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Taking the Pulse of the Online Classroom: A Data-based Approach for Faculty Self- Assessment of Student Engagement

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Traditional model - lecture

F → F (Face to Face)

-The instructor in the lecture hall

- Unilateral and synchronous communication
- Instructor talks
- Students listen
- Few if any chances for clarification or questions
- Messages move from instructor to students

Traditional model - classroom

F ↔ F (Face to Face)

-The instructor in the classroom

- Bilateral and synchronous communication
- Instructor talks with students
- Students talk with instructor
- Students talk with other students
- Lots of chances for clarification, questions – messages flow back and forth between the instructor and the students
- Responses are immediate

Online model

CMC Computer Mediated Communication

F ↔ LMS ↔ F

-The instructor in the online classroom

- Bilateral, but asynchronous communication
- Instructor writes to students
- Students write to instructor
- Students write to other students
- Lots of chances for clarification, questions – messages flow back and forth between the instructor and the students
- Responses are delayed

Kurt Vonnegut

Sentences spoken by writers, unless they have been written out first, rarely say what writers wish to say. Writers are unlucky speakers, by and large, which accounts for their being in a profession which encourages them to stay at their desks for years, if necessary, pondering what to say next and how best to say it. (Vonnegut, 1981, p. 143)

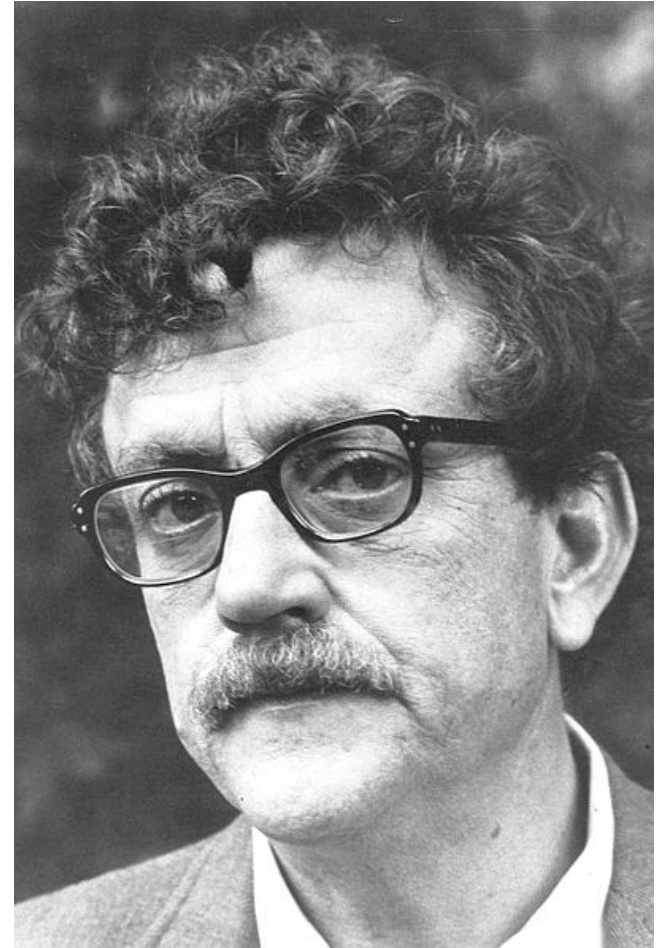


Figure 1. Kurt Vonnegut. (1972) Used under Creative Commons Attribution 3.0 Generic License: <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Image shows writer Kurt Vonnegut in 1972.

Online interactions

Asynchronous interactions provide an advantage

-Thinking and reflecting:

- Instructors have time to interpret student messages
- Time to contemplate replies
- Time to determine implications of replies
- Students have time too:
 - “format allows time for preparation of discussion materials”
(DeCristofaro, Murphy, Herron, & Klein)

Online interactions

Asynchronous interactions provide an advantage

-Not bound by the ticking clock

- Class is not limited by a 1 to 4 hour class period
- Pacing to maintain student attention is not a critical factor
- Students can work around job and family schedules causing them to arrive late or leave early.

Emerging challenge – online engagement

Judging effectiveness of online interactions with students

-Czerkawski and Lyman, (2016):

- “research on student engagement is yielding increasingly complex questions and issues, the need for research exploring engagement in the context of online learning is greater than ever” (p. 538).

Emerging challenge – online engagement

Judging effectiveness of online interactions with students

-Traditional measures of success

- Assignment scores
- Activity scores
- Assessments
- Student end of course surveys
- Classroom observations by managers

Emerging challenge – online engagement

Judging effectiveness of online interactions with students

-Traditional classroom allows for instant observations of message effectiveness

- Advance notice of announced classroom visits
 - Skewed results due to change in lesson plan
- No advance notice of unannounced classroom visits
 - Skewed results due to time-limited review process

Emerging challenge – online engagement

Judging effectiveness of online interactions with students

-Online LMS does not always provide timely metrics

- Classroom reviewer still has limited time to search through the hundreds of posts, activities, and assignments
- Feedback is often delivered for a course that ended prior to the review
- Valuable information doesn't make it to the instructor in time for taking corrective action in the reviewed class

Self-evaluative approach

The questions

-Are instructors

- Capturing the attention and interest of students?
- Drawing students into a deeper understanding of course content?

Current LMS insights

Data dashboard – student participation posts

- Chart showing the days, but not the number of posts per day, that students participated in discussions
- Chart showing the number of posts per week, but not the number of posts per day, that students participated in discussions.
- Chart showing the total number of posts students made to date in the course
- Chart showing a feed of recent posts, but student posts are aggregated by day and activity

Proposed LMS insights

Data log proposals:

- When students signed in, how long they signed in, and which pages they viewed (Henrie, Bodily, Manwaring, & Graham, 2014, pp. 136 – 137)
- Number of clicks on different materials students made (Rodriguez & Armellini, 2013, p.4).

