Key Learner Characteristics for Academic Success

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Abstract

The development of a Profile of a Quality Collegiate Learner (PQCL) is presented in this paper with the goal of assisting colleges in clearly determining the characteristics they seek to develop in their learners to increase student success. The characteristics that correlate with successful learning performance emerged from the authors' 20 years of experience in facilitating, assessing, and researching Learning to Learn Camps, improving Learning to Learn curriculum, and engaging with the scholarship of Process Education. These characteristics were refined through a meta-analysis of student success research and resulted in a profile describing a student who would be successful in any undergraduate program. The characteristics that make up the PQCL are organized into seven performance categories: (1) growth mindset, (2) academic mindset, (3) learning processes, (4) learning strategies, (5) affective learning skills, (6) social learning skills, and (7) productive academic behaviors. While characteristics in the PQCL correlate with success, the very definition of Process Education and its core principles support the idea of causation — that collegiate learners are not just born but can be developed. Research cited in this paper provides strong support for this assertion, especially the excerpts from students' Self-Growth papers illustrating how the Learning-to-Learn Camps strengthen these learner characteristics.

Background

Accreditation agencies (regional and professional) have been raising the public's expectations that educational programs should increase completion rates as well as demonstrate outcomes that enhance their graduates' success in their professional and personal lives. Research has been conducted 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 mount through policy changes (e.g., the drive towards performance-based funding).

A common belief among Process Educators is that successful collegiate learners can be developed. This belief implies that a student's failure is an institutional responsibility and that the students who currently fail, or are at-risk of failing, could be successful if the cultural practices of an institution followed these Process Education principles (Beyerlein, Schlesinger, & Apple, 2007):

- Every learner can learn to learn better, regardless of current level of achievement; one's potential is not limited by current ability

- Although everyone requires help with learning at times, the goal is for a student to become a capable, self-sufficient, life-long learner

- An empowered learner is one who uses learning processes and self-assessment to improve future performance

- To develop expertise in a discipline, a learner must develop a specific knowledge base in that field, but also acquire generic, life-long learning skills that relate to all disciplines

In this paper we describe who at-risk learners can become: Students with whom every faculty/staff member would like to work and who will be successful at their institutions — quality collegiate learners. Such students have the capacity to succeed at any academic challenge: in high school, undergraduate college, professional programs, or while pursuing advanced graduate degrees. The PQCL is a model of the key learner characteristics that at-risk learners can develop, leading to increased academic success.

Additionally, the PQCL outlines the types of learning and growth outcomes that can help direct current strategic efforts with respect to student success and form part of an assessment system measuring institutional effectiveness. The PQCL can be used to measure incoming students' current learning capacity, target student performance areas that need to be strengthened for academic success, and help in the redesign of a general education program and its supporting courses.

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Identifying the Learner Characteristics for the Profile of a Quality Collegiate Learner

The authors focused on eight contributing sources to identify the characteristics of successful learners that would make up the PQCL model. The first five sources focused on previous research in Process Education (PE), the analysis of which ultimately yielded 45 characteristics. The authors then edited that list using sources outside of Process Education.

Process Education Sources

The first Process Education source examined was previous models describing a Quality Learner. The focus on producing a model of a *quality learner* has always been a key component of Process Education research as illustrated in *25 Years of Process Education* (Apple, Ellis, & Hintze, 2016). The PQCL is the fourth evolution of this model. First came the Model of a Good Learner in 1992 which was followed by the Profile of a Quality Learner in 1996 that was updated yet again in 2007. The motivation for this update was the amount of experience and research carried out between 2007 and 2016 on Process Education, learning to learn, and self-growth. As a result of this work, we have gained significantly greater understanding concerning the potential goal for student development (i.e., the model of a quality learner) and how to produce this type of learner. Both the goal and how to achieve it have become even clearer as a result of practice, assessment, and research.

The second Process Education source the authors utilized was the redesigns of the *Foundations of Learning* books and curricula/course. As each new edition of *Foundations of Learning* was produced, the model of a quality learner was reexamined. Updated learning and behavior goals informed the model of a quality learner and it was on this basis that the book and supporting resources were developed. The model guided the content, learning experiences, and reflective exercises required to produce the desired transformation in the learner. When it came to redesign *Foundations of Learning Edition 4*, a fully updated course design described the type of learner that the course was to produce (Apple, Ellis, & Hintze, 2016).

