Impact of Higher Education Culture on Student Mindset and Success

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Abstract

Student mindsets and academic behaviors are strongly influenced by an institution's culture, its values, faculty mindsets and prevalent teaching and learning practices. From recent Process Education-based research centered on possible ways for post-secondary educational institutions to become more effective, 14 cultural aspects that define an educational culture were identified and differentiated in the Transformation of Education (Hintze-Yates et al., 2011). Adopting these 14 cultural aspects as the theoretical framework, this paper articulates a transformation of traditional educator practices to a set of "research based best practices" that contributes significantly to the development of quality collegiate learners. Thus, this discussion has a two-fold objective: (1) to contrast traditional and transformational educational cultures; and (2) to articulate how the impact of transformational practices can shift student mindsets toward successful academic behaviors. Accordingly, our theoretical inquiry focuses on five distinct elements: institutional values, faculty mindsets, faculty practices, student mindsets, and learner characteristics for each of the referenced 14 cultural aspects. Analysis of the traditional culture and its teaching and learning traits reveal reasons that contribute to and exacerbate student risk factors (Horton 2015). In contrast, analysis of the transformational culture and its teaching and learning traits demonstrates how development and enhancement of success factors (Apple, Ellis & Hintze, 2015) can help mitigate those risk factors.

Introduction

Transformation of Education (TofE) theory*,* as articulated by Hintze-Yates et al. (2011), proposes 14 aspects that define an educational culture (Table 1). The authors use TofE as a framework to contrast two educational cultures — traditional (historical tendency) and transformational (future direction) — by comparing their traits for aspect by aspect. Examination of TofE from a Process Education (PE) perspective reveals that beliefs, perceptions, relationships, attitudes, practices, and written and unwritten rules shape and influence every aspect of education (Apple, Ellis & Hintze, 2016a).

Educational culture is slowly evolving and changing and can be influenced by values, mindsets and practices. This paper contrasts two cultures, traditional and transformational, to help differentiate characteristics in higher education culture. Accordingly, the purpose of this discussion is to serve as a roadmap to simplify the choices, invite self-identification, and moderate any resultant tensions. While culture is pervasive, there still remains opportunity for faculty to create their own classroom culture.

Literature Review

The relationship between academic culture and student learning has been richly debated in the contemporary literature. In general, the debate articulates a correlation and a significant impact (Deal & Peterson, 1999; Heck & Marcoulides, 1996; Kuh et al., 2005/2010; Maslowski, 2001). Research also reveals how faculty mindsets and current practices can impact student mindsets and behaviors (Apple, Duncan & Ellis, 2016). These faculty mindsets and practices can lead to success or help condone and perpetuate a set of student risk factors, issues, characteristics or circumstances that serve as the reasons for students to drop out or fail academically (Horton, 2015). Risk factors can encompass a wide range of possible characteristics including socioeconomic background, behaviors, values and conditions (Huba & Freed, 2000). Contemporary research on mindset has shown that in most cases, risk factors are conditional rather than intrinsic (Dweck, 2006; Kuszewski, 2011; Sternberg, 2008).

The understanding of what constitutes a mindset is critical for analyzing behaviors and cultural characteristics. Our description of mindset was created by synthesizing a set of definitions from contemporary on-line dictionaries (Oxford, Free, Merriam-Webster, Collins, and Dictionary. com). A person's mindset encompasses their mental attitudes, dispositions, and moods that lead to intentions, inclinations or habits often considered fixed and difficult to change. It extends to their ways of thinking, points of view and set of opinions and at times even ventures into their be-

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liefs. Linking student mindsets with risk factors shows why many students are not successful in college (Horton 2015).

The methodology used is predicated on a performance-based philosophy (i.e., Process Education) through which the factors that influence or impact one's learning performance can be ascertained. *Theory of Performance* (Apple, Ellis & Hintze, 2016b) identifies six components of performance: Identity, Skills, Knowledge, Context, Personal Factors, and Fixed Factors. All are malleable, with the exception of fixed factors. This theory was used to describe the *learning to learn* (L2L) performance paradigm (Apple & Ellis, 2015) which illustrates that these five components of performance can be strengthened. *The Profile*

of a Quality Collegiate Learner (Apple, Duncan & Ellis, 2016) clarifies 50 key learner characteristics (success factors) for academic success organized around seven key areas: Growth Mindset, Academic Mindset, Learning Processes, Learning Strategies, Affective Skills, Social Skills, and Productive Academic Behaviors. A central principle in Process Education is that development of self-growth and academic mindsets supported by improved learning processes and strategies along with strengthened social and affective learning skills help any learner to achieve greater academic, personal and professional success.

Bean's (1983) student attrition model illustrates how important beliefs and values are in shaping attitudes, which

Table 1 The 14 Defining Aspects of Educational Culture

	Aspect	Definition
1	**(Academic) Challenge**	The degree to which increasing the level of difficulty is used in order to grow capacity for learning and performing
2	**Cognitive Complexity**	The degree to which training and doing is elevated to problem solving and research
3	**Control**	The locus of power/authority for the learning situation or experience
4	**Delivery**	The means by which information/knowledge is obtained by learners
5	**Instructional Design**	The purposeful arrangement of instructional environment, materials, and experiences to support learning
6	**(Self) Efficacy**	The well-founded belief in one's capacity to change and to make a difference
7	**Feedback**	Information about what was observed in a performance or work product
8	**Measurement**	The process of determining the level of quality of a performance or product
9	**Ownership**	The degree to which the learner accepts responsibility and accountability for achieving learning outcomes
10	**Relationship**	The degree of emotional investment an instructor or mentor has in his or her students or mentees
11	**Scope of Learning**	The contexts across which learning occurs and its application is demonstrated
12	**Self-Awareness**	The degree to which reflective and self-assessment practices are used by the individual to foster the growth of his or her learning skills across the cognitive, affective, and social domains
13	**Social Orientation**	The investment, interdependence, and responsibility for learning throughout a community
14	**Transparency**	The degree to which stakeholders can view individual, team, or collective performances

Source: Hintze-Yates, Beyerlein, Apple & Holmes (2011).

in turn shape behaviors, and behaviors signal intents (risk or success factors). A student's beliefs are affected by the culture and the set of experiences afforded by the culture which evolve into attitudes which determine a student's sense of belonging or "fit" with the institution. Students' perceptions of faculty and staff responsiveness affect behaviors, decisions, and success. Seven categories of effective educational practices that directly influence student learning and the quality of their educational experiences are student-faculty contact, cooperation among students, active learning, prompt feedback, time on task, high expectations, and respect for diverse talents and ways of learning (Chickering & Gamson, 1987). Generally speaking, the more students engage in these kinds of activities, the more they learn and the more likely they are to persist and graduate from college.

Educational Culture: Definitions and Theoretical Framework

An **educational culture** is the environment in which educational activities take place. Subject to regional and historical contexts, however, an educational culture can vary in its elucidation and application. In general, an educational culture represents the evolutionary manifestation of the transfer of knowledge involving specific skills, facts and standards of moral and social conduct that are perceived necessary for the succeeding generation's material and social success (Dewey, 1938). An **educational institution's culture** has a direct impact on the quality of the educational experiences it provides students and the potential it creates for transformational experiences for its students, faculty, and staff (Hadley, 2007). Research (Bickel et al., 1986; Dryfoos, 1990; Horton 2015) suggests that ineffective practices can lead to risk factors impacting an increase in dropout rates. Instead, "institutional programs and practices must be of high quality, carefully designed to meet the needs of students they are intended to reach, and firmly rooted in student-success-oriented campus culture" (Kuh et al., 2006, p. 58).

A **traditional educational culture** supports assimilative learning where students acquire new information that can easily fit within their familiar, pre-existing knowledge structures. In other words, "future achievement draws upon past performance, behavior and achievement" (Fines, 2002, p. 92), leading to an outcome consistent with the initial expectation.

