SENATE STANDING JOINT COMMITTEE FOR GENERAL EDUCATION ASSESSMENT

Update on General Education Assessment 2022–2023

(Informational)

Introduction

Penn State faculty have consistently reaffirmed their commitment to General Education as a core component of Penn State undergraduate education. With that commitment comes a shared responsibility to assess the effectiveness of the General Education curriculum. Administrative offices support this work and faculty participate by providing data from their courses, reviewing findings, and using these data to make continuous curricular improvements. In the years since the establishment of the Senate's Standing Joint Committee for General Education Assessment, we have regularly shared the results of this work with the Senate to build understanding of both the strengths and challenges in our General Education curriculum. This report serves as the annual update.

Revised General Education Assessment Plan Timeline

In 2022–2023, the Committee reviewed the University's General Education assessment progress against the timeline presented in the January 2020 Curricular Affairs Report. We identified areas in which the University has not met these targets, largely due to the pause in assessment reporting implemented by the University while we adapted to the many changes brought by the COVID-19 pandemic. We are also challenged to develop scalable methods by which to assess seven Learning Objectives, five Knowledge Domains, and two Foundations in a curriculum with no single required course. As a result, the Committee has revised the timeline and increased the number of Learning Objectives, Foundations, and Knowledge Domains assessed each year to enable the University to complete a full General Education assessment cycle in 2028–2029 (Table 1). The schedule includes the assessment of at least one Learning Objective per year, which prolongs the total number of years to complete a full cycle by extending the time it will take to cover the Foundations and Knowledge Domains. The purpose of doing so is to maintain the focus on and momentum behind assessing the Learning Objectives.

Another component of General Education assessment has been the ongoing development and analyses of several core datasets. These analyses have improved our understanding of student enrollments in General Education, the relationship between General Education and undergraduate majors, student perceptions of General Education, student performance in General Education courses, and the intersections between General Education courses and Learning Objectives. The revised timeline now includes a planned schedule for updating these datasets to track trends over time as the General Education requirements and course options evolve (Table 2).

Table 1: Updated ten-year learning assessment timeline

Year	Category	Objective assessed
2018–2019	Learning Objective	Integrative Thinking
2019–2021	--Pandemic Pause--	--Pandemic Pause--
2021–2022	Learning Objective	Effective Communication
2022–2023	Learning Objective	Creative Thinking
	Learning Objective	Global Learning
2023–2024	Learning Objective	Critical and Analytical Thinking
	Learning Objective	Social Responsibility and Ethical Reasoning
2024–2025	Learning Objective	Integrative Thinking
	Domain	GN
2025–2026	Domain	GA
	Domain	GS
	Learning Objective	Effective Communication
2026–2027	Domain	GHW
	Domain	GH
	Learning Objective	Creative Thinking
2027–2028	Foundation	GWS
	Foundation	GQ
	Learning Objective	Global Learning
2028–2029	Learning Objective	Key Literacies
	Learning Objective	Critical and Analytical Thinking

Table 2: Core General Education data set timeline

Last completed	Category	Next scheduled	Periodicity moving forward
2017–2018	Update General Education course enrollment dataset and analysis	2022–2023	Every 4 years
2022–2023	Map the relationships between General Education and undergraduate majors. Explore the level of General Education prescriptiveness in the majors.	2032–2033	Every 10 years
2018–2019	Student survey (dates subject to revision based on University survey calendar)	2024–2025	Every 5 years
2021–2022	Direct assessment of student performance on a subset of General Education Learning Objectives and/or foundation/Domain criteria	In progress for this AY	Annually; see Table 1
2019–2020	Map the General Education courses to General Education Learning Objectives	2029–2030	Every 10 years
NA	*Possible alumni survey (need to complete a feasibility and cost-benefit analysis before moving forward with this)*	TBD	Every 5-10 years

Key Literacies Learning Objective

The General Education Learning Objective, Key Literacies, is defined as:

> The ability to identify, interpret, create, communicate, and compute using materials in a variety of media and contexts. Literacy acquired in multiple areas, such as textual, quantitative, information/technology, health, intercultural, historical, aesthetic, linguistic (world languages), and scientific, enables individuals to achieve their goals, to develop their knowledge and potential, to lead healthy and productive lives, and to participate fully in their community and wider society.

