

Feedback

PATTN Conference
Hershey 2012
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Key Points

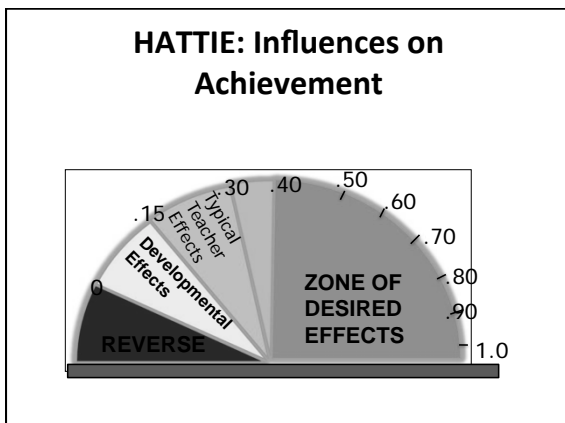
- No one masters complex work without lots of feedback (and advice)
- We tend to teach too much and to provide too little feedback
- Feedback is useful information about what you did, given a specific goal. (Feedback is not advice or praise/blame)

2

feedback and its use is key to great gains

- Black & William meta-analysis:
 - *“There is a body of firm evidence that formative assessment is essential... We know of no other way of raising standards for which such a strong prima facie case can be made.”*
 - Black and William (1998) “Inside the Black Box: Raising Standards through Classroom Assessment,” *Phi Delta Kappan*, volume 80, 2 (October)

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Hattie's Meta-analysis

Rank	Influence	ES
1	Self-report/ self-assess	1.44
5	Reciprocal teaching	.74
8	Feedback	.72
9	Formative evaluation to teachers	.70
11	Meta-cognition strategies	.67

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Harvard's "most effective" courses

- "The big point—it comes up over and over again as crucial—is the importance of quick and detailed feedback. Students overwhelmingly report that the single most important ingredient for making a course effective is getting rapid response on assignments and quizzes.

- Richard Light

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Harvard's "most effective" courses

- "Students say that it should be possible in certain courses to get immediate feedback. They suggest that the professor should hand out an example of an excellent answer."

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Feedback as key (cont.):

- "Secondly... an overwhelming majority are convinced that their best learning takes place when they have a chance to submit an early version of their work, get detailed feedback and criticism, and then hand in a final revised version..."

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Feedback as key (cont.):

- "Many students observe that their most memorable learning experiences have come from courses where such opportunities are routine policy."

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“formative assessment”

- Many so-called formative assessments are NOT truly formative:
 - One-shot quizzes – the questions don’t recur
 - Not ongoing assessments of year-end goals

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No achievement gains = weak feedback system??

- Flat scores or grades over time? Maybe the problem is not the “teaching” or the “students” but the *feedback system*.

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What is Feedback?



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One day my son wrote...

JUSTIH

13

N

“What’s this?”

H

“What’s *this*?”

14

“What’s *this*?”

JUSTIH

15

“Not what I wanted!”

JUSTIN

Thus, an *effective*
feedback system

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So, based on the story...

*What is
feedback?*

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**Concept Attainment:
Feedback**

1. Compare examples (YES) with non-examples (NO) of a concept.
2. Identify the distinguishing characteristics of each.
3. Test your ‘theory’ against new cases.
4. Refine your concept, as needed.

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YES: Examples of (oral) feedback

- “ ball - that’s why you are swinging and missing.”
- “At the end of this paragraph in the story you wrote, I was puzzled over the character’s motives; if that was your intent, it worked.”
- “In the 6 problems you got right, you presented a logical proof; in the 3 ones you got wrong you didn’t show your reasoning.”

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YES: Examples of non-verbal feedback:

- No one laughed at your joke about thin people; they laughed heartily at your homework joke
- 3 of your dinner guests frowned when they saw the meal, and 2 picked at their plate for most of the meal.
- When speaking the audience was getting more and more on the edge of their chairs as you told the travel story, but when you explained the basic facts of the country, many people became fidgety.
- As you studied model units, you realize that yours was closest to a 3 (top score = 4)

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NO: not feedback

- “Good job!”
- “Why did you do that?”
- “Try harder!”
- “Next time, make an outline first.”
- “Your story about ants? I love ants!”

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Refine your answer: what is feedback, then?

- What distinguishes the examples from the non-examples?



