Key Learner Characteristics that Produce Academic Success

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Abstract

Colleges continue to struggle to increase student success. This paper, through meta-analysis of research that identifies factors that significantly increase student success, presents a model of a quality collegiate learner: a student who would be successful in any undergraduate program. In integrating 20 years of empirical research concerning "Learning-to-learn" with the student success research, we develop strong support for 50 learner characteristics that enhance success. These are organized into seven performance categories: learning processes, productive academic behaviors, growth mindset, academic mindset, learning strategies, affective learning skills and social learning skills. Each of these characteristics has a significant impact on student success and has been shown to be malleable. Our empirical research illustrates that the Learning-to-learn Camp produces significant improvement in each of these 50 success factors.

Introduction

Ample research exists regarding students' failure to progress in and/or graduate from high school and college (Horton, 2015) and the challenges confronting secondary and post-secondary educational institutions as they strive to increase their completion rates (Kuh, 2006). The volume of research in this area has increased significantly over the last couple of decades as pressures mounts through policy changes such as the drive towards performance based funding.

Learning-to-learn Camps provide hope for successfully addressing these completion rate challenges. Over 20 years, Pacific Crest and the members of the Process Education Academy have improved, refined and contextualized these camps to effectively improve student learning performance and skills and the non-cognitive skills as documented in student growth papers written during the camps (Apple, 2015). Table one, Profile of a Quality Collegiate Learner (PQCL), present the success factors arranged according the aforementioned performance categories. It presents characteristics that significantly increases students' probability of academic success as measured by graduation rate and GPA and is validated by the research literature and our empirical studies.

The PQCL has 50 dimensions of learner performance, with performance criteria describing expectations for the learner. There are seven other performance areas tables that provide references to specific research studies and students' descriptions of the transformational learning produced by the Learning-to-learn Camps. This set of tables is a powerful illustration of the transformational learning produced by the Learning-to-learn Camps.

Table 1 Profile of a Quality Collegiate Learner

Master Learner:	Uses the Learning Process Methodology to construct transferable knowledge through thinking critically and generalizing
Reads:	Links the reading process to the learning process to produce understanding and meaning through thoughtful inquiry
Writes:	Consistently uses writing to help think, clarify and document ideas, plans, thoughts, and reflections of learning
Thinks Critically:	Asks critical questions, analyzes information, and synthesizes meaning to elevate understanding and clarity
Solves Problems:	Identifies and defines problems with key issues and assumptions and produces validated solutions that are generalized
Processes Information:	Engages all senses to access information quickly and distinguishes relevant from irrelevant information and its level of quality
Reflects:	Takes time to produce higher level of learning, understanding of self, and reasons behind actions and decisions
Engaged:	Brings 100% of energy and involvement to each learning activity every day
Focused:	Applies all mental efforts to the tasks at hand and filters out all distractions
Prepared:	Understands expectations, has a plan for learning, has completed all preparatory work
Organized:	Knows when, where, and what needs to be done in a timely and systematic way
Self-grower:	Wants to grow from every experience - sets growth goals, self-challenges, self-assesses, self-mentors and mentors others
Committed to Success:	Does all that is necessary to reach the milestones towards stated goals
Self-assess:	Sets criteria for each performance, makes key observations, reflects on and analyzes these observations, behaviors, and actions, and consistently makes improvements without being prompted by others.
Positive:	Energetic, passionate and invested in life by seeing the value, opportunity, and beauty in each new situation and person
Self-starter:	Take the initiative to begin each new experience quickly with a plan to maximize the opportunities and learning
Open to Feedback:	Wants to improve future performance by seeking out feedback from whatever channel they can and turn this feedback into assessment
Open-minded:	Receptive to diverse views, perspectives, and paradigm-shaking ideas, suspends judgment
Self-challenges:	Pushes themselves outside their comfort zone, thus increasing failure and growth opportunities
Clarifies Expectations:	Knows what others want delivered by which dates and can establish standards of quality by writing performance criteria
Inquisitive:	Constantly seeks new knowledge in multiple forms and from many disciplines by asking lots of interesting questions
Self-efficacious:	Has a strong belief in who they are, who they can become, and their ability to be successful in everything they attempt

Self-motivated: Has passion and desire to explore new information, concepts, and challenges in areas of interest

Self-confident: Approaches each new task with self-assurance that any new challenge can be mastered

Life Vision: Evolves a vision for life based upon an analysis of the past, present, and future that includes life goals, and a well constructed plan for achieving these accomplishments

Goal Setting: Sets clear goals and supporting objectives, maintains a constant focus on producing results aligned with these goals

Learner Ownership: Takes full responsibility before, during, and after each learning experience for constructing the expected knowledge by their own means

Use Resources Effectively: Explores all aspects of the college and each course to inventory each resource, its potential use, and how to effectively use that resource given a useful situation

Validates: Affirms their own understanding and growth with certainty

Metacognition: Understands the implications of their behaviors and actions on others and adapt appropriately for each changing situation.

Plans: Before action, stops and thinks of how to do something effectively and lays out a structure to produce the quality work desired

Persists: Uses failure as a frequent and productive road to success

Manages Frustration: Puts things into perspective so current context doesn't overwhelm current performance

Manages Time: Allocates time for the most important tasks and then effectively uses that time

Prioritizes: Effectively balances life by putting first things first while taking care of self

Self-disciplined: Has self-control to do what is needed to be done even though other things are more enjoyable and exciting

Takes Risks: Does publicly something that has a great potential impact but where outcomes are not known and failure is very possible

Leverage Failures: Realizes the growth potential coming from each failure through action plans

Asking for Help: Perseveres through difficult tasks by making good decisions about when to seek help

Works Hard: Diligent, works long hours and uses parallel processing to increase work produced per hour of time

Adapts: Keeps changing and responding to new context

Team Catalyst: Brings a positive attitude, like supporting and helping others, congratulates others, fills in gaps in a cohesive manner, and is empathetic when others are having difficulties with their performances or personal lives

Collaborative: Partners with others, performs their roles effectively, asks for help when it is needed, and supplies assistance to others.

Responsible: Conscientious and can be counted on to produce quality work in an ethical way that exceeds expectations within the allocated time and resources

Assertive: Contributes proactively within a community and a team to add value and not be marginalized

Connected:	Has many friends, communities, and activities that influence growth and development of self and others
Communicator:	Is effective in interactive conversation in informal and formal settings that includes articulating new ideas
Seeks Diversity:	Understands and appreciates the values, differences, and perspectives of others and suspends judgment of others
Speaks Publicly:	Assesses audience, prepares a clear meaningful message and articulates with impact to change minds
Wellness:	Maintains balance by taking care of self, sleeping effectively, exercising, eating well and engaging in social activities

Profile of a Collegiate Graduate

Accreditation agencies, regional and professional, have been raising the public's expectations that educational programs demonstrate outcomes that enhance graduate success in their professional and personal lives. As can be seen in the PQCL, almost every learner characteristic listed there is a trait that businesses, government, education, non-profits, and graduate schools demand. It is our contention that an initial emphasis on Learning-to-learn would help all institutions of learning achieve the outcomes that these stakeholders desire.

This paper is a cornerstone in the series of Learning-to-Learn research papers. It describes the transformation of an at-risk learner into the student that every college and faculty member would like to work with and who will be successful at their institution. This Quality Collegiate Learner has the capability of being successful in any academic challenge - high school, undergraduate college, professional programs, or pursuing advanced graduate degrees. Success factors are learnable. Thus, their identification is the first step in enabling colleges to establish programming that supports their development. It is our experience that even in the face of numerous significant personal issues, for examples those faced by many students at open access colleges, every individual can be empowered to overcome them and become successful.

Definition of Academic Success

The most common dependent variables representing student success identified in the literature are 1st year retention, graduation rates, and GPA. Farrington et al. (2012) present a strong argument based on the results of 7 major studies that past GPA is the strongest predictor of future academic success.

Success Factors

A success factor is a definable learner characteristic that has been shown to contribute significantly to academic success. The PQCL was first developed from our empirical studies that analyzed the student self-growth papers from a variety of Learning-to-learn Camps. The students identified growth areas that were meaningful to them in relationship to future performance. We then took this model and compared these learner characteristics to those identified in a large meta-analysis of many different studies of student success conducted by Farrington et al. (2012). In fact, this research alone identified half of the success factors discussed in this manuscript: study skills, attendance, work habits, time management, help-seeking behaviors, metacognitive strategies, and social and academic problem-solving skills that allow students to successfully manage new environments and meet new academic and social demands (Conley, 2007; Farkas, 2003; Paris & Winograd, 1990). Other studies have added additional critical success factors, including students' attitudes about learning, their beliefs about their own intelligence, their self-control and persistence, and the quality of their relationships with peers and

adults (Ames & Archer, 1988; Bandura, 1997; Bandura & Schunk, 1981; Keith, Keith, Troutman, Bickley, Trivette, & Singh, 1993; Pintrich, 2000; Schunk & Hanson, 1985; Wentzel, 1991; Zimmerman, 1990). An integration of the results of these studies with our own work led to the PQCL, where each success factor is empirically defensible, most often by multiple studies.

A cursory search of the web revealed numerous sites promoting means to increase college students' success. We found more than 40 of the PQCL learner characteristics (Table 2) in just 13 sites (Table 3).

