds in the first through the fourth year of enrollment. Thresholds are typically defined as 24 to 30 credential-bearing credit hours for full-time students and 12 to 15 credit hours for part-time students each year. The number of earned credits are summed across the enrollment year, including summer and intersession terms. This KPI is tracked in the executive summary and credit accumulation rate dashboards.
- **Credit completion rate**: The credit completion rate measures the proportion of credits attempted by entering credential-seeking students that were completed in their first year. Ratios are determined by dividing each student's total number of credits earned in their first year by the total number of credits attempted in their first year. The average of all student ratios across a cohort year produces an institution's credit completion rate for that cohort year. This KPI is tracked in the executive summary and credit completion ratio dashboards.
- **Gateway completion rate:** The gateway completion rate measures the share of entering credential-seeking students who successfully completed required math and/or English gateway courses within their first year. This metric excludes students who completed all necessary gateway course requirements before enrolling at the institution. This KPI is tracked in the executive summary and gateway course completion dashboards.

Outcomes Over Time

These KPIs examine longer term cohort-based and non-cohort-based measures of student success.

- **Retention**: First-to-second-year retention reflects the share of entering credential-seeking students who enrolled at the cohort institution in their second year or had completed a credential before the end of their second year at the cohort institution. This KPI is cohort-based and is tracked in the executive summary, retention/persistence, and retention/persistence term-to-term dashboards.
- **Persistence**: First-to-second-year persistence reflects the share of entering credential-seeking students who enrolled at an institution *other than the cohort institution* (i.e., transfer institution) in their second year or had completed a credential before the end of their second year at a transfer institution.[2] This KPI is cohort-based and is tracked in the executive summary, retention/persistence, and retention/persistence term-to-term dashboards.
- **Outcome measures**
  - **Completion**: Completion measures the share of credential-seeking students who earned a certificate or degree within a given length of time; for example, within 150% of normal time (i.e., within 6 years at 4-year institutions or within 3 years at 2-year institutions). Completion is reported overall, and it also is differentiated by whether the student earned the certificate or degree at the cohort institution or a transfer institution.

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[2] In the PDP, the persistence KPI measures enrollment at an institution other than the cohort institution only (i.e., it excludes continued enrollment at the cohort institution). This differs from the National Center for Education Statistics (NCES). NCES defines persistence as continued enrollment at any institution, including the cohort institution. See, for example, Chen, X. et al. (2019). *Persistence, retention, and attainment of 2011–12 first-time beginning postsecondary students as of spring 2017* (First Look) (NCES 2019-401). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. Retrieved from https://nces.ed.gov/pubs2019/2019401.pdf

- o **Enrolled**: Enrolled measures the share of credential-seeking students who did not earn a certificate or degree within a given length of time. Enrolled is differentiated by whether the student is not enrolled, is enrolled at the cohort institution, or is enrolled at a transfer institution. It also is differentiated by credential type sought.
- o Outcome measures are cohort-based and are tracked in the executive summary and outcomes dashboards.
- **Transfer-out**: Transfer-out reflects the share of credential-seeking students who transfer from the cohort institution to a transfer institution. This KPI is cohort-based and is tracked in the transfer dashboard.
- **Credentials conferred**: Credentials conferred reflects credentials awarded by the institution within an academic year. It is non-cohort-based and reflects the academic year in which the institution awarded the credential, not the student's cohort year. Students are included for as many credentials as they received in a given academic year. In other words, a single student who earns two credentials in a year counts as two credentials conferred in an institution's count. This KPI is tracked in the executive summary and time to credential/credentials conferred dashboards.
- **Time to credential**: Among the credentials conferred (prior bullet), the time to credential is the length of time, measured in years, between a student's initial enrollment at the institution and the credential award date. An institution's average time to credential is the average time it took each student to complete a credential. Like credentials conferred, time to credential is non-cohort-based and does not reflect individual students within an entering cohort year. Instead, it reflects credentials conferred by the institution within an academic year. Students are included in the academic year where they earned their first undergraduate credential. Where students earned multiple credentials in an academic year, they are included for their highest credential only. This KPI is tracked in the executive summary and time to credential/credentials conferred dashboards.

