

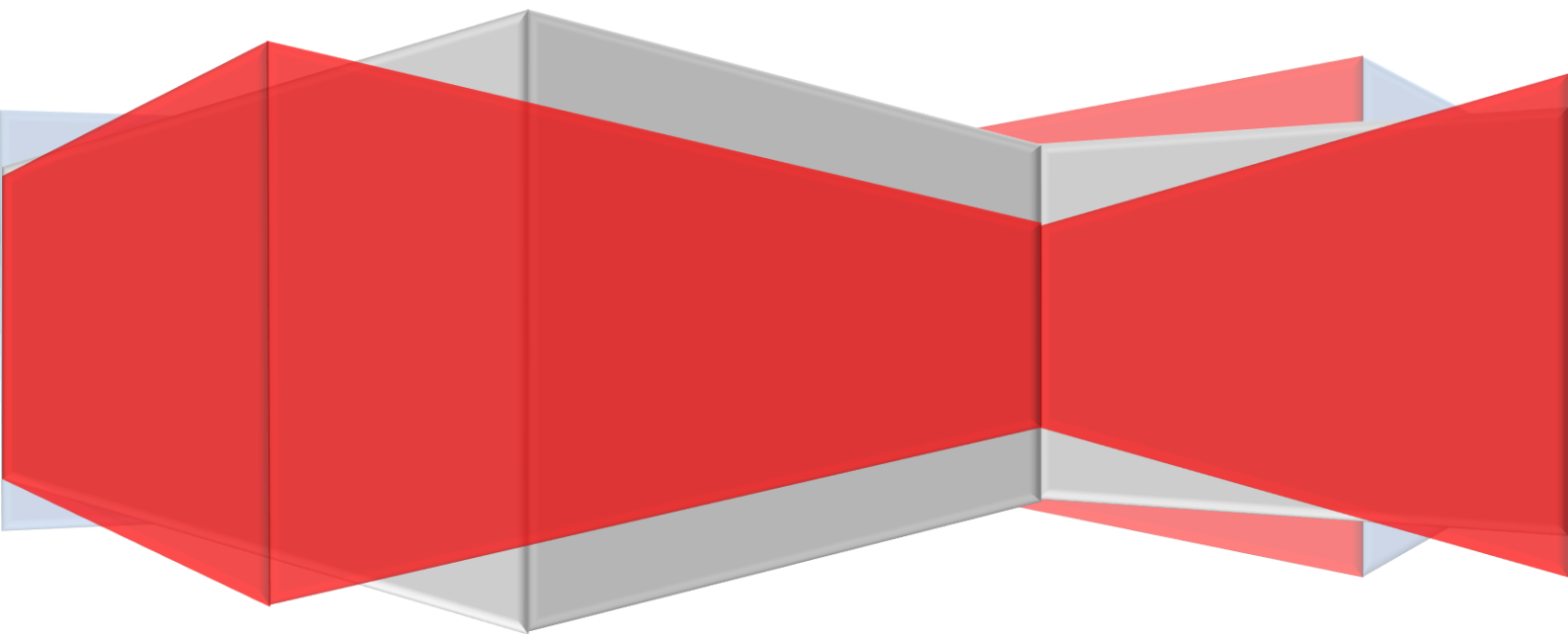
**Cultivate school entrepreneurial mindset through holistic approach
targeting teachers and pupils**



Additional Theories for PPT

IO5A8: 3.3 Coping with Uncertainty, ambiguity and risk

Partner Responsible: DIMITRA



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Cultivate school entrepreneurial mindset through holistic approach targeting teachers and pupils