As a third Process Education source for characteristics, the authors analyzed Learning to Learn Camp (LLC) outcomes. Pacific Crest and the members of the Academy of Process Educators improved, refined, and contextualized Learning to Learn Camps from 1995 to the present as a set of practices to effectively increase student learning performance (Apple, Ellis, Hintze, 2015). The previous profiles of a quality learner were then expanded based on analysis of Self-Growth papers written between 2010 and 2015. (A Self-Growth paper is a task required of all LLC participants, wherein they analyze their current performance in the camp in comparison with past performance. They are required to account for, explain, and document changes, improvement, and growth.) This analysis provided impetus for the continued evolution of learning to learn theory and practice, having a significant impact on the Foundations of Learning Course, Learning to Learn curriculum materials and Learning to Learn Camps, with each new iteration (Apple & Ellis, 2015).

The fourth process also involved analysis of a Learning to Learn Camp; in this case, the Hinds Community College Nursing Recovery Camp in 2008. This analysis focused specifically on why students failed in the first place. The characteristics of students who failed led to the inclusion of *at-risk* factors (Horton, 2015), providing a useful mirror for the determination of "success factors" (the characteristics demonstrated by a quality collegiate learner).

The fifth and final PE source for learner characteristics stemmed from analyzing the conversion of the LLC into a one-credit course. The insights from this conversion resulted in a major rethinking of what learner transformation should look like. The *Book of Measures* (Pacific Crest, 2013) provided a way to measure the changes taking place in the Learning to Learn Camps over the last few years, as many of the characteristics that would ultimately make up the PQCL were incorporated in the *Book of Measures'* broad areas of measurement: Professionalism, Engaged Learner, Self-Assessment, Critical Thinking, Problem Solving, Risk-Taking, Performing in a Team, and Quantitative Reasoning.

Looking Beyond Process Education

The list of characteristics compiled using the Process Education sources was then compared to information available on 13 different websites counseling students on how to be successful in college (see Appendix A). A frequency distribution was created for how often the each characteristics was identified by these websites (see Appendix B). This comparison led to incorporating three additional learner characteristics in the PQCL: Clarifying Expectations, Using Resources Effectively, and Maintaining Balance.

Additionally, the Big-Five personality model was explored to help determine which characteristics contribute to professional and life success (Barrick & Mount, 1991) as well as academic success. This exploration led to the addition of two more learner characteristics: Working Hard and Commitment to Success. Appendix C lists 29 learner characteristics contributing to the five traits in the Big-Five model (Komarraju, Karau, Schmeck, & Avdic, 2011) as well as to the profile of a quality collegiate learner.

To finalize the list of learner characteristics, the authors explored other research articles on student success. A set

of learner characteristics shown to contribute significantly to academic success (success factors) were validated and justified through a meta-analysis of research on student success. Academic success cited in this research used first year retention, graduation rates, and grade point average (GPA) as the primary measures of academic success. Farrington et al. (2012) presents a strong argument based on the results of seven major studies that past GPA is the strongest predictor of future academic success. For this reason, most researchers we cite use GPA to indicate academic success.

Selecting Characteristics for the PQCL

After accumulating this list of learner characteristics, the final step in the selection process for PQCL characteristics was to validate the list, as it stood, using published literature. The authors determined which of the potential characteristics had supporting evidence sufficient to warrant inclusion of that characteristic in the PQCL. To be included in the PQCL the learner characteristics needed to be discussed in a minimum of two studies. (There was one exception: **Using Resources Effectively**. Although it was supported by only one study, we included it in the profile because it was listed by four of the college success websites. Additionally, students in Grand Valley State University's recovery courses identified the inability to use resources effectively as a factor contributing to why they had failed during their first year.)

After the validation process, there were learner characteristics that, while they had been suggested in the initial selection process, were ultimately not included in the PQCL, due to a lack of sufficient supporting evidence. The learning characteristics not included in the PQCL are: Having a Strong Identity as a Learner; Being Empathetic/Respectful; Having Developed a Strong Support System; Managing Personal Finances; Being Ethical; Listening Actively; Making Good Decisions; Being Professional; Generalizing; Using Methodologies; Improving Learning Skills; Having Integrity; Taking Advantage of Opportunities (e.g., Internships); Setting High Expectations; and Leading.