A **transformational educational culture** involves educators and learners using critical reflection and self-assessment. It necessitates conscious development and implementation of plans and a fundamentally rational and analytical process (Grabove, 1997; Slavich & Zimbardo, 2013). Mezirow (1991) describes it as *"the process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand, and feel about our world"* (p. 128). Robert Kagan's (1982, 1994) constructive developmental theory involves different stages of "meaning making" or the activity of making sense of experience through discovering and resolving problems (1982). Kagan distinguishes transformational learning from learning new information or skills because transformational learning happens when someone **changes** "not just the way he behaves, not just the way he feels, but the way he knows—not just what he knows but the *way* he knows." (1994, p. 17). This is about performances and the performer owning their performance (Elger, 2007) and the metacognitive process for continual self-growth (Jain, Apple & Ellis, 2015).

Elements Chosen to Analyze Higher Education Culture

In this section, we address the following three questions:

1. Why did the authors choose the five elements of, institutional values, faculty mindsets, teaching/learning practices, student mindsets and key learner characteristics, as the key traits for performing the cultural analyses?

2. Can we justify a causal relationship? In other words, do institutional values impact faculty mindsets, which in turn determine selected teaching/learning practices which then strongly influence student mindsets resulting in different behavioral choices leading to different student learner characteristics and/or level of success?

3. Will these cultural descriptions be sufficiently detailed to help colleges determine where their culture falls on a scale from traditional to transformational?

The five elements stated in Question 1 and illustrated in Figure 1 were chosen based upon their relationships and their dominance in educational processes, systems, structures and daily activity. It is our contention that an institution's values are embodied in its vision, mission, and strategic plan. The values are then reflected in its systems, processes, and structures. Faculty mindsets are well developed prior to being hired and are often one of the key reasons why these faculty members were hired. Faculty as well as staff and student mindsets are continually influenced by the culture's values, strategic goals, structures, processes and systems. The mindset of the faculty will

strongly impact the choice of teaching and learning practices that are conducive with the culture, with staff having a minor impact. Throughout the literature, examples are given that student mindsets are impacted by the educational practices, faculty interactions and conventions and norms that the college upholds (Kuh et al., 2006). Many studies show that a positive shift in student mindsets increases academic performance and success (Auten, 2013). It is important to note that student mindsets, while impacted by the culture, also impact faculty mindsets and culture.

Methodology

Our methodology focuses an in-depth analysis of the prevailing academic culture traits and practices that have led to the current educational praxis in general. In a systematic approach, it begins with a contextual understanding of the 14 cultural aspects. A step-by-step analysis using 20 years of Learning to Learn (L2L) Camps, 25 years of faculty development events, and data collected from these experiences (e.g., self-growth papers and Teaching Institute journals) helped catalog and organize our observations (see the list which follows).

[Note that for the purpose of this discussion, the terms 'faculty,' 'teacher,' 'educator,' 'instructor' and 'academic' are interchangeable. The same is true for 'student' and 'learner.']

1. Employing 25 years of cumulative research knowledge, we mapped and correlated specific risks factors to the most appropriate aspects in Transformation of Education (TOE) (Horton, 2015).

2. We mapped and correlated key learner characteristics from quality collegiate learner to the most appropriate aspects in the Transformation of Education (Apple, Duncan & Ellis, 2016).

3. Next, we envisioned the mindsets of faculty who use the traditional and transformational practices associated (Sweeney, Apple & Ulbrich, 2017) with each aspect using our collective 25 years of faculty development and learning to learn camp experiences and associated documents (Apple, Ellis & Hintze, 2016c).

4. We then employed key findings from 20 years of L2L Camp self-growth papers to catalog student mindsets (Apple, Ellis & Hintze, 2015).

5. We inventoried institutional values that support either the traditional or transformational culture for each aspect.

6. Next, we developed the tables to serve as a convenient and efficient tool to distinguish the impact the two educational cultures (according to institutional values, faculty mindsets, and teaching/learning practices) have on student mindsets and learner characteristics (risk factors/success factors).

7. Finally, the student mindset quotes in the tables are composites from the Pacific Crest's *L2L Camps* (2017) and the self-growth papers they produced over the last ten years of these camps.

Figure 1 Five Impact Elements in a Higher Education Culture
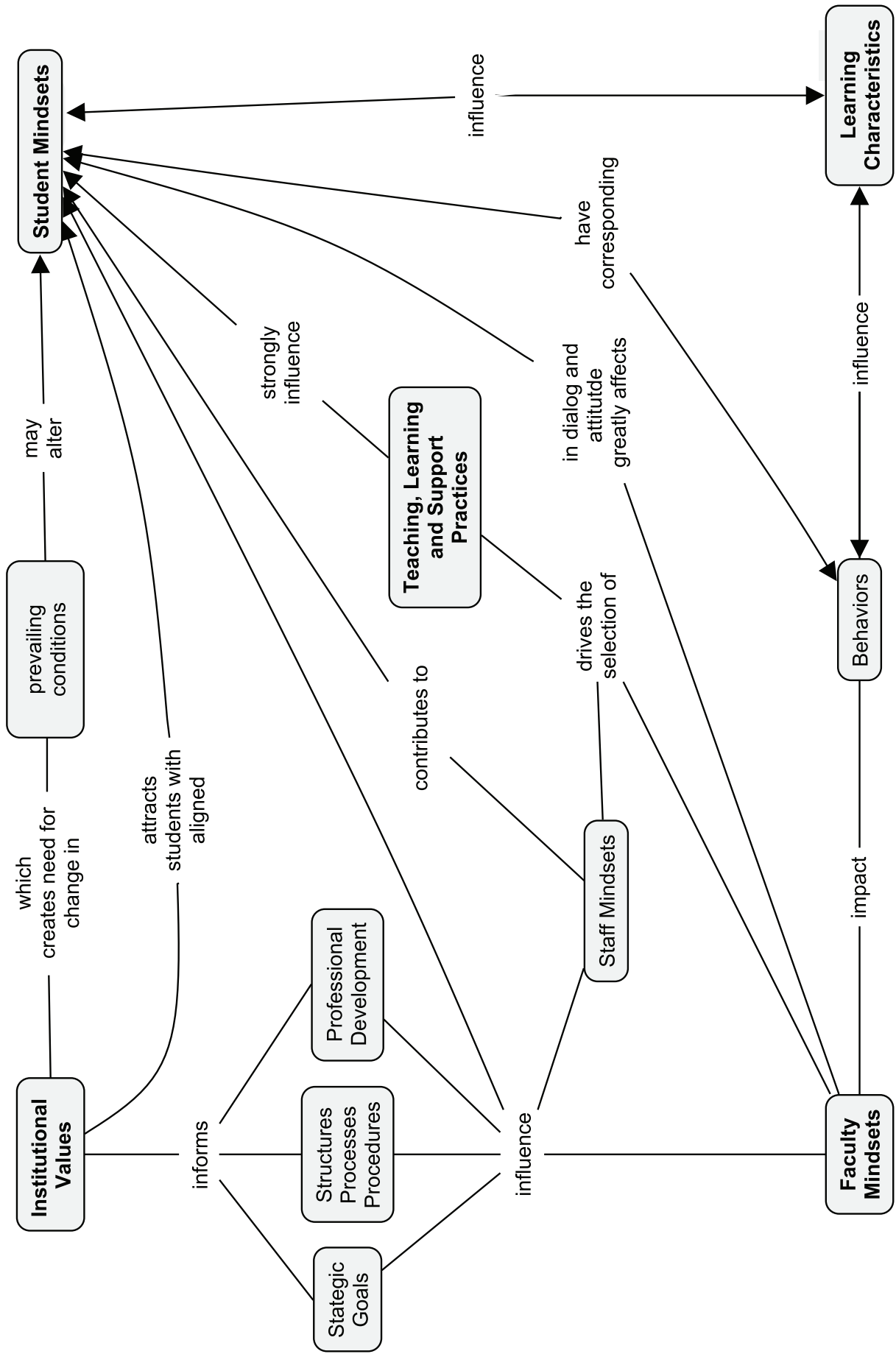
Cultural Aspect of Education 1: Challenge

This aspect refers to the level of difficulty used to challenge a learner's current capacity or the quality of a stakeholder's performance. It is related to the level of expectations and academic demands that an educational environment places on its students, faculty, or itself (Smith, 2007a). In an institutional context, challenges involve the sponsoring, executing and managing a multi-year strategic plan; aligning annual operational plans; addressing issues associated with enrollment, retention, and graduation rates; and systematically assessing student achievement with respect to targeted learning outcomes (St. Clair & Hackett, 2012). Institutional expectations and academic rigor can be set at varying levels ranging from 'enabling' to 'empowering'. This raises the central question, "should a learning challenge (or any other challenge) be set at a level where success is likely based upon current capacity, or should it be set at a much higher level than current capacity to challenge everyone to develop greater capacity?" Not having enough challenge can lead to complacency and apathy towards improving quality, while too much challenge can lead to non-productive frustration, anger, and withdrawal (Morgan, 2007).

