

“We are currently preparing students for jobs that don’t yet exist ... using technologies that haven’t been invented ... in order to solve problems we don’t even know are problems yet.”

Richard Riley, former US Secretary of Education.

The original 21st century skills were developed in response to the increasing reliance on technology-based careers, educational systems that focused largely on content knowledge and not the application of the knowledge, and a rapid change from a manufacturing-based economy to one dependent upon problem-solving, creativity, and effective communication with people inside and outside of a field.

Those future jobs require skills that have been rarely taught outside of graduate school education. However, only about 13% of all Americans have a master’s degree or higher, and only 35% have a bachelor’s degree. If we wait until graduate school to teach critical thinking skills *as a major focus of their instruction*, we are short-changing the vast majority of students who pass through our classes.

It’s 2020. Why do these still matter?

- Pace of change in society and technology is still increasing.
- Occupations and careers are in rapid flux.
- The average millennial has already worked as many jobs as most 50-year-olds.



These skills must be **modeled, directly taught, and practiced** for students to become adept at using them. They’re not something that’s inferred from didactic instruction, completing projects, or writing reports.

Necessary Skills for Success

- Oral & written communication
- Teamwork
- Respect towards others
- Critical thinking
- Adaptability
- Professionalism
- Dependability and reliability

Repeated surveys of businesses about what skills entry-level workers need in order to success frequently place “soft skills” – those that are not dependent upon subject-specific knowledge – at the top of lists of employer requirements. They can adequately assess whether an applicant has the requisite knowledge for a job, or they can teach the applicant the specific information needed to be successful, but they aren’t able to determine the level of ability most applicants have with these listed “soft skills.”

The 4 Cs

COMMUNICATION
Sharing thoughts, questions, ideas and solutions

COLLABORATION
Working together to reach a goal. Putting in talent, expertise, and smarts to work

CRITICAL THINKING
Looking at problems in a new way and linking learning across subjects disciplines

CREATIVITY
Trying new approaches to get things done equals innovation and invention

The 4Cs of 21st Century Skills are part of an original list that included digital literacy, leadership and responsibility, and social and cross-cultural interactions, among other things. This presentation focuses on just the 4Cs, what they look like in action, and how you can incorporate them into your own teaching regardless of the subject you’re teaching or the age of your students.

These skills are **age-independent**. You can teach a toddler how to communicate better, and help her practice her creativity and

problem-solving skills. Don’t think that a student must reach a specific mental age or have a specific mental capacity in order to practice these.

Critical Thinking Skills

- Solving problems
- Separating fact from opinion
- Verifying accurate information
- Asking questions
- Making effective decisions

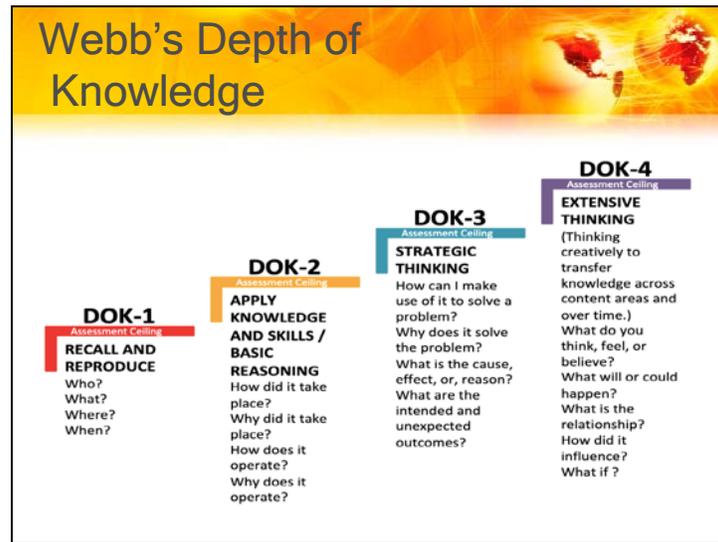
Reasoning
Problem Solving
Evaluating
Decision Making
Analyzing

Here are what critical thinking skills are used for.

You have already encountered the results of a lack of critical thinking skills if you’ve heard someone claim that Covid-19 is a hoax designed to kill jobs and to embarrass our current government leadership. Or if you know someone who engages in extremely risky or life-threatening behavior because they feel that they are highly unlikely to be hurt or killed *just because it hasn’t happened already*. You’ve also seen this with someone

who gives up on solving a problem when they first encounter it or after a single attempt, and then cry for help because they have no idea about another approach.