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Tyrnavos

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16	<p>1st option: The answer would be uncertain because of the lack of sufficient information and predicting the outcome of an event is difficult. This is uncertainty.</p> <p>2nd option: Given the background and the knowledge of the things the gardener will do, the student can weigh which of the two plants will most probably grow, and it is an example of a risk.</p>
21	<p><u>Effectuation Theory:</u></p> <p>Sarasvathy proposed the theory of effectuation in the early 2000s after studying a sample of expert entrepreneurs with diverse backgrounds. Effectuation theory is often considered a process theory because it explains the process that entrepreneurs use to create new ventures. Effectuation theory stems from the way that expert entrepreneurs think about problems and how they go about solving them.</p> <p>Effectuation logic contrasts with what Sarasvathy calls "causation theories" of entrepreneurship, where it is proposed that entrepreneurs start with a goal and then acquire the resources needed to achieve the goal, in a linear fashion. Each resource acquisition is a step toward the goal.</p> <p>In stark contrast, effectuation logic involves evaluating resources that are available to use today and then deriving goals out of what can be made from the recombination of those resources. Thus, entrepreneurs don't just recombine resources to meet goals, they accept floating goals within a set of limits and allow the resources that are available now to guide the evolution of their strategies. By forgoing the need for expensive resource like large sums of startup <u>capital</u>, effectuators do in kind deals that achieve their desired effects.</p> <p>Elaborating on the theory, Sarasvathy suggested that effectuation involves five core principles.</p> <p>1) The bird in the hand principle: A bird in the hand beats two in the bush—This refers to maximizing the use of what an entrepreneur knows (i.e., their background and experience), who they know (e.g., friends, family and others around them), and aligning options based on who they are (i.e., what are the entrepreneur's abilities).</p> <p>2) The affordable loss principle: Only take on affordable losses—Don't obsess about windfall profits, but do try to minimize potential losses. This involves taking low probability bets, but only with a small investment of resources lost with each failure.</p> <p>3) The crazy quilts principle: Make crazy quilts—Weave potential deals with potential partners until something sticks. Many iterations are often required.</p> <p>4) The lemonade principle: Make lemonade means to see potential in depressed or under-utilized resources. This is similar to the alertness principle.</p>

	<p>5) The pilot in the plane principle—Focus on today, not next year.</p> <p>Effectuation theory continues to gain research attention from entrepreneurship scholars and has made its way into entrepreneurship textbooks. There is some evidence that expert entrepreneurs use effectuation logic more often than causal logic, providing some support for the theory. One meta-analysis suggests that most of the core effectuation behaviors are positively related to venture performance (Read, Song and Smit, 2009).</p> <p>As an example, a chef using causal logic decides to cook a particular meal recipe and then gathers the requisite ingredients to do so. A chef using effectuation logic looks in the fridge to see what ingredients are available, then improvises a meal using what is there. Causation logic is rational and may be best employed in situations that do not involve too much uncertainty. By contrast, effectuation logic is useful when there is uncertainty about the goals of the entrepreneur, and therefore, no definable selection environment to analyze (Chandler, DeTienne, McKelvie, and Mumford, 2011). From : https://entrepreneurshiptheories.blogspot.com/2017/08/sarasvathy-effectuation-theory.html</p> <p>Additional: https://www.emerald.com/insight/content/doi/10.1108/JSBED-02-2017-0030/full/html https://www.diva-portal.org/smash/get/diva2:708973/FULLTEXT01.pdf</p>  <p>Effectuation_Theory.pdf</p>
31	<p>In project risk management, known unknowns usually are treated as “risks”. Unknown unknowns are considered impossible to identify or imagine. Project managers try to maximize known knowns by detecting as many unknown knowns as possible. It is impossible to identify all risks in advance for many reasons, and unidentified risks remain as unknown unknowns until they actually happen.</p> <p>In relation to the information in the matrix, you will evaluate the risk and decide if it is worth taking.. This will in turn affect your plans. Finding more unknown unknowns means converting them to known unknowns so that they become manageable using project risk management.</p>
32	<p>Once probable risks are identified and organised in a list, they must be evaluated to determine the level of impact (consequence) - i.e. will there be a negative impact, and how serious will it be?</p> <p>We can grade the identified risks, according to two criteria: probability of occurrence and the impact. Using the scale from 1 to 5, visualising the aspects along the two axes is useful to better remember the risks at play. This way, it is more possible for us to adapt our everyday decisions appropriately.</p>
41	<p>Some refuse to speak. Some prefer not to participate. Some turn red every time you mention their name. Some are perfectionists.</p>