Traditional Culture

A traditional culture's academic level of challenge is often influenced by inadequate resources and underprepared students. A multi-layered support system is frequently put in place to ensure stakeholder success even when faced with

Table 2 Cultural Aspect of Education 1: Academic Challenge

Institutional Values		
Traditional Culture Risk Factors		*Academic Challenge*
• Provide multiple support systems	• Provide second/third chances	
• Student-centered	• Provide accommodations when student issues arise	
Transformational Culture Success Factors		*Academic Challenge*
• Values student research experiences	• Provide high level problem solving challenges	
• Expects students to teach each other and themselves	• Mentor (challenge and assess vs. advise, "tell what to do")	

Faculty Mindset		
Traditional Culture Risk Factors		*Academic Challenge*
• "If I challenge learners to really understand at higher levels (problem solving), they would fail the class"	• "I increase student success by assisting them to do better on papers and tests"	
Transformational Culture Success Factors		*Academic Challenge*
• "Students are inherently strong; they bend but do not break"	at least 5 to 7 areas of disciplinary performance throughout the course" (improve this mindsets related to success factors)	
• "I consistently send the message and means so that the learners can succeed by staying on top of each process"	• "Provide students with rich resources, numerous opportunities, and choices to meet their learning needs and self-challenges"	
• "I believe students can perform the discipline in my course and as such will have them focus on		

Faculty Practices		
Traditional Culture Risk Factors		*Academic Challenge*
• Teachers help edit students' draft papers before submission	• Teachers clearly articulate and summarize what they consider the key information in the textbook	
• Teachers run review session to prepare students for exams	• Teachers summarize what has been covered during class (defines what is important)	
• Content is often rushed or dropped due to time constraints	• Teachers present solutions to hard homework problems that students couldn't solve	

considerable institutional constraints. In this environment, faculty and staff believe their primary obligation is to help students avoid failure by making learning easier and doing what is necessary to minimize student stress levels. Teaching practices that support this mindset include reviewing their homework, preparing them for tests and editing their papers. When performers exist in this culture for a prolonged period of time, individuals can become comfortable in the knowledge that they will get affirmed for their efforts and accommodated when performance doesn't meet expectations. Thus, they will often migrate to "learned helplessness" (Abramson, Seligman & Teasdale, 1978; Dweck, 1975; Dweck & Reppucci, 1973). Even in a culture with adequate challenges and expectations, a relaxed environment may reinforce procrastinators (Kuh et al., 2006). It is important to understand that procrastination is a result of failure in self-regulation and self-challenge that frequently leads to poor achievement (Akinsola, Tella, & Tella, 2007).

Transformational Culture

A transformational culture perceives high levels of challenge as a critical component of a quality learning environment. This is rather powerful because it begins with teachers' steadfast belief that all students can grow in their learning, performance and achievement (Fines, 2002). In a high expectation environment, all stakeholders will initially react emotionally because it requires them to learn and perform better than their current capacity. This means that they will have to learn to manage this new frustration. However, a sustained challenge quickly conditions them to overcome the lack of emotional intelligence because they start enjoying the growth that comes from being outside their comfort zone (Morgan, 2007). This shift leads to the discovery that these rewards can be obtained through self-challenge. Once the learners or performers realize that they can meet these elevated challenges through growth, their self-motivation increases because they are better able to mold themselves into the person they want to become. Volkwein and Cabrera (1998) found that intellectually challenging classroom experiences cause students to learn new things, become self-starters, and enjoy self-reliance. In all of these situations, time is at a premium, and as a result, everyone needs to prioritize critical tasks required for overcoming external or internal challenges.

	Transformational Culture Success Factors	*Academic Challenge*
Faculty Practices	• Mentors let students express how they are really feeling • Facilitators let students take time out to figure out what is going on emotionally • 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 • At the beginning of a new process, facilitators set high expectations which are much greater than the learners' current capacities	• Provide timely milestones with assessment to challenge students to stay 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 • Designers provide a set of performance measures that detail the levels of performance and how future performance can be improved • Mentors encourage learners to set their own high expectations thus self-challenge
	Traditional Culture Risk Factors	*Academic Challenge*
Student Mindsets	• "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)	• "It is unfair to put problems on tests that were not presented in class, on homework assignments, or covered in review sessions" (Unchallenged)
	Transformational Culture Success Factors	*Academic Challenge*
	• "I am much stronger than I thought I was and what others think I am capable of attempting" (Manages Frustration) • "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)	• "I want to constantly increase my performance and will use every opportunity to see how I can perform" (Self-Challenges) • "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" (Prioritizes)

Cultural Aspect of Education 2: Cognitive Complexity

Cognitive complexity refers to a psychological characteristic associated with perception skills and reflects the degree to which a person can see differentiation and integration in an event, concept or thought (Streufert & Swezey, 1986). Bloom's taxonomy (Bobrowski, 2007) and the cognitive domain of the classification of learning skills (Davis et al., 2007) help explain the concept of cognitive skills and their pivotal role in learning. In describing cognitive complexity as a personality dimension, Streufert and Swezey (1986) note that individuals operating with high cognitive complexity are multidimensional in their thinking and are able to analyze or differentiate a situation into many constituent elements. In general, the debate on defining appropriate learning outcomes focuses on where to set the level of learning for an outcome. Following Bloom's taxonomy, the learning levels are: 1) memorized information, 2) comprehension and understanding, 3) transferability of that knowledge or 4) working expertise. Research shows that faculty members who share both real-life problems and their own research value a high level of cognitive complexity (Pascarella et al., 1985; Volkwein et al., 2000). Individuals with high cognitive complexity are generally quite flexible in creating new distinctions within new situations to advance learning, problem solving, and research (Streufert & Swezey, 1986).

Traditional Culture

A traditional culture supports implicit assumptions which encompass reliance on historical practices and proven solutions. Institutional concerns for efficiency, i.e., time and cost, restrict their willingness to move beyond the familiar contexts. In the classroom, faculty share knowledge and expertise by systematically providing a large body of information which students' listen to and from which they efficiently capture the critical information. Teachers who value expediency therefore limit the context to immediate need and endorse the belief "practice makes perfect" (Hintze-Yates et al., 2011). Students bring beliefs and perceptions about classroom roles for themselves, peers and teachers (Thomas & Pedersen, 2001). Based on their high school experiences, they continue to apply memorization as a primary tool of learning and test-taking and often find college level learning complex for their current level of cognitive capacity. This makes it difficult for faculty to raise the level of learning. In *Pedagogy of the Oppressed*, Paulo Freire (1993, p. 58) calls such practice the "banking" method because it facilitates teachers making information deposits in the minds of students. These cultural characteristics and practices impact how much time students will actually spend thinking critically and how much ownership they take of their learning and success.

Transformational Culture

In a transformational culture, students are expected to develop working expertise and build strong problem solving performance (Apple and Lawrence, 1994). In *Structure of the Observed Learning Outcome*, Biggs (1995) describes how a learner's performance grows in complexity when mastering increasingly more difficult tasks, particularly the sort of tasks undertaken in a transformational environment. This belief is also internalized by faculty who model their own learning, problem solving, and research processes in dynamic and evolving situations to motivate students to want to seek the same level of performance. "What if" analyses and synthesis are valued as important skills to develop so students can seek high levels of learning through complex work projects, problem solving, research, and transference to new contexts (Hintze-Yates et al., 2011). These techniques help develop independent critical thinkers and avid readers who seek, explore and process information outside of the classroom. Students engage in open-ended, inquiry-based learning activities that challenge them to generalize their knowledge. They relish continually higher challenges that include research collaborations with faculty. In turn, faculty design and provide authentic problems, research opportunities, resources and problem-solving tools so students formulate and test their ideas, draw conclusions and inferences on their own.

