

TITANIUM ENGAGEMENT

Enhancing the Visibility and Accessibility of Learning Management System (LMS) Data to Support Learning

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ABSTRACT

Learning Management System (LMS) data provide an alternative way to monitor student progress. Using California State University, Fullerton's LMS, TITANIum, we developed TITANIum Engagement, an easily accessible, real time visualization tool that monitors student LMS usage patterns. It provides timely information that identifies students who exhibit unhealthy learning behaviors and are in need of intervention.

WHAT IS TITANIUM ENGAGEMENT?

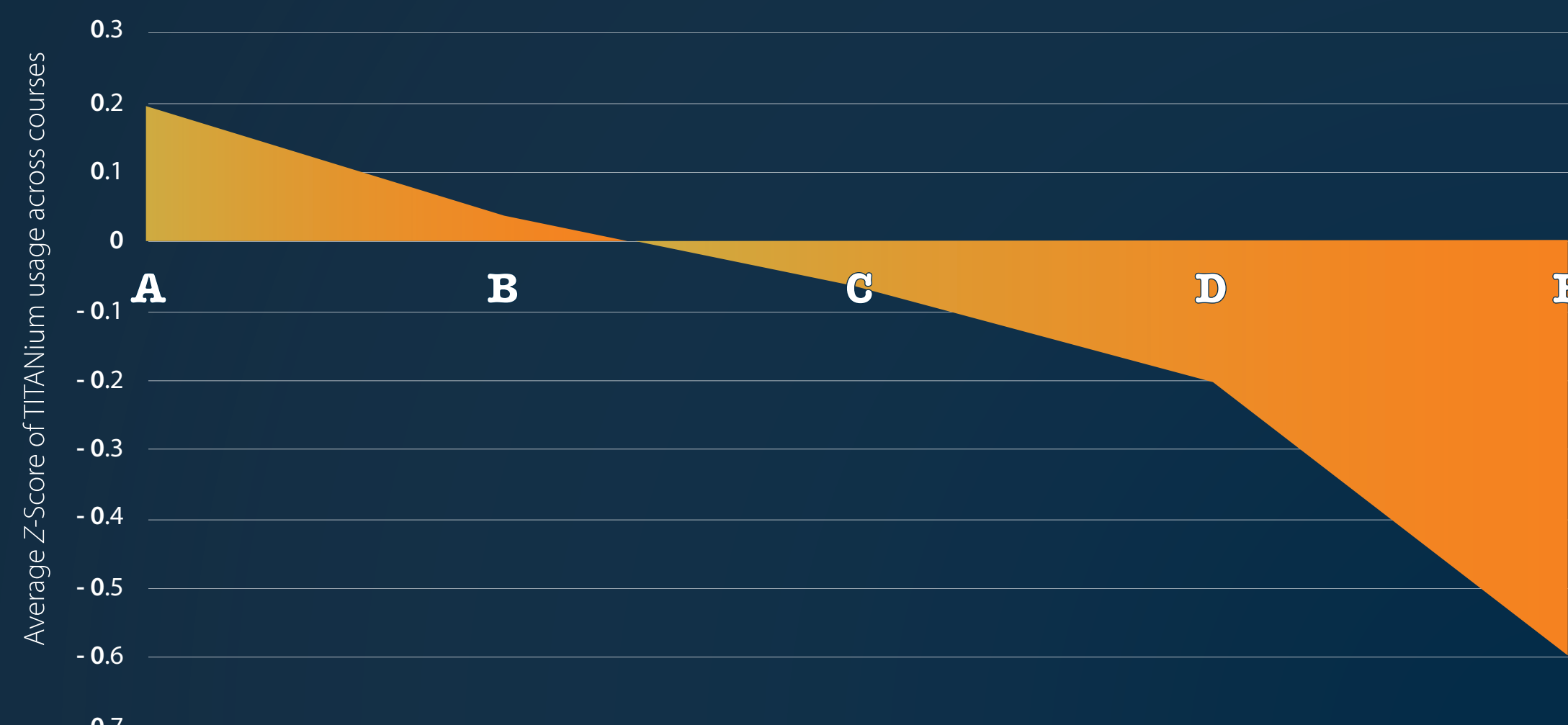
TITANIum Engagement monitors student usage patterns as an indication of their engagement with learning. This provides faculty with easily accessible, real time updates of how each student in the course is using the course site. The instructor can also view a longitudinal pattern of student Titanium Engagement to spot behavior changes. Interventions deemed appropriate by the instructor can then be initiated to help bring the students back on track.

