Body: stand straight, two feet spread evenly  
Rate: medium, Pitch: medium, Volume: high, Quality:

(Below, focus on pause and emph.)

TODO: increase intent.

TODO: focus on how to say it.

TODO: figure out whether the tomorrow’s leader’s makes sense.

TODO:

Who are tomorrow’s leaders of the world? Is it the MBA from an Ivy League School? Or the PhD from a top-ranked engineering school?

TODO  
Who are tomorrow’s leaders? Who shapes the trends and innovation of tomorrow. The one that knows a lot about a little, or the one that knows a little about a lot?   
  
(opt. pause- make the audience think)   
  
By the way, the type of person with the skill sets I just mentioned have names. The former is a generalist. The latter is a specialist.

(short pause)

While not a rule, a manager of a consulting company with an MBA might be a generalist, and a scientist with a PhD might be a specialist. The debate between the merits of a generalist and specialist is age-old, and I’ve seen it on my GRE writing. And both sides seem to have an argument.

Statistics show that all CEOs, as an identifier of leadership, have an MBA from an Ivy League school. Quote from … . And I agree. They are trained to have the skills to manage and be leaders. I think it is who you know, and not just what you know. Specialists are trained .

The thing is, if you look online for a form of this argument today, you’ll find several articles arguing for the importance of the generalists in today’s globalized world, with the main argument being that generalists can see (slt emph) the bigger picture (emph-up), adapt to a changing environment (emph-up), and promote team building (emph-up) – all of which are necessary in this increasingly flat world. But, not too many articles exist that make this same case for *specialists*; can’t specialists (body: / emph: ) have these positive qualities too, even if they don't have the actual leadership training that instills these qualities (vocal: emph)? I would like to provide an argument that specialists can shape the ideas of tomorrow also.

As I see it, there are 3 different ways scientists and engineers can develop these strong qualities associated with a generalist. (pause).   
  
1. specialist can understand the bigger picture of the work they are doing. Many publications, particularly those in computer science, are judged by novelty. Knowing the novelty of a solution involves constant assessments of needs in society. Grant proposals require a broader impact section, and scientists must have a way to come up with good cases for their research, otherwise they will not get funded to do what they are doing.   
  
2. even though specialists don't know broad skill sets, specialists often have this unique ability to learn *how* (emph) to learn, allowing them to pick up a broad skill set if needed. The act of doing a lab experiment to find a new virus requires a discovery process that involves learning new things as you go. Coming technologies abound. up with new algorithms and implementing them requires one to pick up skill sets in an uncertain environment where several   
  
3. specialists are *already* team-builders. Cross-lab collaborations are a big part of working together in research. It's often up to the scientists to s*eek out* these collaborations, and this involves networking. Once a collaboration has been formed, it involves finding a way to work as a team. Faciltating, listening. The training of many specialists, notably PhDs, often requires some aspect of teaching undergraduate students. This involves leading students to collectively learn in the classroom (by making sure to answer all their questions), and planning and overseeing group projects of the class. The skills acquired here in teaching students can be transferred to leadership skills.   
  
(Pause)  
  
Generalists may be in high-demand due to their abilities to have a broad range (body: / emph: ) of skill sets applicable in many domains. Yet in my opinion, the viewpoint that various articles suggests is that only generalists are well-equipped to take on leadership roles, and this viewpoint sometimes implicitly suggests that specialists *aren’t*. If one considers the skills that a specialist must have to succeed in her job, this viewpoint may be a bit extreme. A specialist can learn to adapt / understand broader impact, and build teams too.   
  
Perhaps their skills won't be as refined as managers, but they can learn on their own and pick up skills, if they worked hard at it, to get practical, real-world experience doing it. In my opinion, it's a matter of realizing how the skills a scientist or engineer already has (shortPause) can be transferred in the context of managerial positions. Once realized, it’s then a matter of practicing and engaging oneself in such leadership positions, and thriving through the energy that specialists so often have.