Table 3 Cultural Aspect of Education 2: Cognitive Complexity

	Traditional Culture Risk Factors	*Cognitive Complexity*
Institutional Values	• Must cover the quantity of content demanded by stakeholders • Students have many demands on their time so we must provide more help • Save time by giving students what they need	• Provide clear explanations to make understanding easier

	Transformational Culture Success Factors	*Cognitive Complexity*
Institutional	• Students must become strong independent learners • Students do internships and outreach to apply their learning into their communities	• Problem Solving of open ended problems • Undergraduate research is expected of all students

	Traditional Culture Risk Factors	*Cognitive Complexity*
Faculty Mindset	• "I must teach the students so they can learn and be successful"	• "I have all this required content that I must cover during this course for future courses"

	Transformational Culture Success Factors	*Cognitive Complexity*
Faculty Mindset	• "Provide students with a variety of open-ended challenges that require them to use real-world data and informational resources" • "I know that students are capable thinkers and must be challenged to do the thinking that will improve thinking"	• "I know students learn to solve problems more effectively when they are systematic and write their ideas clearly" • "I expect that the students come in class with a high level of comprehension to engage in even in higher levels of learning activities"

	Traditional Culture Risk Factors	*Cognitive Complexity*
Faculty Practices	• 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) • Multiple choice exams are the most efficient means to measure learning with large sections or with extensive information	• Teachers present solutions to hard homework problems that students couldn't solve • Content rich courses have over 100 learning objectives /competencies that must be covered • Must limit the number of challenging or complex questions due to lack of time

	Transformational Culture Success Factors	*Cognitive Complexity*
Faculty Practices	• 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 • 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 before students try to apply knowledge	• 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 • 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

	Traditional Culture Risk Factors	*Cognitive Complexity*
Student Mindsets	• "Why invest in learning something if it is the teacher's responsibility to teach me." (Underprepared for Collegiate Learning)	• "I must memorize all of this information so that I recall it for the quizzes, exams, assignments, and essays." (Memorizers)

	Transformational Culture Success Factors	*Cognitive Complexity*
Student Mindsets	• "I need to determine what information is relevant, trustworthy, and valuable for my current challenge in learning or problem solving" (Information Processor) • "I need to know 'the why it is true' behind something so I can teach it to others" (Critical Thinker)	• "I use writing to clarify my thinking when I am in the process of learning or problem solving" (Problem Solver) • "I enjoy reading books to produce meaning and understanding for myself as I explore possibilities through personal inquiry" (Reader)

Cultural Aspect of Education 3: Control

Control refers to the locus of power and authority in a learning situation or educational environment. This aspect can be positioned as tightness vs. looseness of the society, its organizations, and resulting individual behaviors (Gelfand et al., 2007). The essence of control is contained in the question, "if an individual is delegated the authority along with the responsibility to carry out their tasks, will greater success occur for all the involved stakeholders?" Research on failure (Perry et al., 2005) reveals that although high academic control may benefit learning-related emotions along with cognition, motivation, and performance, it is not sufficient to ensure optimal success. Using tight controls along with strong norms and established rules, a traditional culture produces conformity and obedience. The transformational culture with its looseness produces experimentation, openness to change, flexibility and greater risk-taking.

Traditional Culture

A traditional academic culture values a strong classroom management control as a critical instructional competency. Using control, academic institutions strive to increase student success by creating a safe, directive and rule-based environment. Credentialed subject-matter experts use their experience and trusted methods to make sure that the students do what is best for them. Since the faculty's contractual employment and other conditions regarding tenure, promotion, respect and appreciation, etc., are directly tied to their external successes, they are encouraged to seek control of their situation to enhance their professional standing. This mindset manifests itself in the classroom as structured teaching and learning, enforced procedural rules, products with prescribed formats, and dictating what will be learned, when and how. Among the students, however, it can lead to a sense of deference and a "so what?" attitude. If these attitudes are pervasive, students become less responsible in a tight, controlling environment (Gerlach, 2015). Students also become compliant and will do what the teacher directs them to do (Svoboda, 2008). Recognizing they have little control on what they want to learn and how they want to go about learning, students become accustomed to teacher "dictation over facilitation" (Apple, Ellis & Hintze, 2016d, p. 88).

Transformational Culture

Students take control by setting their own goals, keeping the end in mind, focusing on what really matters in the process, and validating their progress and outcomes to make sure it matches the expected quality. The faculty provides students the authority to make many of their individual decisions while also offering them inclusion in class-wide decision making. This empowers students to plan before proceeding, determine what types of changes need to be made at critical milestones, reflect on what is happening, and continually add new challenges during the process. The faculty holds students accountable for delivering what they promised but gives them the freedom and room to do it their own way. Functioning within this environment, students are more focused, set better goals, and are more responsible because they are in control, which leads to being significantly vested. They even validate the quality of their work to ensure they exceed everyone's expectations (Smith, 2007b).

Table 4 Cultural Aspect of Education 3: Control

Institutional Values	**Traditional Culture Risk Factors**	*Control*
	• Safe environment • Demonstrated accomplishments	
	• Strong credentials • Follow chain of command	
	Transformational Culture Success Factors	*Control*
	• Learning centered • Egalitarian	
	• Inclusive decision making • Delegation of authority	
Faculty Mindset	**Traditional Culture Risk Factors**	*Control*
	• "I know what I want students to learn and I exert my will on them in that direction"	
	• "I want students to follow my rules and do what I ask so they will be successful"	

	Transformational Culture Success Factors	*Control*
Faculty Mindset	• "I must help students personalize a learning experience by having them think about what they really want" • "For students to really learn, they must know that they know"	• "I have students wanting to outperform each other as teams and as individuals with explicit expectations in a very challenging environment" • "I want student teams to have ownership of what they are doing for every moment of the activity"

	Traditional Culture Risk Factors	*Control*
Faculty Practices	• Teachers will not change dates for exams or provide make up exams in almost 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	• 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

	Transformational Culture Success Factors	*Control*
Faculty Practices	• 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 have learners set their learning and growth goals at the start of each course • Mentors challenge students by holding them accountable for their commitments • Designers build in many alternate paths to allow the students to make decisions on what they want to accomplish from the course	• Have the students teach each other at the end of activities by sharing their insights • Facilitators let students decide what they want to incorporate into their Learning Journal • Evaluators require students to validate their solutions to get full credit • 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?"

	Traditional Culture Risk Factors	*Control*
Student Mindsets	• "Since faculty have all the control and demand respect, just give them exactly what they want in the way they want it" (Deferential) • "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)	• "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 Taker)

	Transformational Culture Success Factors	*Control*
Student Mindsets	• "I need to determine why I am in this class and what I really want out of this class for me" (Goal Setter) • "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)	• "I am a better student than most of my peers because I am motivated, responsible, quality oriented and hard-working" (Responsible) • "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)

Cultural Aspect of Education 4: Delivery

Delivery methods are the means by which learners obtain information and knowledge, including the processes, tools and techniques to achieve the targeted level of learning outcomes. Westwood (2008) advises that along with design, delivery selection methods and the nature of the subject matter, it is important also to understand how students learn. Smith (2007b) suggests facilitation as an effective tool that is equally useful to learners, educators, researchers, and professional organizations. In addition to classroom teaching methods, contemporary research supports the use of out-of-class interactions and experiences to positively shape and influence student perceptions and educational aspirations (Gurin and Epps 1975; Hearn 1987; Pascarella 1985), as well as successful completion (Pascarella, Smart & Ethington 1986; Stoecker, Pascarella & Wolfe 1988).

