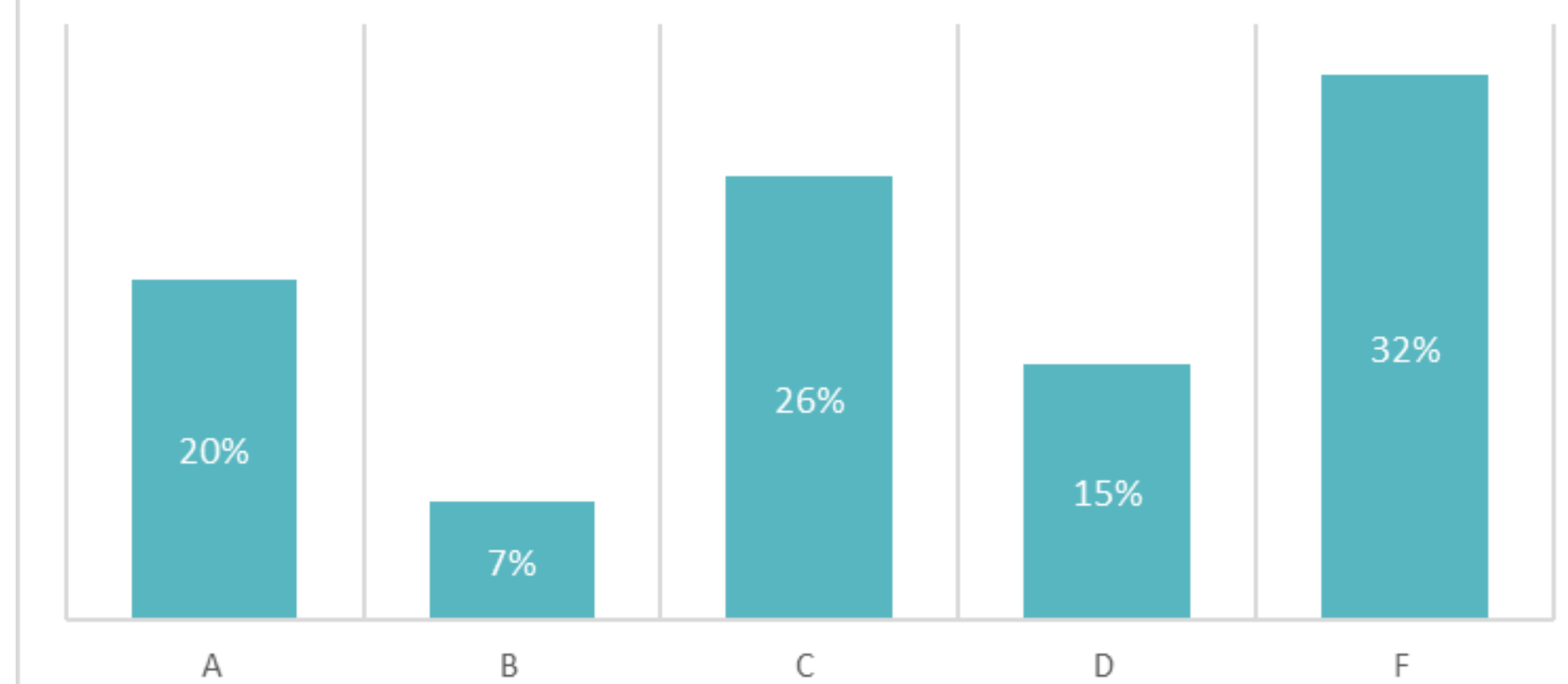


REDESIGN OF BIOLOGY 101

- General Biology I was seeing an average of 32% F final grades
- Changes were previously made to include adaptive online homework systems, and the grade distribution was not moving quickly.
- A decision was made to redesign this course as an OER based course for the Fall 2018 semester. This conversion included reworking lecture and lab materials.
- The original course included the McGraw-Hill text "Biology" by Raven, access to McGraw-Hill's online *Connect* platform and the Morton laboratory manual "Exploring Biology in the Laboratory Core Concepts" by Pendarvis and Crawley.

**BIOLOGY 101 FINAL GRADES:
3 SEMESTER AVERAGE**



TEACHING IMPACT

- 100% access to lecture and lab materials on day one
- Easier to reference digital material during class
- Accessory items increased engagement with content

PLAN IMPLEMENTATION INFORMATION

- 22 students: one OER section of BIOLOGY 101 lecture, two sections of lab.
- One faculty member
- Conversion included:
 - OpenStax "Biology" text (\$0)
 - Tutor Beta online homework platform by OpenStax (\$10)
 - Many outside resources, topic specific, such as HHMI.
 - No suitable lab manual replacement was found. Labs were created in house. (\$0)

LESSONS LEARNED

- Many students want access to a print copy of their text.
- Modeling use of the resources during lecture increased student comfort with the resources.
- Finding an acceptable OER lab manual was difficult. Creating a replacement was very time consuming.