For those young people, I say get encouraged to pursue science and engineering, even after college graduation. Having been through the process.

More broadly speaking, it seems to me that it's really up to a person's motivation and hard work, rather than their degrees or certifications, that makes a person a leader.

Meta-tasks : 1. don’t give away too much 2. Make a todo list

Introduce MBAs .

The business-savvy or the math and science? The MBA who is networked. Or a PhD who has worked tirelessly.

First (body: ), a specialist can understand the bigger picture of the work they are doing. Many publications, particularly those in computer science, are judged by novelty. Knowing the novelty of a solution involves constant assessments of needs in society. Grant proposals require a broader impact section, and scientists must have a way to come up with good cases for their research, otherwise they will not get funded to do what they are doing. The ability to understand related work can be expanded through using their skills to broaden their knowledge and become better.

First (body: ), a specialist can have a general knowledge. The scientist must understand related work. To do this involves constant reviewing of articles. This may make the scientist overly specialized in their fields. However, there is a skill set involved in acquiring the specific knowledge. A specialist can find these skills to build a rough landscape of the world around them. This picture may not be the best. The manager could help smooth the rough edges. But the specialist is able to find a unique perspective of the world that a manager may not have thought of.

Organize thoughts better 🡪 when you put your mind to it, some really good things can happen.

Second, (body: ), don't know broad range of skill sets, but specialists often have this unique ability to learn how to learn, allowing them to pick up a broad skill set if needed. The act of doing lab experiments to find a new virus requires discovery process that requires learning new things as you go. The discovery process involves forming a hypothesis, testing the hypothesis, designing conclusions. In each part, the scientist must navigate unknowns to come across a conclusion. Doing this continuously doesn’t necessarily increase the specialists knowledge. But, behind the scenes, what it’s simultaneously doing is enhancing the ability to pick up new knowledge on the fly, increasing their abilities to infer knowledge from one piece of knowledge. If a specialist truly wanted to and took the effort to, he or she could become a generalist using their strengths as a specialist.

Third (body: ), specialists are *already* team-builders. Cross-lab collaborations are a big part of working together in research. It's often up to the scientists to s*eek out* these collaborations, and this involves networking. Once a collaboration has been formed, it involves finding a way to work as a team. Faciltsting, listening. The training of many specialists, notably PhDs, often requires some aspect of teaching undergraduate students. This involves leading students to collectively learn in the classroom (by making sure to answer all their questions), and planning and overseeing group projects of the class. The skills acquired here in teaching students can be transferred to leadership skills.

Cross-lab collaborations are a big part of working together in research. It's often up to the scientists to s*eek out* these collaborations, and this involves networking. Once a collaboration has been formed, it involves finding a way to work as a team. Faciltsting, listening. The most basic collabs are student-teacher based.

Who are tomorrow’s leaders? Who shapes the trends and ideas of tomorrow? The one that knows a lot about a little, or the one that knows a little about a lot? (opt. pause- make the audience think)   
  
By the way, the type of person with the skill sets I just mentioned have names. The former is a generalist. The latter is a specialist.

(short pause)

While not a rule, a manager of a consulting company with an MBA might be a generalist, and a scientist with a PhD might be a specialist. The debate between the merits of a generalist and specialist is age-old, and I’ve seen it on my GRE writing. And both sides seem to have an argument.

Statistics show that all CEOs, as an identifier of leadership, have an MBA from an Ivy League school. Quote from … . And I agree. They are trained to have the skills to manage and be leaders. I think it is who you know, and not just what you know. Specialists are trained .

The thing is, if you look online for a form of this argument today, you’ll find several articles arguing for the importance of the generalists in today’s globalized world, with the main argument being that generalists can see (slt emph) the bigger picture (emph-up), adapt to a changing environment (emph-up), and promote team building (emph-up) – all of which are necessary in this increasingly flat world. But, not too many articles exist that make this same case for *specialists*; can’t specialists (body: / emph: ) have these positive qualities too, even if they don't have the actual leadership training that instills these qualities (vocal: emph)? I would like to provide an argument that specialists can shape the ideas of tomorrow also.