	<p>Others stutter and struggle to put two sentences together in a presentation, when you know for a fact they are brilliant students.</p> <p>It all stems from a single root: the inability to deal with failure in a society that demands constant overachievement. The fear of what others might say and what friends might think. The terror of feeling ridiculous and exposed.</p> <p>So what can we do to lighten the load on our students and encourage them to think of failure more positively?</p> <p>1. Be careful not to overcorrect</p> <p>It's no secret—we want students to improve in every possible way. For that reason, we genuinely believe we are doing them a favor when we correct their mistakes. While that is true to a certain extent, it should be measured. Interrupting students to correct them is distracting. It leads them to believe they are continually messing up—which, in turn, might lead to them not wanting to participate at all. Even making mistakes requires having some personal space.</p> <p>2. Share a meaningful story</p> <p>All of us have embarrassing or frustrating stories to tell. Moments in which we wanted to scream, run away, or hide until we finally overcame that obstacle. Share those stories. Personally, I often share the story of how I was an epic failure at my first driving exam, or how I wanted to hide in the bathroom and cry after first moving to Istanbul because I couldn't express myself decently in Turkish. Both stories have a happy ending—I got my license and became fluent in Turkish—and my students always smile and feel inspired because they can relate. If you prefer to avoid talking about yourself, tell a quick story of a family member, a friend, or celebrity.</p> <p>3. Make fun of yourself and the subject at hand</p> <p>Incorporating some sensible humor into your class can never go wrong. Being theatrical, playful, sarcastic (with care), and silly can sometimes lead students to realize that you are not an authoritarian figure, rather, a human being who is there to help. A playful environment will allow them more freedom to express themselves without fear, and foster the ability to laugh at themselves. Do this by including fun images on your worksheets, memes on your PowerPoints, giving silly (but relevant) examples or providing humorous dialogs for students to read in pairs. You can also be theatrical in your way of delivering certain parts of your class!</p> <p>4. Learn something from your students</p> <p>You are likely to have students in your classroom who know way more about another topic than you do; whether that be music, their own culture, how to</p>
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	<p>use certain technological devices in class, and so on. Get curious and ask: “Do you think you can help me with this device?” or “How do people do this in your country?”. Be curious about whatever they would like to share with you. This works because you are humbling yourself and showing students you are more than somebody who is there to assess them—you are interested in who they are and realize they can teach you something too.</p> <p>5. Teach students to be fair to themselves</p> <p>Anytime a student talks negatively about themselves, make sure to address that student individually—or even in open class, if suitable—and ask: “If your own child or best friend were in your position right now, would you be angry at them for something as small as making a mistake in a classroom? Would you bring them down for not being able to get a certain grade or pronounce things a certain way?” The goal is to make students think of themselves with the same empathy as we think of others. We wouldn’t insult our loved ones over small things, so why should we do it to ourselves? Learning is also an act of discovering how to be kind to yourself, and your students should be the first ones to know that.</p> <p>So What Is the Key To Teaching Failure?</p> <p>The reason encouraging failure in the classroom is so challenging is because it requires us to open up, relax, and not take ourselves too seriously. This is often difficult for teachers, as we might be under pressure due to massive amounts of paperwork, being evaluated by our superiors, taking care of administrative tasks, correcting homework, or assessing students.</p> <p>However, sparing some seconds to apply these strategies can help make life easier on yourself and your students. Acknowledging failure and learning how to manage its side effects is one of many gifts education can give us all, regardless of age.</p> <p>In the end, encouraging others to fail and be ok with failure is all about leading by example. Show your students that you are not always perfect, knowledgeable, and confident. You’ve had to overcome your own obstacles, fight your own battles, face your insecurities, and be embarrassed several times in life before you were able to stand in front of a class.</p> <p>The secret is that it all starts with you and with that one question you should be asking yourself before inspiring your students: When was the last time you failed?</p> <p>Resource: https://www.ef.com/wwen/blog/teacherzone/how-and-why-to-encourage-failure-in-your-classroom/</p>
43	Problem Solving