Traditional Culture

A traditional delivery method is grounded in respect for authority and wisdom with an integrated teacher-centered delivery of instruction where the experts can provide very directed and purposeful instruction, especially being mindful of the cost of higher education and the value of efficiency. Typically, this involves lecturing, speeches, and other aids such as graphs, charts and PowerPoint presentations. Students are presumed to be blank slates ready and eager to absorb knowledge (Apple, Ellis & Hintze, 2016d) from the "sage on the stage" (King, 1993). Instruction is based on specific textbooks and individual written assignments with a single, unified curriculum for all students. Students are more comfortable in this inactive role of note taker and test taker.

Transformational Culture

Practices of a transformational culture ensure that active learning experiences, driven by discovery and curiosity, motivate learners. The educator serves as a "guide on the side" (King, 1993) with belief that students should learn to actively construct knowledge. This involves students' active participation using learning skills, critical thinking and problem-solving techniques. The instructors adopt the role of facilitator to help students more effectively and efficiently construct knowledge (Apple, Ellis & Hintze, 2016f). These active learning experiences can span to include internships, service learning, research projects, and international programs. The students in active learning environments become more organized, work harder, build effective reading and writing skills, think more critically, and continually improve their problem-solving performance.

Table 5 Cultural Aspect of Education 4: Delivery

	Traditional Culture Risk Factors	*Delivery*
Institutional Values	• Credentials of the educators	• Incoming standardized test
	• Scholarship efforts	• State of the art tools for communication
	Transformational Culture Success Factors	*Delivery*
	• Faculty research process is shared with students	• Students teaching students
	• Problem based learning / difficult open problems	• Much international travel and immersion
Faculty Mindset	**Traditional Culture Risk Factors**	*Delivery*
	• "I look at students' body language and listen to their responses to see if they are capturing what I am saying"	
	• "I share my extensive disciplinary expertise with the students"	

	Transformational Culture Success Factors	*Delivery*

<table>
<tr><td rowspan="1">Faculty Mindset</td><td>Transformational Culture Success Factors</td><td><i>Delivery</i></td></tr>
</table>

Faculty Mindset

Transformational Culture Success Factors	*Delivery*
• "Give a set of expectations and requirements that require a full team contribution" • "I encourage students to try to do more every minute by finding opportunities to add more to their plate"	• "I know students learn more effectively when they write their ideas clearly" • "I know students don't need me in their process of learning so I provide them learning experience that challenges and supports their learning"

Faculty Practices

Traditional Culture Risk Factors	*Delivery*
• Teachers tell students what they'll teach them, teach them, and tell them what they've been taught • Teachers explain complex ideas so students can understand them • 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 create PowerPoint slides as a key resource for the students during class and for review later when studying • Teachers give short quizzes to make sure students are paying attention

Transformational Culture Success Factors	*Delivery*
• Performance expectations are provided so that student monitor their own learning performance • Facilitators provide 5 minutes for teams to analyze the activity before a team is released to do the activity • 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	• Every class period and even before and after class are activities that students perform • Designers use multiple levels of difficulty in an activity to provide richness and stimulate individual interest • Facilitators use of the LPM to model learning activities so the students see the learning process modeled continuously • Facilitator provides many extra choices for learners to explore areas on their own for their own interest (thus raising the bar individually on students)

Student Mindsets

Traditional Culture Risk Factors	*Delivery*
• "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)	• "I must capture all of this information because this is what will be on the test" (Transcribers)

Transformational Culture Success Factors	*Delivery*
• "We must know what we need to do and how we are going to do it, before we start doing it" (Organized) • "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)	• "I use writing to clarify my thinking when I am in the process of learning or problem solving" (Writer) • "I can construct knowledge to working expertise by using every step of the Learning Process Methodology more and more effectively" (Learner)

Cultural Aspect of Education 5: Instructional Design

Instructional design refers to a purposeful arrangement of instructional structure, materials and experiences to support learning. This requires determination and specification of the content, methodologies, activities, sequencing, evaluation and assessment of the learning experience (Davis, 2007). It is a systematic process by which instructional materials are created and developed. The practice of creating *instructional* **experiences** makes the acquisition of knowledge and skills more efficient, effective, and appealing (Merrill et al. 1996, p. 6). It is a holistic process that first begins with faculty's analysis of the learner needs and goals followed by development of a delivery system to meet those needs and goals. As an inherent part of teaching, instructional design integrates the teaching-learning process that takes place in a unit of learning such as a course, a lesson or any other learning event (Duffy & Jonassen, 1992). Other contemporary researchers (Apple, Morgan, & Hintze, 2013; Gange, 1985; Gagne, Briggs & Wagner, 1992) also distinguish levels of learner knowledge to be hierarchical. Advocating levels of learning as the basis for sequencing of instruction, Gange (1985) suggests specific conditions for learning as the basis for designing instruction according to hierarchy of complexity. Biggs' instructional design model suggests three components: student learning outcomes, teaching and learning tasks designed to achieve the intended outcomes, and assessment of learning. Offering a constructive realignment of Biggs' model, Jain and Utschig (2016) suggest a new process model design that replaces student learning outcomes with the process of student growth; replaces teaching and learning activities with the process of instructional design; and reinterprets assessment to also include the process of ongoing assessment of the learning process itself.

Traditional Culture

Traditional academic cultures pursue consistency, i.e., courses, resources and materials packaged to achieve his-toric goals, values, and identities. Faculty members have special courses they teach year after year leveraging the same curriculum and textbooks. Their classroom lectures are designed to cover the course material within a regimented timeframe. Optimization is achieved by standardizing the process to disseminate information and evaluate student knowledge. Evaluation of student performance is conducted with pre-established criteria using historical tests and exams as references. In these courses, the teacher covers the salient points in class, provides "study guides", gives homework assignments for practice, and provides "review sessions" before exams. In this environment, popular student practices include rote memorization, focusing only on what faculty emphasize in class, in the study guide, on the homework, or during the review sessions coupled with lots of cramming before the tests.

Table 6 Cultural Aspect of Education 5: Instructional Design

Institutional Values	**Traditional Culture Risk Factors**	*Instructional Design*
	• Faculty teach their favorite courses	• Approved syllabi by a curriculum committee
	• Tests judge level of learning from textbook and lectures	• Cover the textbook and use the best one for the job
	Transformational Culture Success Factors	*Instructional Design*
	• Update learning experiences based upon latest disciplinary scholarship and professional activities	• Differentiated instruction that allows learners to approach with different styles and background
	• Open and flexible syllabus with learners inputs and their desired outcomes	• Provide culture very similar to the profession for improving professional practice
Faculty Mindset	**Traditional Culture Risk Factors**	*Instructional Design*
	• "I know what needs to be covered because of my years of experience in teaching this course"	• "I will provide all examples of how to do the types of problems before they take the exams"
	Transformational Culture Success Factors	*Instructional Design*
	• "Provide students with rich resources and opportunities to meet their learning needs and challenges"	• "Provide rich experiences that challenge students to perform in the discipline"
	• "I expect the students be able to successfully solve or argue any problem or position given them"	• "Students are responsible for level 1 and level 3 knowledge outside of class so we can do critical thinking and problem solving in class"

Transformational Culture

A transformational design is inherently flexible in meeting the needs of different audiences and is reusable, sustainable and reconfigurable (Davis, 2007). Faculty value relevance, diversity, and flexibility more than consistency in design and structure. They employ a variety of modular, easily reconfigured and adaptable learning experiences which allow changes as needs and context shift (Barnhardt, 1981). Faculty members introduce multiple traditional and non-traditional resources (e.g., online technologies) within and outside the classroom to make students realize the importance, value and effectiveness of a variety of learning resources. The curriculum is designed to optimize student effectiveness by having them complete pre-activities before class, activities in class, and demonstrate their understanding and hardest problems after class to produce generalized knowledge. Such techniques include continual challenge and raising the level of student learning through a mixture of problems-solving exercises that compel independent critical thinking and articulation (Morgan & Williams, 2007).