Table 2 Success Factors Identified on "College Success" Websites

Report	1	2	3	4	5	6	7	8	9	10	11	12	13	T
Engage	X	X	X	X	X			X	X	X	X	X		10
Connect		X	X			X	X	X		X		X	X	8
Organized			X			X	X	X	X		X		X	7
Prioritize		X			X	X			X		X		X	6
Clarify Expectations							X	X		X	X	X		5
Leverage failure	X					X		X				X	X	5
Life vision	X	X								X	X		X	5
Manage Time		X	X						X	X			X	5
Plan		X				X			X		X		X	5
Focus (Concentrate)			X	X	X	X		X						5
Ask for help			X								X	X	X	4
Inquiry	X									X	X	X		4
Using resources effectively		X					X		X				X	4
Writing for Learning			X							X		X	X	4
Wellness					X			X			X		X	4
Goal setting	X										X		X	3
Maintain balance (wellness)							X			X			X	3
Manage Frustration						X					X		X	3
Positive			X			X					X			3
Self-discipline									X		X		X	3
Support group							X		X		X			3
Accept feedback						X					X			2
Assertive											X	X		2
Collaborate		X								X				2
Critical thinker	X										X			2
Empathetic	X											X		2
Intern/work			X										X	2
Persistence						X					X			2
Personal Finance Management										X			X	2
Prepared				X				X						2
Reads											X	X		2
Respectful								X				X		2
Self-assess				X							X			2
Self-challenge						X					X			2
Self-starting			X									X		2
Set High expectations				X		X								2
Communicate			X											1
Decision Making													X	1
Learner Ownership				X										1
Open minded						X								1
Self-Confident			X											1
Self-efficacy												X		1
Self-growth									X					1
Servant leadership	X													1
Take risks	X													1

Table 3 Websites Dedicated to Preparing College Students for Success

#	Name of Site	URL	Sponsoring Agency
1	Secrets of the Most Successful College Students	http://ideas.time.com/2013/03/13/secrets-of-the-most-successful-college-students/	Time Magazine
2	Six Habits of Successful College Students	http://www.foxbusiness.com/personal-finance/2013/01/07/six-habits-successful-college-students/	Fox Business
3	How to Be a Successful College Student	http://www.wikihow.com/Be-a-Successful-College-Student	Wikihow.com
4	Top 10 Secrets of College Success	http://www.usnews.com/education/blogs/professors-guide	USNews
5	Making the Grade: Tips on Being a Successful Student	https://www.scholarshipexperts.com/resources/campus-life/how-to-be-a-successful-student-in-college#.VVzbh7t_mM8	ScholarshipExperts.com
6	The 15 Habits of Top College Students	http://www.washcoll.edu/live/files/3704-the-15-habits-of-top-college-students.pdf	USNews
7	The Perfect 10: 10 Easy and Essential Tips for Students Entering College	http://www.college.emory.edu/home/assets/documents/learning/EssentialTipsFreshmen.pdf	Emory College
8	Study Skill Workshop #1: Habits of Successful College Students	http://www.lbcc.edu/LAR/documents/SS%20video%201%20Habits%20Suc%20Students.pdf	Long Beach CC
9	10 Ways to Be a Successful 1st Year College Student	https://www.niagara.edu/assets/listpage/10-Ways-to-Be-a-Successful-1st-Year-Student.pdf	Niagara University
10	Student Guide to Creating a Successful College Experience	http://www.purdue.edu/checklist/BGR/	Gallup-Purdue Index (GPI)
11	The 14 habits of top college students	https://www.universityparent.com/topics/academics/the-14-habits-of-top-college-students/	University Parent
12	A Professor's Pointers for Success in College: 21 Easy-to-Follow Tips	http://www.huffingtonpost.com/ann-marie-gardinier-halstead/a-professors-pointers-for_b_5654706.html	Huffington Post
13	Success in College Guide	https://mappingyourfuture.org/successincollege/	Mapping Your Future

Alternatively, meta-analyses of decades of research surrounding the Big-Five personality model and its relationship to success identified of these 32 learner characteristics (Barrick & Mount, 1991; Komeraju et al, 2011).

There are additional learner characteristics that both students and Learning-to-learn Camp facilitators documented as important but were not included in the PQCL because we were not able to justify them with published research. These included: 1) a strong Identity as a learner ; 2) being empathetic/respectful; 3) having developed a strong support system; 4) personal financial management; 5) being ethical; 6) listens actively; 7) makes good decisions; 8) professional; 9) generalizes; 10) uses methodologies; and 11) servant leadership.

Transforming Risk Factors into Success Factors

Pacific Crest has demonstrated the transformational power of the Learning-to-learn Camps (Apple, 2015). Farrington's work (2012) also supports the contention that quality, short-term interventions that target students' psycho-social beliefs—for example students' beliefs about their intelligence, social belonging, or the relationship between their performance and future goals—have a substantial and

sustained positive influence on school performance (e.g., Blackwell et al., 2007; Good, Aronson, & Inzlicht, 2003; Oyserman, Terry, & Bybee, 2002; Walton & Cohen, 2007).

Two widely cited psychologists, Duckworth and Seligman (2005), suggest that academic performance depends in large part on students' self control or "conscientiousness", concluding that "*a major reason for students falling short of their intellectual potential [is] their failure to exercise self-discipline*" (p. 939). They claim that measures of self-discipline are far more predictive of positive academic outcomes than are measures of IQ. In her seminal work on academic mindsets, Carol Dweck and her colleagues (2011) cite "academic tenacity" and educational interventions that target it, as having a transformative effect on students' experience and achievement in school, improving core academic outcomes such as GPA and test scores months and even years later.

Classification of Learner Success Factors

There are several different and useful ways that the success factors can be classified. For example, using the "Big Five" personality mode (Table 4), the most commonly used system in personality studies, the factors can be organized as follows.

Table 4 Big Five Model

Conscientiousness	Extraversion	Openness to Experience	Neuroticism (Lack of)	Agreeableness
Organized Plans Responsible Works hard Validates Prepared Self-disciplined Committed to Success	Being Positive Speaks Publicly Self-starter Assertive Communicator Connected	Seeks diversity Reflection Inquisitive Life vision Meta-cognition Focused Engaged Information Processor Critical Thinker	Self-efficacy (doubt) Confident (Anxious) Focused (scatterbrained) Managing Frustration (helpless) Taking Risks Leveraging Failures (Give up)	Professional Collaborative

However, personality is viewed to be a fairly stable trait, and we believe that the success factors can be changed – thus empowering improved academic performance. As a result, we have chosen to organize the success factors according to a framework modified from that proposed by Farrington et al (2012) and with a pedagogical orientation (Table 5). Thus their "Social Skills" becomes Social Learning Skills and "Perseverance" becomes Affective Learning Skills (including "Grit"). We retained the remaining categories: Academic Mindset, Learning Strategies, and Academic Behaviors and added two additional categories: Learning Processes and Growth Mindset.

Table 5 Learner Performance Areas

Learner Performance Area	Description of Performance Area
Learning Processes	A set of very valuable, explicit, step-wise learning processes that every quality learner should continually improve.
Productive Academic Behaviors	Expected behaviors that faculty/teachers have of students and when not exercised lead to non-academic success.
Growth Mindset	Belief that learning performance is not fixed but can be improved significantly.
Academic Mindset	Successful learners have mindsets that know they belong, enjoy their learning challenges and academic work, find value from their efforts and know they will succeed.

Learning Strategies	Are very valuable learner practices (practices, tools, strategies, and approaches) when used more effectively lead to greater academic success.
Affective Learning Skills (Grit)	The affective domain of the classification of learning skills has many very valuable skills leading to having "Grit" and greater academic success.
Social Learning Skills	The social domain of the classification of learning skills has many very valuable skills leading to greater academic success.

Figure 1 illustrates the relationship among these Learning Performance Areas.

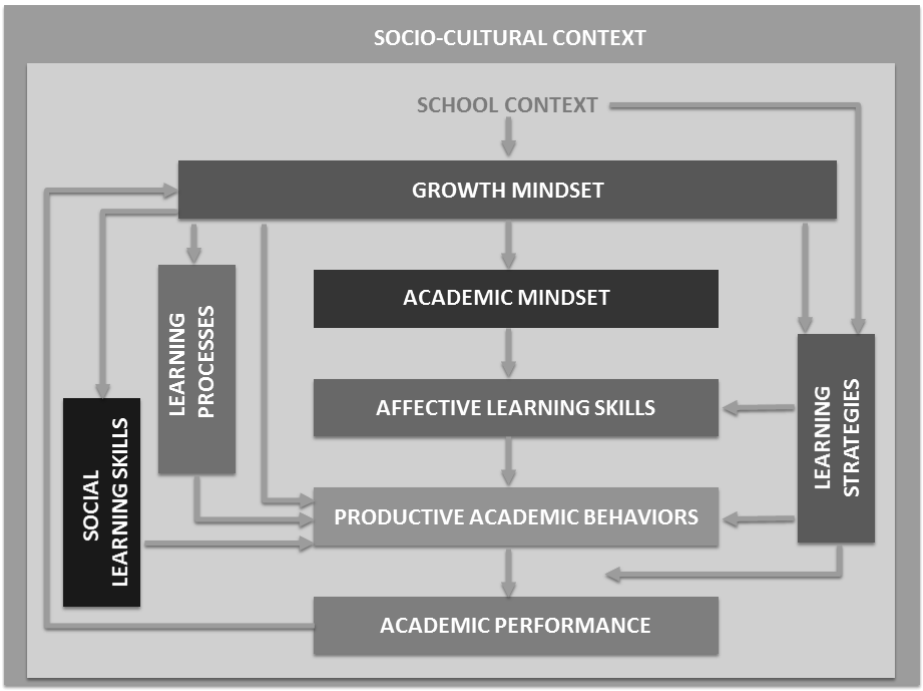

Figure 1 Modified Farrington et al (2012) Diagram

Learning Processes

Academic Success has long been associated with key learning processes which are essential for success in an academic setting (Table 6). At the heart of being a collegiate learner is understanding how knowledge is constructed (**Learning**) - identifying why and what needs to be learned, collecting and processing relevant vocabulary and information, using examples and expert models and through critical thinking produce meaning and understanding, and then contextualizing and generalizing this knowledge so it becomes part of working expertise.