	<p>What Are Problem-Solving Skills?</p> <p>Problem-solving skills help you solve issues quickly and effectively. It's one of the key skills that employers seek in job applicants, as employees with these skills tend to be self-reliant. Problem-solving skills require quickly identifying the underlying issue and implementing a solution.</p> <p>Problem-solving is considered a soft skill (a personal strength) rather than a hard skill that's learned through education or training. You can improve your problem-solving skills by familiarizing yourself with common issues in your industry and learning from more experienced employees.</p> <p>How Problem-Solving Skills Work</p> <p>Problem-solving starts with identifying the issue. For example, a teacher might need to figure out how to improve student performance on a writing proficiency test. To do that, the teacher will review the writing tests looking for areas of improvement. They might see that students can construct simple sentences, but they're struggling with writing paragraphs and organizing those paragraphs into an essay.</p> <p>To solve the problem, the teacher would work with students on how and when to write compound sentences, how to write paragraphs, and ways to organize an essay.</p> <p>Theresa Chiechi / The Balance</p> <p>There are five steps typically used in problem-solving.</p> <p>1. Analyze Contributing Factors</p> <p>To solve a problem, you must find out what caused it. This requires you to gather and evaluate data, isolate possible contributing circumstances, and pinpoint what needs to be addressed for a resolution.</p> <p>To do this, you'll use skills like:</p> <ul style="list-style-type: none">• Data gathering• Data analysis• Fact-finding• Historical analysis <p>2. Generate Interventions</p> <p>Once you've determined the cause, brainstorm possible solutions. Sometimes this involves teamwork since two (or more) minds are often better than one. A single strategy is rarely the obvious route to solving a complex problem; devising a set of</p>
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	<p>alternatives helps you cover your bases and reduces your risk of exposure should the first strategy you implement fail.</p> <p>This involves skills like:</p> <ul style="list-style-type: none">• Brainstorming• Creative thinking• Prediction• Forecasting• Project design• Project planning <p>3. Evaluate Solutions</p> <p>Depending on the nature of the problem and your chain of command, evaluating best solutions may be performed by assigned teams, team leads, or forwarded to corporate decision-makers. Whoever makes the decision must evaluate potential costs, required resources, and possible barriers to successful solution implementation.</p> <p>This requires several skills, including:</p> <ul style="list-style-type: none">• Analysis• Discussion• Corroboration• Teamwork• Test development• Mediation• Prioritizing <p>4. Implement a Plan</p> <p>Once a course of action has been decided, it must be implemented along with benchmarks that can quickly and accurately determine whether it's working. Plan implementation also involves letting personnel know about changes in standard operating procedures.</p> <p>This requires skills like:</p> <ul style="list-style-type: none">• Project management• Project implementation• Collaboration• Time management• Benchmark development <p>5. Assess the Solution's Effectiveness</p> <p>Once a solution is implemented, the best problem-solvers have systems in place to evaluate if and how quickly it's working. This way, they know as soon as possible</p>
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	<p>whether the issue has been resolved or whether they'll have to change their response to the problem mid-stream.</p> <p>This requires:</p> <ul style="list-style-type: none">• Communication• Data analysis• Surveys• Customer feedback• Follow-through• Troubleshooting <p>Here's an example of showing your problem-solving skills in a cover letter.</p> <p>When I was first hired as a paralegal, I inherited a backlog of 25 sets of medical records that needed to be summarized, each of which was hundreds of pages long. At the same time, I had to help prepare for three major cases, and there weren't enough hours in the day. After I explained the problem to my supervisor, she agreed to pay me to come in on Saturday mornings to focus on the backlog. I was able to eliminate the backlog in a month.</p> <p>Here's another example of how to show your problem-solving skills in a cover letter:</p> <p>When I joined the team at Great Graphics as Artistic Director, the designers had become uninspired because of a former director who attempted to micro-manage every step in the design process. I used weekly round-table discussions to solicit creative input and ensured that each designer was given full autonomy to do their best work. I also introduced monthly team-based competitions that helped build morale, spark new ideas, and improve collaboration.</p> <p>Highlighting Problem-Solving Skills</p> <p>Since this is a skill that's important to most employers, put them front and center on your resume, cover letter, and in interviews.</p> <p>If you're not sure what to include, look to previous roles—whether in academic, work, or volunteer settings—for examples of challenges you met and problems you solved. Highlight relevant examples in your cover letter and use bullet points in your resume to show how you solved a problem.</p> <p>During interviews, be ready to describe situations you've encountered in previous roles, the processes you followed to address problems, the skills you applied, and the results of your actions. Potential employers are eager to hear a coherent narrative of the ways you've used problem-solving skills.</p> <p>Interviewers may pose hypothetical problems for you to solve. Base your answers on the five steps and refer to similar problems you've resolved, if possible. Here are tips</p>
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	<p>for answering problem-solving interview questions, with examples of the best answers.</p> <p>Resource: https://www.thebalancecareers.com/problem-solving-skills-with-examples-2063764</p> <p>Additional:</p> <p>https://www.mindtools.com/pages/article/newTMC_00.htm</p> <div style="display: flex; justify-content: space-around;">   </div> <p>What_is_problem_solving.pdf paper_inte_final.pdf</p>
48	<p><u>IDEAL Strategy</u></p> <p>IDEAL Problem Solving Strategy</p> <p>First on the list we have is a strategy that was introduced by Bransford and Stein in 1984. It's called the "IDEAL" approach of problem solving. Let's break it down.</p> <p>I – Identify the problem D – Define the cause E – Explore possible strategies A – Act L – Look and Learn</p> <p>Let's learn about each letters in IDEAL problem solving strategy.</p> <p>First is Identifying the problem. Rather than going with the blame game, try to find what exactly is the problem? The real problem may not be the one that you're facing right now. For example: Sales team failed to meet targets this year. Rather than blaming entirely on the sales, try to find what caused them to fail this month. May be there was not enough support from development team to improve the product or support team wasn't helping. There's always a cause that leads to a problem, that's the first step.</p> <p>Second is Defining the cause. After finding out all the possible reasons, define the problem in one line. What exactly is the problem? Not the situation that you're facing because that can be one of the results of the main cause. Define the cause, in one simple line. Defining the cause can save you from many upcoming problems. For example, if a company failed to perform to complete a task on time, and the cause is "Weak communication between teams", there more than one problems that can be solved by solving the cause.</p> <p>To solve "weak communication between teams", you can implement various tools for communication. By solving the cause, work productivity can also be improved. The time taken for tasks will reduce, and average time to complete a project will reduce. Hence, solving a case will solve multiple problems.</p>