As I see it, there are 3 different ways scientists and engineers can develop these strong qualities associated with a generalist. (pause).   
  
1. specialist can understand the bigger picture of the work they are doing. Many publications, particularly those in computer science, are judged by novelty. Knowing the novelty of a solution involves constant assessments of needs in society. Grant proposals require a broader impact section, and scientists must have a way to come up with good cases for their research, otherwise they will not get funded to do what they are doing.   
  
2. even though specialists don't know broad skill sets, specialists often have this unique ability to learn *how* (emph) to learn, allowing them to pick up a broad skill set if needed. The act of doing a lab experiment to find a new virus requires a discovery process that involves learning new things as you go. Coming technologies abound. up with new algorithms and implementing them requires one to pick up skill sets in an uncertain environment where several   
  
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(Pause)  
  
Generalists may be in high-demand due to their abilities to have a broad range (body: / emph: ) of skill sets applicable in many domains. Yet in my opinion, the viewpoint that various articles suggests is that only generalists are well-equipped to take on leadership roles, and this viewpoint sometimes implicitly suggests that specialists *aren’t*. If one considers the skills that a specialist must have to succeed in her job, this viewpoint may be a bit extreme. A specialist can learn to adapt / understand broader impact, and build teams too.   
  
Perhaps their skills won't be as refined as managers, but they can learn on their own and pick up skills, if they worked hard at it, to get practical, real-world experience doing it. In my opinion, it's a matter of realizing how the skills a scientist or engineer already has (shortPause) can be transferred in the context of managerial positions. Once realized, it’s then a matter of practicing and engaging oneself in such leadership positions, and thriving through the energy that specialists so often have.

For those young people, I say get encouraged to pursue science and engineering, even after college graduation. Having been through the process.

More broadly speaking, it seems to me that it's really up to a person's motivation and hard work, rather than their degrees or certifications, that makes a person a leader.

META-TODO: add priorities to TODO’s.

META-TODO: figure out logistics of TODO’s.

META-TODO: figure out whether we need to be concrete below, or put in more?

META-TODO: Add in more about persuasion.

TODO: check wording below for leaders vs. trends and ideas.

Who are tomorrow’s leaders? Who shapes the trends and ideas of tomorrow? The ones that know a lot about a little, or the ones that know a little about a lot?

TODO: check people vs. person .   
By the way, the two types of people with the different skill sets I just mentioned have names. The former is a generalist. The latter is a specialist.

TODO: check the manager of a consulting company, and see if MBA works.

TODO: expand on “both sides” seem to have an argument .

While not a rule, a manager in a large corporation with an MBA might be a generalist, and a scientist in a research lab with a PhD might be a specialist. The debate between the merits of a generalist and specialist is age-old and fundamental, and both sides seem to have an argument.

TODO: think about whether to put search online vs “look online”.

TODO: think about last sentence that aims to give intent.

The thing is, if you look online for a form of this debate today, you’ll find several articles arguing for the increased importance of the generalists in today’s globalized world. One particular article by the Harvard Business Review titled “All Hail the Generalists” argues that generalists can see the bigger picture, adapt to a changing environment, and promote team building – all of which are necessary in an increasingly globalized world. Yet, not too many articles exist that make this same case for *specialists*; can’t specialists have these positive qualities too, even if they don't have the leadership training that instills these qualities? In the below, I hope to convince you how specialists can shape the ideas of tomorrow also, with the skills that they already have.

1. Seeing the bigger picture: Advancements in science are judged by its novelty. Specialists can understand the bigger picture of the work they are doing. Most scientific publications are judged by novelty. Knowing the novelty of a solution involves constant assessments of needs in society. To assess novelty, scientists must usually do a literature search, and constantly be aware of other work in the neighborhood of their research area. The skill of learning about and relating other work to their own can be applied in a management position, where constantly assessing the competition around them is necessary in delivering a successful product to their customers.   
  