The learning process is supported and enhanced by other processes. It begins with **information processing**, which requires the learner to identify the informational base most likely needed to produce the desired learning. Students are expected to spend between 20% - 35% of their time learning through **reading** and this performance is critical for academic success and life-long learning. The **writing** process and **writing to learn** help the learner construct knowledge and then demonstrate their learning through their writing on tests and academic papers. At the heart of learning, reading, and writing is **critical thinking**. The stronger the learner's thinking capabilities, the stronger the other processes become. The ability to apply knowledge in **problem-solving** situations, in both academic and personal contexts has a significant impact on their success. An important, but often overlooked learning process is **reflection** – metacognitively stepping back from any activity to learn more about what, why and how we are performing – and thus providing an opportunity to improve. Each and every day, students constantly

make learning decisions based upon these learning processes and the better the decisions, the more successful they become.

Table 6 Learning Processes: Supporting Research Along with Student Reflections

Success Factor	***REF***	**Student Written Descriptions from Self-growth Papers and Letters to Friends**
Learner	*1,6, 23, 26, 31*	"At the beginning of the camp, I didn't know how to learn. I seemed to think I knew how to learn, however, based on my success in high school. I didn't understand there was a complex methodology to the process of learning, which can help immensely. From identifying necessary skills and background knowledge, taking this process step by step helped me understand not only what I'm learning but why I want to learn. ... I wanted to learn at a faster rate so I could be a more efficient student in college."
Information Processor	*38, 39*	"Before coming to this program, my research paper experience was limited at best. At any mention of a research paper, I would feel sick to my stomach. I hated completing the papers because of a fear of citing improperly. ... I have been given a wealth of knowledge on how to write a research topic, how to find the best sources, and how to cite the information. The seminars on the library database, article validation, and the research methodology helped me gain confidence within my sources and citations. I felt good about the information I was applying to my paper topic. ... I think this growth was caused by my personal interest in finding useful sources, and the wealth of knowledge that was provided on the subject."
Reader	6,23,11	"Once the Reading Methodology was introduced to me I had an epiphany. I couldn't believe all of the information I was missing by just reading and highlighting my textbook one time. The six steps that make up this Reading Methodology range from establishing a purpose for your read down to synthesizing information. It helps the reader implement active reading, thinking and to become more critically engaged in what you are reading. Looking back at my reading skills I have realized that I wasn't doing any thinking, I was just simply scanning over the words, I wasn't truly comprehending what I was reading. Knowing and understanding the steps the reading methodology has given me, I have the tools to overcome my weaknesses and to become a strong more active reader. Along with this a Reading Log was introduced, which I feel is the best tool I was given this entire week. It really allows a reader to map out exactly what they are looking for while they read."
Writer	1,6,23,26	"For one, I usually spent too much time writing and not about thinking about the material itself. Once I started writing down and brainstorming before an assignment, it became much easier. .... Even on this paper, I have used the writing methodology, exploring and assessing my performance on the essay. It is truly a valuable thing."
Thinks Critically	*1,6, 23, 3, 26*	"The reason why I was missing the questions is because I was not critically thinking. I should have analyzed the question, took out key terms, understood what it was asking and then answered the question. Since learning how to critically think, seeing a question I now understand it and understand exactly what the question is asking."
Problem Solver	1,6, 23, 31, 36	"For me, the most impactful and insightful one dealt with problem solving. ... By laying out an effective and proven plan step by step I was able to see on paper the process that I was attempting to formulate in my head. Seeing the process that worked on paper allowed me to compare it to my process which I thought worked efficiently and see where it could be improved. For me this was a huge step because it meant being able to finally fully analyze my thoughts. ... My issue has always been that I essentially skip the last half of the steps to effectively problem solve. ... I now know what to do in order to help myself in solving personal problems after analyzing them."
Reflector	5,6,23,26, 31,39	"I learned a lot about myself and I figured out who I am really am as well as what I want to achieve in my life. For example, I have a deep passion to follow my dreams and one day become a surgical nurse. Before I barely understood who I was and what I really wanted to do. , I was able to write down everything I am, what I want to do, what the positive and negative aspects are in my life as well as who I love and hate, what I don't like and my entire life was being written down for my own knowledge. I grew to understand who I am and who I can become if I achieve my dreams and goals. I have one focus and only one main focus, which is to reach success and intrinsic happiness."

Productive Academic Behaviors

Research consistently highlights four academic behaviors shown to be strongly connected to student success (Table 7). Their absence clearly reveals risk (Horton 2015). The first academic behavior is **engaging** in their learning experiences (at the minimal level - attending class) by putting 100% of their energy into the current learning task. The second is **focusing** (at the minimal level - paying attention) so that time on task produces more learning. The third critical academic behavior is **preparing** by reading, completing assignments, and otherwise being ready to respond to a class activity (at the minimal level - bringing required materials). The fourth success factor is being **organized**, knowing what one needs to do, by what time, and at what quality (at the minimal level - doing homework). Taking notes and following instructions is a good indicator that these academic behaviors are in play. Notice that these are expectations that almost all teachers have. If missing, the educator often believes that the student doesn't care about his or her learning and success.

Table 7 Productive Academic Behaviors: Supporting Research Along with Student Reflections

Success Factor	*REF*	**Student Written Descriptions from Self-growth Papers and Letters to Friends**
Engaged	*1,6,14,18, 21,26,29*	"This program is about you making the personal decision to extend yourself as high as you can possibly can go. ... Once you have that motivation, all the skills and knowledge will follow"
Focused	*5,39*	"staying focused on your work at all times, which can be achieved through having some type of self-discipline, take risk because you just might be performing the tasking or answering the question correctly."
Prepared	*6,11,19, 26, 36*	"...completing all readings assigned in for homework because it will allow you to be better prepared the next day in class so that you can contribute to your group activities..."
Organized	*5,6,11, 22, 31, 39*	"This camp has helped me improve my organization skills. I had to get organized to keep up with certain reading logs and other information"

Growth Mindset

Some of the newest research on student success focuses on a growth mindset (Table 8). There is significant evidence that academic success increases when students persevere which ultimately increases their performance, enabling them to meet even more difficult learning challenges. This is called a "growth mindset" (as opposed to a "fixed mindset"). The first factor is commitment to **self-growth**, the ability to improve future performance based upon past performance: increasing capacity. Having both a growth and **open mindset** are essential for growing learner performance since in addition to believing one can grow, one must be open to new techniques, skills, and strategies that support self-growth. The key enabler of a growth mindset is **self-assessment**, the ability to generate ideas to sustain one's strengths and improve one's limitations so the next performance can be improved. This is enhanced by the ability to seek and **accept feedback** from others and use this feedback. The next success factor is **self-challenging** by raising personal performance expectations and taking on difficult challenges. This kind of student learns from failures to enhance future performance. A growth mindset tends to result in the student having the **positive** perspective that anything is possible: a "can do" attitude that results in consistent growth. Finally this kind of student is **committed to success**. Growth is unpredictable without it because life's challenges are sometimes difficult to surmount. All of these learner characteristics can be increased and should be prompted by the learner and rather than waiting for someone else to prompt them, a **self-starting** attitude.

Table 8 Growth Mindset: Supporting Research Along with Student Reflections

Success Factor	***REF***	**Student Written Descriptions from Self-growth Papers and Letters to Friends**
Self-Grower	*2, 5*	"I learned that self growth can be a conscious activity, as opposed to a subconscious one.. I had believed that conscious self growth was an ability only possessed by enlightened monks and the like, but this week taught me that anyone can learn it. I learn that the process of self growth can happen much faster than I thought possible, given the proper conditions. This week was the proverbial perfect storm of those conditions, causing explosive self growth in most people, myself included. Finally, I learned that self growth, even if taught, is still an organic, self-driven process. .. the growth in the end was still in the areas that I wished to improve."
Open Minded	2,9 ,39	"The “Learning-to-learn Camp” exposes you to want to do and be better in what you lack in. I can honestly say it has made me think out the box and expose me to new materials to use throughout my life as I pursue to become a well renowned engineer in my future."
Self-Assesses	*5,6,11,24, 11, 35, 36*	"We learned that we cannot grow from what we produced unless we analyze the final product. Without truly understanding our strengths, areas of improvement, and the insights we gained from the process, there was no way for us to grow from said process. The strengths show where we have improved from where we were before; the areas for improvement help show where we could work to improve the quality of work next time; and finally the insights are what help us understand how to apply what we have taken from the whole process and how we might apply it to a new situation. Through doing this we began to no longer need the approval of another; we could assess ourselves and grow from ourselves, not from the endorsement of another person."
Accepts Feedback	*38, 41,42*	"When I actually take the time to process my failures it is usually rather simple to find where the problem was. For example, if I performed badly on an exam in the past I would just stuff it into the back of my folder and never look at it again. The failure ate away at me, but I tried to find ways to just not think about it. Doing this caused me to continue to fail tests. Now, I understand that ignoring a failure doesn’t fix it and doesn’t make it go away. From this camp I have learned that the only way to be successful is to learn from your mistakes. Analyzing my failures is the only way to find out how I can fix it. Now, if I get a test back with a bad grade, I will be able to identify the circumstances that led to that bad grade and set up an action plan in order to take the steps necessary to performing at a higher level next time. "
Self-Challenges	33	"...it is easy to stay in your comfort zone but nothing different or exciting happens in your comfort zone. It should be called the uncomfortable zone because you are stuck at a standstill..."
Positive	11,2, 26, 39,42	"...I was always beating myself over mistakes that I made. The program aided me in stopping these destructive tendencies and changing my mentality to "what should I do better next time..."
Committed to Success	14,2,21,22, 26,39	"...This program is about you making the personal decision to extend yourself as high as you can possibly can go. ... Once you have that motivation, all the skills and knowledge will follow..."
Self-starter	3,6	"...I grew so much in the past week. I stopped procrastinating as much. I tried to become more motivated, and finally, I become the leader I always knew I could be..."