While humans have excellent critical thinking skills, they need to practice them to keep them from atrophying. And if they're never given an opportunity to practice them, they are stuck in a pattern of thinking that is extremely difficult to overcome.



I'd like to take a moment to introduce **Webb's Depth of Knowledge** (see <https://www.edutopia.org/blog/webbs-depth-knowledge-increase-rigor-gerald-aungst> for a detailed description). At its core, this model of learning categorizes tasks based on the complexity of thinking required to successfully complete them.

The lowest level only requires recall and reproduction – listing facts, names, using plug-and-chug problems sets that only require memorization, etc.

Level 2 involves tasks with more than one **mental step**: comparing, organizing, predicting, estimating, and summarizing.

Level 3 is about **strategic thinking**: it focuses on more abstract uses of knowledge, a task will have more than one way to complete it, and students have to solve non-routine problems.

Level 4 requires the most complex cognitive effort. Students have to transfer knowledge from one subject to another (for example, inferring the key point from an informational text after learning what the vocabulary words mean), or bring together information from multiple sources to solve problems in a different area.

Many Students are Resistant

- Just tell me the answer!
- Is this right?
- I don't know what you want me to do.
- I can't find the answer in the book.
- You're not teaching me.
- It's too hard!



When you're planning activities for students at Level 4, you are promoting the practice of critical thinking skills. You'll know you're accurately engaging students at this level when they say things like, "I can't find the answer in the book!" or "You never taught me about this topic!"

As you incorporate more activities and assessments at the highest levels of Webb's Depth of Knowledge, expect quite a bit of push-back from your older students (middle school

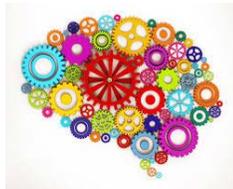
and up). Undergraduates in their first and second year are much more likely to complain about you "not teaching" them when you have them practice their higher order thinking skills. Elementary children, on the other hand, are not as concerned about getting the "right answer" as they are with finding some of their own solutions.

In today's educational climate, all too many students want to believe that all they have to do is memorize information to have successfully "learned" it. And many of our standardized tests for students from elementary through high school are largely based on rote memorization. Students expect to only focus on basic facts and concepts for most of their subjects.

When you have a student throw one or more of these comments at you, tell them that you **are** teaching them; you are teaching them **how to think**.

Examples of Activities

- What would happen if? scenarios
- Novel problems not found in textbooks
- Determining the accuracy of information
 - Valid sources
 - Differentiating fact from opinion



It's not easy to come up with activities that stimulate critical thinking when your class is entirely online. Students will attempt to cheat by just Googling your question to (hopefully) find an answer. Others will post the question to homework help websites and then copy and paste any answer that is provided.

Stanford University has a collection of lessons on critical reasoning by evaluating online information. These are appropriate for high school and first and second year

undergraduates. Rather than trying to create your own lessons and activities to teach how to determine whether a source is valid and differentiating fact from opinion, use some of these lessons to help guide students through identifying what sources are worthwhile and how you can tell, and making decisions based on evidence, not emotion. You'll need to create a free

account to access all the materials: <https://cor.stanford.edu/curriculum/>. There are also videos you could link to for explaining some of these skills.

Another site that has multiple links to resources on critical thinking lessons is <https://www.aeseducation.com/career-readiness/top-7-critical-thinking-lesson-plans>.

Creativity

"The gift of fantasy has meant more to me than my talent for absorbing positive knowledge." **Albert Einstein**

"I haven't failed -- I've just found 10,000 ways that won't work." **Thomas Edison** on the invention of the light bulb



While some people are naturally more creative than others, you can stimulate and encourage your students to be more creative in their thinking than they usually are.

Thinking Outside the Box

- Look at a problem from multiple perspectives.
- Share their ideas with others.
- Don't have to do things the way they've always been done.
- Understand that many ideas don't work - this isn't failure, but learning.



It's important for students to understand that failure is a part of learning. Failure is much more common than success, particularly in the sciences and in research. **Perseverance** in the face of failure is a positive character trait, so students shouldn't be punished for "failing" to find a successful, practical, useful solution to every problem, especially the first time they attempt creative thinking.