Organization and Discussion of Learner Characteristics in the Profile of a Quality Collegiate Learner (PQCL)

The PQCL has seven Learner Performance Areas into which the characteristics of high-quality learners are classified. The first five Learner Performance Areas use the basic framework provided by the Farrington model (2012) with the following five areas: (1) Productive Academic Behaviors, (2) Learning Strategies, (3) Academic Mindset, (4) Social Skills and (5) Perseverance. The authors chose to reorganize and expand this framework and to rename areas (4) and (5) with a pedagogical orientation: "Social Skills" became Social Learning Skills and "Perseverance"

became Affective Learning Skills. To complete the categorization of the characteristics, the authors added two additional Learner Performance Areas: (6) Learning Processes and (7) Growth Mindset.

Figure 1   Relationship among Learning Performance Areas (modified from Farrington et al., 2012)
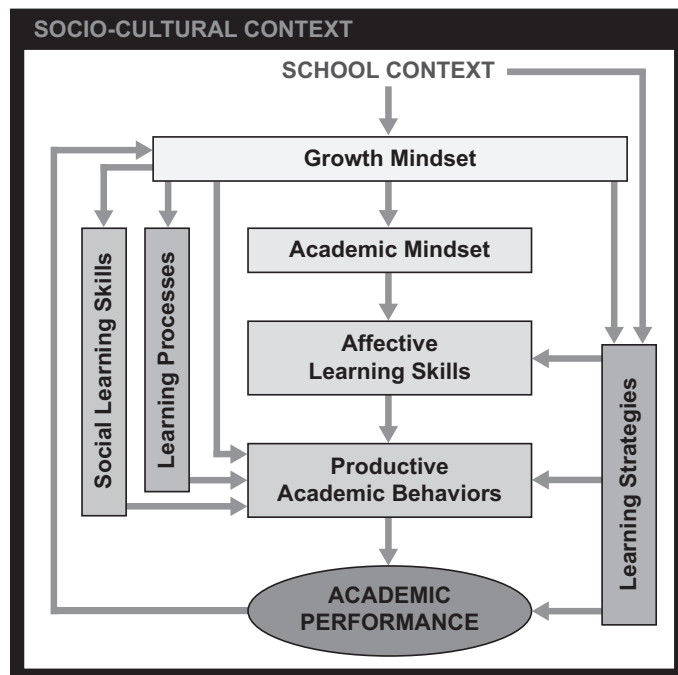
The dynamics between these seven Learner Performance Areas are represented in Figure 1. Accordingly, the Learner Performance Areas of the PCQL are presented in the following order: Growth Mindset, Academic Mindset, Learning Processes, Learning Strategies, Affective Learning Skills, Social Learning Skills, and Productive Academic Behaviors.

In the presentation of each Learner Performance Area, we offer its definition and a brief discussion of the area, explaining and contextualizing each of that area's learner characteristics. An accompanying table lists and defines each of the area's characteristics and offers, for each, the references cited as supporting evidence for the importance of that characteristic and its inclusion in the PCQL. In the last column, a pertinent quotation from a student Self-Growth paper or Letter to a Friend is shared. (As with a Self-Growth paper, students at Learning to Learn Camps are tasked with writing a "Letter to a Friend," explaining why they're at the camp, what they're doing, and what the camp could offer their friend. These letters are not actually sent, but instead constitute a significant writing exercise and challenge for the participants to reflect on their own situation, engagement, and attitude.) Appendix D contains the full citations for the supporting evidence references. The full Profile of a Quality Collegiate Learner follows the presentation of Learner Performance Areas, as Table 8.

GROWTH MINDSET: *Belief that learning performance is not fixed but can be significantly improved*

Some of the newest research on student success focuses on a growth mindset (Table 1). 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 catalyst for 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. Raising personal performance expectations and taking on difficult challenges are the keys to the **self-challenging** behavior. 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 1 Growth Mindset: Supporting Research and Student Reflections

Characteristic	Description
Is a Self-Grower	*Wants to grow from every experience and so sets growth goals, self-challenges, self-assesses, self-mentors, and mentors others*
References: 14, 21, 33	**STUDENT COMMENTS** "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."
Is Open-Minded	*Receptive to diverse views, perspectives, and paradigm-shaking ideas*
References: 2, 5, 21, 22, 33	**STUDENT COMMENTS** "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	*Sets criteria for each performance, makes key observations, reflects on and analyzes observations, behaviors, and actions, consistently making improvements without prompting*
References: 2, 5, 14, 15, 21, 30, 37, 39	**STUDENT COMMENTS** "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."
Is Committed to Success	*Will do everything necessary to reach the milestones towards stated goals*
References: 9, 18, 22, 26, 33, 44	**STUDENT COMMENTS** "...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..."