Among the General Education Learning Objectives, Key Literacies stands out because it is not a unique way of thinking or studying the world but encompasses the breadth of content available for students to explore within our institution. The committee deconstructed this Learning Objective to determine how to best assess it. The result is a map of the intersectionality between the example areas in the Key Literacies definition and the Senate-approved learning criteria for the General Education Domains and Foundations (Table 3). This map reveals that the multifaceted components of Key Literacies are largely demonstrated across the Foundations and Knowledge Domains. As a result, the committee plans to assess Key Literacies via a meta-analysis that brings together the results of Domain and Foundation assessments. This analysis also highlights that the Key Literacies definition includes literacies that do not map to specific requirements in the General Education program and, therefore, in the future, the Faculty Senate may wish to revisit the specific language and wording of this learning objective.

Table 3: Key Literacies mapped to the Foundations and Knowledge Domains.

Example key literacies	GWS	GQ	GA	GH	GHW	GN	GS
Textual	Yes	--	--	Yes	--	--	--
Quantitative	--	Yes	--	--	--	Yes	--
Information/technology	Yes	--	--	--	--	Yes	Yes
Health	--	--	--	--	Yes	Yes	--
Intercultural	--	--	Yes	Yes	--	--	Yes
Historical	--	--	Yes	Yes	--	--	Yes
Aesthetic	--	--	Yes	--	--	--	--
Linguistic (World Lang.)	--	--	--	--	--	--	--
Scientific	--	--	--	--	--	Yes	--

Communication about General Education Assessment

We recognize that clear, consistent information about General Education assessment will benefit our efforts and are working to improve communication in several ways. First, so that faculty can see the results of prior assessment studies, assessment reports are available on the OPAIR website and shared via email with any faculty who were invited to participate. For the Effective Communication study (more information in the section below) this email communication was sent in late January 2023. Additionally, we are working to populate the OPAIR website with a

complete set of rubrics for the General Education learning objectives. Rubrics for the Knowledge Domains and Foundations will be posted as they are created and vetted.

A long-standing goal for the General Education program has been to increase awareness about the constituent courses and how they contribute to General Education as a program. We constantly have new faculty and faculty teaching courses that are new to them, therefore the faculty may not always be particularly familiar with a course. Starting in fall 2022, in the week before the start of the semester, faculty teaching General Education courses are now sent an email, informing them of the specific General Education requirements (Domain, Foundation, Integrative Studies) and Learning Objectives that their course(s) is intended to address. No action is specifically requested of faculty other than encouraging them to keep these objectives in mind. This email concludes with information about availability of General Education microgrants. We consider this the first part of a soft informational campaign, and it is hoped that this recognition of the General Education Learning Objectives will help prepare faculty for when a course they teach is part of a General Education Assessment study. Over the first two semesters, the campaign has been a success. The open rate of these emails for both the Fall 2022 and Spring 2023 semesters has been over 71% and all correspondence initiated by these emails has been positive. Typically, there are some questions that can be answered by the course curriculum proposal (available via the Curriculum Archive), but most are an appreciative thank you or questions about the microgrant program. Building off this effort, the Office for General Education is exploring other ways the General Education characteristics for a course can be more obviously displayed for both students and faculty in tools such as Canvas.

Effective Communication

Penn State assessed Effective Communication in 2021–2022 using a rubric developed and applied by faculty. During the fall and spring, 1,527 unique instructors across Penn State taught 4,950 course sections designated as meeting the Effective Communication objective; 14% of invited instructors contributed to the study, providing data from 5% of all course sections. Instructors reported the number of students considered to be developing, satisfactory, and exemplary for each of the three Effective Communication criteria: 1) substance, 2) delivery, and 3) adaptation to audience and community building. Overall, students scored similarly across all three criteria with 86% scoring "satisfactory" or "exemplary" on substance, 84% on delivery, and 83% on adaptation to audience and community building. Responses were grouped by General Education Domain (e.g., quantification, arts) to look for overall patterns but there were no significant differences by Domain. Several limitations have been identified in the 2021–2022 study that have informed the approach to the 2022–2023 study of the Creative Thinking and Global Learning Objectives. For more information, see the Effective Communication Assessment report.