Student-Level Filters and Dimensions

Filtering the Dashboard Data

The dashboards allow you to filter across a wide range of student-level characteristics (Exhibit 1).[3] You can use one or more of the dropdown options to focus the entire dashboard on a specific subset of students.[4] For example, use *Age Group*[5] to limit the dashboard data to students who were "Older than 24"[6] at entry and *Enrollment Type* to further limit the dashboard data to "Transfer-in" students.

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[3] For a more detailed description of the dashboard filter options, including specifics on how to use the filters in each dashboard please refer to the Clearinghouse's Dashboard Guide and Filter Definitions document.

[4] Filter options are located along the top header of a given dashboard, with the following exceptions: *Select Credit Threshold*, *Outcomes at*, *Transferred Within*, and *Destination Institution Type*. These filters are instead located in the interior of the dashboard.

[5] Dashboard filter names are written in italics throughout the document.

[6] Filter options are written in quotations throughout the document.

Exhibit 1. Dashboard Student-Level Filters

Filter Name	Filter Options
Filters Available on All Dashboards	
Cohort	All cohort years with available data
Cohort Term	Fall, Winter, Spring, Summer
Credential Type Sought	Certificate seeking, Associate seeking, Bachelor's seeking, Credential seeking-Other, Non-credential seeking, Unknown
Enrollment Type	First-time, Transfer-In, Unknown
Attendance [1]	Full-Time, Part-Time, Unknown
Dual/Summer Enrollment	Dual and Summer Enrollment, Dual Enrollment, Summer Enrollment, Unknown
Age Group	20 and younger, >20–24, Older than 24,[2] Unknown
Race/Ethnicity	Nonresident Alien, American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, White, Hispanic, Two or more races,[3] Unknown
Gender	Female, Male, Unknown
Pell Grant Recipient [4]	No, Yes, Unknown
First Generation	First Generation, Not First Generation, Unknown
GPA Range	0.0 to 0.5 through 4.0 to 4.5 in 0.5 increments, Unknown
Math Prep	Not Ready in Math, Ready in Math, Unknown
English Prep	Not Ready in English, Ready in English, Unknown
Dashboard-Specific Filters	
Executive Summary and Time to Credential/Credentials Conferred	
Academic Year [5]	All academic years with available data
Credit Accumulation Rate	
Select Credit Thresholds	15/30[6], 12/24[7]
Academic Year [8]	1, 2, 3, 4
Gateway Course Completion	
Gateway Status	English Required Only, Math and English Required, Math Required Only
Gateway Grade	A, B, C, D, P, Not Passed
Retention/Persistence and Retention/Persistence Term-to-Term	
Retention/Persistence	Retention, Persistence, Retention/Persistence
Retention/Persistence Term-to-Term	
Select Cohort Term:	Fall, Winter, Spring, Summer
Term Name	Fall, Winter, Spring, Summer
Outcomes	
Outcomes at	Two Years, Three Years, Four Years, Six Years, Eight Years
Transfer	
Earned Credit Milestone	0, >0–6, >6–12, >12–24, >24–30, >30–60, >60–90, >90
Transferred Within	> 0–2 Years, > 2–3 Years, > 3–4 Years, > 4–6 Years, > 6–8 Years
Destination Institution Type	2-Year, 4-Year

Note: The exhibit lists all possible filter options. However, you will only observe options relevant to a given dashboard and your institution. For example, an institution that enrolls only bachelor's-seeking students will see "Bachelor's seeking" as the only option in *Credential Type Sought*.

[1] Attendance reflects a student's status (i.e., full-time or part-time) in their first term of enrollment.

[2] The "Older than 24" option includes students who have reached the age of 24.