Academic Mindset

A student's academic mindset has a significant impact on the success of learners in every academic setting (Table 9). First and foremost, love of learning is very helpful in producing a successful performance in a learning environment. Since education is focused on learning and the development of the learner, the more **inquisitive** the learner, the more connected s/he is to the academic environment. Academic success is most often measured with GPA and a critical success factor is **clarifying expectations** - knowing what needs to be done, by when and at what quality in order to achieve the desired grades. A learner's **self-efficacy,** the belief in one's capacity to execute behaviors necessary to produce specific performance attainments is what enables him or her to **self-motivate in order** to reach for them. Every successful performance in the academic setting, especially during evaluation processes, increases the students' **self-confidence**. The academic mindset includes a well developed **Life Vision** with a personal history, a self-analysis, their life's passion, a vision of a personal future, an educational plan, and an integrated career and life plan.

Table 9 Academic Mindset: Supporting Research Along with Student Reflections

Success Factor	***REF***	**Student Written Descriptions from Self-growth Papers and Letters to Friends**
Inquisitive	1,6,26,39	"I now can say that I am an engage in learning ... teaching another person and while in the process I still will be learning. ... This area I know will lead to success in my life because no matter how much you know you can never know enough."
Clarifies Expectations	41,42	"I understand that it is essential for a self-grower to know what is expected of me, know my areas of improvement, and know how to improve those areas. The fact that one of my goals is to learn how to assess myself and accept assessments from others proves that I am willing to find my areas of improvement and work on them."
Self-efficacy	*1,2,6,11,14,17, 26,29,31, 35, 36*	"Being in this camp has helped me grow tremendously and it has opened my eyes that there is always room for improvement It amazes me that I did in four days what I couldn't do in seventeen years. Not only did I grow but I watched others grow right with me"
Self-motivated	*6,17,11,21,26, 29, 35, 36*	"...A self-grower is someone who has achieved a higher level of motivation, intrinsic motivation to be exact. It means that they no longer need someone to push them to go forward, instead they are the ones in control, and they make the critical choices for themselves..."
Self-confident	*17,1,29*	"...If you have confidence and believe in yourself you will pass the program with flying colors..."
Life Vision	16,17,1	"I have never thought about nor asked myself "who am i" the way I have in the past 3 days. I always had a vision or an idea about who I want to be, and I always had a slight idea of who I was but I never truly understood what it meant. I struggled with finding myself for a very long time, I thought I was one person, the married housewife, and when that didn't go as planned I really needed to get back to the drawing board and start over. Even when I knew what I wanted I was never satisfied. I didn't have the dream job I always wanted, I didn't have the education I knew I deserved and I certainly didn't have the husband I wanted. I was floating around wasting everyone's time and money and really not doing anything productive. This camp has taught me the importance of a Life Vision and a Life Vision Portfolio. ... This LVP will hold all of my past and future accomplishments and dreams and I cannot wait to start building it. "

Learning Strategies

Successful students continue to develop, evolve and refine their toolbox for effective learning performances. This toolbox varies significantly from student to student, but the most successful students use most of the strategies in Table 10. Foremost is **setting academic goals** for life, for the program of study, for each term and for every course. When students take **ownership of learning** they

free themselves from being subject to the vagaries of instructors and the learning contexts in which they find themselves. **Planning** enables the learner to make the most productive use of limited time. By identifying and making **use of all the resources** available to them, learners enhance the quality of the performance and the products of that performance. Knowing that errors are always possible, even in the best expert sources, strong learners **validate** their understanding – ensuring that they "know that they know." An important learning strategy that encompasses these other learner characteristics is **metacognition** - thinking about thinking, knowing how you do what you do, and also why do you decide to do what you are doing. And finally - the quality and quantity of success is highly correlated with the effort expended - how **hard you work**.

Table 10 Learning Strategies: Supporting Research along with Student Reflections

Success Factor	***REF***	**Student Written Descriptions from Self-growth Papers and Letters to Friends**
Sets Goals	*17,29,31, 36*	"You must set goals and be driven to reach them on your own because others can't make that decision for you. We are at a point in our life where we must be self-motivated because this is our life and no one has to live with those decisions but us."
Learner Ownership	*1,6,17,29, 31, 35*	"...it taught me how to grow and learn to learn from myself..."
Plans	5, 6,31	"Currently, the outcomes of my efforts are very different. After applying a planned strategy my efforts have been more effective. I have developed problem-solution systems that helps me better analyze what actions to take when faced with a problem. The first step that I take is asking questions. What is the problem at hand? What can I do in order to solve it? What is my most effective way to solving this problem? After asking myself these questions I then begin to brainstorm. I start a list of ideas for possible solutions to the problem, incorporating the steps needed, and how long each process might take. I then pick the most effective solution and work from there. Just a simple change in planning and this process has helped me to excel academically. "
Uses Resources Effectively	42	"Another area that I have improved in is knowing the importance of using the resources on campus and the help of others in order to succeed. During my first year, I rarely asked anyone for help. I did not use the campus resources has much as I should. I did not even step foot into the library until the middle of my second semester. I felt very uncomfortable asking people for help because I did not want anyone's help. ... With the vigorous work that I had to accomplish during the course of this camp, I have learn that I need help! I could not have completed my Learning-to-learn book without the help of my coach, mentor, and group members. I have learn that everyone needs help and cannot do it on their own at times."
Validates	*6,25,29,30, 5, 35*	"If we got the answer then we were asked why we chose that particular answer. Validation is a word I will hear for the rest of my life. Validation is the key word for being successful in college and in life, for if you know why you have the answer then you have a better understanding of what you have learned"
meta-cognition	*1,6,16,23, 26,29, 35*	" Another area where I increased in skill was my meta-cognition. To clarify, this was my ability to switch between an immediate frame of reference and an assessing from a of reference. It includes the ability to know which strategy to use for problem solving, and can be loosely defined as "knowing about knowing". It is also closely related to self knowledge and self assessment."
Works Hard (productive)	6,15,2,3, 26,39	"You have to learn how to manage your time, be productive in the classroom and in life - I was able to accomplish things I never thought I would in this short amount of time."

Affective Learning Skills (Grit)

Grit - the "perseverance and passion for achieving long-term goals" is often associate with the successes of famous historical leaders, and today researchers are overwhelmingly confirming that correlation. The affective learning skill correlates of grit can be found in Table 11. **Persistence**, seeing one's way to the finish line no matter what obstacles are encountered, is perhaps the skill most frequently cited. The willingness to **take risks** and venture into challenges not yet surmounted is another important component. When, inevitably, the results come up short of expectations, successful learners **leverage their failure** and **ask for help** in enhancing their performances for future growth. They handle this failure by increasing their coping skills and **managing frustrations**. In part, frustration is reduced by **prioritizing** (putting first things first), dividing a larger goal into sub-goals and mastering each one in turn, and by planning and **managing time** wisely. The actual effective use of time that is planned requires **self-discipline**, doing what needs to be done no matter what current distractions (pleasurable, for example) that may exist. As new challenges and situations arise, the learners must **adapt** to the new cultural demands and expectations that the colleges impose on learners. The healthier the learner is - physically fit, well nourished, rested, and emotionally balanced - leads to overall **wellness** and greater academic success.

Table 11 Affective Learning Skills (Overall Grit): Supporting Research along with Student Reflections

Success Factor	***REF***	**Student Written Descriptions from Self-growth Papers and Letters to Friends**
Persists	*6,17, 20,1,29,39*	"Just putting myself to the challenge shows that I finally have enough faith I need to try even if I fail. ... If I had a chance to do it all over again I surely would because I would work even harder in the camp. I am proud to say I gave my all, didn't quit and worked to the best of my ability."
Take Risks	2	"I also took a risk this week by signing up for the talent show. I have joked and been the center of comedic attention in my small groups of friends, but never have I done what I am about to do tomorrow. I plan on performing stand-up comedy on stage in front of dozens of people. This is stepping very far outside my comfort zone and if I can do this, I can learn to take more risks in the future. I grew in this area because I decided to finally try something that I wasn't use to and started initiating risk taking."
Leverages Failures	20	"Self-growth is a person looking at his or her life and figuring out what mistakes he or she made and try to improve on them to become successful."
Asks for Help	6,18	"When I got to a problem that I didn't understand, my pride would not let me ask any of my teammates nor mentors for help. I eventually got out of that and started asking for help. When I started asking for help I understood more."
Manages Frustration	*6,14, 20,11,39*	"Once I stopped and released myself to simply learn and not be so driven for to meet expectations and reach success did I actually begin to get something out of this week. My growth was facilitated primarily by my emotions and exhaustion. I learn that it is also important to take care of myself. Some nights I had to go to bed leaving things undone and being unsure when they would get done, which was a new experience for me. I had to decide when was the right time to let myself recover so that I could be productive the next day, too. I also learned that I have more physical, emotional and mental endurance by actually testing them this week."
Prioritizes	*20,18,22*	"I am now much better at planning out my day, making choices on what needs to be done and what is a priority, and that we simply are not capable of doing everything."

Manages Time	*3,5,6,42*	"Time management is a critical factor for determining success in college. I would have to manage my time by making a schedule of how I am going to balance out my social life with my academic life. My academic life is more important so that is where I would spend the most time, .. Even though, my social life is important the academic life is going to be more important for the career I want to pursue, which becoming a physical therapist."
Is Disciplined	*6,15, 20,11,39*	"The "Camp" preps others and including me to take charge of my life and not let any second go by to be waste on foolish things. Work-ethics plays a big asset to my growth also, without that I would not have the initiative to pursue new skills and would not be a reliable source to my team."
Adapts	6,26	" I had to learn to be more self-sufficient. I've always been a very independent person, but I've never stayed the night by myself before this week. By moving into Niemeyer I had no choice, I had to start doing everything for myself. I had to wake up and get ready without my mom telling me to hurry up, and I also had to figure out for myself when I felt I had to go to bed. Because I was thrown into the situation and didn't have any choice but to adapt, I, again, grew up a lot and quickly."
Wellness	37	"Furthermore, I must set fitness goals to keep my body prepared for taking exams and critically thinking. I believe that when you have a healthy body the mind runs faster and accurately. Mentally when I have a sense of understanding in can produce my best work to show correct correlations between knowing and my thought process. To be positive of success, I will have a planner to organize my day correctly. Ultimately, I will be obligated to follow the daily goals I put time into creating for myself. ... Truly I will be capable to pull metacognition off if I am no longer exhausted from Destiny Raids on my gaming system. To eliminate that horrible feeling I will have fitness goals of the days I live on earth. It is clear as day that when I pull these skills together, generally a successful student emerges from the ashes of failure."