Several questions emerged from this study. What is Penn State's performance target for General Education learning? In other words, what is an acceptable ratio of developing, satisfactory, and exemplary scores? A related question is whether all General Education courses, regardless of course level, should be expected to achieve the same level of student performance. These questions lead to more fundamental questions about the nature of Penn State's General Education curriculum, how we support General Education instruction, and how we assess it.

Prescription of General Education by Majors

The March 2022 Senate report from this committee presented data demonstrating the remarkable similarity in the courses that represented 70% of student enrollment in General Education between AY 2016–2017 and AY 2019–2020 despite significant changes to General Education (i.e., recertification of General Education courses, introduction of the Integrative Studies requirement, and establishment of a C or better requirement for Foundation courses). It was suggested that the level of General Education course double counting between General Education and major requirements (where majors designate the courses students take to fill General Education requirements), limits students' exploration and prohibits any significant shift in course taking patterns.

Given faculty interest in supporting students' ability to explore the breadth of the General Education curriculum, the report recommended further study of the ways that majors prescribe or otherwise restrict student choice. Additionally, in the discussion of a recent report from Curricular Affairs updating the General Education requirements, there was revived conversation about how the General Education statement and Breadth requirement policies (specifically 143-00 and 143-10), work together toward achieving the intended goals for students. While a major degree program can require any course – General Education or otherwise – to meet its program learning objectives, the General Education statement details which can double count toward both the General Education requirements and the program requirements. On the surface it can seem that double counting courses for multiple requirements is beneficial for students, especially if by double counting it created opportunity for students to explore, but frequently that is not the case. Double counting can also create scenarios in which the overall number of required credits is very close to 120 and does not account for credit that may be earned during major exploration or via transfer credit. For example, by double-counting all the General Social Science credits within a program, students with transfer, Advanced Placement, or International Baccalaureate credit in this Knowledge Domain, end up with unused credits and credit totals substantially exceeding the required number. We also create competing priorities and send mixed messages to students when programs prescribe courses in a General Education curriculum designed to allow and encourage exploration outside of a student's major. Is it critical that we find the right balance.

In Fall 2022, the Office for General Education collaborated with the Office of Planning, Assessment, and Institutional Research to review the level of General Education double counting in majors. Here we summarize some of the findings. There are 263 baccalaureate programs (plans): 179 programs with options (sub-plans) and 84 without. Counting each option as unique – because each can have a unique General Education statement – we reviewed a total of 454 options and programs.

The following graphs show the number of programs/options with a given range of credits double counted between General Education and major requirements. Where programs have a range of allowable credits, the data represented is the maximum. The analysis focused on two course groups. The first is Foundations: Quantification (GQ) and Writing/Speaking (GWS) (Figure 1). The second is the Knowledge Domains: Arts (GA), Humanities (GH), Health and Wellness (GHW), Natural Science (GN), and Social Sciences (GS). Figure 2 shows the number of programs and options that double-count Domain courses in aggregate and Table 4 breaks this down by Domain. Some obvious and expected data points are visible. For example, many programs – most often in the STEM fields – fully double count GQ and GN. Also, some programs, particularly those that must meet criteria set forth by the Pennsylvania Department of