2. Adapt to a changing environment: The skills required to find a new virus requires a process that involves learning how to use new lab equipment, or learning a new chemistry equation. In doing scientific experiments, scientists often have this unique ability to learn *how* to learn. A scientist’s skills used to acquire a depth of knowledge on-the-fly can replicated within a management position, where the environment such as stock market exchange data feeds, are constantly changing.

TODO: refine and add todos.   
3. Being a team-builder: Specialists are *already* team-builders. Cross-lab collaborations are a big part of working together in research. It's often up to the scientists to s*eek out* these collaborations and this involves networking. Once a collaboration has been formed, it involves finding a way to work as a team. The skills acquired can be transferred to a management position, where networking is essential to management positions.

As can be seen, realizing how the skills a scientist or engineer already has can be used to in the context of management position.

There’s a bigger point here than whether it’s today’s graduating PhDs or MBAs that will shape the innovation of tomorrow. The true leader of tomorrow will need to be able find our strengths within ourselves, and grow through building upon those strengths, whether or not we have a PhD, MBA, or any certification whatsoever. Given this, we should start finding our own happiness, being thankful for who we are, and appreciating what we have rather than what we don’t have. In other words, it requires strengthening our inherent strengths, rather than trying to fix all our known weaknesses. Once we realize our strengths, it’s a matter of harnessing them to handle our shortcomings, just like the scientist of a national lab above tries to become a manager of a corporation.

Each of us has a set of unique capabilities, but its often easy to forget about what we have inside of us, by focusing on what we aren’t rather than what we are.

Finding one’s strengths and harnessing them

I just showed how someone who may have

(Pause)  
TODO: - make high-demand

TODO: make sentences less of a run-on.   
Generalists may be in high-demand due to their abilities of have a broad range (body: / emph: ) of skill sets applicable in many jobs. Yet, in my opinion, the viewpoint that various articles suggests is that only generalists are well-equipped to take on leadership roles, and this viewpoint sometimes implicitly suggests that specialists *aren’t*. If one considers the skills that a

specialist must have to succeed in his or her job, this viewpoint may be a bit extreme. A specialist can learn to adapt, understand broader impact, and build teams too.   
  
TODO: add intentionality.

TODO: fix word “managers”

TODO: fix “once realized”

Perhaps their skills won't be as refined as managers, but they can learn on their own, and if they worked hard at it, to get practical, real-world experience doing it. Once realized, it’s then a matter of engaging oneself in such leadership positions, and thriving through the energy that specialists so often already have.

TODO: add in content about young people here.

TODO: expand on this, and integrate with the above.

TODO: fix qualifier “more broadly speaking”.

More broadly speaking, it seems to me that it's really up to a person's motivation and hard work, rather than their degrees or certifications, that makes a person a leader. For those young people, I say get encouraged to pursue science and engineering, even after college graduation. Having been through the process.

Who are tomorrow’s leaders?

Who are tomorrow’s leaders? Those that know a lot about a little, or those that know a little about a lot? By the way, the two types of people I just mentioned have names. The former is a generalist. The latter is a specialist. While not a rule, a manager in a large corporation with an MBA might be a generalist, and a scientist in a government research lab with a PhD might be a specialist. The debate between the merits of a generalist and specialist is age-old, and both sides seem to have an argument.

The thing is, if you look online for a form of this debate today, you’ll find several articles arguing for the increased importance of the generalists in today’s globalized world [2]. One particular article by the Harvard Business Review titled “All Hail the Generalists” [3] argues that generalists have an added edge to be leaders, because they can see the bigger picture, adapt to a changing environment, and promote team building – all of which are important leadership qualities in an increasingly globalized world. Yet, not too many articles exist that make this same case for *specialists*; can’t specialists be leaders too, even if they don't have the training that instills these leadership qualities? In the below, I hope to convince you that they can, by showing how a specialist, e.g. a scientist of a government research laboratory, can use her strengths to take on a leadership role typically assigned to a generalist, i.e., a manager of a large corporation.