Social Learning Skills

Colleges are communities that value knowledge – its learning, creation, application, management, storage, integration, and dissemination. All of these activities are undertaken in dynamic social settings including learning communities, professional organizations, research teams, and so on. Therefore, success in this environment requires a set of universal social skills (Table 12). Communal belonging requires that the learner is **connected** to the community by helping others, contributing to the success of members and the community as a whole, and benefitting in turn from this membership through the reciprocal action of others. **Seeking diversity** brings in a host of new perspectives, values, and ideas that can enhance thinking and problem-solving – and outcomes. All this requires skill in **communication, teamwork** and **collaboration**. **Assertiveness** in bringing forth one's own ideas is enhanced by the capacity to **speak publicly** about ideas and positions with ease. The final social success factor is **responsibility** (following through on the commitments made to self and others). Without these social skills most learners will struggle to meet the requirements that colleges impose.

Table 12 Social Learning Skills: Supporting Research along with Student Reflections

Success Factor	*REF*	**Student Written Descriptions from Self-growth Papers and Letters to Friends**
Connected	14, 21, 26,42	"Working with others was another major aspect of my self-growth into becoming a successor. I never was able to work with others because I grew up not trusting people around me. .. I was angry and terrified because I did not who I was going to be grouped with and wondered if they were going to judge me. So, as we got into group the concept was to interact with one another and being to communicate with people from different background, opinions, and aspects of life. Being in the groups of the course of the week made me realized what I was missing when I was being anti-social with people. If it wasn't for the groups, I would not have learned how efficient and exciting teams that work together get things done. Communication was the key in teamwork that helped me break out of my comfort zone and take the risk of getting to know someone and for them to get to know me as well and not be afraid of them judging me."
Seeks diversity	1,26	"The first and arguably foremost skill I improved was my ability to relate to and respect others. More precisely, I learned how to work as a team and trust that my team members would do their part. ... I was forced to let my team members do their parts simply because I couldn't do it for them. When they succeeded as often as I did, I realized that I could trust and respect them, instead of being condescending and arrogant."
Team player	*6,26*	"...I have come from being unsure of myself in group work and sharing my ideas to being a real team asset, participant, and even leader..."
Collaborative	*6, 11, 14,15, 21, 36,39*	"Example of teamwork that I have displayed is, when my partners/team didn't understand I brought us together to evaluate and do the process of elimination when you can't define exactly what something is. This strength is a well deserve ability and whoever possesses it can one day be a team leader and a team player."
Communicator	17,26	"Communication and coming out of my comfort zone was a little hard for me. I became more involved into working with them but also communicating with them. By me making a decision to talk to people without knowing them has really made me come all the way out of my shell."
Speaks Publicly	1	"At the beginning of this camp I was one girl who was not confident in herself and afraid to speak around others. By the end of this camp I have improved my learning skills by 70% in my opinion and I am now ready to take on any challenge that school or life throws at me."
Assertive	*4*	"At one point our team felt like giving up but I pushed them through it. They called me the motor of the team because of my strength I have to lead. I always thought I was a natural born leader but this camp brought it out of me in the best way possible."
Being Responsible	*6,17, 22, 26, 39*	"learn how to take full responsibility over life and your destiny."

Summary

Process Education looks at learner growth from three perspectives: 1) The Classification of Learning Skills, 2) Self-Growth, and 3) Learning-to-Learn. The Classification of Learning Skills, developed empirically over 2 decades ago, encompasses over 250 learning skills, one important aspect of the PQCL model. In the paper, "What is Self-Growth," Jain's (2015), ten self-growth components are also ten success factors in the PQCL. This paper has provided scholarly evidence that at least 50 of the learner characteristics described in the Profile of Quality Collegiate Learner have substantial impact on collegiate and life success.

That there are 50 factors that facilitate success can be daunting to learner and instructor alike – "Where to start? How to teach and learn them all?" However a strong Process Education environment, as can is found in a Learning-to-Learn Camp (Apple 2015), provides a reproducible context in which each can be practiced, assessed, and grown. Importantly, decades of experience have shown just how malleable these learner characteristics are.

That they can be grown, and that capability and success grow as a result, are profoundly at odds from the historical belief in a fixed "intelligence quotient" (IQ) defining a student's permanent *capacity* to learn. Research in human cognition over the last 30 years demonstrated the limitations of the "IQ" concept.

Today we must redefine what constitutes so-called "intelligence" and the capacity to learn: It is an interplay between personal cognitive and non-cognitive factors, the environment and socio-cultural processes – and it can be changed. This gives us a superior target for a collegiate education (PQCL) and the means to attain it through a pedagogy of Learning-to-Learn and Self-Growth. Our challenge now is to convince every institution of higher education that implementing a Learning-to-Learn Program will ensure that they are able to produce the collegiate learners and college graduates they desire.

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Notes

Cultural Analysis of the Traditional Classroom using the Transformation of Education

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Common Values, Attitudes, and Practices*	*Student Mindset*	*Risk Factor Elevated*
Challenge	Enabling - *Help Students*	"I increase student success by assisting them to do better on papers and tests"	• Teachers help edit students' draft papers before submission • Teachers run review session to prepare students for exams • Content is often rushed or dropped due to time constraints	"Why work hard, bang your head against the wall, or do something ahead of time when you will get the help later and won't waste time when things change."	**Procrastination**
Challenge	Enabling - *Perform the learning*	"I must teach the students so they can learn and be successful"	• Teachers clearly articulate and summarize what they consider the key information in the textbook • Teachers summarize what has been covered during class (defines what is important) • Teachers present solutions to hard homework problems that students couldn't solve	"Why invest in learning something if it is the teacher's responsibility to teach me."	**Underprepared for college-level learning**
Complexity	Memorizing - *Present a large body of information*	"I have all this required content that I must cover during this course for future courses"	• Content rich courses have over 100 learning objectives /competencies that must be covered • Multiple choice exams are the most efficient means to measure learning with large sections or with extensive information • Must limit the number of challenging or complex questions due to lack of time	"I must memorize all of this information so that I recall it for the quizzes, exams, assignments, and essays."	**Memorizers**
Complexity	Memorizing - *Practice lots of problems*	"If I challenge learners to really understand at higher levels (problem solving), they would fail the class"	• Teachers test in areas where students have had lots of homework and practice solving problems • Teachers provide a couple of challenging test problems to identify the "A" students • Teachers limit class time to work on open-ended problems because too much content	"It is unfair to put problems on tests that were not presented in class, on homework assignments, or covered in review sessions"	**Unchallenged**
Control	Teacher Centered - *Exert Authority*	"I know what I want students to learn and I exert my will on them in that direction"	• Teachers will not change dates for exams or provide make up exams in any situation • Teachers decide what is important to learn and when and how it will be graded • Teachers make decisions in the class because they know best what will help the students	"Since faculty have all the control and demand respect, just give them exactly what they want in the way they want it"	**Deferential**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Common Values, Attitudes, and Practices*	*Student Mindset*	*Risk Factor Elevated*
Control	Teacher Centered - *Defines the rules*	"I want students to follow my rules and do what I ask so they will be successful"	• Teachers define what it means to attend class and participate • Teachers want to see work products done in a specific way (format) • Teachers will have a set of class conventions that must be followed else there will be consequences	"I don't really care what happens with my grade if I can't do what I want to do or do in the way I want to do it."	**Irresponsible**
Delivery	Presentation - *share expertise*	"I share my extensive disciplinary expertise with the students"	• Teachers tell students what they will teach them, teach them, and tell them what they have been taught • Teachers explain complex ideas so students can understand them • Teachers create PowerPoint slides as a key resource for the students during class and for review later when studying	"I must capture all of this information because this is what will be on the test"	**Transcribers**
Delivery	Presentation - *monitor that learning is occurring*	"I look at students' body language and listen to their responses to see if they are capturing what I am saying"	• Teachers use questions like - Did you understand? or Did that make sense? or Okay? to determine if students are learning • Teachers ask questions that students can answer to show they have been listening • Teachers give short quizzes to make sure students are paying attention	"I need to let the instructor know that I am paying attention by smiling, nodding occasionally and answering an occasional question when I am sure"	**Head-nodders**
Design	Rigid - *Reuse past courses*	"I know what needs to be covered because of my years of experience in teaching this course."	• Teachers use historical lecture notes which have worked in the past • Teachers and departments collect back graded exams from students so they can be reused in future courses • The department syllabus is reused term after term for consistency and reliability	"Wait till a review session to find out what will be on the test and ask students for previous tests to determine what needs to be studied"	**Cramming**
Design	Rigid - *teach to the test*	"I will provide all examples of how to do the types of problems before they take the exams."	• Teachers provide sample exam problems in lecture and review sessions that closely match the exam problems • Teachers assign a lot of practice problems for homework • Teachers and colleges find it unfair to have students try to solve exam problems in a new context	"I need to remember exactly how to solve each of the types of problems shown and practiced"	**Lack of transferability**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Common Values, Attitudes, and Practices*	*Student Mindset*	*Risk Factor Elevated*
Efficacy	Doubt – *of Self*	"I will be able to help students be successful who are capable, work hard and do all the work"	• Teachers like saying - look to left, look to the right, shake hands now because 1/3 of you will be gone after mid-terms - low completion rates imply high standards and rigor • Teachers constantly say to their students - just work harder, you will be successful • Teachers requests to administration and admissions - please recruit and admit better students who can be successful	"I don't think I am the caliber of the students will be successful but I am"	**Self-doubters**
Efficacy	Doubt - *of Achievement*	"I know that I can improve with new teaching/learning practices, but I think I will wait till I get more effective"	• Teachers have tried it once before and it didn't work thus they no longer trust that practice • Many teachers will wait till others become successful at implementing that practice • Teachers know that if they succeed, no one really cares, but if they fail, they are likely to be admonished	"If I hide in class so as not to expose my weaknesses, then the teachers will pass me because they will not think that I am stupid"	**Non-risk-takers**
Feedback	Evaluation - *of work products*	"I don't like to evaluate, but I must grade students' work to motivate and reward good students' work"	• Colleges provide courses for honor students who can excel and "Mickey Mouse courses" for those who can't (e.g. - Math for Poets) • Teachers observed that students will enroll in sections that are easier (even go to the community college to take the difficult statistics course) • College prevent grade inflation by encouraging teachers to norm their grades	"I must carefully pick courses (review RatemyProfessor) to find the easy courses and easy graders"	**Fear of failure**
Feedback	Evaluation - *of people*	"I must constantly point out where students are weak so they can get better"	• Mark up homework and quizzes to show students' deficiencies that need work • Place comments on essays of what needs to be fixed in their thinking and communication skills • Grade down based on mistakes, errors, and missing the point on exams	"I constantly worry about how well I have done, what teachers think of me, if am I doing good, and should I be worried about the future"	**Self-evaluators**
Measurement	Subjective - *unclear expectations*	"My syllabus gives a list of course content, the required work products, and my grading guidelines"	• Faculty use class time to explain the requirements for work products • Grades are justified with extensive comments • Faculty assign interesting additional work that isn't graded	"I play the grade game to find the minimum amount of work needed for personal success"	**Minimalist**