Examples of Creative Thinking Activities

- 100 uses
- iWish
- Blue Sky Thinking



100 Uses (Creativity)

- Works best in real time; synchronous meeting.
- Students must be divided into groups of no more than 10.
- Takes about 15 min. from introduction to completion before follow-up.



The 100 uses activity works best in real time, so you would need to have all of your students logged in at the same time to use this activity. This reinforces communication skills since students need to listen closely to each other to accomplish the task.

- Divide students into small groups – no more than 10 at the most.
- Have them number a sheet of paper 1 – 20. They will need five sheets total for each group.
- Have students count off (1 – 2 – 3 – 4, etc.).
- Assign roles to every student in a group of 5 or every other student in a larger group. You will need five different recorders of information. (Example, all students in the #2 group are the first recorders; the next recorder is from group #4, etc.)
- Give them ten minutes to come up with 100 uses for a common material: old newspapers, used pizza boxes, used water bottles, paper cups, etc.
- Instruct them not to shut down any ideas, but to encourage building on what someone suggests.
- Have one person record the first 20 ideas, someone the next 20, and so on until you reach 100 ideas.
- At the time limit, stop the exercise and have random students from each group discuss the ideas their group came up with.
- This activity helps promote communication and letting others express their ideas.

iWish (Creativity)

- Can be used synchronously or for homework.
- Make your groups as diverse as possible.
- Reinforces the idea that innovation solves a human problem.



The iWish activity can be a small group homework assignment instead of a synchronous activity.

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- Assign students to a group. Each group should be small (5 people or less) and as diverse as possible.
- Have each group come up with a problem or obstacle that people they know face routinely, a third world problem related to your content (health care, clean water or sanitation facilities, environmental issues, food safety or accessibility), or an issue for people with special needs (the elderly or physically handicapped). Or you could use a current issue facing many people around the globe if it relates to your content.
- Each team should discuss ideas about the problem and create a solution that can be implemented using a cell phone app.
- The team should design the app interface and name, and then present their problem and solution to the whole class with a short video they've recorded or in a live, synchronous session.
- Keep track of student engagement by requiring them to post a Google doc or on a team wiki page within a learning management system about their ideas and their progress. Each student should be able to clearly identify the problem and explain their solution.
- It doesn't have to be practical or limited by current technology.

Blue Sky Thinking (Creativity)

- Ideas don't need to be grounded in reality.



- Most inventors and innovating thinkers come up with their best ideas when they're not constrained by current reality.

Blue Sky Thinking

This also needs to be completed synchronously, but you could assign it to be completed individually, although it might be a bit less effective than if students worked in pairs.

- Pair up students. Tell them to make a wish about resolving a pressing problem or obstacle they're facing. ("I wish I could...I wish it was easier to...I wish [X] wouldn't happen by...")
- Extend this wish further by making a *wild wish*; something that is less likely than your initial wish to solve the problem, but still within the realm of possibility.
- Now have them come up with wishes for a resolution of their problem if they had *unlimited time, unlimited money, and is probably impossible – a fantasy*.
- Break the fantasy solution down to its core principle – the essence of the solution.
- Use this core principle to come up with five new ideas that don't require unlimited funds, time, or the suspension of natural laws.

Lessons for elementary & middle school students:

<https://www.aeseducation.com/businesscenter21/5-problem-solving-lesson-plans-your-students-will-love>

Lessons for older students: <https://www.onecommunityglobal.org/creativity-lesson-plan/>

Diversity and Creativity

- Socially diverse groups are more innovative than homogeneous groups.
- Interacting with individuals who are different forces group members to better prepare to defend their ideas.
- Alternative viewpoints help provide more solutions and ideas.



For example, I was once tasked with evaluating a website for students to learn about toxic waste dumps and identified environmental hazards. It was a very extensive website with advanced details about multiple chemicals, their sources, and the effects of long-term contamination. The culminating activity was a 10-page written report with data. I asked the creators who their target audience was. They told me it was for students who took a relatively rare Advanced Placement course in high school. I told them that most students across the US

did not take this course, because most high schools didn't have a qualified teacher to teach it.