Characteristic	Description
Self-Challenges	*Pushes themselves outside their comfort zone, increasing failure and growth opportunities*
References: 2, 3, 21, 23	**STUDENT COMMENTS** "'...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..."
Is Open to Feedback	*Wants to improve future performance by seeking out feedback from whatever channel they can and turn this feedback into assessment*
References: 19, 21, 25, 37, 42, 43	**STUDENT COMMENTS** "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. "
Is Positive	*Is energetic, passionate and invested in life by seeing the value, opportunity, and beauty in each new situation and person*
References: 2, 15, 19, 22, 33, 44	**STUDENT COMMENTS** "...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..."
Is a Self-Starter	*Takes the initiative to begin each new experience quickly with a plan to maximize the learning opportunity provided by the experience*
References: 5, 12, 17	**STUDENT COMMENTS** "...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: *Successful learners know they belong, enjoy their learning challenges and academic work, find value from their efforts and know they will succeed*

A student's academic mindset has a significant impact on the success of learners in every academic setting (Table 2). 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. With this goal in mind, a critical characteristic 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 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 2 Academic Mindset: Supporting Research and Student Reflections

Characteristic	Description
Is Self-Motivating	*Has passion and desire to explore new information, concepts, and challenges in areas of interest*
References: 3, 5, 6, 9, 12, 15, 21, 37, 38, 39, 44	**STUDENT COMMENTS** "...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..."

Characteristic	Description
Is Inquisitive	*Constantly seeks new knowledge in multiple forms and from many disciplines by asking many interesting questions*
References: 5, 12, 22, 24, 44	**STUDENT COMMENTS** *"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	*Elucidates performance expectations with criterion-based quality standards, milestones and a deadline*
References: 19, 21, 37, 44	**STUDENT COMMENTS** "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."
Is Self-Efficacious	*Has a strong belief in a personal ability to succeed*
References: 1, 3 ,5, 6, 15, 21, 24, 26, 31, 33, 37, 38, 39, 44	**STUDENT COMMENTS** "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"
Is Self-Confident	*Approaches each new task with self-assurance that mastery of a new challenge can be attained*
References: 6, 24, 37, 38	**STUDENT COMMENTS** *"...If you have confidence and believe in yourself you will pass the program with flying colors..."*
Creates a Life Vision	*Evolves a vision for life based upon an analysis of past, present, and future that includes life goals, and a well-constructed plan for achieving these goals*
References: 21, 24, 27, 36, 38	**STUDENT COMMENTS** "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 PROCESSES: *A set of explicit, step-wise learning processes that every quality learner should continually improve*

Academic Success has long been associated with key learning processes which are essential for success in an academic setting (Table 3). 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% and 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 learner 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 3 Learning Processes: Supporting Research and Student Reflections

Characteristic	*Description*
Is a Master Learner	*Uses the Learning Process Methodology to construct transferable knowledge through thinking critically & generalizing*
References: 2, 3, 5, 21, 24, 40, 41, 44	**STUDENT COMMENTS** "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."
Processes Information	*Engages all senses to access information quickly and distinguishes relevant from irrelevant information and its level of quality*
References: 2, 3, 22, 27, 40, 42	**STUDENT COMMENTS** "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."
Reads	*Processes all forms of informational resource to produce understanding and meaning through thoughtful inquiry*
References: 5, 15	**STUDENT COMMENTS** "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."
Writes	*Consistently uses writing to think, clarify and document ideas, plans, thoughts, and reflections*
References: 5, 12, 24, 25, 44	**STUDENT COMMENTS** "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."
Solves Problems	*Identifies & defines problems with key issues and assumptions and produces validated and generalized solutions*
References: 2, 5, 12, 21, 24, 25 39, 41	**STUDENT COMMENTS** "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."

Characteristic	Description
Thinks Critically	*Asks critical questions, analyzes information, and synthesizes meaning to elevate understanding and clarity*
References: 2, 3, 5, 12, 17, 24, 40, 44	**STUDENT COMMENTS** "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."
Reflects	*Takes time to produce a higher level of learning and self-understanding including the causes of actions and decisions*
References: 2,4, 5, 14, 21, 22, 41, 44	**STUDENT COMMENTS** "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."

LEARNING STRATEGIES: *Learner practices (habits, tools, strategies, and approaches) that lead to greater academic success*

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 4. 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 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 4 Learning Strategies: Supporting Research and Student Reflections

Characteristic	Description
Sets Goals	*Sets clear goals and supporting objectives, maintains a constant focus on producing results aligned with these goals by assessing progress towards, and making appropriate changes to reach them*
References: 2, 3, 6, 21, 25, 27, 38, 39, 41	**STUDENT COMMENTS** "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."
Uses Metacognition	*Thinks about thinking, builds self-knowledge about how you do what you do, and also why you decide to do what you are doing.*
References: 3, 5, 6, 16, 21, 24, 36, 37, 40, 44	**STUDENT COMMENTS** " 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 frame 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."