Faculty Practices		
Traditional Culture Risk Factors		*Instructional Design*
• Teachers use historical lecture notes which have worked in the past		• The department syllabus is reused term after term for consistency and reliability
• Teachers and departments collect back graded exams from students so they can be reused in future courses		• Teachers provide sample exam problems in lecture and review sessions that closely match the exam problems
• Teachers and colleges find it unfair to have students try to solve exam problems in a new context		• Teachers assign a lot of practice problems for homework
Transformational Culture Success Factors		*Instructional Design*
• Let students define and solve significant problems requiring a whole set of new resources		• Designers frame level 4 problems that require working expertise to solve in different disciplines
• Teachers collaborate with academic skills centers, counseling, faculty peers, other disciplines, and online technologies to provide students with many support structures for success		• 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 (alignment skill to practice)
• Facilitators provide inquiry questions and sample possible solutions to complex problems to promote discussion about understanding and problem solving process		• At the beginning of new learning challenges, require learners to inventory what they already know that would be useful in the current learning
• Designers envision long-term behaviors that are supported with compelling themes and that build disciplinary ways of being		• Facilitators use reading assignments, readings logs, and reading quizzes so students are ready for learning activities

Student Mindsets		
Traditional Culture Risk Factors		*Instructional Design*
• "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)		• "I need to remember exactly how to solve each of the types of problems shown and practiced" (Lack of Transferability)
Transformational Culture Success Factors		*Instructional Design*
• "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)		• "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)
• "I need to be able to apply this knowledge in any appropriate and valuable situation successfully" (Generalizes)		• "The only way that I will succeed in my career choice is to learn how to perform the disciplinary challenges"(Engaged)

Cultural Aspect of Education 6: Efficacy

Efficacy refers to a belief in one's capacity to grow or make a difference by setting a goal and achieving its desired outcome, a precondition for behavior change (Bandura, 1977b). Bandura's social learning theory identifies a strong relationship between self-efficacy and individual success. People with low self-efficacy doubt themselves and therefore avoid challenging tasks because they perceive them as threats (Margolis & McCabe, 2006). People with high efficacy employ a greater degree of effort toward commitments and ultimately are more likely to succeed in achieving even their most challenging goals. Contemporary research (Apple, Ellis & Hintze, 2016; Bandura, 1977a; Fencl & Scheel, 2005) confirms that students with a strong sense of efficacy are more likely to challenge themselves with difficult tasks and be intrinsically motivated. Articulating adult learning theory, Kegan (1994) asserts that over a period of time with the formation of a sociocultural life perspective, a transformational process will occur in a person's self-identity, self-confidence, and communication skills. Research studies have shown a correlation between efficacy, academic confidence and sense of belonging with students' greater persistence and higher grades (Aronson et al., 2002; Paunesku et al., 2015; Walton & Cohen, 2011).

Traditional Culture

Student success is a key focus for most colleges since many students are underprepared and doubt that they are college ready. Institutions have layered student services to support students as they navigate through the challenges of their first year. Although research has consistently established that student-faculty interaction (mentoring) is an important factor in student success (Kuh et al., 2006), most current systems and processes try to increase students' academic success by faculty and staff supporting student work products. They offer help and encouragement, striving to make their teaching entertaining to maintain student interest, and by providing enticements such as review sessions, tutoring, sample exams, and office hours to mediate students' self-doubt. In this academic environment, with such a strong dependence on faculty and staff, students never gain trust in their own capability (self-doubt). Since students continue with a fixed mindset (intelligence not malleable), they become codependent on others to ensure their future success. In this culture, many faculty members begin to doubt their ability to mentor students to become successful independent self-growers capable of producing their own success.

Transformational Culture

A transformational institution employs and values faculty and staff who believe in creating new challenges to elevate student self-efficacy, self-validation and performance on a daily basis. The faculty models self-growth practices to instill similar positive student behaviors to validate self-confidence in their learning and performance (Apple, Ellis & Hintze, 2016g). They use assessment and mentoring tools to support transformational learning among students and encourage them to use reflective journals for self-assessment to monitor their own improvement, learning and growth. Students' willingness to take responsibility and the resultant success helps them realize their self-growth leading to greater self-efficacy (Apple, Ellis & Hintze, 2016h).

Table 7 Cultural Aspect of Education 6: Efficacy

Institutional Values		
Traditional Culture Risk Factors		*Efficacy*
• We promise we will make you successful: admissions	• Our advising system will make sure you take the right courses	
• Faculty care about you	• We will place you in a job	
Transformational Culture Success Factors		*Efficacy*
• You will have opportunities to prove yourself in research, internationalism, internships, and servant leadership	• Sets high expectations for community membership so that belief in oneself is challenged till it happens	
• Daily challenges and opportunities for elevating current performance	• Hire quality faculty and staff who have belief they can make a difference	

Faculty Mindset	**Traditional Culture Risk Factors**	*Efficacy*
	• "I will be able to help students be successful who are capable, work hard and do all the work"	• "Students need to be entertained and need immediate gratification in whatever they do"
	Transformational Culture Success Factors	*Efficacy*
	• "Students have unlimited potential and I make sure they know I believe in their potential" • "An environment of assessing and mentoring produces great opportunities for transformational learning"	• "I know that students are capable and must let them learn how to do things themselves" • "I want to help students become stronger self-growers by modeling and challenging self-growth"
Faculty Practices	**Traditional Culture Risk Factors**	*Efficacy*
	• 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 • Faculty use flashy technology to entertain • Faculty grade all work to motivate students	• Teachers constantly say to their student, "just work harder, you will be successful" • Teachers requests to administration and admissions: "please recruit and admit better students who can be successful" • Faculty give bonus points to motivate students
	Transformational Culture Success Factors	*Efficacy*
	• 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 • Learner contract that asks the students for their commitment of what they want to produce from the course • Share with students your belief in and commitment to their success	• 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 • Create an open classroom with freedom of movement, choice of activity, and a set of powerful social conventions • Implement peer-assessment where people are helping other people get better
Student Mindsets	**Traditional Culture Risk Factors**	*Efficacy*
	• "I don't think I am the caliber of the students that will be successful" (Self-Doubters)	• "Maximize my grade with minimum effort" (Fixed Mindset)
	Transformational Culture Success Factors	*Efficacy*
	• "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) • "I don't want to let my mentor or myself down thus need to accomplish the goal no matter what" (Committed To Success)	• "I can grow and want to build greater capacity in facilitating this self-growth" (Self-Grower) • "I am a better student than most of my peers because I am motivated, responsible, quality oriented and hard-working" (Being Positive)

Cultural Aspect of Education 7: Feedback

Miser (1999) defines feedback as "an objective description of a student's performance intended to guide future performance. Unlike evaluation which judges performance [assessment], feedback is the process of helping students assess their performance, identify areas where they are right on target and provide tips on what they can do in the future to improve in areas that need correcting" (p. 12). Feedback is the practice of giving prompt and meaningful information about an observed performance. Evaluation includes the comparison of the performance to a standard and assessment includes helpful analyses to help improve future performance. Assessment, especially self-assessment, is about systematically observing and analyzing a performance to pull out the strengths (why and how), improvements (with action plans), and insights (lessons learned) (Wasserman & Beyerlein, 2007). Educational research supports the idea that feedback helps achieve greater learning (Bransford, Brown & Cocking, 2000; Hattie, 2008; Marzano, Pickering & Pollock, 2001). Students learn more when they are given timely feedback that is both supportive and corrective (Cross 1987; McKeachie et al., 1986; Menges & Mathis, 1988). Effective feedback must be specific, objective, goal-referenced, tangible, transparent, actionable, personalized, timely, focused and constructive (Apple, 1991; Miser, 1999; Wiggins, 2012).

Traditional Culture

Traditional culture feedback and practices focus on making judgments about quality of performances and work products to let the performer know how well they did. Frequent (monthly and annual) feedback are provided to faculty and staff to determine if the quality of performance meets expectations and pre-established standards. Faculty in turn employs the same motivational practice for students by grading/evaluating their work. All cultures value performance and know if performances are not evaluated then performances cannot be rewarded, and if performances are not rewarded then why put in extra effort to excel? Butler and Nisan's (1986, p. 5) research on the traditional evaluative practice of assigning grades identified a few concerns such as emphasis on quantitative aspects of learning, depressed creativity, fostering fear of failure, and weakened students' interest in learning.