The whole group of people – maybe 15 of them – did not believe me. They told me that each of them had at least one child who had taken this course in high school – so, it made sense to them that every school offered this course. But they were all doctoral-holding professionals living near some of the top public schools in the country, where one of the most rigorous charter schools for science and technology was also located. I told them they lived in a very exclusive place where advanced instruction was a given. But for most students, they would never have the opportunity to take a course that would help them complete the activity, much less write the report. **Not one person on the committee had ever been to a school that lacked scientific equipment or qualified science teachers.**

Collaboration

Working together to achieve a common goal.

- Members of majority groups tend to dominate; watch for this.



- You can assess the **process** of teamwork more than the **product**.

Whenever possible, mix your students into diverse groups. Don't keep the same group throughout the class if you want to spur creativity and improve communication skills.

In highly technical courses where there may be few minority students, have at least two students of the same minority group together so they don't feel isolated or are talked over by the members of the majority group.

Reinforce the teamwork aspect by randomly assigning roles to group members: leader,

recorder, project manager, etc.

Collaboration Skills

- Reliability
- Respectfulness
- Conflict management
- Active listening
- Communication



Effective online collaboration requires more structure than face-to-face collaborative work. Students are notorious for being unreliable when working in a group (never completing their part; not maintaining communication; letting others do the bulk of the work). Most students will reach out to you to solve these problems before attempting to do it themselves.

Structuring Collaborative Projects

- Have credit for completing sections of the work.
- Organize weekly or bi-weekly check-in sessions during office hours. Require groups to sign up for a time.



You could create a checklist with deadlines for different parts of a project. During a synchronous team meeting, have students go through the checklist with you and note where they're behind. Remind them of the final due date. Be sure to plan for time to check in with each team at least once per week. You will need to be quite flexible in finding a time where everyone can meet together. If a student does not come to the team meeting with you, then deduct participation points from their final score.

Structuring Collaborative Projects

- Have self-assessment checklists or rubrics for students.
- Teach conflict resolution skills.
- Grade students on their peers' assessment of their participation.



Using self-assessment checklists or rubrics provides each group member with feedback about whether they're a productive member of their group. You can also use a rubric that each group member fills out about each other member, and average the scores for a final participation grade. You may find that students are brutally honest about their peers, as long as their best friends aren't in the same group.

You can also focus mostly on one collaborative skill, like reliability,

respectful interaction, level of engagement, or active listening. It's easier for the students to focus on a project if they know you are only assessing one of their collaborative skills at a time.

Here's a rubric for grading teamwork (collaboration) skills: <http://web.cse.ohio-state.edu/~soundarajan.1/abet/DIRASSMNT/teamworkRubric.html>

Collaboration rubrics:

- elementary: <https://drive.google.com/open?id=0B406qUmTkfqLSnRHUWlreW91NmM>
- secondary: <https://drive.google.com/open?id=0B406qUmTkfqLR1kwQIFvRWZBYWs>
- any age: <https://mailchi.mp/trevormuir.com/collaboration-rubric> (must provide email address)

Rubric makers free online: <https://www.pbisrewards.com/blog/free-online-rubric-maker/>

Here's another: <https://teaching.cornell.edu/resource/group-work-how-evaluate-it>

You can have lower stakes assignments to evaluate collaborative skills instead of focusing on the project you want students to complete.



You can't expect students, no matter what their age, to simply be able to resolve conflicts within a group without any direct instruction on how to do it. Many people are also conflict-adverse, and would much rather ignore the problem and do the project without the person at the heart of the conflict. But this skill is essential to promote effective collaboration.

To practice this, you could have students role-play a situation where one person refuses to do work or doesn't answer any attempt at communicating with them to

come up with some solutions. You could have the whole class determine some steps to take if they have a group member who doesn't cooperate. This could be accomplished through either a synchronous discussion or an asynchronous discussion board question. Provide them with some resources on resolving conflicts for background information, like these:

<https://learningcommons.ubc.ca/student-toolkits/working-in-groups/resolving-conflict/>

<https://s3.wp.wsu.edu/uploads/sites/2070/2016/08/The-big-book-of-Conflict-Resolution-Games.pdf>

You could also grade students on how well they resolve conflicts within their group by asking them about any problems they encountered and how they solved them in their final assessment of their project. Most importantly, these skills need to be modeled and directly taught to students.

Examples of Activities

- Case studies
- Fishbowl debates
- Group projects
- Fermi problems



Case studies in science:

<https://sciencecases.lib.buffalo.edu/>.