Aspect	Descriptor and Focus	Faculty Mindset	Common Values, Attitudes, and Practices	Student Mindset	Risk Factor Elevated
Measurement	Subjective - *lack of performance criteria*	"I know quality when I see it"	• Work in progress is critiqued publicly to find out what is fixable • Grading work products is done from the perspective of faculty expertise • Students are often allowed to resubmit work for re-grading after fixing problems	"I work hard and give the teacher what they want."	**Teacher Pleaser**
Ownership	Directed – *tell how-to-do it*	"In a timely fashion, I tell the students how they can be successful."	• Faculty member provides daily messaging about reading assignments and homework, along with due dates • Faculty member recommends changes in the way that project teams is functioning • When students run into course difficulties, the faculty member solves the problem for them	"I want the teacher to tell me exactly what to do (and how)."	**Undisciplined**
Ownership	Directed – *tell what to do*	"Most of my students don't really care about what I am sharing with them in my course."	• Faculty member determines both the depth and breadth of each area course content • Faculty member defines work product specifications as well as performance criteria • Faculty member uses evaluation of homework, quizzes and participation to get students to put forth effort	"I'm taking this course because it is required for my degree."	**Unmotivated**
Self-Awareness	In the moment – *doing*	"As I can get the student to work harder, I can make them more successful."	• Faculty assigns lots of homework practice problems • Having students write lots of academic papers to illustrate knowledge • Faculty takes attendance	"If I go to class, do the homework, and give the faculty what they want on papers and tests, I will get my degree."	**Aimless**
Self-Awareness	In the moment – *live for today*	"Students need to be entertained and need immediate gratification in whatever they do."	• Faculty give bonus points to motivate students • Faculty use flashy technology to entertain • Faculty grade all work to motivate students	"Maximize my grade with minimum effort."	**Fixed Mindset**
Relationship	Emotionally Reserved – *not my responsibility*	"I'm here to teach learners and not be a parent."	• To be fair, I should treat all students the same and not provide specialize attention • If students want extra help, they should see me during office hours • Academic skills center is there	"No one really how I am doing, my level of success, or if I really stay here."	**Lacks support system**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Common Values, Attitudes, and Practices*	*Student Mindset*	*Risk Factor Elevated*
Relationship	Emotionally Reserved – *not interested in mentoring*	"I am an educator, while student services are set up to work with student "	• I am not trained to do psychological counseling or deal with students' personal problems • When personal issues arise, I refer students to student services for counseling • When students ask for advice, I tell them what I think they should do if qualified	"I don't want to impose on the teacher, because they are very busy, not accessible, and not important."	**Lacks mentor**
Scope of Learning	Situational - *personal experiences*	"I share my experience when I have extra time, but only in areas where I have expertise"	• Teachers provide detail instructions of the best way to do something • Teachers are not experts in all disciplines so they demonstrate use of knowledge only in their areas of expertise • Teachers are limited in exploring the depth and breadth of knowledge because of time	"I just need to do it the way the teacher told me to do it in the areas the teacher showed me"	**Lacks meta-cognition**
Scope of Learning	Situational - *context*	"I give strong real-world examples from my discipline"	• Teachers believe that the use of real-world examples takes a lot of classroom time • Teachers use contexts where they are the experts • Teachers rarely use complex interdisciplinary projects since students lack an interdisiciplinary mindset	"I just need to focus on the area the teacher wants me to focus on and not waste time exploring other options"	**Non-interdisci-plinary**
Social Orientation	Individual - *Isolate the student*	"What students do outside of class to engage in campus activities is not my responsibility"	• Student clubs are separate from faculty activities • Teachers engage with students rarely in events outside of the course • Colleges rarely set expectations for students to engage in campus activities	"I must give 100% of my time to performing in my courses and any distractions will impact my grades"	**Not connected**
Social Orientation	Individual - *Work alone*	"Students don't work effectively together and only a few of the students do all the work"	• Teachers use occasional group work without structure (design and team roles) • Teachers believe that many students don't learn well in teams because only a few of the team members do all the work • Teachers find that group work takes too much time to be used very often	"I don't like group work, because it is ineffective and I always get let down by the people I work with, thus I rather do the work by myself"	**Non team player**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Common Values, Attitudes, and Practices*	*Student Mindset*	*Risk Factor Elevated*
Social Orientation	Individual - *Keep ideas to self*	" It is very hard to get students to speak up and say something new, different, or insightful."	• Teachers call on students that show confidence • Teachers often correct what students say wrong to correct what other students think • Teachers answer questions they have asked if no student volunteers an answer within 10 seconds	"I will embarrass myself if I offer my ideas because I don't know if they are correct"	**Insecure public speaker**
Transparency	Private – *what others are thinking*	"I enjoy my academic freedom to be able to teach and grade the course in the way I wish to teach and grade the course."	• Teachers have the right to teach in their own way. • Teachers norm grades to prevent grade inflation and when everyone does poorly • Teachers constantly measure what students don't know rather than what they do know	"How well am I really doing and what do my peers and teacher think of me?"	**Seeks affirmation**
Transparency	Private – *are they good enough*	"I am a better teacher than most of my colleagues and definitely better learner than my students."	• Teachers consistently critique learners on their faults • Teachers require peer evaluation on speeches, contributions to projects and writing assignments • Teachers use informal group work, but are not very happy with it	"I am a better student than most of my peers because I am motivated, responsible, quality oriented and hard working."	**Judgmental**