Table 8 Cultural Aspect of Education 7: Feedback

Institutional Values	**Traditional Culture Risk Factors**	*Feedback*
	• Motivating people through continuous evaluation • People need to know when they are deficient in meeting expectations	• Tenure process gets rid of the non-performing faculty • Need to weed out the non-performing students
	Transformational Culture Success Factors	*Feedback*
	• Each individual is self-assessing • Everyone seeks out peer assessment • Each person is willing to take time to help others improve with timely feedback desired by the performer	• Systematic assessment systems (course, program, and institutional alignment) provide quality expectations, measurement, and documented assessment report
Faculty Mindset	**Traditional Culture Risk Factors**	*Feedback*
	• "I don't like to evaluate, but I must grade students' work to motivate and reward good students' work"	• "I must constantly point out where students are weak so they can get better"
	Transformational Culture Success Factors	*Feedback*
	• "I must grade students' work fairly to motivate and then reward the students who produce good work" • "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"	• "The shift in feedback from evaluation to assessment increases students' performance during practice" • "I know that students' overall performance is highly dependent upon their self-assessment performance"

Transformational Culture

The focus of feedback in a transformational culture is to improve future performance. It is interactive and involves teachers, staff, and students in a conversation about how the student is performing. Black and William's (1998) review of literature suggests that descriptive feedback along with letter grades leads to highest improvements in performance. Process Education's transformational practice (Apple, Morgan & Hintze, 2013, pp. 75-112) emphasizes the Strength, Improvement and Insights (SII) method, which is based on reflection and continuous assessment of self and others for learner and instructor alike. Similarly, assessment of the course, program and institutional alignment provides quality expectations and measurement. Continuous assessment (and assessment of the assessment) helps develop meaningful feedback (Apple, Ellis & Hintze, 2016i). It helps student understand that failure can be used in improving future performance toward success, thus raising the bar to a higher level of performance. To leverage failure, students learn to seek and accept teacher feedback and intervention as needed, become active listeners and hone their self-assessment skills though continual practice.

Faculty Practices	Traditional Culture Risk Factors	*Feedback*
	• 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	• 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
	Transformational Culture Success Factors	*Feedback*
	• Facilitators let students fail in order for students to really succeed • Facilitators have students analyze tests to improve performance on future tests • 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	• Having students self-assess weekly focused on a critical performance in the course • Student assessment feedback with mid-term assessment • Students consult with other teams in an assessment culture • Team spokesperson to spokesperson dialog
Student Mindsets	**Traditional Culture Risk Factors**	*Feedback*
	• "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)	• "I must carefully pick courses (review RatemyProfessor) to find the easy courses and easy graders" (Fear of Failure)
	Transformational Culture Success Factors	*Feedback*
	• "I know that failures are just temporary setbacks that lead to my greatest growth spurts" (Leverage Failures) • "After each performance, ask for feedback to see how performance can be improved" (Seeks And Accepts Feedback)	• "As I increase my self-assessment skills, my ability to improve my own performance continues to increase" (Self-Assessor)

Cultural Aspect of Education 8: Measurement

Measurement, as a critical component of every educational culture, is used to determine the level of quality and achievement of learner and faculty performance (Apple & Krumsieg, 2002). As an academic tool, measurement can be expanded to gain understanding of many other areas of the academy such as distinguishing differences in intelligence and personality (Von Stumm et al., 2011), cultures (NSSE, 2005) and Value Rubrics from Association of American Colleges and Universities (AACU 2007). Institutions use academic measurement as a series of qualitative and quantitative scales to produce corresponding decisions that involve accomplishment of individual course and institutional objectives, skills and competencies. In their research involving definition and measurement of the term "academic success," York, Gibson and Rankin (2015) found that the most often measured academic components are academic achievement, satisfaction, acquisition of skills and competencies, persistence, attainment of learning objectives, and career success. The real difference between the two cultures is the degree of explicit measurement tools and their effective use, and knowing that the more objective and reliable the measurements become, the greater the cost of their development and use.

Traditional Culture

Traditional institutions consistently delegate the measurement of student learning to teachers who develop their own grading systems based upon instruments (such as tests, papers, etc.) they are comfortable using in grading. For example, a test selects a subset of exercises that students normally have practiced to determine their proficiency in a timed environment. Another instrument for capturing student learning is an essay, in which the students try to provide in writing what they think faculty wants to hear. In each case, the scoring structure is determined by instructors and they set the standards of different levels of performance. In almost every case, students don't really know how they are being measured and must trust the faculty to be fair and objective in their measurement process. In this environment, one often sees 1) normative grading, 2) resubmission with corrections, 3) dropping out the lowest grade, and 4) negotiation of points reinstated. Even *US World News and Report* has annual measurement and rankings of higher educational institutions that apply these principles. When there is subjectivity in measurement, students, faculty and even institutions spend a lot of time playing the grading game. They either perform to reach at least the minimum required level of expectations, or constantly seek direction from authority/teacher to please them, and use compliments to make the authority/teacher happy and generous with their measurements (Horton, 2015).

Transformational Culture

A transformational culture identifies and carefully selects what will be measured, measuring what really matters. Each measurement system clearly communicates its purpose, identifies explicit performance areas, clarifies expectations in each area, determines the costs and reliability of measurement, identifies when and how to collect the measurements, and uses relevant and clear rubrics (Apple, Ellis and Hintze, 2016j). The measurements involve and require alignment with outcomes, performance tasks, and performance criteria. Measurement methods and analysis are used both in evaluation and assessment and are combined with associated observations and insights (Beyerlein, Holmes, & Apple, 2007, p. 71-105). Accordingly, application of these practices necessitates integrating the role of measurer with the other roles of a teacher: as a designer, facilitator, mentor, evaluator and assessor. Students respond positively to using the measures themselves to plan, strategize, self-assess and self-mentor their own growth in these measurement areas. By monitoring their own progress, students build self-confidence to explore, clarify and exceed teachers' and their own expectations.

Table 9 Cultural Aspect of Education 8: Measurement

	Traditional Culture Risk Factors	*Measurement*
Institutional Values	• Faculty know the quality of other faculty performance in tenure process • Faculty own their grading systems and determine quality of learner performances • Class rankings based upon GPA	• US World regional and national rankings of current position

	Transformational Culture Success Factors	Measurement
Institutional	• Set of institutional measures of effectiveness (dashboard) • Set of performance criteria and performance measures for each course aligned with program performance criteria and performance measures	• Rubrics that measure key general educational outcomes • Faculty tenure and promotion decisions are based on clear expectations and performance measures

	Traditional Culture Risk Factors	Measurement
Faculty Mindset	• "My syllabus gives a list of course content, the required work products, and my grading guidelines"	• "I know quality when I see it"

	Transformational Culture Success Factors	Measurement
Faculty Mindset	• "As a mentor of students I check in to determine how they are doing overall, including financially" • "I want students to see where they are, where they were and where they want to go"	• "I designed the course based upon a set of performance criteria and performance tasks measuring transformational learning"

	Traditional Culture Risk Factors	Measurement
Faculty Practices	• Faculty use class time to explain the requirements for work products • Work in progress is critiqued publicly to find out what is fixable • Faculty assign interesting additional work that isn't graded	• Grading work products is done from the perspective of faculty expertise • Students are often allowed to resubmit work for re-grading after fixing problems • Grades are justified with extensive comments

	Transformational Culture Success Factors	Measurement
Faculty Practices	• 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 • Designers provide analytical rubrics with specific details in the levels of performance that give ideas of how to improve future performance	• Evaluators provide public score sheets to clarify how work products are actually being evaluated • 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

	Traditional Culture Risk Factors	Measurement
Student Mindsets	• "I play the grade game to find the minimum amount of work needed for personal success" (Minimalist)	• "I work hard and give the teacher what they want" (Teacher Pleaser)

	Transformational Culture Success Factors	Measurement
Student Mindsets	• "I must constantly make decisions to manage current situations to provide means to accomplish my goals" (Financial Management) • "I have improved from past performances and can see ways in which I can continue to improve" (Self-Confident)	• "I need to analyze the syllabus fully, determine what needs to be done by when and at what quality" (Clarifies Expectations) • "I must rely on myself " (Validates)

Cultural Aspect of Education 9: Ownership

The quality and quantity of results are strengthened by having the people who are producing the results take greater ownership. For example, with regards to learning, how do we get students to take greater ownership of learning, moving from directing their learning to get students learning to self-direct? Learner ownership is about how much of the process of constructing, using and validating knowledge is taken over by the learner with the aim of becoming a self-grower (Apple, Morgan & Hintze, 2013). Stone (2014) describes three essential characteristics of student ownership: commitment, endurance, and motivation. In general, critical thinking and satisfaction of creating something triggers ownership (Vygotsky, 1978). Ketch (2016) notes a direct link between student conversation (oral or written) and ownership because it helps individuals make sense of what is being learned or accomplished. It also helps build respect for others' opinions while taking ownership of one's learning process. Dewey (1916) also suggests a connection between experiential learning and ownership because it "give[s] pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking, or the intentional noting of connections; learning naturally results" (p. 181). Taking ownership also pertains to all stakeholders in the educational institution where, if they own what they do, they seek to produce the highest quality and share their efforts and results with educational community.