Students read a case study, provide a summary and an analysis of the solution, and then come to an agreement in small groups of 3 – 4 about the solution and whether there was a better one, along with their reasoning. Each group can have a different case study that they then present to the class in a very short presentation. If the class is asynchronous, divide students into groups and have groups report back in a discussion area.

Fishbowl debates are for groups of 3: one person takes a position, another takes an opposing viewpoint, and they both have to present their ideas to convince the third person of their position. The third person determines who made the most convincing argument, while everyone must remain respectful and speak only about the topic under discussion. For synchronous classes, you can have only two students making their cases at a time while the rest of the class decides who had the most convincing viewpoint. Or students could film and upload a 2 – 3 minute presentation while the whole class views them offline and votes who made the best argument.

Group projects don't always need to result in a written report or presentation. Students could collaborate on designing an informational poster online, coming up with a practical solution to a community problem, or solving Fermi problems, which require creative thinking, common knowledge, and usually require some mathematic skills. You can have students work on Fermi problems using a time limit in synchronous classes. A Fermi problem is a multi-step problem that can be solved in a variety of ways, and whose solution requires the estimation of key pieces of information.

For asynchronous classes, students would usually Google the answer (if possible) and you wouldn't get a good understanding of their ability to collaborate with someone else about finding a solution.

<https://www.teachertoolkit.co.uk/2017/04/28/fermi-questions/>

<https://www.edgalaxy.com/journal/2012/5/29/an-excellent-collection-of-fermi-problems-for-your-class.html>

Communication

Conveying ideas quickly and clearly.

- Text-based communications lack *tone* and body language cues.
- Students don't know how to communicate in a professional setting.



I hope that we'll develop a text-based emoji to convey sarcasm one of these days, but while we're waiting for that to happen, we need to teach our students how to communicate in a professional manner via text.

One of the major complaints that college professors seem to have about their students is the lack of respect or detail in their email messages. But good communication skills go beyond knowing how to write a properly formatted email.

Students need to learn how to include a respectful tone in their written communication, provide clear, concise details when asking a question or providing information, and understanding when they need to adjust their words to make their ideas clearer to their targeted audience.

In fact, in survey after survey of businesses about what is the most important skill their workers need, clear oral and written communication skills tops the list.

Communication Skills

- Active listening
- Adapting your style to your audience
- Friendliness
- Confidence
- Giving and receiving feedback



Continued

- Volume and clarity
- Understanding nonverbal cues
- Responsiveness
- Empathy
- Respect



As you can probably tell from this list, you're not going to be able to incorporate teaching all of these skills to your students, and modeling them in your own communications with them won't help them make a connection between how you interact with them and how they should interact with **you**.

So, let's focus on the specific skills you **can** require students to perform.

Skills You Can Embed in Instruction

- Adapting your style to your audience
- Giving and receiving feedback
- Respect
- Clarity



Who is your audience?

- Peers
- Supervisors
- Clients / customers
- General public
- Younger children



The first thing you want your students to be mindful of in their professional communications are to **KNOW YOUR AUDIENCE**. Here are some various activities that you could have your students complete to practice their communication skills based on a specific audience.

- Write emails to elected officials about specific issues being debated or voted on, or topics they should be concerned about.
- Create a 2-minute presentation for elementary students to teach them some basic content knowledge.
- Develop a 5-minute presentation for their peers on a detailed explanation of a topic from class.
- Write a 2-paragraph essay to persuade you, the instructor, to give them another chance to take a test they already took.
- Role-play talking to an older relative at a family gathering to explain a basic science concept.
- Write an apology letter regarding a mistake in a report that affects a client's income. Indicate that their supervisor will also read this.

Positive Feedback

- Recognizes strengths, achievements, or success
- Precise & specific
- Give it close in time to the event



Everyone likes to receive praise. When someone has worked very hard on a project and it is shared with others, it is appropriate to acknowledge their efforts and what they've done well, or done right. I know that many grandmothers have told us, "If you can't say anything nice, don't say anything at all", but when someone has put forth effort *even if the end product is poorly developed, designed, or presented*, it's important to try to acknowledge that the effort itself is appreciated.

One of the most common reasons people leave a job is because they feel undervalued or are managed poorly. When a person *never receives praise* regardless of their work ethic, they tend to start to think there's no reason to keep trying to do well since it's never acknowledged.