Samuel Hubbard Scudder



Figure 2. Samuel Hubbard Scudder. (n.d.) Used under Creative Commons Attribution 3.0 Generic License:
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Image shows Samuel Hubbard Scudder

Samuel Hubbard Scudder

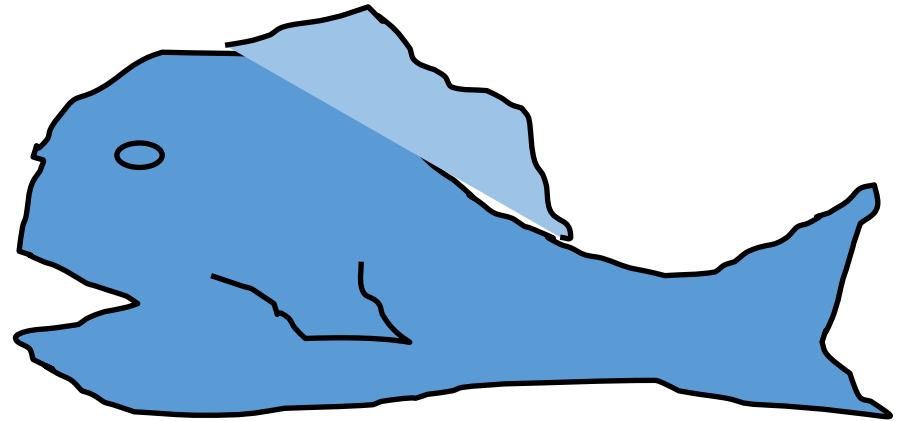
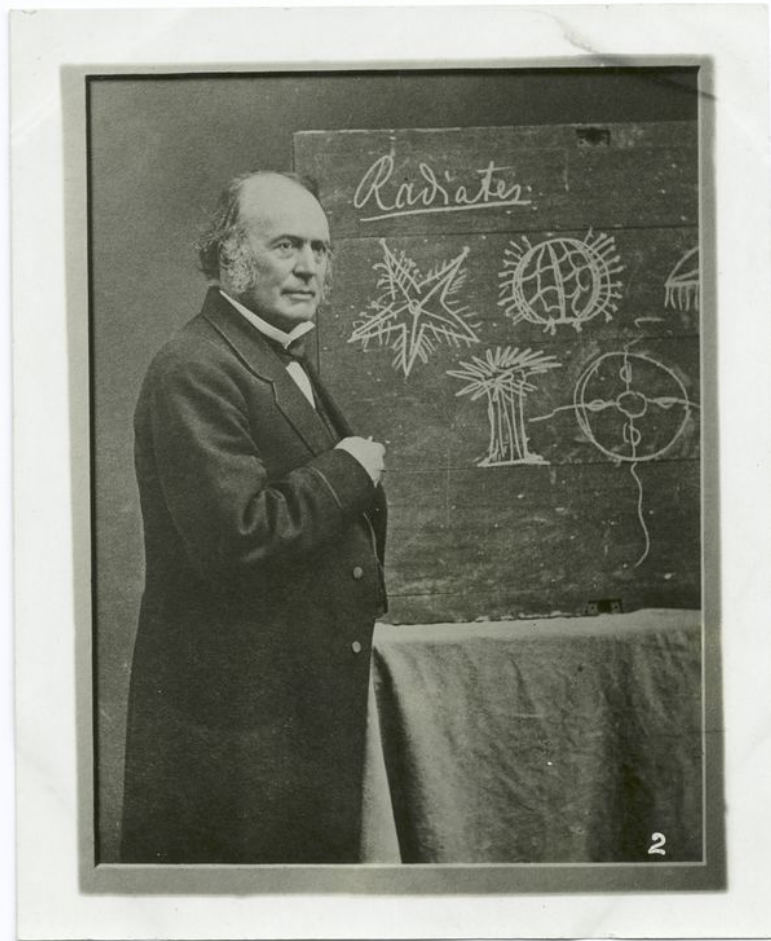


Figure 4. A poorly drawn fish.

Figure 3. Samuel Hubbard Scudder. (n.d.) Used under Creative Commons Attribution 3.0 Generic License:
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Images show Samuel Hubbard Scudder looking at a poorly drawn fish.

Louis Agassiz



“You have not looked at it very carefully” (Scudder, 1999, p. 271).

Figure 5. Louis Agassiz at chalkboard. (n.d.) Used under Creative Commons Attribution 3.0 Generic License: <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Image shows Louis Agassiz standing at a chalkboard with drawings of sea creatures.

Samuel Hubbard Scudder

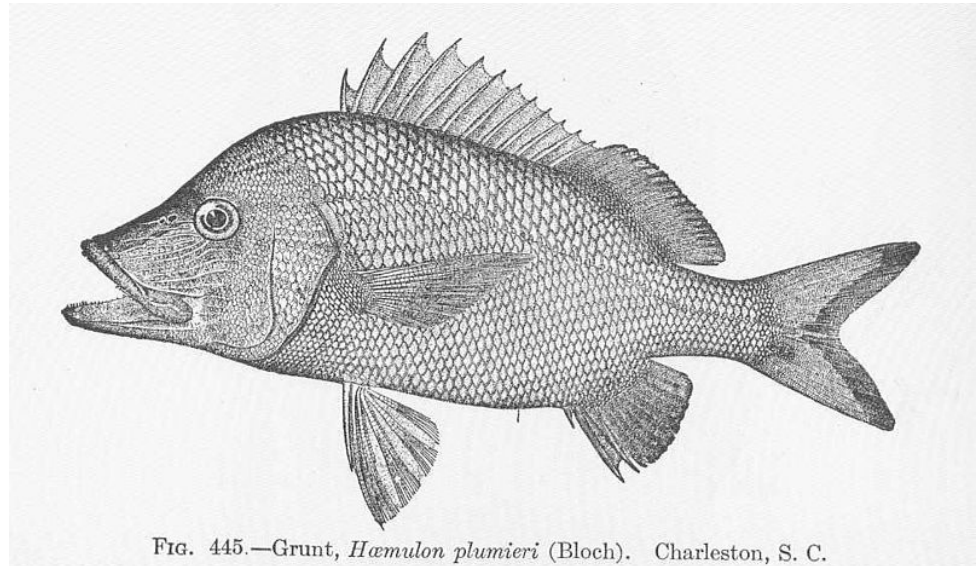
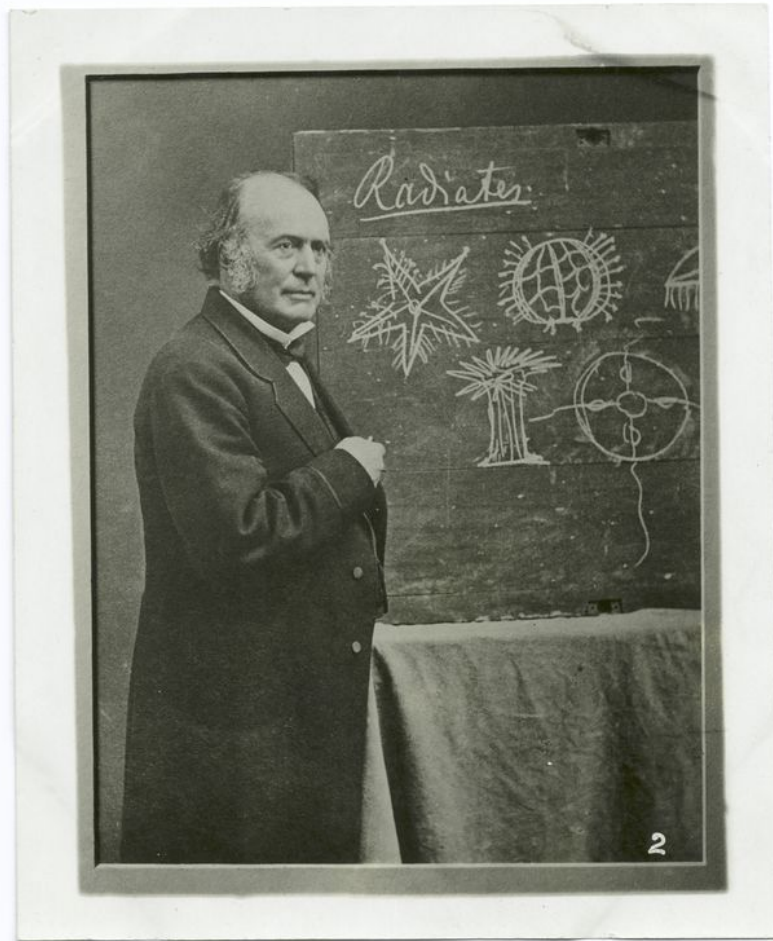