1. Seeing the bigger picture: Most scientific publications are judged by novelty. To assess novelty, scientists must usually do a literature search, in order to be aware of other work in the neighborhood of their research area. The skill of learning about and relating other work to their own can be applied in a management position, where constantly assessing the competition around them is necessary in delivering a successful product to their customers.   
  
2. Adapting to a changing environment: In carrying out a scientific experiments, scientists almost always must acquire an ability to learn *how* to learn. For example, the discovery process of a new biological virus involves learning how to use new lab equipment, or learning a new chemistry equation. A scientist’s skills of learning how to learn acquired while carrying out an experiment can be replicated within a management position, where the impact of a sudden drop in housing prices to customer demand needs be assessed quickly in order adapt the goals of the company to satisfy this new customer demand.

3. Being a team-builder: Cross-lab collaborations form a big part of working together in research lab. It's often up to the scientists to s*eek out* these collaborations, and this involves networking. Once a collaboration has been formed, it involves finding a way to work as a team, bringing the best of each person’s strengths to make the collaboration work effectively. The skills acquired in research collaborations can be transferred to a management position, where teaming up the right people and synergizing their abilities is critical to sustained productivity.

As can be seen, the skills a scientist already has can be used in the context of management position. 🡨 make sure a positive /neutral stance is taken here.

There’s a much bigger point here, and it’s not about whether it’s today’s graduating PhDs or MBAs that will define the trends and paradigms of tomorrow. With the advent of online courses and degrees [3], there are a myriad of opportunities for self-development for those who never had them. Thus, those who make a difference tomorrow may not have degrees like a PhD, MBA, or any certification whatsoever, and instead might be the ones that can quickly find strengths within themselves, and further develop their strengths. And if this is the case, then to succeed in tomorrow’s world, we need to be thankful for what we have rather than what we don’t, focus on the one thing that makes us truly happy rather than the dozen that make us only adequately satisfied, and build on what we have already accomplished rather than amend our perceived failures. In other words, we should recognize the best of what we have -- and make it even better -- rather than thinking about and fixing what we don’t. Once we focus on what already have within us, we are more likely to also turn what we don’t have into what we do, just as the scientist above uses what she already has to her advantage to rise up to the challenge of a management position.

To those high school seniors trying to be part of every club this year to look as well-rounded as their peers on their college applications, maybe go back to that school-wide competition you randomly decided to do in junior year and got 3rd place in – and see if you can get 1st place in the division-wide competition this year. To those at the tail end of college trying to fix their cumulative GPAs to make up for freshman year grades in order to avoid having to explain their GPA to prospective employers, maybe think again about that one course project report you aced – and see if you can publish it as a best paper in a top-tier conference. To those currently working but thinking they need to do graduate school to get a promotion, maybe think again about that code snippet you wrote for an entire weekend that freed you up the next 7 weekends -- and see if it can top the 10,000-download-mark on sourceforge. Because if you follow your passions and build on them, rather than continually trying to get more certifications and validations from the world, you might just find that being a leader in tomorrow’s world is only a couple steps further.

To those in high school trying to be part of every club possible in their senior year before applying to college, maybe go back to that math competition you got 3rd place in during junior year – and see if you can get 1st place. To those in college trying to fix their GPAs in their senior year before applying to jobs, maybe go back to that one project report you aced during sophomore year – and see if you can publish it in a top-tier conference.

maybe choose that one club you’ve always been part of throughout, and work towards becoming president of it. To those in college trying to fix their GPAs , because their freshman year grades were bad, maybe go back to

Even to those deep in their careers, maybe find that team with whom you developed a game-changing technology many years ago, and bring that team back together, generalize that technology to other areas, and write a book.

spend time who have spent their lives in a particular job, don’t follow what you haven’t done.

And when we bring that unique perspective, we have a real impact on this world.

successfully carry out the role of a manager of a corporation. An individual can transcend the limitations of their training to rise up to a challenge of a role they are faced with. Whoever they want to be.