Characteristic	Description
Has Learner Ownership	*Takes full responsibility before, during, and after each learning experience to construct knowledge that meets external quality criteria*
References: 2, 5, 6, 24, 37, 38, 41	**STUDENT COMMENTS** "...it taught me how to grow and learn to learn from myself..."
Plans	*Develops a strategy to produce quality outcomes in a efficient manner before acting*
References: 2, 3, 5, 12, 14, 21, 41	**STUDENT COMMENTS** "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. .... Just a simple change in planning and this process has helped me to excel academically. "
Uses Resources Effectively	*Inventories and explores all available resources in the college context so that they can be accessed and used expeditiously in learning and problem-solving situations as they arise*
References: 19	**STUDENT COMMENTS** "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	*Finds empirical evidence to affirm or reject personal understanding in order to ensure reliability and confidence in the constructed knowledge*
References: 2, 3, 5, 6, 8, 14, 29, 37	**STUDENT COMMENTS** "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"
Works Hard (productive)	*Diligent, works long hours and uses parallel processing to increase work produced per hour of time*
References: 5, 17, 22, 28, 33, 44	**STUDENT COMMENTS** "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): *Skills that will increase the emotional intelligence leading to the willingness to get outside of the comfort zone, take risks, embrace failure and do what is necessary to achieve eventual success*

Grit, the perseverance and passion for achieving long-term goals, is often associated with the successes of famous leaders throughout history and current research overwhelmingly confirm that correlation. The affective learning skill correlates of grit can be found in Table 5. **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** to improve 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 may exist. As new challenges and situations arise, the learners must **adapt** to the new cultural demands and expectations that the colleges impose on them. The healthier the learner is — physically fit, well nourished, rested, and emotionally balanced — the greater their overall **wellness** and academic success.

Table 5 Affective Learning Skills (Overall Grit): Supporting Research and Student Reflections

Characteristic	Description
Persists	*Will not let obstacles or unexpected challenges get in the way of eventually achieving targeted goal*
References: 1, 6, 17, 29, 34, 39	**STUDENT COMMENTS** "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."
Takes Risks	*Takes on challenges despite the fact that outcomes are not known, failure is very possible, and others will be aware of results*
References: 21, 33, 37	**STUDENT COMMENTS** "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	*Plans future action to exploit the growth potential inherent in each failure*
References: 21, 25, 37	**STUDENT COMMENTS** "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	*Seeks assistance from knowledgeable individuals in order to navigate through difficult situations*
References: 1, 5	**STUDENT COMMENTS** "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	*Puts things into perspective so that a current stressful context doesn't overwhelm performance*
References: 2, 5, 11, 15, 22, 26, 37	**STUDENT COMMENTS** "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."
Adapts	*Continually changes to respond optimally to new contexts*
References: 4, 5, 37, 44	**STUDENT COMMENTS** "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."
Manages Time	*Allocates time for the most important tasks and then effectively uses that time*
References: 5, 14, 17, 19	**STUDENT COMMENTS** "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."
Prioritizes	*Organizes tasks, events, and undertakings to effectively live a balanced, healthy life by putting first things first*
References: 18, 22	**STUDENT COMMENTS** "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."

Characteristic	Description
Is Disciplined	*Does what must be done even though other things may be more enjoyable and exciting*
References: 2, 3, 5, 10, 11, 15, 22, 28	**STUDENT COMMENTS** "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."
Seeks Wellness	*Maintains balance by taking care of self, sleeping effectively, exercising, eating well and engaging in social activities*
References: 3, 36, 37	**STUDENT COMMENTS** "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: *Skills that will increase the engagement of learners in a community and within teams to increase their effectiveness in their own learning and that of others*

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 6). 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, problem-solving, and outcomes. All this requires skill in **communication, teamwork** and **collaboration**. **Assertiveness** in setting forth one's own ideas is enhanced by the capacity to **speak publicly** about ideas and positions with ease. The final social characteristic 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 6 Social Learning Skills: Supporting Research and Student Reflections

Characteristic	Description
Is Connected	*Has many friends, communities, and activities that influence growth and development of self and others*
References: 19, 26, 35, 36, 44	**STUDENT COMMENTS** "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."
Is Responsible	*Can be counted on to produce quality work that exceeds expectations within the allocated time and resources given*
References: 2, 5, 10, 18, 22, 25, 38, 44	**STUDENT COMMENTS** "learn how to take full responsibility over life and your destiny."