Figure 7. Grunt, *Haemulon plumieri* (Bloch) Charleston, SC. (n.d.) Used under Creative Commons Attribution 3.0 Generic License:
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Figure 6. Samuel Hubbard Scudder. (n.d.) Used under Creative Commons Attribution 3.0 Generic License:
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Louis Agassiz



“A pencil is one of the best of eyes”
(Scudder, 1999, p. 271).

Figure 8. Louis Agassiz at chalkboard. (n.d.) Used under Creative Commons Attribution 3.0 Generic License:
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Image shows Louis Agassiz standing at a chalkboard with drawings of sea creatures.

The Fish - Haemulon

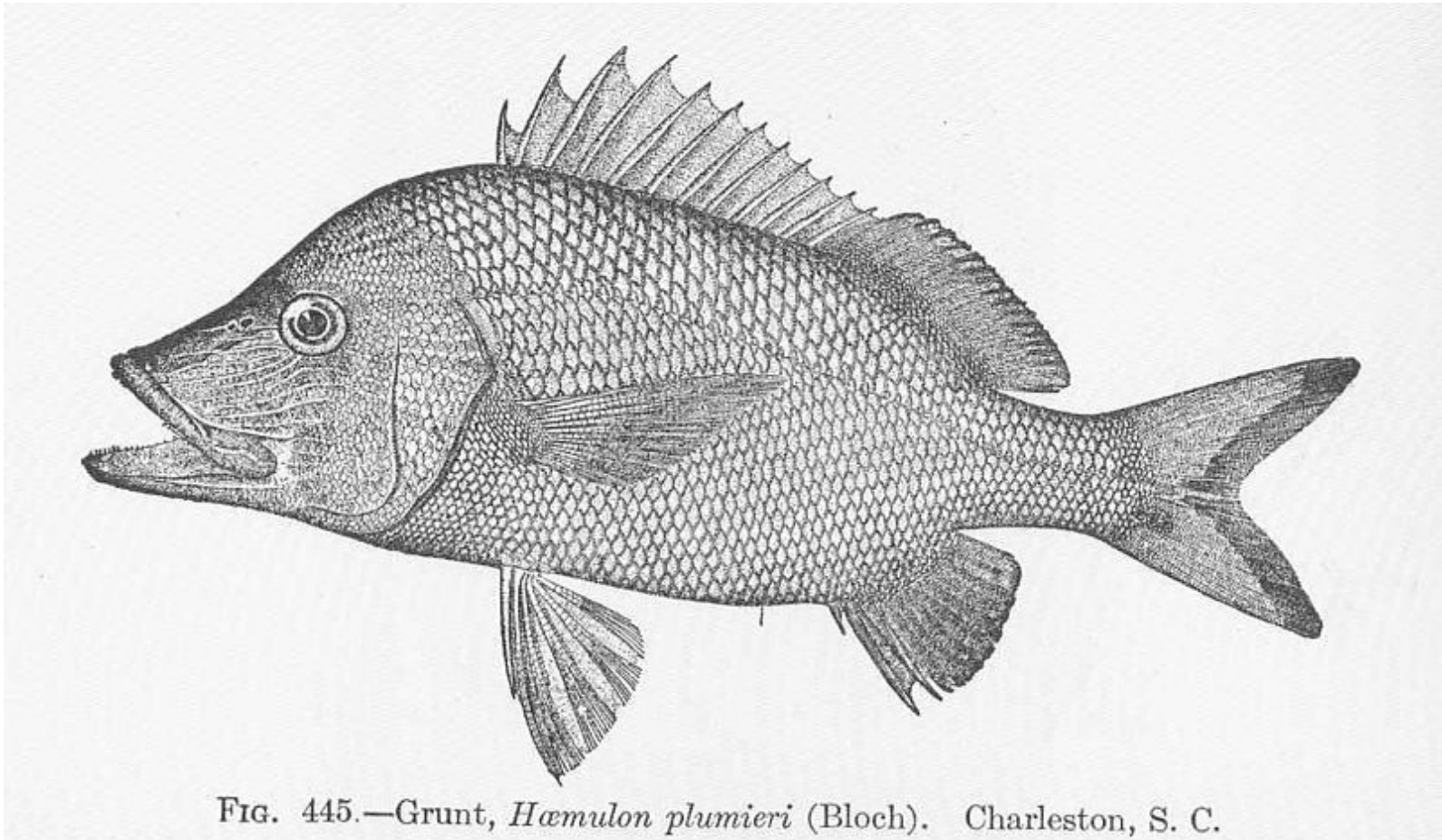


Figure 9. Grunt, *Haemulon plumieri* (Bloch) Charleston, SC. (n.d.) Used under Creative Commons Attribution 3.0 Generic License: <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Image shows an expert drawing of a *Haemulon plumieri* fish.