Education, fully or nearly fully double count General Education requirements. In general, GA courses are less commonly doubled counted than GN and GS.
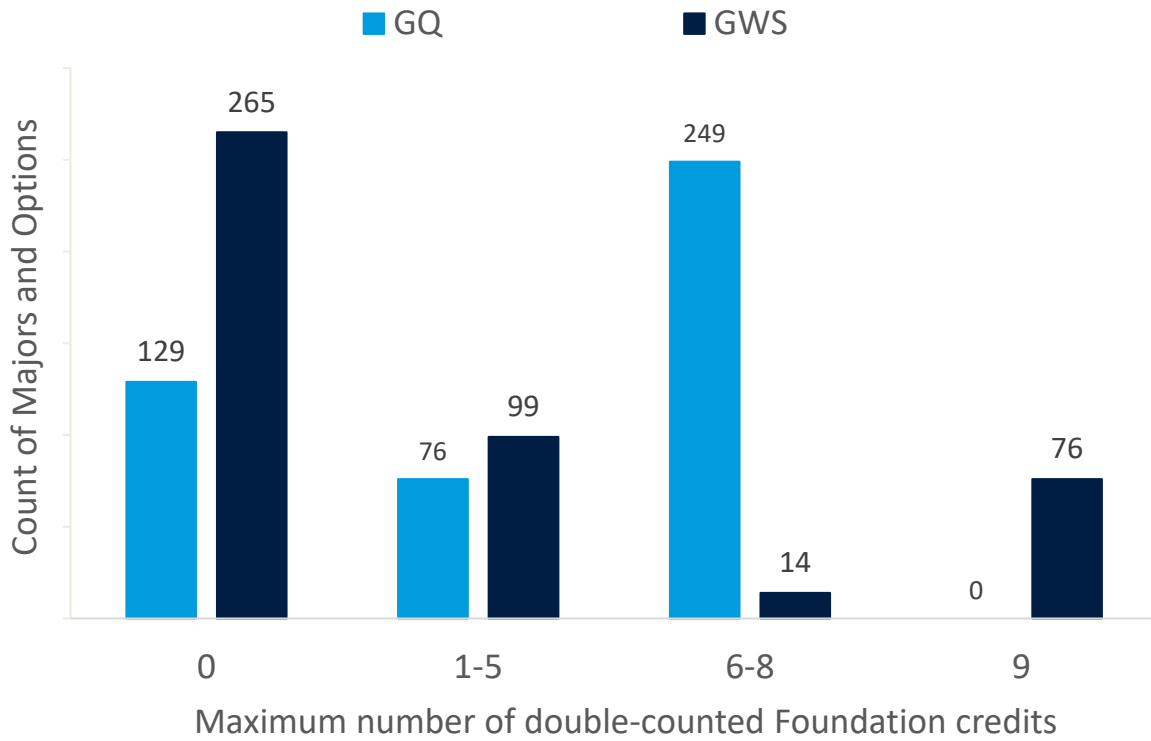
GQ **GWS**

Figure 1: Number of programs with double-counted General Education credits within the Foundations requirements (9-credit max for GWS and 6-credit max for GQ).
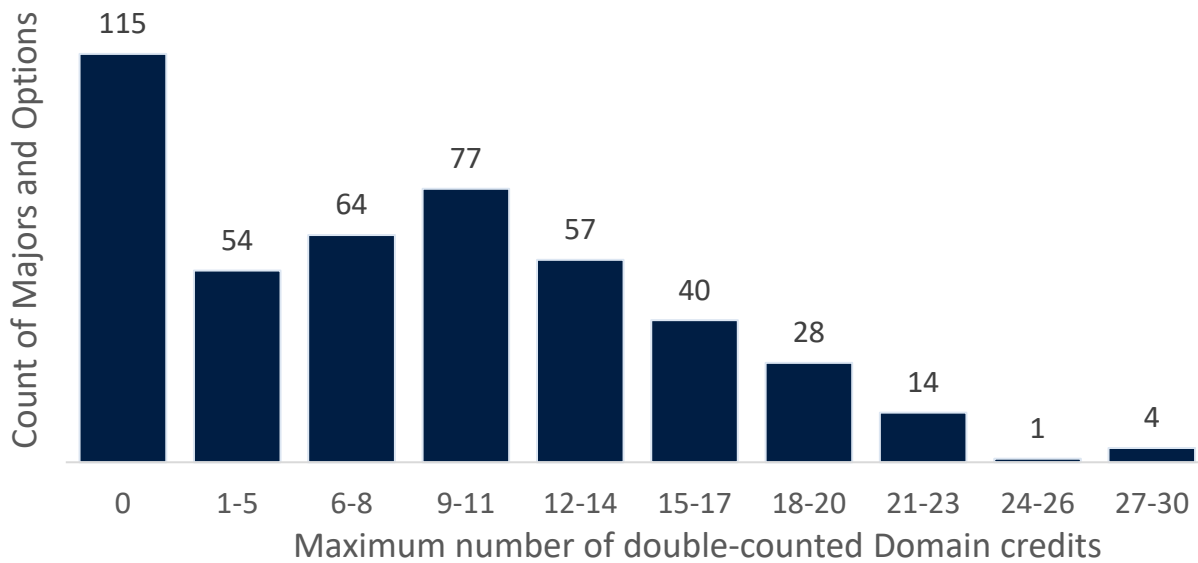
Figure 2: Number of programs with double-counted General Education credits within the Knowledge Domain requirement (30-credit max).