	YES	NO
I can't hear you!	<input type="checkbox"/>	<input type="checkbox"/>
Good speech!	<input type="checkbox"/>	<input type="checkbox"/>
Speak softer!	<input type="checkbox"/>	<input type="checkbox"/>

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Feedback?	YES	NO
"As a reader, I was engaged until the last page; there, I lost interest because I couldn't follow your logic"	<input type="checkbox"/>	<input type="checkbox"/>
[As a speaker, I see that people are starting to fidget and text on their phones]	<input type="checkbox"/>	<input type="checkbox"/>
"What was your thinking on page 4?"	<input type="checkbox"/>	<input type="checkbox"/>

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Again, what is feedback?

- What distinguishes the 'yes' from the 'no'?
What *is* feedback?



What is feedback? Models...

- What was the best feedback system you were ever in?
- After sharing: what is common to all the stories – what is true of the best feedback, in general?



👉 TIP: make the implicit explicit

- The specific performance goals and related criteria are often too implicit or even unclear; make them explicit and clear
 - Feedback is best framed in terms of the logic of goals/results, intent/effect
 - When you are unsure of the goal, state the feedback in IF/THEN terms

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Note that much is implicit

- Justin was trying to write his name with accuracy and precision
- A writer is trying to achieve a certain effect on the reader
- A speaker is trying to engage the audience and achieve a result related to purpose & situation

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👉 TIP: make the implicit explicit

- Example:
 - “Recall that the point was to engage the audience. But when you read from your note cards and said ‘um’ and ‘er’ you started to lose them, as suggested by their eyes and body language...”

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👉 TIP: make the implicit explicit

- That’s really the point of rubrics with rich descriptors and indicators: to have a streamlined consistent system in which feedback is given quickly and validly.

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 **tip: GOAL/RESULTS**

- So, couch the feedback in terms of the goals and results:
 - “Audience & Purpose are key as we know. While I am clear on the audience I am unclear on the purpose and here’s why:...”
 - “IF your aim was to make me frightened, THEN it worked in the first scene in the haunted house but not the second.”

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You might be thinking...

- I am NOT saying: don’t ask questions, don’t praise, don’t scold, don’t give advice, don’t evaluate.
- I am merely saying that feedback is different from all of the above.

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Back to Justin example: in fact –

- I did ask questions, I did praise, and I also insured that he received feedback.
- Later, I gave him some advice.

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My 'advice' to Justin



- I drew N's and H's
- I drew the start of an N and drew dots on the left top and right bottom and told him to practice the N, then H, then each in turn, taking note of the starting points

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It's OK to praise!!

- **BUT - praise doesn't get you better**

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It's OK to give advice!!

- **BUT** too much advice, too quickly, doesn't clarify the result, build autonomy, or improve self-assessment – all of which should be long-term aims

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It's OK to ask questions!!

- BUT too many questions dodge the issue of helping learners understand what they did and didn't do. A novice, in particular, will be unlikely to answer the questions or get their point.
 - (Why are you hesitant to give direct feedback? No coach is...)

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Feedback, defined

- Useful information on one's effect or results, given a specific goal



- Feedback is **descriptive**, not evaluative
- Feedback is **not** praise or blame

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Advice, defined

- Useful information on what to do to improve performance, based on the feedback and the goal(s)



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 **Useful tip:**

- When you hear yourself say “Good job” or “No, not right” immediately say WHY in terms of goal/results –
 - ◉ *Good job*: you made me engaged right from the start and that’s what effective writing does.
 - ◉ *No not right*: you didn’t give me a thesis, you gave me a claim with strong beliefs.

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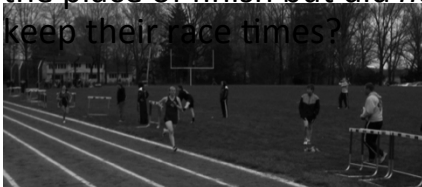
 **Useful tip:**

- It should never seem to the students that the job is to please you; it should seem more matter of fact - that they did or did not do what was necessary for achieving the clear desired result.

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No achievement gains = weak feedback system??

- ◉ Ponder: how would your track team do if we only kept the place of finish but did *not* keep their race times?



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Exercise

- Try giving **ONLY** feedback to a teacher who is not making their lesson clear, engaging the class, or not dealing with behavior

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YES NO

“Next time, try to visualize who your audience is as you write. It will help you achieve your purpose.”

“Who is your audience for this paper?”

“After the first paragraph, it was very clear to me who you were writing for: your peers. I wasn’t really sure what your purpose was, though.”

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I know what some of you are thinking...