Cultural Analysis of the Future Classroom Using the Transformation of Education

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Practices, Tools, Techniques and Strategies*	*Student Mindset*	*Success Factor Elevated*
Challenge	Empowering - *Respect Emotional Intelligence*	"Students are inherently strong, they bend but do not break"	• Mentors let students express how they are really feeling • Facilitators let students take time out to figure out what is going on emotionally	"I am much stronger than I thought I was and what others think I am capable of attempting"	**Manages Frustration**
Challenge	Empowering - *Provide Rich Resource Set*	"Provide students with rich resources and opportunities to meet their learning needs and challenges"	• Designers provide a wide set of opportunities outside the course to support student learning experiences - service learning, field trips, projects, community activities, and research activities • Teachers collaborate with academic skills centers, counseling, faculty peers, other disciplines, and online technologies to provide students with many support structures for success	"It is up to me to use the opportunities provided me to leverage my efforts by using resources effectively inside and outside the course to achieve success in my own way"	**Uses Resources Effectively**
Challenge	Empowering - *Acquire Information*	"Provide students with a variety of open-ended challenges that require them to use real-world data and informational resources"	• Facilitators provide students with library challenges that require them to present on a new topic or provide a literature search of current research • Designers assemble a range of optional resources that students can review and make use of during the course	"I need to determine what information is relevant, trustworthy, and valuable for my current challenge in learning or problem solving"	**Information Processor**
Challenge	Empowering - *Push Outside of Comfort Zone*	"Provide challenges that exceeds students' current capabilities"	• At the beginning of a new process, facilitators set high expectations which are much greater than the learners' current capacities • Facilitators constantly challenge learners using the accelerator model to push learners outside their current comfort zone	"The only way I am going to get better is to risk trying things I don't already know I can succeed at"	**Risk-taker**
Complexity	Problem Solving – *Explore*	"I want students to solve their own problems with full knowledge, thus I challenge them to learn new things on their own"	• Facilitators ask students to a quick read, and formulate a set of inquiry questioning for a comprehensive read • Facilitators use problem based learning, where students must identify what they don't know in the process of solving a challenging problem	" I always want to know everything about everything; when it will be useful in learning new things or solving complex problems"	**Inquisitive**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Practices, Tools, Techniques and Strategies*	*Student Mindset*	*Success Factor Elevated*
Complexity	Problem Solving - *Think*	"I know that students are capable thinkers and must be challenged to do the thinking that improve thinking"	• Facilitators consistently answer questions with additional questions to help advance the valuing of thinking through inquiry • Facilitators use guided inquiry activities that have critical thinking questions	"I need to know 'the why it is true' behind something so I can teach it to others"	**Critical Thinker**
Complexity	Problem Solving – *Construct*	"I require students to use the Learning Process Methodology (LPM) to construct knowledge through its levels of learning"	• Facilitators use of the LPM to model learning activities so the students see the learning process modeled continuously • At the end of each learning cycle, assessors ask students to create the hardest problem they can so students know they can solve any new type of problem in an exam	"I want to improve my learning performance by becoming more effective in integrating the steps of the LPM"	**Master Learner**
Complexity	Problem Solving - *Systematize*	"I know students learn to solve problems more effectively when they are systematic and write their ideas clearly"	• Facilitators require students to document their problem solving process using the problem solving methodology step by step • Facilitators require students to take time to think how can they can reuse this problem solution in future problems by doing a lot of 'what if' questioning	"I use writing to clarify my thinking when I am in the process of learning or problem solving"	**Problem Solver**
Control	Learner Centered - *Define Goals*	"I believe that I must help students personalize a learning experience by having them think about what they really want"	• Facilitators have learners set their learning and growth goals at the start of each course • Designers build in many alternate paths to allow the students to make decisions on what they want to accomplish from the course	"I need to determine why I am in this class and what I really want out of this class for me"	**Goal Setter**
Control	Learner Centered - *Self-affirm*	"For students to really learn, they must know that they know"	• Facilitators let students decide what they want to incorporate into their Learning Journal • Evaluators require students to validate their solutions to get full credit	"I must rely on myself "	**Validates**
Control	Learner Centered - *Read to Learn*	"I expect that the students come in class with a high level of comprehension to engage in even higher level learning activities"	• Facilitators require the students to learn how to read effectively by having the students use the reading methodology • Facilitators require students to come to class with completed reading logs to engage in class learning	"I enjoy reading books to produce meaning and understanding for myself as I explore possibilities through personal inquiry"	**Reader**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Practices, Tools, Techniques and Strategies*	*Student Mindset*	*Success Factor Elevated*
Control	Learner Centered - *Make Choices*	"Students are in the best position to decide what processes work best for them"	• Designers allow for an open syllabus where students provide input on how to weight each component of the evaluation system • Assessors use of mid-term assessment and make at least three public changes based upon student feedback	"I feel as if I control the operations of the course and thus need to excel based upon this control"	**Decision Maker**
Delivery	Active Learning - *Define Structure*	"Give a set of expectations and requirements that require a full team contribution"	• Designers use multiple levels of difficulty in an activity to provide richness and stimulate individual interest • Facilitators provide 5 minutes for teams to analyze the activity before a team is released to do the activity	"We must know what we need to do and how we are going to do it, before we start doing it"	**Organizer**
Delivery	Active Learning - *Attentive*	"I want student teams to have ownership of what they are doing for every moment of the activity"	• Facilitators encourage students to do many things at the same time by parallel processing - playing their role and being an active learner within the team • Facilitators intervene with the team captain to ask the team captain - did you find the last 5 minutes helped your team to meet the expectations of this activity	"I must give 100% of myself to my set of responsibilities while at the same time help others produce our team outcomes for the course and the specific activity"	**Focused**
Delivery	Active Learning - *Write to Learn*	"I know students learn more effectively when they write their ideas clearly"	• Designers create structured learning activities to help students learn from each other through introspection, intra-group processing, and inter-group reporting • Assessors use one minute papers to help students articulate discoveries, synthesize new knowledge, and uncover muddiest points	"I use writing to clarify my thinking when I am in the process of learning or problem solving"	**Writer**
Delivery	Active Learning - *Effort Exerted*	"I encourage students to try to do more every minute by finding opportunities to add more to their plate"	• Facilitators constantly use time pressured learning to increase the amount of learning per unit of time • Facilitator provides many choices to learners in what they can explore	"I must constantly use every minute to produce what I need to do as well as helping our team produce results at a high level of quality"	**Works Hard**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Practices, Tools, Techniques and Strategies*	*Student Mindset*	*Success Factor Elevated*
Design	Responsive - *Diverse Experiences*	"I believe students can perform the discipline in my course and as such will have them focus on at least 5 to 7 areas of disciplinary performance"	• Designers integrate a set of 15 specific Learning Skills, aligned activity by activity, within specific content areas (3 skills at a time) • Assessors select and create performance tasks that are as authentic as possible	"There is a lot to this course and I must decide what is important in this course for my future and meeting everyone's expectations"	**Prioritizing**
Design	Responsive *Engaging Experiences*	"I want to provide rich experiences that challenge students to perform in the discipline"	• Designers frame level 4 problems that require working expertise to solve • Designers envision long-term behaviors that are supported with compelling themes and that build disciplinary ways of being	"The only way that I will succeed in my career choice is to learn how to perform the disciplinary challenges"	**Engaged**
Design	Responsive - *Explicit Syllabus*	"I designed the course based upon a set of performance criteria and performance tasks measuring transformational learning"	• Assessors specify a clear set of performance criteria for the course that are aligned with course learning outcomes documented in the syllabus • Designers select performance tasks that align performance criteria with supporting grading rubrics describing quality	"I need to analyze the syllabus fully, determine what needs to be done by when and at what quality"	**Clarifies Expectations**
Design	Responsive - *Pre-activities*	"Students are responsible for level 1 and level 3 knowledge outside of class so we can do critical thinking and problem solving in class"	• Facilitators use reading assignments, readings logs, and reading quizzes so students are ready for learning activities • Facilitators provide inquiry questions and solutions to problems to promote discussion	"I need to do my work outside class time in order to do well during class on discussions, quizzes, and classroom problem solving situations"	**Being Prepared**
Efficacy	Conviction- *I Believe in You*	"Students have unlimited potential and I make sure they know I believe in their potential"	• Mentors believe that you shouldn't do something for students that students can learn to do themselves • Students keep a reflective journal that repeats the documentation of performance so the growth in the performance is viewed by the performer	"I believe I will be successful because of the increased quality of work produced now knowing that I can perform to the highest expectations"	**Self-efficacy**
Efficacy	Conviction- *Take Care of Yourself*	"I need to help students maintain balance in their collegiate life by checking in on them to see how it is going"	• Spread the work so students can complete their work outside of crunch time periods • Have them do up a plan for your course and integrate their other courses into their plan	"I need to take care of myself with sleep, healthy diets, exercise, social engagements, and renewal within my weekly challenges of college"	**Wellness**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Practices, Tools, Techniques and Strategies*	*Student Mindset*	*Success Factor Elevated*
Efficacy	Conviction- *You Can Do It*	"I consistently send the message that the learners can succeed by staying on top of the process"	• Provide timely milestones with assessment to encourage students staying ahead of the game and on top of long-term projects • Provide students with the Personal Development Methodology so they can self-improve any growth area on their own	"I want to get going as soon as possible because there are so many things I want to do and areas in which I want to grow"	**Self-starter**
Efficacy	Conviction- *Let Students Do Things For Themselves*	"I know that students are capable and must let them learn how to do things themselves"	• Learner contract that asks the students for their commitment of what they want to produce from the course • Mentors challenge students by holding them accountable for their commitments	"I don't want to let my mentor or myself down thus need to accomplish the goal no matter what"	**Committed to Success**
Feedback	Assessment - *Provide Means for Recovery*	"I must grade students' work fairly to motivate and then reward the students who produce good work"	• Facilitators let students fail in order for students to really succeed • Facilitators have students analyze tests to improve performance on future tests	"I know that failures are just temporary setbacks that lead to my greatest growth spurts"	**Leverage Failures**
Feedback	Assessment - *Create a Culture*	"The shift in feedback from evaluation to assessment increases students' performance during practice"	• Mentors challenge students when they are up, raising the bar, and when students are down, provide significant intervention • Assessors teach the assessment methodology in order to differentiate assessment from evaluation	"After each performance, ask for feedback to see how performance can be improved"	**Seeks and Accepts Feedback**
Feedback	*Assessment - Valuation*	"I know that students' overall performance is highly dependent upon their self-assessment performance"	• Having students self-assess weekly focused on a critical performance in the course • Assessing the students' self-assessments to improve their self-assessments	"As I increase my self-assessment skills, my ability to improve my own performance continues to increase"	**Self-assessor**
Feedback	Assessment – *Be Interactive*	"I see assessment as the means to mentor students, build rapport, and help them to strengthen how they listen to what people are really saying"	• Mentors provide opportunities to provide oral feedback that leads to rich discussions and mentoring opportunities • Assessors use peer assessment so that students can help each other improve future performance	"In order to improve I must listen to feedback to see how I really can improve performance"	**Listens Actively**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Practices, Tools, Techniques and Strategies*	*Student Mindset*	*Success Factor Elevated*
Measurement	Objective *-Elevate Performance Targets*	"I have aligned a set of published performance measures related to course work products so the students know how to improve their performance"	• Designers provide a set of performance measures that detail the levels of performance and how future performance can be improved • Mentors set initial high expectations and through the experience encourage learners to set their own high expectations	"I constantly review the measures to determine what I can do to further my performance"	**Self-challenging**
Measurement	Objective -- *Gather Data*	'As a mentor of students I check in to determine how they are doing overall, including financially"	• Facilitators provide real-life contexts where life performances are integrated as problems to solve in the course • Mentors take opportunities to have mentees review big picture status of how things are going, including financially	"I must constantly make decisions to manage current situations to provide means to accomplish my goals"	**Financial Manager**
Measurement	Objective *- Measure Progress*	"I want to provide students with a positive evaluation system that encourages and rewards performance "	• Designers create a point system aligned with performance criteria to allow students multiple ways of demonstrating learning and performance • Facilitators provide checkpoints in a course to have students analyze where they are and what they want to do to reach their goals	"I constantly review my syllabus, my growth goals, and my current performance to determine where to put my efforts to maximize my accomplishments"	**Self-motivated**
Measurement	Objective – *Celebrate Improvement*	"I want students to see where they are, where they were and where they want to go"	• Evaluators provide public score sheets to clarify how work products are actually being evaluated • Designers provide analytical rubrics with specific details in the levels of performance that give ideas of how to improve future performance	"I have improved from past performances and can see ways in which I can continue to improve"	**Self-confident**
Ownership	Self-directed – *Internalization*	"I will release control so that students can take ownership"	• Facilitators Intervene on process rather than on content • Designers leave significant components in projects where the learner gets to define its specifications	"I have learned that I must construct knowledge and effectively use every step of the LPM effectively"	**Learner Ownership**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Practices, Tools, Techniques and Strategies*	*Student Mindset*	*Success Factor Elevated*
Ownership	Self-directed – *Exercise self-Control*	"I will constantly put challenges up in front of students with firm deadlines and hold them accountable"	• Facilitators provide many milestones with firm deadlines that require students with a set of responsibilities • Facilitators will provide benefits to students who consistently meet deadlines by providing peer assessment, extra opportunities, and references for graduate school and jobs	"I will do the things I must do in favor of things I would like to do in order to succeed"	**Self-disciplined**
Ownership	Self-directed – *Select Methods*	"I will set up the challenges for the students but let them figure out how they will accomplish them"	• Facilitators will provide special classroom time period for teams and individuals to put together a project plan • Mentors provide students with the plan methodology to help them think through effectively the planning process	"I will take time to think about what I want to accomplish, how will I accomplish them, and when I have to have them done by"	**Planner**
Ownership	Self-directed - *Use Time Wisely*	"I will require and expect students to perform more learning with less time"	• Designers build courses that require much more than the students can do during the course, during any week in the course and during any class period thus they must make more effective use of time • Facilitators frequently ask students to assess added value in the last time period in order to eliminate sources of waste	"I want to make each day of each week the most productive by deciding how to use time and then using it productively"	**Time Management**
Self-Awareness	Self-growth – *Direction*	"I constantly want to know what students want from life, college, and my course"	• Required the students to contribute to a life vision portfolio through natural activity of the course • Designers provide a wide set of opportunities outside the course to support student learning experiences - service learning, field trips, projects, community activities, and research activities	"I enjoy thinking about my future and who I am so that I can make the most of each new experience as it links with my future"	**Life Vision**
Self-Awareness	Self-growth – *Mindset*	"I want to help students become stronger self-growers by modeling and challenging self-growth"	• Facilitators require a reflector's role in each learning activity where the learners practice self-assessment from the perspective of the team • Facilitators set time aside for self-assessment and the assessment of self-assessment	"I can grow and want to build greater capacity in facilitating this self-growth"	**Self-grower**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Practices, Tools, Techniques and Strategies*	*Student Mindset*	*Success Factor Elevated*
Self-Awareness	Self-growth – *Means*	"I model my process knowledge with methodologies that provide students an abstract generalization"	• Designers provide concrete methodologies for each major disciplinary process so the students can analyze and understand • Facilitators have students peer assess the documented use of the methodology by other students to help them improve their performance	"I regulate my use of a process by consistently documenting and assessing my performance against a methodology"	**Methodology User**
Self-Awareness	Self-growth - *Stepping Back*	"I realized that learners need planned reflection time and means to process experiences to bring meaning to them"	• Designer integrates a set of reflection tools , such as the Student Success Toolbox • Designers provide a rich set of activities and experiences, like service learning, and then have the students reflect on their experience to produce learning and growth	"Every time things are not clear, I take time to step back and figure it out so I can put meaning to the experience"	**Reflection**
Relationship	Emotionally Invested - *Belief in*	"I want students to realize how special they are and the contributions that they can make"	• Use of team competition on a regular basis that focuses on different strengths so that everyone has a chance to star only if they step up • Highlighting examples of student performances that are completed with exemplar quality	"I am obligated to step up and help others so that my contribution increases the success of all involved"	**Assertive**
Relationship	Emotionally Invested - *Care for Others*	"I value my students and want them to be part of our college community"	• Mentors are available at critical times when students are most likely going to struggle and fail • Faculty reach out to student groups to agree to be a faculty advisor to these activities	"I really care what happens in my classes and in the college and I can help it become better every day by providing input into how things are done"	**Connected**
Relationship	Emotionally Invested - *Involve Others*	"I want to make sure that students know they can count on me if they have difficulties"	• Facilitators use storytelling illustrating the numerous times they have helped other students become successful in similar situations • Mentors advocate when their students are being treated unfairly within the system	"When things get difficult I must reach out to others instead of withdrawing and hiding from everyone"	**Asking for Help**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Practices, Tools, Techniques and Strategies*	*Student Mindset*	*Success Factor Elevated*
Relationship	Emotionally Invested - *Not Let Others Down*	"I am committed to every student's success by doing every reasonable action that will improve their likelihood of success"	• Designing supportive learning communities that help students increase the support of dealing with personal factors (including cohort learning) • Mentors challenge students with constructive intervention at those specific times when the students are going to quit (sometimes locating them)	"I want to live up to my expectations, those who care about me, those depending on me and everyone who has helped me get to where I am today"	**Persisting**
Scope of Learning	Interdisciplinary - *Values and Cultures*	"I want students to see how knowledge in our discipline can support and be connected to other disciplines"	• Facilitators use students' desire to go on short tangents to help each other produce greater clarity and connections of diverse perspectives • Design interdisciplinary teams and try to maximize diversity within these teams	"I value how different disciplines think and can help in solving large scale problems"	**Seeks Diversity**
Scope of Learning	Interdisciplinary - *Ways of Knowing*	"I want students to be able to truly understand the ways of being and knowing of the discipline"	• Facilitators have students stop and figure out the what and why behind disciplinary practices- how they just did what they did • Mentors encourage and challenge majors on the best practices of the disciplines to know why they are the best practices	"I want to understand how I do what I do so I can improve how I do it and make sure each decision aligns with my values"	**Meta-cognition**
Scope of Learning	Interdisciplinary - *Language and Methods*	"I want students do be able to perform with different disciplines and in different cultures"	• When improving upon a specific learning skill, have the students see the impact of use of skill in a new disciplinary context • Give problems and situations from different disciplines and cultures that require students to take on new roles and perspectives	"Since things change all the time, I must be able to perform in any situation or challenge that I confront"	**Adapting**
Scope of Learning	Interdisciplinary - *Ideas across Disciplines*	"I expect the students be able to solve any given problem or successfully argue any position given them"	• Mentors help students improve upon a specific learning skill by having the students see the impact of use of skill in a new disciplinary context • At the beginning of new learning challenges, require learners to inventory what they already know that would be useful in the current learning	"I need to be able to apply this knowledge in any appropriate and valuable situation successfully"	**Generalizes**