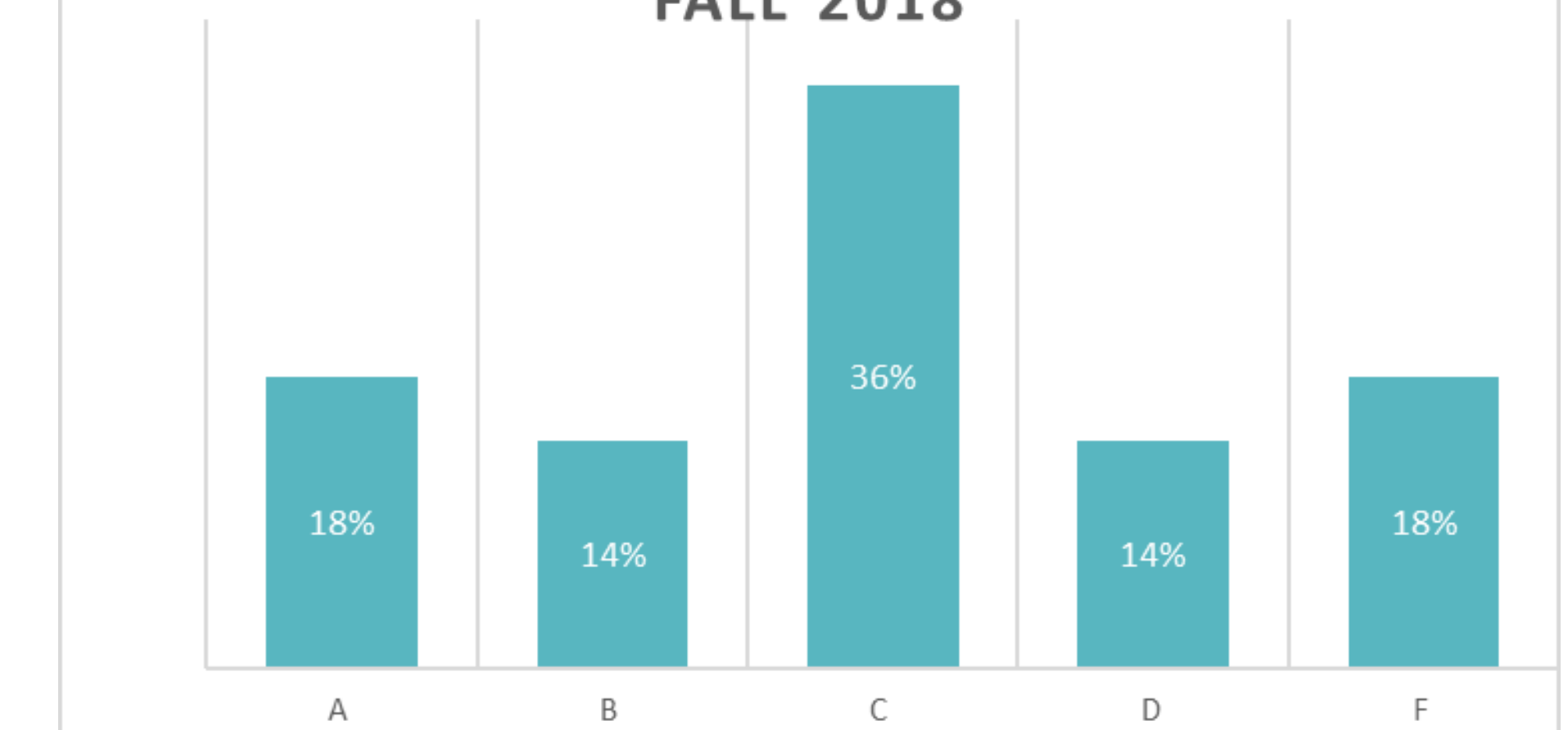
FUTURE PLANS AT GARRETT COLLEGE

- Improve the labs for Biology 101.
- Convert to OER the second course in this two course sequence (Biology 102).
- GC has formed an OER committee to develop an infrastructure to guide the progression of OER.
- GC has been awarded a M.O.S.T. grant for Fall 2019 to scale efforts across disciplines.

FALL 2018 STUDENT IMPACT

- Converted course cost was \$10
- This conversion decreased course cost by 97%
- Total saving for the 22 student group was \$7,656
- A 15% decrease in F final grades
- This decrease was mirrored by a 15% increase in the collective A/B/C grades

**BIOLOGY 101 FINAL GRADES:
FALL 2018**



Students:

- More students reported using the OER text / materials than previous semesters using the traditional text for the course.
- Enjoyed the text embedded web links and interactives, as well as the accessory sites and resources added to the course.
- Did not find the online adaptive homework platform useful.