	<p>Third is Exploring possible strategies. Now that you know the cause that formed the problem, again you have to brainstorm. Think about all the possible solutions and strategies that can be easily implemented at your workplace. You should definitely take suggestions from your teammates, as they have suffered the problem.</p> <p>The fourth step is to Act. Choose from the list of possible solutions and start acting on it. Here's the fun about not wasting your time and killing productivity. When you try a new solution quickly, you will see the changes very quickly as well. Now, if you think a particular solution is not solving the problem, you can quickly shift to the next solution. That way, you'll find the needed workflow in a short span.</p> <p>The last one is to Look back and Learn because there's always some learning. There's a great quote from Robert H. Schuller, "Problems are not stop signs, they are guidelines." Stopping the problem was not in your hand at some point, but you can stop the upcoming bizarre events by learning a lesson.</p> <p>IDEAL is one of the finest problem solving strategies because it is a general theory. Not just for your workplace, you can implement this problem solving strategy for personal benefits too.</p> <p>Resource: https://www.minterapp.com/3-effective-problem-solving-strategies-know-workplace/</p> <p>Additional: https://www.tntech.edu/cat/pdf/useful_links/idealproblemsolver.pdf</p>
60-62	<ol style="list-style-type: none"> 1. Design iterative work (i.e., work that deserves and is conducive to revision and iteration) How does this promote failing forward? If there's no stopping point, then mistakes are simply opportunities. Say: "Your design work on the app blueprint is coming along nicely. Awesome job using the feedback from the subreddit you got the idea from." 2. Use project-based learning How does this promote failing forward? Not only does PBL encourage iteration, but it also reduces the snapshot effect of academic assessment, where stakes are high, errors are costly, and there is almost always a right and wrong answer. Say: "Your first two drafts didn't work so well, huh? What can you take from each of them—what's salvageable and what's not?" 3. Help students publish their thinking How does this promote failing forward? This helps mistakes become a matter of transaction between the student and their audience, i.e., the writer and the reader. Say: "How did your audience respond to your ideas? Based on that, as data, how might you respond?" 4. Connect students with communities How does this promote failing forward? In the classroom, students are motivated by performance and image; in a community—assuming it's one the student cares about—they are motivated by the effect of the work and an identity that's crafted over time. Or they should be anyway, depending on the nature of the connection with the community. 5. Develop a grading system that suggests it