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**Eric Mazur's Research in
Physics at Harvard**

- After 10 minutes, Mazur poses a question that requires conceptual understanding (such as estimating the displacement of a toy boat in a bathtub).
 - Students write their answers on a sheet and identify their levels of confidence in the answer.
 - In pairs, attempt to convince others of their answers.
 - Students then answer the question a second time and report their confidence levels again.
 - The whole class is polled again about their answers.

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“Force Concept Inventory”

- A boy throws a steel ball straight up...
- Disregarding any effects from air resistance, the force(s) acting on the ball after it leaves the hand and until it returns to the ground is (are):

the force(s) acting on the ball is (are):

- a) its weight vertically downward along with a steadily decreasing upward force.
- b) a steadily decreasing upward force from the moment it leaves the hand until it reaches its highest point beyond which there is a steadily increasing force of gravity as the ball gets closer to earth.
- c) a constant downward force of gravity along with an upward force that steadily decreases until the ball reaches its highest point, after which there is only the constant downward force of gravity.
- d) a constant downward force of gravity only.

Mazur's data

- students performed considerably better on standard physics course exams
- students scored higher on measures of traditional problem solving
- students scored much higher in conceptual understanding

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Mazur:

- “No lecturer, however engaging and lucid, can achieve this level of improvement and participation simply by speaking.”

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Let's be clear about the big idea here:

- Less “teaching” and more “feedback” = BETTER results, even on typical tests!

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Not a surprise, really: think of...

- *Call of Duty, Angry Birds*
- WORD spellcheck and grammar check
- Learning English as a 3 year old
- Learning to walk
 - No direct teaching; lots of learning

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Thus, misconception to say:

- “I have too many students and too much to ‘cover’”
 - ‘Coverage’ is pointless without constant checking for understanding
 - You need not be the only feedback giver
 - The best feedback systems minimize the use of human-provided feedback

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From *How people learn*

- “Studies of adaptive expertise, learning, transfer, and early development show that feedback is extremely important. Students' thinking must be made visible (through discussions, papers, or tests), and feedback must be provided.... The addition of opportunities for formative assessment increases students' learning and transfer, and they learn to value opportunities to revise ”

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Grant Wiggins - on Feedback

Rubric for Self-Assessment & Teacher Assessment: Essay

	Persuasive	Clear	Thorough	Polished
% weight	40%	30%	30%	20%
4	Very persuasive: compelling evidence, sound reasoning, effective counter-argument, effective organization.	Very clear: helpful and precise use of language, ideas are explicit and the argument is easy to follow.	Very thorough: there is rich detail and comprehensive discussion of all the relevant issues to assess the quality of the argument.	Very polished: there are no errors of syntax, mechanics, or usage. This is publishable-quality.
3	Persuasive: valid evidence, logical reasoning, effective organization.	Clear: accurate use of language, most ideas are explicit and the reader can follow the argument.	Thorough: there is sufficient detail and discussion of all the relevant issues to assess the quality of the argument.	Polished: there are no distracting errors of syntax, mechanics, or usage.
2	Somewhat persuasive: there are some appeals to the logic, some evidence is relevant and well-organized, does not address counter-arguments effectively.	Somewhat clear: some topic sentences or topic sentences or inaccurate language, some ideas are explicit and a bit hard to follow.	Somewhat thorough: there is a need for more detail and discussion of all the relevant issues to assess the quality of the argument.	Somewhat polished: there are a few distracting errors of syntax, mechanics, and/or usage.
1	Impersuasive: not logical AND/OR missing or unorganized evidence; does not consider other arguments.	Unclear: too much vague, ambiguous and/or inaccurate language, some ideas are implied and hard to follow.	Not thorough: there is insufficient detail and too little discussion of all the issues to assess the quality of the argument.	Unpolished: there are a number of distracting errors of syntax, mechanics, and/or usage. Looks like a rough draft, needing editing and reworking.

Goals/Actions:
Next time I make an argument, I'll do a little more research on the topic and think about what other people are going to argue (especially those who disagree with me). My writing is pretty good, but it's hard for me to make a logical argument because to me my views are just right!

John Wooden: observed for a full year by researchers

- “75% of everything you said was information... We didn’t observe you praising or scolding players...”
- “Players learned to expect practical correction after every error, immediately after it was made.”
 - *You Haven’t Taught Until They Have Learned*

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Alverno College

- 15% of every grade is the accuracy of the student’s self-assessment, attached to work they hand in
 - E.g. their 1st task as a freshman: speak publicly, but the 1st grade is their self-assessment of their talk

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10-13-04
Dear Ms. _____ I disagree on giving me a three. You are not supposed to grade different from the other teachers. And worst of all you did not tell us how to get a four. And further on next six weeks I want you to grade like the other teachers, tell everyone how to get a four and tell the kids that are new to ^{school name} how it works. Part of this should be in the contract with my mom. From Taylor to Ms. _____ P.S. Write me back.