The Fish - Haemulon

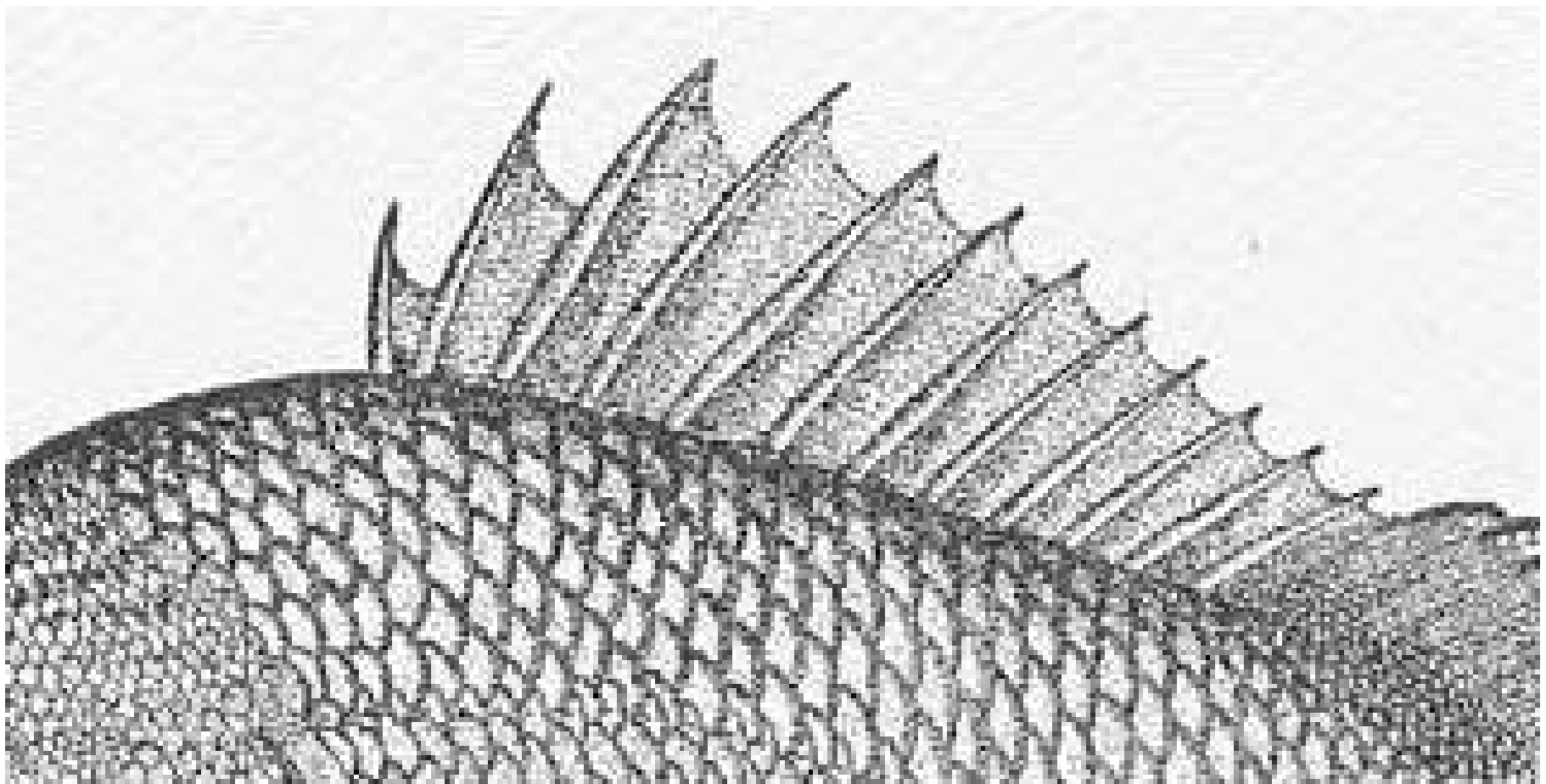


Figure 10. Grunt, *Haemulon plumieri* (Bloch) Charleston, SC. (n.d.) Used under Creative Commons Attribution 3.0 Generic License: <https://creativecommons.org/licenses/by-sa/3.0/legalcode>

Capturing data

Moving beyond the first fish

-Diving into the classroom

- Number of posts
 - Meet or exceed the minimum?
 - Mokoena (2013) speculates that the students may have received “insufficient motivation and unclear expectations” (p. 104).
- Perkins and Murphy (2006, p.301) propose classifying student discussions into four categories:
 - clarification (the most common type) posts
 - assessment posts
 - inference posts
 - strategies posts

Capturing data

Moving beyond the first fish

-Diving into the classroom

- Length of posts
 - Meet or exceed the minimum?
 - Miss out on engagement with course content

Capturing data

Moving beyond the first fish

-Diving into the classroom

- Thread position
 - Student is only engaging with instructor's discussion starters
 - Student is engaging with other students and instructor further down the thread
 - Student is only engaging with other students