Table 4. Number of programs with double-counted General Education credits within the Knowledge Domain requirements broken out by Domain.

Knowledge Domain	0 Credits	1-5 Credits	6-8 credits	9 credits
Arts (GA)	404	20	30	0
Humanities (GH)	374	44	36	0
Health & Wellness (GHW)	429	25	0	0
Natural Science (GN)	261	9	10	174
Social Science (GS)	208	109	137	0

One purpose of the Knowledge Domains is student exploration outside of the major. On the surface it appears that double counting Knowledge Domain credits is somewhat limited as over 65% of programs and options double count 11 or fewer credits in this area. But in terms of student impact, we consider the number of students enrolled by the number of double-counted credits in their program or option (Figure 3). Nearly 50% of students are in programs with 13 or more double-counted credits; our larger enrollment programs tend to have a larger fraction of their General Education requirements double counting.
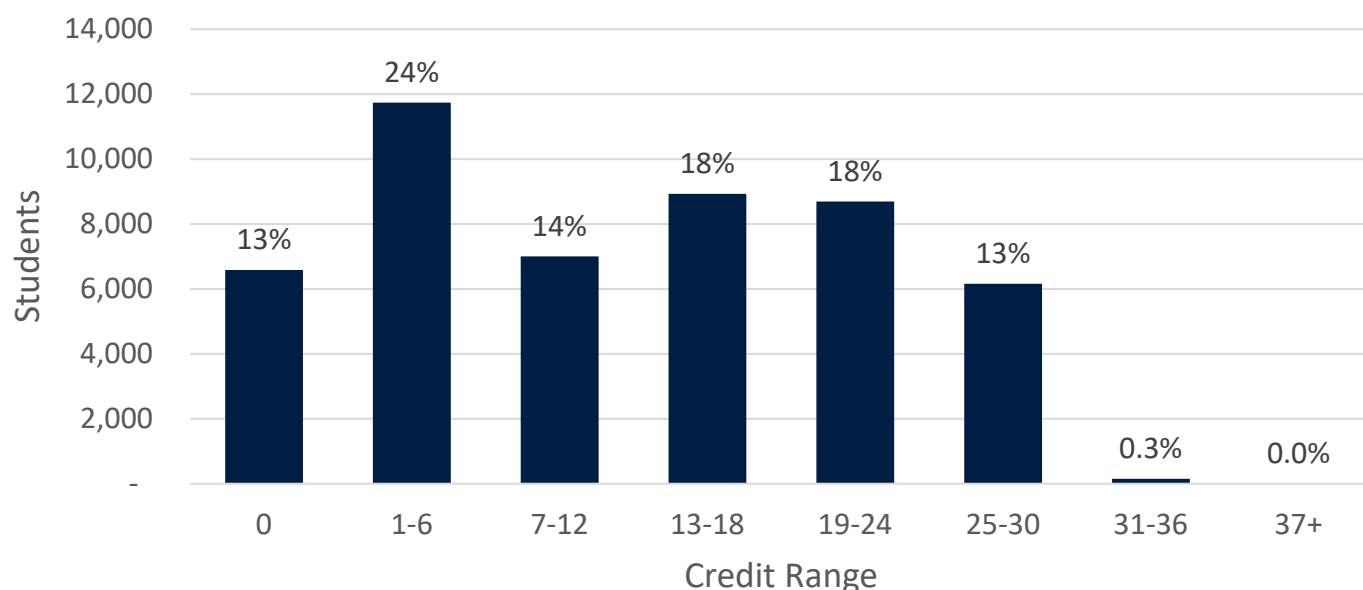

Figure 3: Student enrollment (count and percentage) by double-counted General Education credits in their program.