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Excellent feedback: criteria

- Some of the most commonly-mentioned criteria:
 - Timely
 - user-friendly - in approach and amount
 - Descriptive & specific re: performance
 - Consistent across time and people
 - Expert
 - Accurate
 - Honest, yet constructive
 - Derived from concrete standards
 - On-going

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Bain's study of the best college teachers

- "We studied more than 60 professors from various disciplines to try to determine what outstanding teachers do inside and outside their classrooms that might explain their accomplishments.
- And when we examined in particular how good teachers conduct class, we found that they follow several common principles...."

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Bain's research

- “First, they create a natural critical learning environment.
- The second important element is guidance in helping students understand the significance of the question.
- And thirdly...”

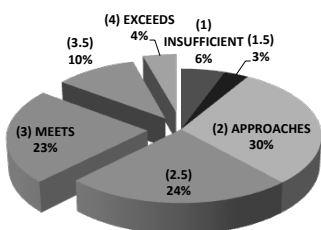
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Bain's research

- “In all the examples, students encounter safe yet challenging conditions in which they can try, fail, receive feedback, and try again before facing a summary evaluation.”

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Innovative & Practical Problem Solver (Avg. 2.52)
39% Met or Exceeded 8th Grade Expectations



■ (1) INSUFFICIENT ■ 1.5 ■ (2) APPROACHES ■ 2.5 ■ (3) MEETS ■ 3.5 ■ (4) EXCEEDS

Tips for improving feedback

- De-personalize the 'system' into the facts of the *goal* and the *results*
- Provide multiple models to support goals and rubrics
- Ask students to self-assess against the goal before turning work in
- Use only descriptive language in rubrics and refer to that language when giving oral feedback

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Tips for improving efficiency

- Highlight feedback to the group on most important points
- Develop skill in peer review
- Use outside feedback givers
- Use non-human feedback devices and approaches

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feedback

- Well, if feedback helps everyone improve...

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Feedback for all

- Then what about teachers? Principals? Administrators?
- 360 degree feedback

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Student feedback

- Worth the anxiety!
 - ◉ 7300 answers last year on our MS and HS survey

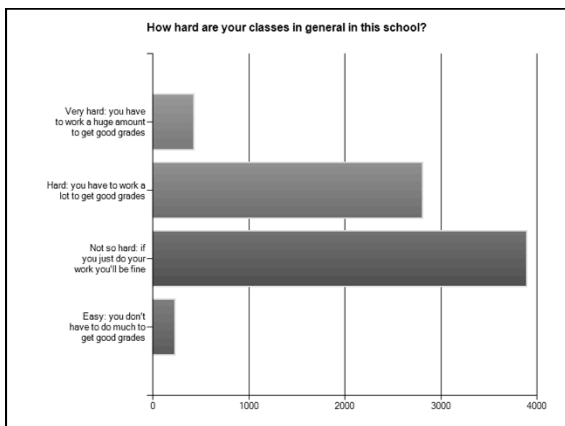
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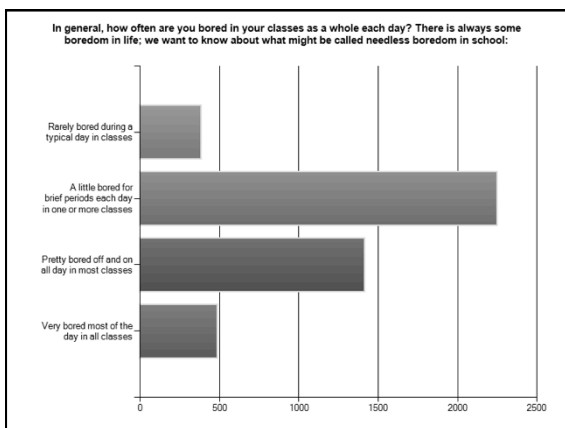
Low-tech: Index Card every Friday

- What worked for you this week? Why?
- What didn't work for you this week? Why?

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Grant Wiggins - on Feedback





“Most Interesting Work”

- Researching a person who had a drug or alcoholic problem in health and was just interesting learning all about the addiction and how it takes over the person.
- An essay about Huck Finn being a racist novel. It was interesting because I had to argue a point I didn't believe in.
- Making a kids' book in health. This was most interesting because I was able to understand how people relate to younger children to get a message across.