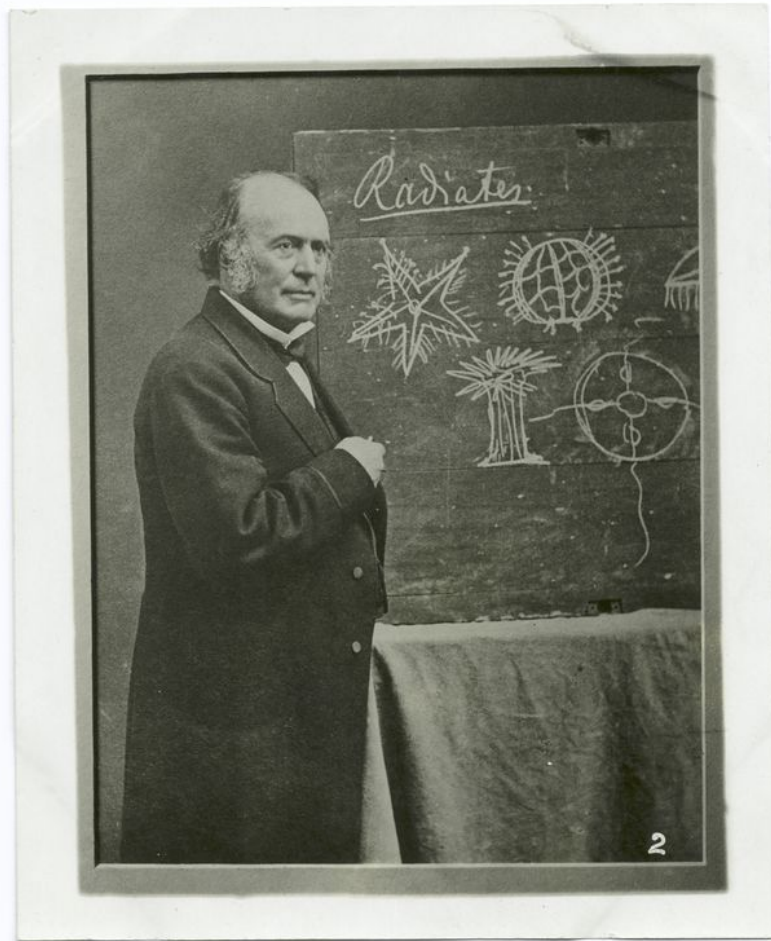
Capturing data

Moving beyond the first fish

-Diving into the classroom

- Type of posts
 - Responding with questions
 - Focusing on concerns about the ability to complete the work
 - Providing personal examples to demonstrate or explore a topic
 - Summarizing readings without adding any personal processing
 - Providing higher-level explanations of the class readings that demonstrate deeper processing
 - Focusing on sympathetic responses rather than course objectives.

Louis Agassiz



“A pencil is one of the best of eyes”
(Scudder, 1999, p. 271).

Figure 11. Louis Agassiz at chalkboard. (n.d.) Used under Creative Commons Attribution 3.0 Generic License:
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Image shows Louis Agassiz standing at a chalkboard with drawings of sea creatures.

Data collection

Try using Microsoft Office® Excel

-Create a simple table to gather

- Student name
- Week of class
- Day of week
- Time of post
- Type of post
- Thread depth
- Word Count

Data collection

	A	B	C	D	E	F	G	I
1	Student #	Week	Day	Time	Type	Depth in Threa	Word Count	
2	Student 16	Week 1	Day 1 Tuesday	3:26 AM	Response to Activity	1	158	
3	Student 13	Week 1	Day 1 Tuesday	5:57 AM	Response to First Message	2	125	
4	Student 13	Week 1	Day 1 Tuesday	7:30 AM	Response to First Message	2	114	
5	Student 4	Week 1	Day 1 Tuesday	9:34 AM	Response to First Message	2	107	
6	Student 4	Week 1	Day 1 Tuesday	10:52 AM	Response to peer post	3	120	
7	Student 17	Week 1	Day 1 Tuesday	4:01 PM	Response to First Message	2	117	
8	Student 16	Week 1	Day 1 Tuesday	4:50 PM	Response to Activity	1	76	
9	Student 16	Week 1	Day 1 Tuesday	5:14 PM	Response to Activity	1	107	
10	Student 6	Week 1	Day 2 Wednesday	2:02 PM	Response to First Message	2	187	
11	Student 6	Week 1	Day 2 Wednesday	2:08 PM	Response to Activity	1	174	
12	Student 6	Week 1	Day 2 Wednesday	2:13 PM	Response to Activity	1	156	
13	Student 3	Week 1	Day 2 Wednesday	4:04 PM	Response to First Message	2	115	
14	Student 3	Week 1	Day 2 Wednesday	4:12 PM	Response to peer post	2	127	
15	Student 4	Week 1	Day 2 Wednesday	4:21 PM	Response to peer post	2	101	
16	Student 4	Week 1	Day 2 Wednesday	5:30 PM	Response to peer post	3	149	
17	Student 16	Week 1	Day 2 Wednesday	6:21 PM	Response to Activity	1	56	
18	Student 4	Week 1	Day 2 Wednesday	7:47 PM	Response to First Message	2	150	
19	Student 8	Week 1	Day 3 Thursday	11:09 AM	Response to First Message	2	179	
20	Student 8	Week 1	Day 3 Thursday	11:25 AM	Response to Instructor Post	4	172	
21	Student 8	Week 1	Day 3 Thursday	11:51 AM	Response to First Message	2	125	
22	Student 16	Week 1	Day 3 Thursday	11:56 AM	Response to Activity	1	74	
23	Student 16	Week 1	Day 3 Thursday	11:56 AM	Response to Activity	1	68	
24	Student 9	Week 1	Day 3 Thursday	12:51 PM	Response to First Message	2	122	
25	Student 4	Week 1	Day 3 Thursday	8:30 PM	Response to peer post	2	116	
26	Student 5	Week 1	Day 3 Thursday	9:16 PM	Response to Assignment	1	113	
27	Student 4	Week 1	Day 3 Thursday	10:09 PM	Response to First Message	2	130	

Figure 12. Screenshot of simulated classroom data.

Image shows a screenshot of an Excel spreadsheet.

Analyzing data

Let Excel do the work

-Pivot Table and Pivot Chart

- Class sum of words per day
- Sum of words per student
- Sum of words per day per student