While faculty have repeatedly confirmed their commitment to incorporating exploration and choice into the General Education curriculum, double counting of courses is viewed by many as a way to minimize total credits and time to degree and thereby contain the costs borne by students and their families. However, this is not the case if double counting credits allows for additional major requirements to be added to a degree program. As the faculty thinks about curriculum and how we can create student-centered curricula to increase student success, this type of information is important to consider: when prescribed courses double count, this can unintentionally limit student exploration, creating challenges for intra-University mobility and transfer students. It is important to find ways we can help students experience the intention and full range of General Education while also promoting curricular design that supports mobility between locations and programs and does not increase time to degree.

There are no specific recommendations to be made from this data at this time, but it should be monitored over time.

Impact of C or Better Requirement in Foundation Courses

As part of the broader changes in General Education (see Final Recommendations of the General Education Taskforce), the University implemented a C or better grade requirement for the General Education Foundation courses (Writing/Speaking and Quantification). The policy went into effect for students matriculating in summer 2018 and after. In 2022, the Office for General Education explored the impact of this requirement change with respect to late-drop rates and D grades. When this policy was being considered there was some concern that it might result in an unwarranted increase in C grades given to D-level work. As demonstrated below, there was no meaningful change in C or better grades and only small differences (described below) in late-drop, D, F, and withdrawal rates in both GWS and GQ courses. Additionally, there was no notable increase in C grades for either Foundation area.

GWS and GQ courses were selected and compared across three semesters before the C or better change (Fall 2016, Spring 2017, and Fall 2017) and three semesters after (Fall 2018, Spring 2019, and Fall 2019). The study excluded the Spring 2020 semester due to the conflating challenges presented by the COVID-19 pandemic. All course offerings of each Foundation area, across all undergraduate units, were included.

The pre-change study population was made up of 67,424 GWS grades and the post-change of 65,684 grades. As seen in Figure 4, the rate of unsuccessful GWS outcomes after the policy change was implemented was relatively unchanged. The rate of C or better grades in GWS courses changed by less than 0.5%, from 89.1% to 89.4% after the new requirement. For D and F rates, there was a 0.3% percentage point decrease in both grades. In the case of late drop and withdrawal rates, there were slight increases in both grades, 0.2% percentage point for late drop and 0.1 percentage point for withdrawal rate, respectively. Late drop and withdrawal require student action and we hypothesize that the new policy resulted in these actions being taken slightly more frequently by students who might otherwise have received a D or F grade.
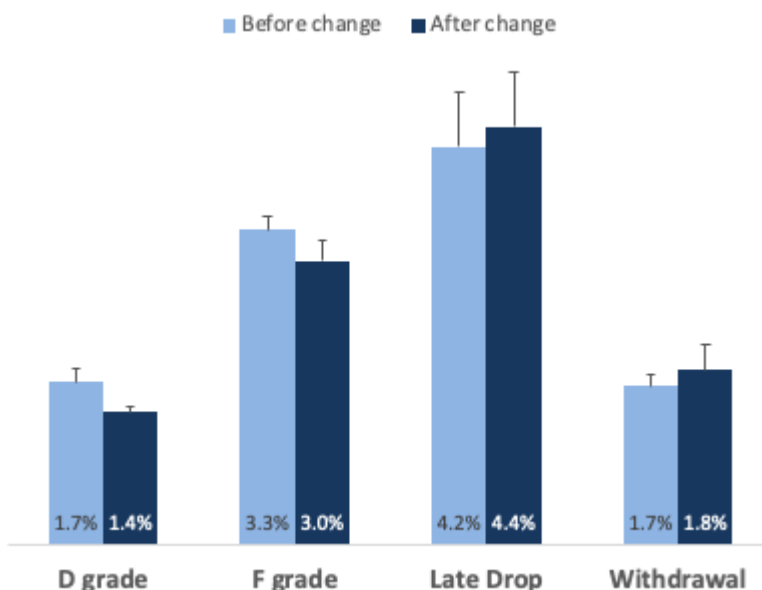
Figure 4: Data from GWS courses comparing unsuccessful (D and F grades, late drop, and withdrawal) outcomes.