	<p>How does this promote failing forward? Good old-fashioned extrinsic motivation. So give them points for correcting mistakes instead of not making them to begin with. Say: “This essay was well-conceived; loved the clear purpose here, so you got full points for your initial execution. For the remaining points, you’ll now need to go back and revise this and edit that and that.”</p> <p>6. Recognize it with badges, feedback, and celebration How does this promote failing forward? As with #5, you don’t just claim to embrace mistakes, you provide instant feedback for it as a good thing with some kind of gamification, or merely a genuine one-on-one conversation with the student. Say: “I was especially proud of the way you revisited this problem and found a better solution; you’ve now unlocked this achievement.”</p> <p>7. Consider a no-zero policy (i.e., don’t “allow” zeroes as a team, grade level, or department) How does this promote failing forward? When you insist that every assignment has to be completed by every student regardless of circumstance, you send a powerful message that all work is important. So A) Make sure the work they do is, in fact, worth their time, but B) Let them know through a well thought-out no-zero policy that failing to turn in an assignment isn’t the end of anything, nor will it simply become a mathematical effect on their grade.</p> <p>8. Use Habits of Mind How does this promote failing forward? Habits of Mind promote non-academic priorities that are hugely personal, and, once internalized by the student, valuable in and out of the classroom.</p> <p>9. Help students practice metacognition How does this promote failing forward? The more they can monitor their own thinking and performance, the more flexible they have a chance to be in real-time while doing the work to begin with, especially when you’re not around. Say: “When you got to this point in the design process, what was your main focus?”</p> <p>10. Model failure How does this promote failing forward? You, as a professional, are modeling the humility and perseverance it takes to fail forward. Say: “I created this test to help me understand what you understand, but I messed up; it doesn’t do that very well. In fact, it’s confused both you and me, and now I have to figure out how to respond.”</p> <p>11. Study failure (often by those with “street cred” for students) How does this promote failing forward? See #10, only this time it’s someone outside the classroom, so it has a chance for a different kind of credibility. Say: “In 1895 when Nikola Tesla’s lab burned and he lost many of his notes and much of his equipment, he could’ve rested on his reputation and gotten a cushy job working for someone else. Instead...”</p> <p>12. Require students to revise all incomplete work (and it’s “Incomplete” if it’s not proficient) How does this promote failing forward? This is a similar to a no-zero policy—all work needs to demonstrate a certain level of quality, or it needs to be improved. Say: “This is so close to representing what you’re able to do. How can we take this and use it to push further?”</p> <p>13. Grade for 2 or 3 prioritized ideas, not 10</p>
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	<p>How does this promote failing forward? Oftentimes, those students in need of the most help have the most to improve upon/recover from after feedback and grading. Keep it simply. Grade in stages, or better yet, personalize the grading for that student.</p> <p>14. Help them be their own best critic (not worst)</p> <p>How does this promote failing forward? If you can help them, in fact, become their own best critic, they'll hold themselves to a higher standard than you ever could. but from a position of possibility, not judgment.</p> <p>15. Have a crystal-clear grading policy that is knowledge and experimentation-friendly, rather than closed and risk-averse</p> <p>How does this promote failing forward? By studying your grading system, you can be more certain what it "encourages." By sharing it with others, you can get their feedback, revise it until it encourages what you'd like it to, and then make sure students understand how they're being graded and why.</p> <p>16. Have a short memory as a teacher if it benefits learners</p> <p>How does this promote failing forward? Mistakes should be temporary; students can't have a growth mindset if their learning leader holds grudges.</p> <p>17. Help students create and use checklists</p> <p>How does this promote failing forward? This one more protects the student from that initial failure than helps them respond after they do.</p> <p>Say: "This checklist should help you as you begin planning your project. If it doesn't, let's revise it until it does."</p> <p>18. This one isn't simple, but differentiate or personalize learning</p> <p>How does this promote failing forward? The more just enough, just in time, just for me it is, the more it can suggest true ownership by students—and ownership can lead to pride, pride to grit and affection and improvement.</p> <p>19. Gamify your classroom by highlighting the process and nuance of student performance</p> <p>How does this promote failing forward? The more visible the process of failure and recovery are, the more "failure literature" students can be, and the better they'll be able to duplicate the failure-recovery process on their own.</p> <p>20. Emphasizing iteration and progress over finishing and completion</p> <p>How does this promote failing forward? Like #1, this focuses on learning as a process; unlike #1, this has less to do with how you design the work, and more with how students see the work you've already planned and how they approach it. (#19 can come in handy here as well.)</p> <p>21. Every student has their own goals, sensitivities, and insecurities. As much as you can, honor that</p> <p>How does this promote failing forward?</p> <p>Say: "You're one of the most creative students I've ever met with extraordinary potential. With that in mind, I've developed a unique grading system for you this 9 weeks to see if we can't use all that talent."</p>
62	<p><u>Risk Analysis</u></p> <p>Risk analysis involves examining how project outcomes and objectives might change due to the impact of the risk event.</p> <p>Once the risks are identified, they are analysed to identify the qualitative and quantitative impact of the risk on the project so that appropriate steps can be taken to mitigate them. The following guidelines are used to analyse risks.</p> <p><u>Resource:</u></p>

	<p>https://www.pmi.org/learning/library/risk-analysis-project-management-7070#:~:text=Risk%20analysis%20involves%20examining%20how,be%20taken%20to%20mitigate%20them.</p> <p>Additional: https://www.investopedia.com/terms/r/risk-analysis.asp https://www.patriotsoftware.com/blog/accounting/small-business-risk-analysis-assessment-purpose/</p> <p>  Risk_Analysis_1.pdf Risk_Analysis_2.pdf</p>
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