Class word count by day

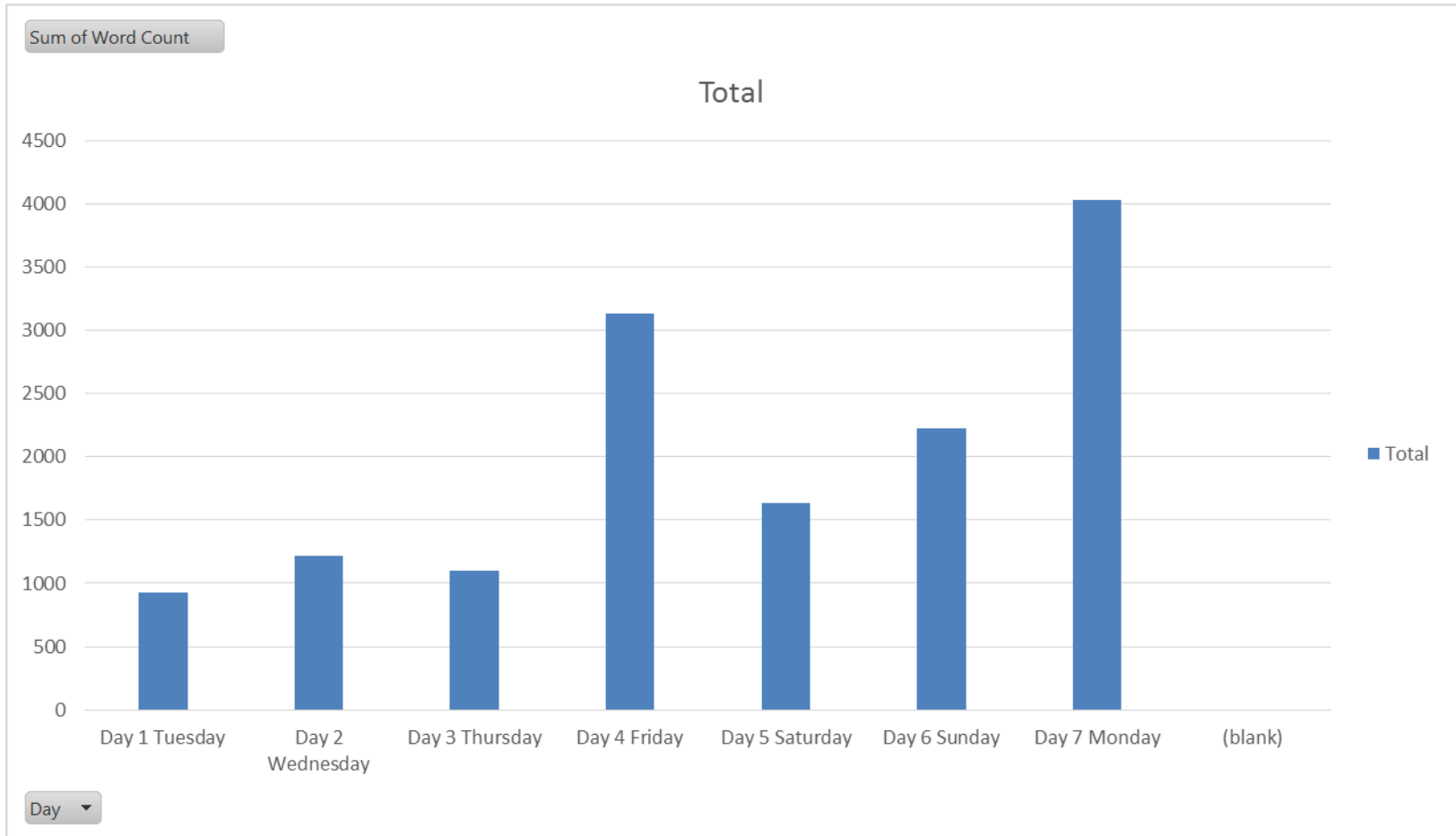


Figure 13. Screenshot of simulated classroom data.

Simple chart and table

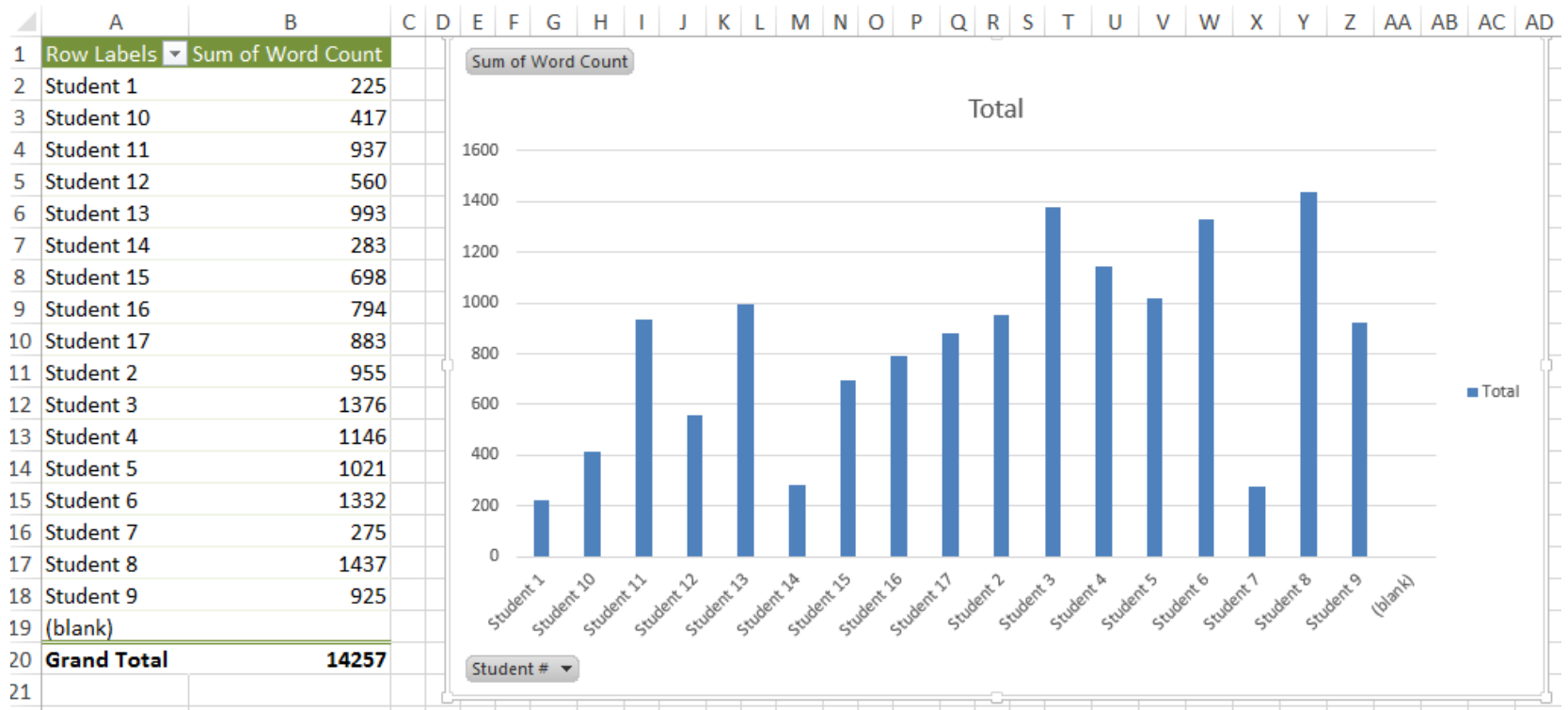


Figure 14. Screenshot of simulated classroom data.