The pre-change study population included GQ grades for 92,674 students and the post-change population for 84,357 students. As seen in Figure 5, **the changes in GQ outcomes after the policy change was implemented were trivial (less than ½ of a percentage point), with lower D and F rates and higher late drop (LD) and withdrawal (W) rates.** Students' grades in C or better increased by 0.3 percentage points (from 70.4% to 70.7%) after the new requirement. There were slight decreases in students' grades for D and F rates, 0.2 percentage points for D and 0.3 percentage points for F, respectively. There was a slight increase, 0.2 percentage points, for both late-drop (LD) and W rates. Again, there was a small increase in LD and W rates, both of which require student action.
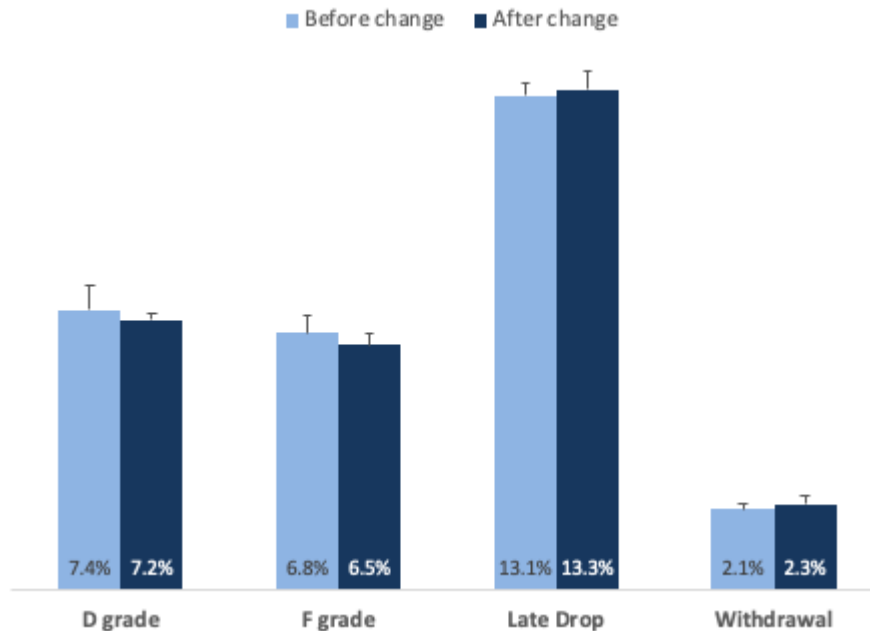
Figure 5: Data from GQ courses comparing unsuccessful (D and F grades, late drop, and withdrawal) outcomes.

The data suggest there wasn't a meaningful change in the C or better results for students after the policy change to the GQ and GWS requirements. All variations between the comparison groups are the same or less than the variation between semesters within a comparison group.

Summary

While the impact of the General Education curriculum on student outcomes is difficult to measure, Penn State faculty believe in its importance and are committed to continuing to use data to fuel ongoing improvement of the curriculum. Over the past year, the Standing Joint Committee for General Education Assessment has worked closely with the Office for General Education and the Office of Planning, Assessment, and Institutional Research to document student learning and explore the impact of recently enacted General Education policy changes. In 2022, the committee established a revised timeline for the assessment of the General Education Learning Objectives, Foundations, and Domains such that a full General Education assessment cycle will be completed in 2028–2029. Further, the Committee established a schedule for the regular update of foundational General Education data sets to facilitate the monitoring of important trends over time.

As part of that effort, several major studies were completed in the past year.

- The assessment of the Effective Communication Learning Objective revealed that most students were demonstrating "satisfactory" or "exemplary" performance on all components of this Learning Objective.

- A review of General Education prescription by majors and options revealed that while a relatively small number of programs prescribe or double count large numbers of General Education credits, the impact is disproportionate because nearly 50% of Penn State's students are enrolled in these programs.

- Exploration of the impact of the 2018 policy change that set a C or better requirement for Foundation courses revealed negligible changes in D and F grades, late drops, and withdrawals.

- We continue to increase and improve communication about General Education assessment and increase dissemination of the results of these studies.

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