IMPLEMENTATION

CWID	Name	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 15	Week 16	Total Score	Grade	Low Engagement	No Engagement	High Engagement
0000000001	Student1 Name	●	▼	■	▲	◆	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	C	▼	▲	■
0000000002	Student2 Name	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	A	■	■	■
0000000003	Student3 Name	◆	◆	◆	◆	●	■	■	■	■	■	■	■	■	■	■	■	B+	■	■	■
0000000004	Student4 Name	●	▼	●	●	●	▲	●	●	▲	▲	▲	▲	▲	▲	▲	▲	F	▼	▲	■

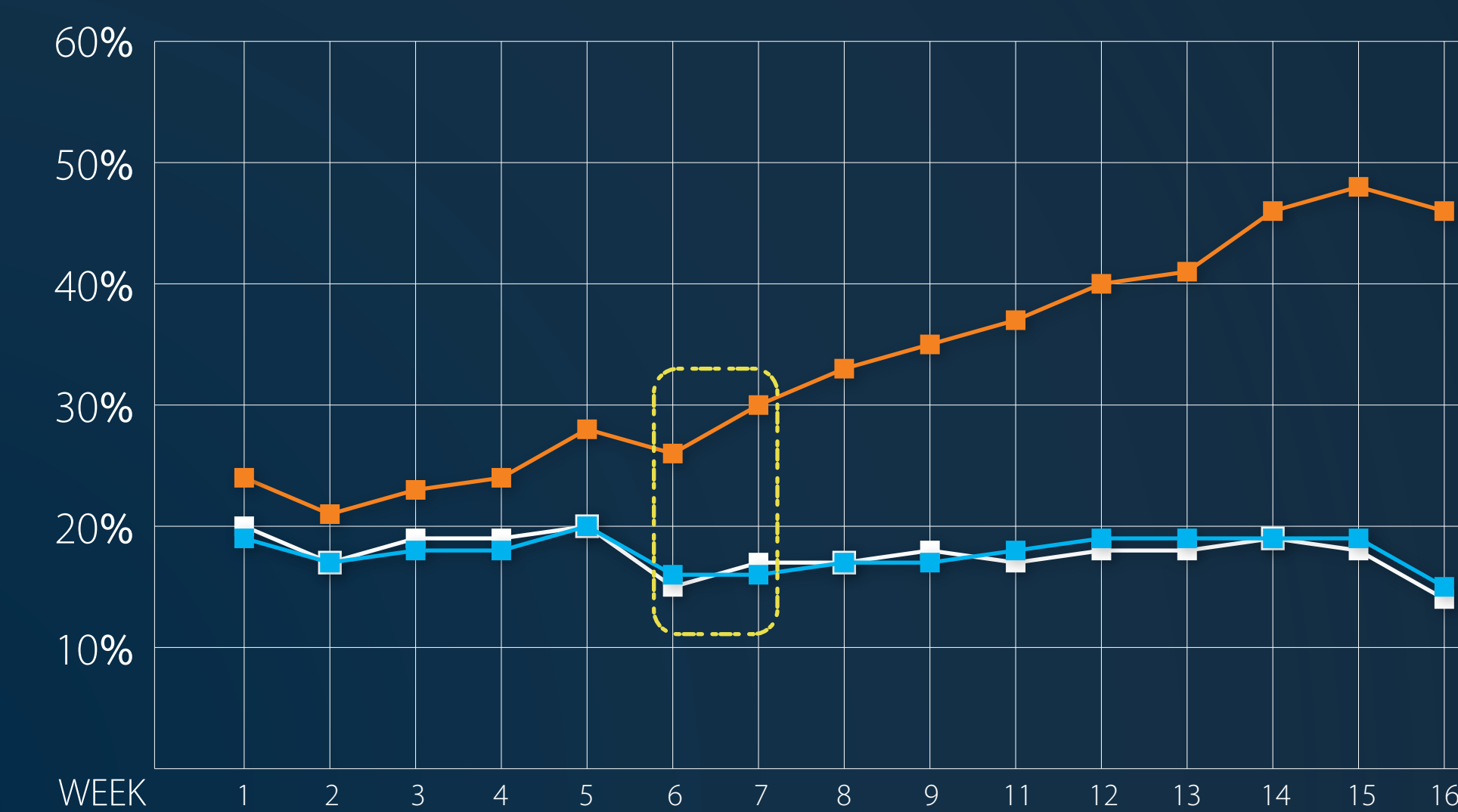
TITANIum Engagement color-codes the quantity of student usage. Faculty/Staff users can also download the data in Excel.