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“Most Interesting Work”

- While reading *To Kill a Mockingbird*, my English teacher had my class take a survey about some of our traits (eye color, hair color, skin color, height, # of immediate family members, and many others). The next day, she had students be separated into the "normal people" and the "slaves". Throughout the class, the slaves had to do ANYTHING the teacher asked us to do for the other normal students, and she kept the separating trait a secret until the end of the class. This technique helped us really realize how much discrimination plays a role in our everyday lives.

7

“Most Interesting Work”

- In my algebra 2 class, we had to do a final project. Our assignment was to find a real life example that involved some of the math ideas we had learned that year. Everyone did a different topic. I feel like I got more out of that project than I have in any other project. I did mine on roller coasters using piecewise functions and regression equations to find out the equations of the track. I also found the angles of descent using points on the graph...there was more, but it's too much to list. Anyways, this project really opened up my eyes and I actually enjoyed doing it.

7

“Most Interesting Work”

- In my sociology class we did a study where we went to all of the lunches that class period and just sat with different groups of people and study group behavior. Then we mapped out the whole lunch room with where different groups typically sat. It was interesting because i got to go out of my comfort zone and study people..
- Last year, in my art class, the most interesting piece I did was an eye project. We had to choose four different artists styles and paint one eye for each style. It presented a challenge but it was fun.

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“Most Interesting Work”

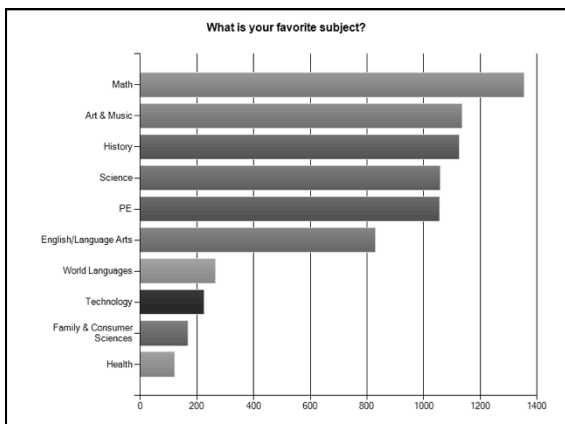
- A journal that we had to keep in History class. We had to write a story about what it would be like if we were a certain character during the French Revolution, and we had certain topics to write about with each entry. There were 6 entries.

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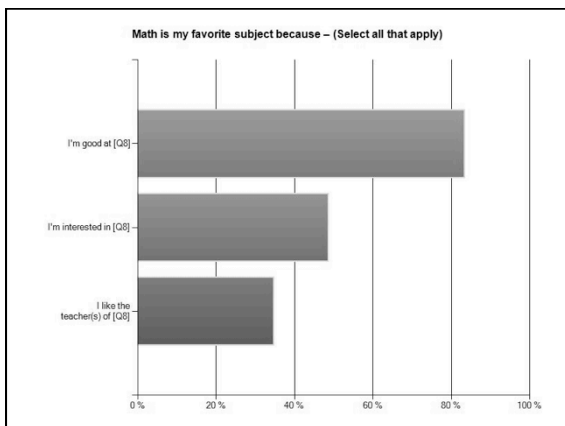
“Most Interesting Work”

- Last year in my Spanish class we were asked to make a movie trailer in Spanish, and our group was extremely engaged in the task. Most likely because we enjoyed filming our project using our own script, and not something too strict. We were allowed to expand our ideas and present them.
- An interesting project we did was in Geometry. It was the centroid project.

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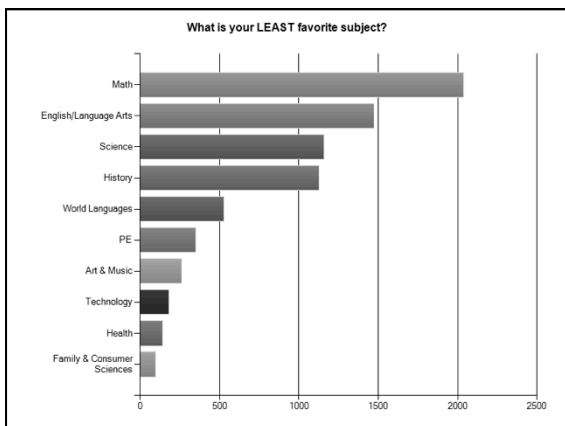
Grant Wiggins - on Feedback



Whether or not you particularly liked the teacher or the content, in which class have you learned the most, and why?