Even with your worst-performing students, those who rarely come to class, those who fail to turn any assignments until far past the due date, need to know that there's something positive about their work, no matter how sloppy or poorly done it is. I sometimes use very faint praise with these students, but at least I say something like, "I'm glad to see you're working your way through the lessons" even if those lessons were due to be completed months ago. At least they know I'm paying attention to what they're finally doing!

Give your students opportunities to provide positive feedback by having them complete peer reviews of summaries, analyses, or other written work. Have them practice providing detailed positive feedback, but it doesn't need to be very long. Have them only focus on 2 – 3 items for positive feedback.



Negative Feedback

- Designed reduce negative behaviors
- Specific & timely
- Provides concrete steps for change
- Focuses on the task, not the person

No one likes to be told they made a mistake or they're doing something wrong. But negative feedback should be **constructive** – designed to reinforce positive behaviors and reduce negative ones by pointing out where the person erred and providing specific steps for improvement.

When students practice giving positive feedback, they should also practice giving negative, or constructive feedback. Most teachers were taught the "sandwich method" of praise – which was *positive –*

negative – positive. However, several recent studies have found that students tended to ignore the negative feedback in the middle and only focus on the positive aspects. A better method has been using *negative (or constructive) – positive – positive*, or just *negative – positive* feedback.

Here are a few studies about this:

<https://www.tandfonline.com/doi/abs/10.1080/01608061.2015.1093057>

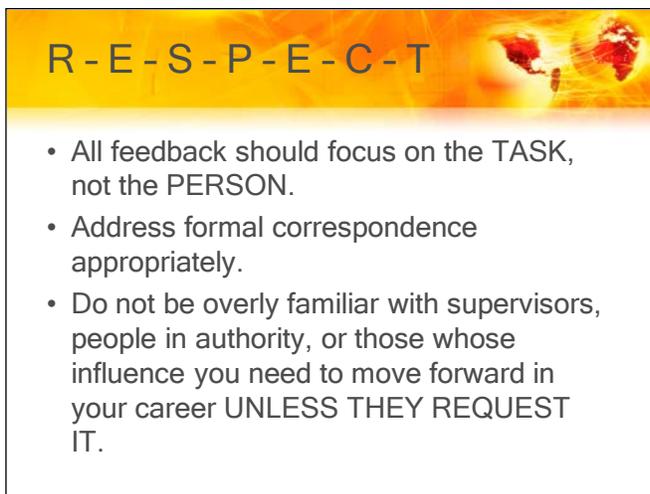
https://www.researchgate.net/profile/Martin_Bressler/publication/281034931_The_Sandwich_Feedback_Method_not_very_tasty/links/5614230008ae4ce3cc6385b0/The-Sandwich-Feedback-Method-not-very-tasty.pdf

<https://www.cambridge.org/core/journals/behavioural-and-cognitive-psychotherapy/article/rightful-demise-of-the-sht-sandwich-providing-effective-feedback/BA231E7EDBD052D55C911C564B70A60B>

You can build in peer reviews and peer evaluation to group or individual projects, oral or recorded presentations, written reports, and even discussion board posts. When you're including this in a lesson, be sure to either provide students with specific details to look for or a rubric for evaluation.

Here's a resource on how to provide constructive feedback:

https://www.bellarmino.edu/docs/default-source/faculty-development-docs/TLC_24_Effective_Feedback.pdf?sfvrsn=0



R - E - S - P - E - C - T

- All feedback should focus on the TASK, not the PERSON.
- Address formal correspondence appropriately.
- Do not be overly familiar with supervisors, people in authority, or those whose influence you need to move forward in your career UNLESS THEY REQUEST IT.

I lurk in several discussion board for professors. A significant proportion of them routinely complain about the lack of respect their students show them in their written communications – failing to include a salutation in an email message, using the same kinds of language that they use with their peers, adding inappropriate emojis or slang terms, and just failing to understand that they don't have the right to demand a change to their grade, nor should they ask, "How can we solve this problem?" when they've been told they failed the latest

quiz or exam and don't take any accountability. They jump over the levels of authority and take problems with a professor directly to the dean instead of trying to solve their issue with the professor first.