SPRING 2017 LETTER GRADES & AVERAGE TITANIUM USAGE

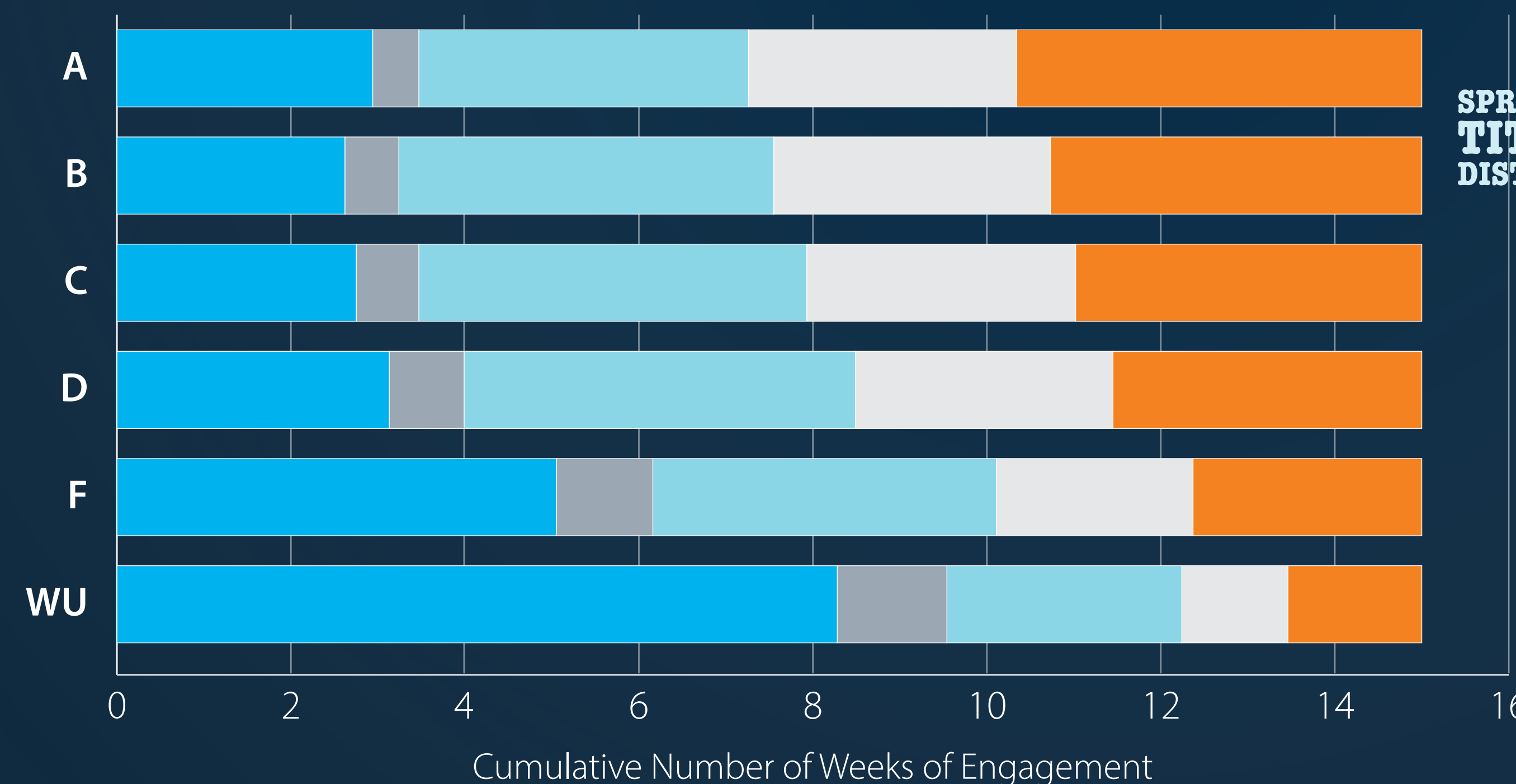


Significant correlation between TITANIum use and final course grade. The effect seems particularly strong for students who received Ds and Fs.

SPRING 2017 STUDENT DISENGAGEMENT BY WEEK



The distinction point between students who succeeded and who failed started around weeks 6,7.



SPRING 2017 TITANIUM ENGAGEMENT ACTIVITY DISTRIBUTION OF AVERAGE TITANIUM ACTIVITY

- No Activity
- Low Activity
- Somewhat Low Activity
- Somewhat High Activity
- High Activity

TITANIum Engagement helps faculty and advisors identify those students who may need an early intervention. Our goal with this tool is to promote course completion and student success.

TIMELINE



FACTS & FIGURES¹

- 1,983 Faculty TITANIum users/semester
- 42,007 Student users/semester
- 5,368 Courses displayed on TITANIum/semester

FEEDBACK²

Useful as an indicator of participation

"I would use this as an adjunct to participation. If I saw someone who was doing really well on their score with the clicker but their TITANIum is lower, then I would assume they were using TITANIum quickly in the beginning."

Better as a student feedback tool

"I like the option of being able to show students in office hours [their engagement scores] but not letting students know it's based on clicks."

Faculty want more training

Based on a conversation between faculty and IT personnel, it was brought to our attention that faculty do not know the full capabilities of TITANIum Engagement, such as exporting to Excel. Faculty were interested in attending a training session to learn more.

NEXT STEPS

- Enhance student/advisor view
- Promote TITANIum Engagement
- Refine algorithm

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1. Fall 2016/Spring 2017 Academic Year
2. Faculty focus group, Summer 2017