Aspect	*Descriptor and Focus*	*Faculty Mindset*	*Practices, Tools, Techniques and Strategies*	*Student Mindset*	*Success Factor Elevated*
Social Orientation	Community – *Teams*	"I know from the research and first-hand experience that cooperative learning increases learner productivity and professional growth"	• Assign and rotate team roles after each learning activity • Use the teamwork methodology for helping teams build and strengthen their performance	"I can help others become more effective and as a result I gain as much as I give to the team"	**Team Player**
Social Orientation	Community – *Spokesperson*	"I expect all students to play spokesperson on a rotating basis"	• Facilitators have spokespersons share the team's learning and dialog between the teams • When students are sharing their discoveries from learning experiences, the spokespersons must be able to rephrase the discovery in a new context of use	"I can voice my ideas in public and represent all perspectives"	**Public Speaker**
Social Orientation	Community - *Cooperative Learning Roles*	"I challenge learners to actively question, listen, articulate, and rephrase each other and including myself?"	• Facilitators use a public recorder that is responsible to capture all the keys ideas that are shared during a dialog • Have the spokesperson read and present from the recorder's journal	"In order for me to work with others and to perform in organization I need to keep improving my communication skills"	**Communica-tor**
Social Orientation	Community – *Social Learning*	"I want students to think, learn, and solve problems with other students"	• Implement the use of cooperative learning principles in the facilitation of active learning • Set the expectations and challenges of the team at a higher level than any individual can perform by themselves	"With strong team work skills I can improve upon learning and problem solving"	**Collaborative**
Transparency	Public - *Performance in Front of Others*	"I enjoy my academic freedom to be able to teach and grade the course in the way I wish to teach and grade the course"	• Have students identify the best practices of other students once every five weeks • Share public reflectors' reports so students learning from each other about process	"I can learn from others, try out new ideas, practices, strategies, and schemas that will improve my performance"	**Open Minded**
Transparency	Public – Teaming	"I have students competing in teams to outperform each other in the leaning challenges"	• Mentors challenge students by holding them accountable for their commitments • Have the students teach each other at the end of activities by sharing their insights	"I am a better student than most of my peers because I am motivated, responsible, quality oriented and hard-working"	**Responsible**

Aspect	***Descriptor and Focus***	***Faculty Mindset***	***Practices, Tools, Techniques and Strategies***	***Student Mindset***	***Success Factor Elevated***
Transparency	Public - *Seeing and Experience Growth Culture*	“An environment of assessing and mentoring produces great opportunities for transformational learning"	• Create an open classroom - freedom of movement, choice of activity, and a set of powerful social conventions • Implement peer-assessment where people are helping other people get better	“I am a better student than most of my peers because I am motivated, responsible, quality oriented and hard-working”	**Positive**
Transparency	Public - *Valuing Others*	"A learning community of everyone working together to produce quality processes produces great results"	• Implement a peer mentoring program where students are formally mentoring other students • Provide a portfolio project where all the students present a case of how they have improve professionally in the discipline	"I want others to know that I have given all that I can to help them, the project, and the quality of results by holding up my end"	**Professional**