Characteristic	Description
Seeks Diversity	*Understands and appreciates the values, differences, and perspectives of others*
References: 24, 44	**STUDENT COMMENTS** "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."
Is a Team Player	*Brings a positive attitude, like supporting and helping others, congratulating others, filling in gaps in a cohesive manner, and is empathetic when others are having difficulties with their performances or personal lives*
References: 2, 5, 25, 44	**STUDENT COMMENTS** "...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..."
Is Collaborative	*Partners with others, performs team roles effectively, asks for help when it is needed, and supplies assistance to others*
References: 2, 5, 13, 15, 22, 26, 28, 35, 39	**STUDENT COMMENTS** "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."
Is a Communicator	*Effective in interactive conversation in informal and formal settings that includes articulating new ideas*
References: 12, 25, 38, 44	**STUDENT COMMENTS** "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	*Assesses audience, prepares a clear meaningful message and articulates it with impact to change minds and actions*
References: 12, 24, 25	**STUDENT COMMENTS** "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."
Is Assertive	*Able to stand up for personal and community positions and rights in a calm and positive way, without being either aggressive or passively accepting*
References: 32, 37	**STUDENT COMMENTS** "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."

PRODUCTIVE ACADEMIC BEHAVIORS: *Behaviors that faculty/teachers expect of students that when not demonstrated, lead to academic failure*

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 behavior is **engaging** in learning experiences (at the minimal level, attending class) by putting 100% of one's energy into the current learning task. The second is **focusing** (at minimum, 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 minimum, bringing required materials). The fourth characteristic is being **organized**, knowing what one needs to do, by what time, and at what quality (at minimum, doing homework). Taking notes and following instructions is a good indicator that these academic behaviors are in play. These are expectations that nearly all teachers have and if they are not met, the educator often believes that the student doesn't care about his or her learning and success.

Table 7 Productive Academic Behaviors: Supporting Research and Student Reflections

Characteristic	*Description*
Is Engaged	*Brings 100 % to each activity, every day*
References: 1, 5, 6, 9, 24, 26, 34, 35, 44	**STUDENT COMMENTS** "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"
Is Focused	*Applies all efforts to the task(s) at hand and filters out all distractions*
References: 3, 18, 26, 34	**STUDENT COMMENTS** "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."
Is Prepared	*Understands expectations, collects and organizes resources, and has a plan for learning*
References: 2, 5, 7, 15, 34, 39, 44	**STUDENT COMMENTS** "...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..."
Is Organized	*Knows when, where, and what needs to be done in a timely and systematic way*
References: 5, 14, 15, 18, 22, 34, 41	**STUDENT COMMENTS** "This camp has helped me improve my organization skills. I had to get organized to keep up with certain reading logs and other information"

Table 8 Full Profile of a Quality Collegiate Learner (Learner Performance Areas, Characteristics, and Descriptions)

Growth Mindset	
Is a Self-Grower	Wants to grow from every experience and so sets growth goals, self-challenges, self-assesses, self-mentors, and mentors others
Is Committed to Success	Will do everything necessary to reach the milestones towards stated goals
Self-Assesses	Sets criteria for each performance, makes key observations, reflects on and analyzes observations, behaviors, and actions, consistently making improvements without prompting
Is Positive	Is energetic, passionate and invested in life by seeing the value, opportunity, and beauty in each new situation and person
Is a Self-Starter	Takes the initiative to begin each new experience quickly with a plan to maximize the learning opportunity provided by the experience
Is Open to Feedback	Wants to improve future performance by seeking out feedback from whatever channel they can and turn this feedback into assessment
Is Open-Minded	Receptive to diverse views, perspectives, and paradigm-shaking ideas
Self-Challenges	Exceeds a personal zone of comfort, despite the risk of failure, knowing that growth and learning will occur in that context

Academic Mindset	
Clarifies Expectations	Elucidates performance expectations with criterion-based quality standards, milestones and a deadline
Is Inquisitive	Constantly seeks new knowledge in multiple forms and from many disciplines by asking many interesting questions

Academic Mindset (con't)