(3) The "Two or More Races" option includes students who reported more than one value for race.

(4) Pell Grant Recipients (i.e., filter value = "Yes") received a Pell Grant in at least one term of their first academic year.

(5,8) There is an *Academic Year* filter in the executive summary, time to credential/credentials conferred, and credit accumulation rate dashboards. In the executive summary and time to credential/credentials conferred dashboards, the *Academic Year* filter allows you to select an academic year at the institution (e.g., the 2018–19 academic year). In the credit accumulation rate dashboard, the *Academic Year* filter represents the year of the cohort's enrollment (e.g., "1" represents the cohort's first year of enrollment).

(6,7) Yearly credit accumulation rate thresholds are typically defined as 24 to 30 credential-bearing credit hours for full-time students and 12 to 15 credit hours for part-time students. The *Select Credit Thresholds* filter allows you to select the higher credit accumulation rate thresholds for part-time and full-time students (i.e., 15/30) or the lower credit accumulation rate thresholds for part-time and full-time students (i.e., 12/24).

Disaggregating the Dashboard Data

The dashboards also allow you to select one dimension over which to disaggregate the dashboard data; that is, they allow you to see the data in a more granular way.[7] This option is available through the *Select Dimension* filter located in the interior of the dashboard. The dimensions from which you may select are the student-level filter options available on all dashboards (see Exhibit 1) except for "Cohort." For example, by selecting "Attendance" in *Select Dimension*, you can see the data broken out by full-time and part-time students. In addition, "Gateway Status" is an available dimension in the Gateway Course Completion dashboard, and "Earned Credit Milestone" is an available dimension in the Transfer dashboard. See the Clearinghouse's Dashboard Guide and Filter Definitions document for additional technical details.

Subgroup Gap Analysis

The dashboards that focus on early momentum metrics and outcomes over time allow you to perform subgroup gap analyses.[8] You can do so by navigating to the Subgroup Gap Analysis tab at the top of the dashboard. Subgroup gap analyses allow you to explore disparities in KPIs between disaggregated student groups. These analyses also show how the size of the gap has changed over time. See the Clearinghouse's Dashboard Guide and Filter Definitions document for additional technical details.

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[7] Due to its high-level nature, the executive summary dashboard does not allow this option.

[8] There are two notable exceptions: First, the executive summary, enrollment, and transfer dashboards do not allow for subgroup gap analyses. Second, the Outcomes dashboard limits the subgroup gap analysis to the overall graduation rate. An institution is, therefore, unable to perform a subgroup gap analysis on graduation rates from the cohort institution alone.

Key Considerations in Dashboard Use

There are important considerations to keep in mind when using the dashboards to inform your work.

Many of the KPIs highlighted in the dashboards are interrelated.

- Early momentum metrics may predict longer term student outcomes. For example, meeting credit accumulation thresholds better positions students for on-time credential completion.
- Relationships are likely to exist between early momentum metrics and outcomes over time. For instance, students with lower credit completion ratios would likely be less able to meet their credit accumulation thresholds.

Place findings from the dashboards into your institution's context, considering its mission and priorities.

- KPIs may inform findings and related decisions differently across institutions. For example, institutional policies concerning which students are required to take gateway courses might affect how an institution measures success in this area (e.g., if it is an indication of college readiness at the institution).
- Measures of time (e.g., time to credential) may have different implications for student success at 2-year and 4-year institutions or institutions with "nontraditional" student populations (e.g., older, primarily part time).

KPI data for a given institution may be limited or incomplete due to small population size, underlying data quality concerns, and/or completeness in reporting.

- Potential causes for data not appearing in a dashboard include low population size suppression or missing and/or incomplete source data.
- The KPI calculations exclude students missing values for *Credential Type Sought* and students classified as "Non-credential seeking."
- KPI metrics may exclude students missing values for *Enrollment Type*. See the Clearinghouse's PDP critical data elements for reporting document for more information.