Most of the learning that students experience in college is outside of the classroom: how to get along with others, realizing that people can have very different views about the world, figuring out how to navigate common life problems without running to a parent to fix it, etc. Learning how to respectfully address others and their ideas is one of those skills that they should be working on throughout their education, but is often lacking when instructors are only focused on having students understand their content.

The best way to teach this is to model it.

- Provide students with specific directions on how you want to be addressed. Don't start off your class with college students telling them to call you by your first name. This immediately puts you on an equal social level with your students, and they will take advantage of this. If you wish to move to a more informal interaction, do it after you've established that your

decisions about grades, assignments, and the pace of the course is the final word. It's MUCH easier to start out formal and move to an informal manner of communication than do it the opposite way.

- Give them a format for emailing or texting you. I don't recommend sharing your phone number with students because you'll receive drunken texts, weird memes, or even sexual comments if you're young enough.
- Address them respectfully when speaking to them. (Give respect to get respect!)
- Have them practice providing negative or constructive feedback while respectfully acknowledging that the person they're critiquing is not a total idiot who should never have been accepted into the class.
- Insist on students speaking to each other without any racist, sexist, or homophobic terms. If you overhear students using them, call them out on it, saying that a classroom is a professional learning environment, and **regardless of their beliefs**, those terms are inappropriate to use, even if they're only trash-talking with a friend.

Clarity

- Can I re-take a quiz?
- What did I miss?
- What's going on with my grade?
- I need a better grade than this.
- This is terrible.



Students are frequently unclear with their comments, questions, and evaluations. They confuse their opinion with facts. They believe they have rights they don't actually have. They feel entitled to overly excessive accommodations. Their questions are not focused, their ideas are all over the place, and they don't have a good grasp of their personal responsibilities.

Of course, this doesn't describe every student. But when communicating about their needs, their problems, and their ideas,

they need to learn how to get quickly to a point without excess or irrelevant information.

Clarity Characteristics

- Know your point
- Focus on behavior
- Keep it short and simple
- Politely ask for a response



For example, students who are asking for an extension on an assignment or are providing an excuse for missing a class, quiz, or exam, may go into great detail about a personal illness – including photos! Others will send a message complaining about their grade, disparaging the professor, and then demanding a grade increase. Others will spend paragraphs writing about how much they like your class and they really, *really*, **really** need a better grade to [keep their scholarship, enter another program, go to

graduate/medical/veterinary school] and try to impress you by how much they like you and your class in order to have you bump up their grade. Some think that the more information they share with you about the hardships in their life will automatically make you feel so sorry for them that you'll pass them on little or minimal effort.

Have students practice communicating with clarity for several situations:

- When they have to apologize to a group for not participating or helping as much as they should.
- When they have to ask for a letter of recommendation for an important career move or entrance into a specialized program.
- When they have to ask a supervisor for an extension on a project due to a situation out of their control.
- When they have to ask a colleague for help on a project and they're not sure the colleague has enough time to help.
- To request that an elected official look into an issue in their neighborhood or that personally impacts them.
- When telling a group member that they need to be more productive.

Conclusion

- You can embed teaching these skills in any subject you're teaching.
- You should model them yourself in all your interactions with your students.

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Sharing thoughts, questions, ideas and solutions

COLLABORATION
Working together to reach a goal. Putting in talent, expertise, and smarts to work

CRITICAL THINKING
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CREATIVITY
Trying new approaches to get things done equals innovation and invention

These skills aren't automatically picked up by students when you're teaching. If you specifically tell students what you're attempting to model, whether it's critical thinking when reading an article or evaluating a piece of news, creativity when coming up with solutions to a real-world problem or applying the content information in a real-world setting, collaboration with colleagues for your research, in designing and evaluating group projects or team-based activities, or communicating with your students about the

subject you're teaching, assignments, lack of participation, or student responsibilities, you're showing your students how successful adults in the working world manage their careers.

For your students, these "soft skills" will be just as important decades from now, long after they've forgotten the content knowledge you've tried to teach them.

Give a man a fish, and you'll feed him for a day. Teach a man to fish, and you feed him for a lifetime.



Your students need lifetime skills in order to be successful thinkers, communicators, and collaborators to solve problems we haven't identified yet, using technology that hasn't been invented yet, in careers that don't exist today. Do you want your future lives in the hands of people who have to be told how to solve every problem, and then complain that they have to think for themselves?

Thank You!



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