- Business because I found it interesting and it was fun relating the information to real life.
- Health because it applies to me
- English class because it's active.
- Honors Government - connections to the outside world.
- World language because it moves quickly and we do lots of activities to reinforce learning
- Athletics. it teaches discipline, commitment, and they have high standards
- I learned the most in English class in HS. My teacher respected us and allowed us to make our own decisions regarding how we wanted to be assessed in our reading. There were a number of choices - we could have a conference with her, make a poster or a diorama, or give an oral presentation. It was empowering to be able to make these choices.

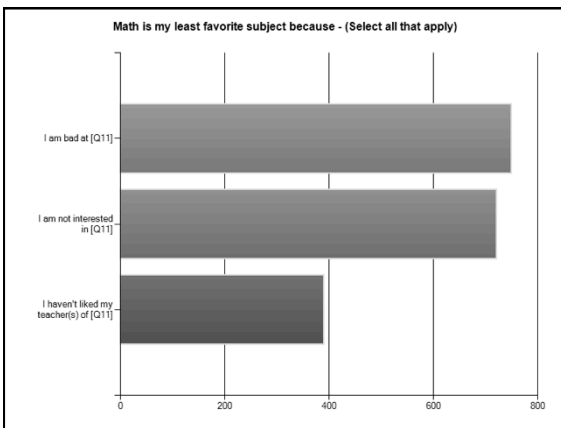
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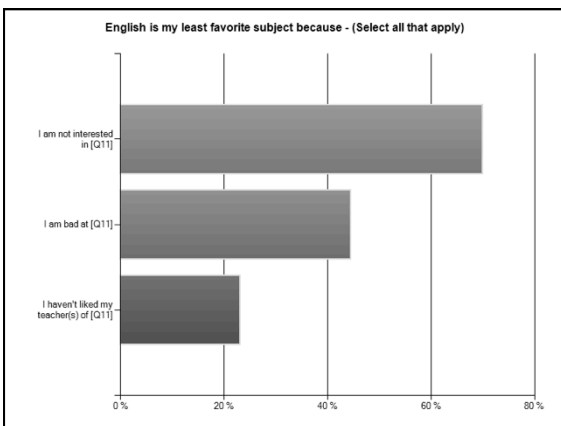


Sample Reasons Math Disliked

- Because there is a specific way to do things and there is no room for creativity.
- I don't believe that most of the math we learn will apply to us in our own careers after high school.
- I have trouble remembering all the rules and all the terms.
- Boring, useless, inapplicable skills
- There is so much repetition in math, it is all about drilling until you get it right.
- I am very interested in learning what impacts today, and have no interest in learning about formulas.
- I like Math the least because I think it is boring and there is no creativity in class work. We are just doing exercises all the time and that is it actually.

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Implications for Curriculum & Assessment

- The current approach to the design of lessons, units, courses, and programs works against optimal feedback and its use
 - We need loops, not linear coverage
 - We need pre-, during, and post-assessments using the SAME questions/tasks and goals
 - We need to grade against progress toward goals, not calculate the mean of all grades

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In short...

- Try –
 - Less teaching, more feedback
 - Less praise and blame, more feedback
 - More non-human feedback ‘systems’
 - Make student self-assessment count
 - Solicit regular helpful feedback from students (and teachers)

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Resources

- Go to my web page:
www.authenticeducation.org
- Click on folder that refers to “materials from your session with Grant Wiggins”
- PW = PATTN2012



Support Materials
from your event
with Dr. Wiggins

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Internet Resources

- ⊙ On Eric Mazur's Physics teaching
 -
 -
- ⊙ On Black & Wiliam's research
 -
 -
 - classroom_learning.html
- ⊙ British Websites on Formative Assessment
 - <http://www.qca.org.uk/7659.html>
 - http://www.qca.org.uk/293_3236.html
 - <http://www.qca.org.uk/downloads/unlocking.pdf>

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Resources

- ⊙ *How People Learn*
 -
- ⊙ Assessment Policy
 -
 - balancedassess.pdf
- ⊙ Books:
 - *Educative Assessment*, Grant Wiggins
 - *Assessment for Learning*, Paul Black et al
 - *Student-involved Assessment for Learning*, Rick Stiggins

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Feedback to me

- grant@authenticeducation.org
- Check out my blog:
grantwiggins.wordpress.com

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