Is Self-Efficacious	Has a strong belief in a personal ability to succeed
Is Self-Motivating	Has passion and desire to explore new information, concepts, and challenges in areas of interest
Is Self-Confident	Approaches each new task with self-assurance that mastery of a new challenge can be attained
Creates a Life Vision	Evolves a vision for life based upon an analysis of past, present, and future that includes life goals, and a well-constructed plan for achieving these goals

Learning Processes

Is a Master Learner	Uses the Learning Process Methodology to construct transferable knowledge through thinking critically and generalizing
Reads	Processes all forms of informational resource to produce understanding and meaning through thoughtful inquiry
Writes	Consistently uses writing to think, clarify, and document ideas, plans, thoughts, and reflections
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 and generalized solutions
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 a higher level of learning and self-understanding including the causes of actions and decisions

Learning Strategies

Sets Goals	Sets clear goals and supporting objectives, maintains a constant focus on producing results aligned with these goals by assessing progress towards, and making appropriate changes to reach them
Has Learner Ownership	Takes full responsibility before, during, and after each learning experience to construct knowledge that meets external quality criteria
Use Resources Effectively	Inventories and explores all available resources in the college context so that they can be accessed and used expeditiously in learning and problem-solving situations as they arise
Validates	Finds empirical evidence to affirm or reject personal understanding in order to ensure reliability and confidence in the constructed knowledge
Uses Metacognition	Thinks about thinking, builds self-knowledge about how you do what you do, and also why you decide to do what you are doing
Works Hard	Diligent, works long hours and uses parallel processing to increase productivity
Plans	Develops a strategy to produce quality outcomes in a efficient manner before acting

Affective Learning Skills

Persists	Will not let obstacles or unexpected challenges get in the way of eventually achieving targeted goal
Manages Frustration	Puts things into perspective so that current stressful context doesn't overwhelm performance
Manages Time	Allocates time for the most important tasks and then effectively uses that time
Prioritizes	Organizes tasks, events, and undertakings to effectively live a balanced, healthy life by putting first things first
Is Disciplined	Does what must be done even though other things may be more enjoyable and exciting
Take Risks	Takes on challenges despite the fact that outcomes are not known, failure is very possible, and others will be aware of results
Leverages Failures	Plans future action to exploit the growth potential inherent in each failure
Asks for Help	Seeks assistance from knowledgeable individuals in order to navigate through difficult situations
Is Well	Maintains balance by taking care of self, sleeping effectively, exercising, eating well and engaging in social activities
Adapts	Continually changes to respond optimally to new contexts

Social Learning Skills

Is a Team Player	Brings a positive attitude, like supporting and helping others, congratulating others, filling in gaps in a cohesive manner, and is empathetic when others are having difficulties with their performances or personal lives
Is Collaborative	Partners with others, performs team roles effectively, asks for help when it is needed, and supplies assistance to others
Is Responsible	Can be counted on to produce quality work that exceeds expectations within the allocated time and resources given
Is Assertive	Able to stand up for personal and community positions and rights in a calm and positive way, without being either aggressive or passively accepting
Is Connected	Has many friends, communities, and activities that influence growth and development of self and others
Is a Communicator	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
Speaks Publicly	Assesses audience, prepares a clear meaningful message and articulates it with impact to change minds and actions

Productive Academic Behaviors

Is Engaged	Brings 100 % to each activity, every day
Is Focused	Applies all efforts to the task(s) at hand and filters out all distractions
Is Prepared	Understands expectations, collects and organizes resources, and has a plan for learning
Is Organized	Knows when, where, and what needs to be done in a timely and systematic way

Success Characteristics Can be Developed

The identification of the learner characteristics in the PQCL is a first step in empowering colleges to advance programming that enhances learner development. In the authors' experience with students, even in the face of numerous significant personal issues, an individual can often be empowered to overcome the issues and become successful. Even students who are highly at-risk can become quality collegiate learners.

Learning to Learn Camps have demonstrated the transformational power of these one-week experiences in producing quality collegiate learners (Apple, Ellis, & Hintze, 2015). Farrington's work (2012) 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. 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.*" 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.

The idea that key learner characteristics can be grown, and that capacity and success grow as a result, are profoundly at odds with 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, challenging us to redefine what constitutes intelligence and the capacity to learn. We believe strongly that it is an interplay of personal cognitive and non-cognitive factors, environment and socio-cultural processes — and it can be changed. Learner development gives us a more focused target for a college education (i.e., creating quality collegiate learners who fit the PQCL profile) and the means to attain it through pedagogical practice focusing on learning-to-learn and self-growth.