Chart of word counts by day

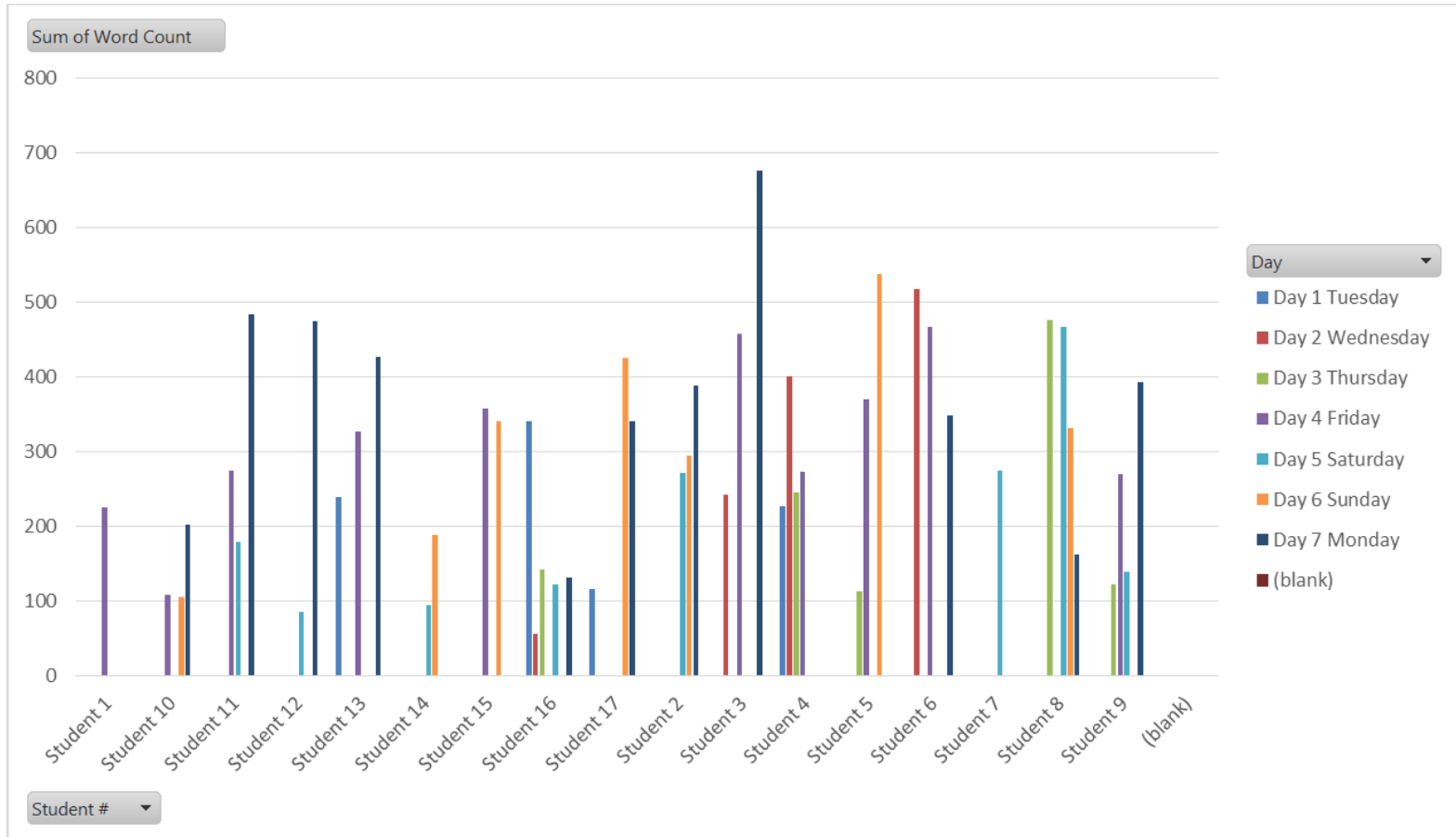


Figure 15. Screenshot of simulated classroom data.

Image shows a screenshot of an Excel chart of word counts by day per student.

Possible remedies

-Amador and Mederer (2013)

- Jigsaw activities
 - create a situation where students use their varied experiences and expertise to discuss a topic
 - develop a group understanding.
 - Grading can be based either on the group project or the individual contributions leading up to the group project (p. 93).
- Problem Based Learning
 - students work with their current understanding of a problem
 - determine what they need to learn in order to solve the problem
 - determine how they will go about learning it (p. 92).

Conclusion

-Chakraborty and Nafukho (2014)

- Increased engagement can benefit students in their
 - course work
 - timely completion of course assignments
 - timely completion of projects (p. 797).

Conclusion

-Kurt Vonnegut

- Using Vonnegut's advice, the instructor can take the time to determine "what to say next and how best to say it" (p. 143) in order to improve the engagement of struggling students.

Q & A



References

- Amador, J. A., & Mederer, H. (2013). Migrating successful student engagement strategies online: Opportunities and challenges using jigsaw groups and problem-based learning. *Journal of Online Learning and Teaching*, 9(1), 89. Retrieved from <https://search.proquest.com/docview/1500386307?accountid=35812>
- Chakraborty, M., & Muyia Nafukho, F. (2014). Strengthening student engagement: What do students want in online courses? *European Journal of Training and Development*, 38(9), 782-802. Retrieved from <https://search.proquest.com/docview/1633950890?accountid=35812>
- Czerkawski, B. C., & Lyman, E. W. (2016). An instructional design framework for fostering student engagement in online learning environments. *TechTrends*, 60(6), 532-539. doi:<http://dx.doi.org/10.1007/s11528-016-0110-z>
- DeCristofaro, C., Murphy, P. F., Herron, T., & Klein, E. (2014). Using guided response to stimulate student engagement in the online asynchronous discussion board. *International Journal of Arts & Sciences*, 7(3), 45-57. Retrieved from <https://search.proquest.com/docview/1644634344?accountid=35812>
- Grunt, Haemulon plumieri (Bloch) Charleston, SC. [Online image] (n.d.). Retrieved from Wikimedia Commons Website: [https://commons.wikimedia.org/wiki/File:FMIB_52017_Grunt,_Haemulon_plumieri_\(Bloch\)_Charleston,_S_C.jpeg](https://commons.wikimedia.org/wiki/File:FMIB_52017_Grunt,_Haemulon_plumieri_(Bloch)_Charleston,_S_C.jpeg)

References

- Henrie, C. R., Bodily, R., Manwaring, K. C., & Graham, C. R. (2015). Exploring intensive longitudinal measures of student engagement in blended learning. *International Review of Research in Open and Distance Learning*, 16(3) Retrieved from <https://search.proquest.com/docview/1737907425?accountid=35812>
- Kurt Vonnegut 1972. [Online image] (1972). Retrieved from Wikimedia Commons Website: https://upload.wikimedia.org/wikipedia/commons/thumb/5/5e/Kurt_Vonnegut_1972.jpg/404px-Kurt_Vonnegut_1972.jpg
- Lee, E., Pate, J. A., & Cozart, D. (2015). Autonomy support for online students. *TechTrends*, 59(4), 54-61. doi:<http://dx.doi.org/10.1007/s11528-015-0871-9>
- Louis Agassiz at chalkboard [Online image] (n.d.). Retrieved from Wikimedia Commons Website: https://commons.wikimedia.org/wiki/File:Louis_Agassiz_at_chalkboard.jpg
- Mokoena, S. (2013). Engagement with and participation in online discussion forums. *TOJET : The Turkish Online Journal of Educational Technology*, 12(2) Retrieved from <https://search.proquest.com/docview/1413491157?accountid=35812>

References

- Perkins, C., & Murphy, E. (2006). Identifying and measuring individual engagement in critical thinking in online discussions: An exploratory case study. *Journal of Educational Technology & Society*, 9(1) Retrieved from <https://search.proquest.com/docview/1287050996?accountid=35812>
- Rodriguez, B. C. P., & Armellini, A. (2013). Student engagement with a content-based learning design. *Research in Learning Technology*, 21doi:<http://dx.doi.org/10.3402/rlt.v21i0.22106>
- Samuel Hubbard Scudder [Online image] (n.d.). Retrieved from Wikimedia Commons Website: https://commons.wikimedia.org/wiki/File:Samuel_Hubbard_Scudder_1837-1911.jpg
- Scudder, S.H. (1999). Take this fish and look at it. In J. Wyrick & B. J. Slaughter (Eds.), *The Rinehart Reader* (3rd ed.), (pp 269 – 273). New York: Harcourt Brace College Publishers.
- Vonnegut, K. (1981). *Palm Sunday: An autobiographical collage*. [Rosetta Books Electronic Version]. New York: Rosetta Books, LLC. Retrieved from Overdrive.com.



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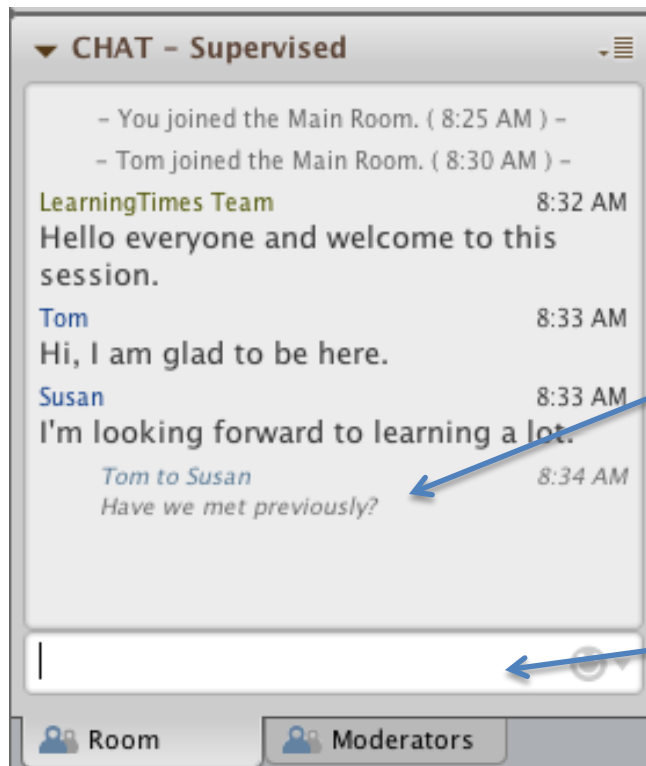
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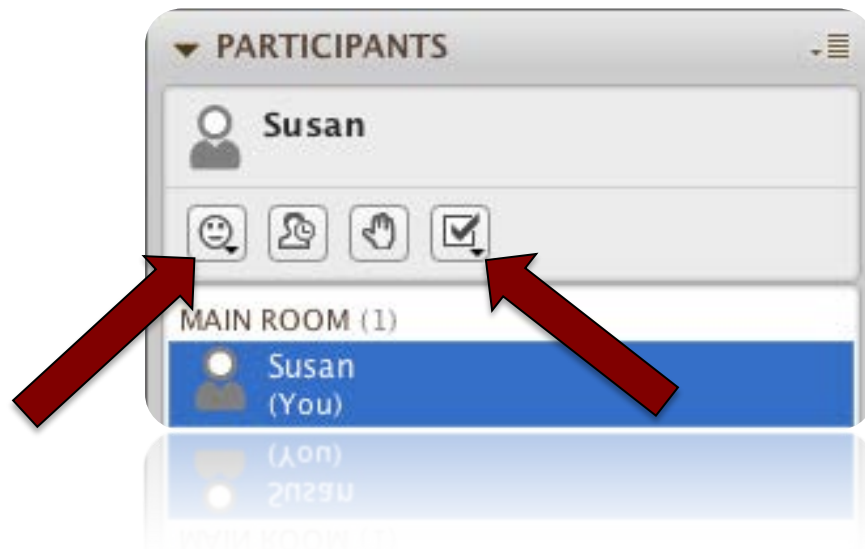


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Type your message here and press Enter to send.



Polls, smiles and handraising



You have a voice!

Audio Setup Wizard



Click on the Talk button.
We won't be using
Video.