Process Education and the Profile of a Quality Collegiate Learner are connected in many ways, most importantly in that every learner characteristic can and should be continually developed for every learner throughout their educa-

tion, before, during, and after college. Process Education offers three perspectives on learner growth: 1) learning skills, 2) learning-to-learn, and 3) self-growth. The Classification of Learning Skills (Apple, Beyerlein, Leise, & Baehr, 2007) encompasses more than 250 learning skills, of which 28 appear in the PQCL. Ten of the 13 components of learner performance identified in Learning How to Learn: Improving the Performance of Learning (Apple & Ellis, 2015) link to multiple aspects of the PQCL, strongly correlating the goal of learning to learn with being a quality collegiate learner. In What is Self-Growth, the ten self-growth components identified by Jain, Apple, and Ellis (2015) are each associated with at least one characteristic in the PQCL.

Conclusion

The characteristics in the PQCL can seem daunting to the learner and instructor alike: *Where to start? How to teach them? How to improve them?* However, a strong Process Education environment, such as a Learning-to-Learn Camp (Apple, Ellis, & Hintze, 2015) provides a reproducible context in which each characteristic is needed, practiced, assessed, mentored and grown. Importantly, decades of experience have shown just how malleable these learner characteristics are. As part of this paper, and with other papers, we have shown that Process Education philosophy, practices, and culture (e.g., Learning-to-Learn Camps) produce transformational learning. This transformation is documented in the seven category tables with cited references that show that each learner characteristic can be developed. A structured student reflection provides a concrete sample of each learner characteristic transformation. Every learner characteristic listed in the PQCL 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 educational institutions achieve the outcomes that these stakeholders desire.

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APPENDIX A Websites Dedicated to Preparing College Students for Success

#	Name of Site and *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	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

APPENDIX B   How Often the 44 Characteristics Appear on the Websites in Appendix A

Characteristic	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
Is Engaged	X	X	X	X	X			X	X	X	X	X		10
Is Connected		X	X			X	X	X		X		X	X	8
Is Organized			X			X	X	X	X		X		X	7
Prioritizes		X			X	X			X		X		X	6
Maintains Balance (Is Well)					X		X	X		X	X		X	6
Clarifies Expectations							X	X		X	X	X		5
Leverages failure	X					X		X				X	X	5
Creates a Life Vision	X	X								X	X		X	5
Manages Time		X	X						X	X			X	5
Plans		X				X			X		X		X	5
Is Focused (Concentrates)			X	X	X	X		X						5
Asks for Help			X								X	X	X	4
Is Inquisitive	X									X	X	X		4
Uses Resources Effectively		X					X		X				X	4
Writes			X							X		X	X	4
Sets Goals	X										X		X	3
Manages Frustration						X					X		X	3
Is Positive			X			X					X			3
Is Disciplined									X		X		X	3
Supports Groups (Team Player)							X		X		X			3
Accepts Feedback						X					X			2
Is Assertive											X	X		2
Is Collaborate		X								X				2
Thinks Critically	X										X			2
Is Empathetic	X											X		2
Seeks Internships			X										X	2
Persists						X					X			2
Manages Personal Finances										X			X	2
Is Prepared				X				X						2
Reads											X	X		2
Is Respectful								X				X		2
Self-Assesses				X							X			2
Self-Challenges						X					X			2
Is a Self-Starter			X									X		2
Sets High Expectations				X	X									2
Is a Communicator			X											1
Is a Decision Maker												X		1
Has Learner Ownership				X										1
Is Open-Minded						X								1
Is Self-Confident			X											1
Is Self-Efficacious												X		1
Is a Self-Grower									X					1
Is a Servant Leader	X													1
Takes Risks	X													1

APPENDIX C   **Big-Five Personality Model and Supporting Learner Characteristics**

Conscientiousness
Is Organized
Plans
Is Responsible
Works Hard
Validates
Is Prepared
Is Self-Disciplined
Is Committed to Success

Extraversion
Is Positive
Speaks Publicly
Is a Self-Starter
Is Assertive
Communicates
Is Connected

Openness to Experience
Seeks diversity
Reflects
Is Inquisitive
Has a Life Vision
Uses Meta-cognition
Is Engaged
Processes Information
Thinks Critically

Neuroticism (Lack of)
Has Self-efficacy (self doubt)
Is Confident (anxious)
Is Focused (scatterbrained)
Manages Frustration (is helpless)
Takes Risks
Leverages Failures (gives up)

Agreeableness
Collaborates

APPENDIX D   **Citations for the Supporting Evidence References Appearing in Tables 1 – 7**

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