Traditional Culture

As a directed process, the traditional teacher-centered practice supports the belief that learners require prompting and monitoring in order to initiate and persist. By default, institutional adherence to prescribed courses and outcomes with standard syllabi and extrinsic motivational grading systems often preclude students from taking more ownership of their own learning and resulting work. As ownership is reduced, students tend to take less pride and satisfaction in their work, which causes faculty to try to be even more directive to elevate the quality of student learning. The more directive the administration is with faculty and staff, the less shared governance and ownership faculty and staff have in helping the institution address its challenges to increase the quality of its systems, processes, and student success.

Transformational Culture

While the goal of educators is to help students improve their educational performance, Process Education advocates shifting ownership of learning to the learner (Apple, 1991) where they take initiative and persistence without prompting.

Table 10 Cultural Aspect of Education 9: Ownership

Institutional Values		
Traditional Culture Risk Factors		*Ownership*
• Departments own programs	• Learning outcomes prescribed	
• Syllabi define courses	• Faculty responsible for learning	
Transformational Culture Success Factors		*Ownership*
• Profile of a graduate: defined performance criteria	• Student developed learning pPlans	
• Student developed portfolio	• Students defined learning and growth outcomes	

Faculty Mindset		
Traditional Culture Risk Factors		*Ownership*
• "In a timely fashion, I tell the students how they can be successful"	• "Most of my students don't really care about what I am sharing with them in my course"	
Transformational Culture Success Factors		*Ownership*
• "I will release control so that students can take ownership"	• "I will set up the challenges for the students but let them figure out how they will accomplish them"	
• "I want to provide students with a positive evaluation system that encourages and rewards performance"	• "I will require and expect students to perform more learning with less time"	

The more that the learner can set their own learning and growth goals, identify how they would like to accomplish the established requirements as well as their own goals, and manage their time as to what and how they will proceed, the greater their energy and motivation will be (Burke, 2007). Faculty who have ownership of their research programs, courses they want to teach, and have aligned their responsibilities to activities that are productive result in greater quality and quantity of annual results.

Faculty Practices		
Traditional Culture Risk Factors		*Ownership*
• 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		• 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
Transformational Culture Success Factors		*Ownership*
• Designers leave significant components in projects where the learner gets to define its specifications • 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 • Facilitators frequently ask students to assess added value in the last time period in order to eliminate sources of waste		• Facilitators Intervene on process rather than on content • 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 • 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

Student Mindsets		
Traditional Culture Risk Factors		*Ownership*
• "I want the teacher to tell me exactly what to do (and how)" (Undisciplined)		• "I'm taking this course because it is required for my degree" (Unmotivated)
Transformational Culture Success Factors		*Ownership*
• "I have learned that I must construct knowledge and effectively use every step of the LPM effectively" (Learner Ownership) • "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" (Plans) • "I want to make each day of each week the most productive by deciding how to use time and then		using it productively "I want to make each day of each week the most productive by deciding how to use time and then using it productively" (Manages Time) • "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)

Cultural Aspect of Education 10: Relationship

This aspect describes the level of connectivity between the teacher/staff and learner and the degree of emotional investment a mentor has in her/his students or mentees. Mentoring involves a trusting but clearly-bounded mutual relationship between a mentor and a mentee for the purpose of personal change or growth of the mentee (Leise, 2007). Framed within the context of mentor-mentee roles, it describes a time-restricted and evolving relationship that cannot be assigned, dictated or forced (Ensher & Murphy, 2005). In "The Profile of a Quality Faculty Member," Collins and Apple (2007) describe the role of a high-quality mentor as one based on a high degree of mutual trust and respect where both learner and mentor are committed to learner's success. A successful relationship is characterized by reciprocity, mutual respect, clear expectations, personal connection and shared values (Straus, Johnson, Marquez & Feldman, 2013). The difference between the two cultures is in how much time, energy and emotional commitment faculty and staff are willing to devote to being servant leaders who mentor the at-risk population of their academic community.

Traditional Culture

A traditional teacher-student relationship is delimited within a regimented routine which values objectivity and emotional boundaries. The mentor-mentee relationships are constrained by the size and magnitude of faculty workload and the design of the reward system. In most cultures, the mentor is not rewarded for the growth in the mentee's performance. As an advisor, the faculty recommends a course of action they believe is best for the student. When faculty uncovers significant personal factors of a student, they quickly refer them to specialized experts. With the lack of connectivity and emotional support of the faculty members, many students learn to hide in the classroom and not seek teachers' help beyond the classroom, such as office hours. When student interests and performance decline, their motivation in continuing the course or program decreases and their academic success becomes at-risk. Faculty during tenure and promotion often can feel the same way if there is not mentoring to help them process all facets of the academic culture.

Transformational Culture

Relationships in a transformational culture are learner-centered with faculty's active interest in developing a mentee's potential within the boundaries of a mentoring relationship and structure. The focus is empathy in creating well-rounded mentees who are individuals able to analyze their own performance in the context of personal situations and backgrounds. The mentor projects positive feelings toward learning objectives, performance expectations, and action plans irrespective of mentees' background or past performance (Apple & Krumsieg, 2009). The mentor consistently models the desired behaviors, is a good listener and communicator and employs timely and effective interventions related to learning skills to stimulate growth in mentee performance. The mentee is enthusiastic and persistent in seeking feedback and critique to improve performance by asking questions and getting help when needed. Essentially, the people in this culture have a strong intrinsic value for servant leadership and have discovered that their growth increases through the mentoring of the growth of others (Apple, Ellis & Hintze, 2016g).

Table 11 Cultural Aspect of Education 10: Relationship

Institutional Values	Traditional Culture Risk Factors		*Relationship*
	• Disciplinary experts share knowledge	• Access via office hours	
	• Faculty defer to institutional professional services to support students	• Student center	
	Transformational Culture Success Factors		*Relationship*
	• Mentoring	• Undergraduate research	
	• Integrated community activities of faculty with students	• Learning community	

Faculty Mindset		
Traditional Culture Risk Factors		*Relationship*
• "I am an educator, while student services are set up to work with students"	• "I'm here to teach learners and not be a parent"	
Transformational Culture Success Factors		*Relationship*
• "I want students to realize how special they are and the contributions that they can make" • "I am committed to every student's success by doing every reasonable action that will improve their likelihood of success"	• "I value my students and want them to be part of our college community" • "I want to make sure that students know they can count on me if they have difficulties"	

Faculty Practices		
Traditional Culture Risk Factors		*Relationship*
• To be fair, I should treat all students the same and not provide specialized attention • If students want extra help, they should see me during office hours • I am not trained to provide psychological counseling or deal with students' personal problems	• Academic skills center is there • 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	
Transformational Culture Success Factors		*Relationship*
• 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 • 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 • Mentors advocate when their students are being treated unfairly within the system	• Facilitators use storytelling illustrating the numerous times they have helped other students become successful in similar situations • 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)	

Student Mindsets		
Traditional Culture Risk Factors		*Relationship*
• "No one really cares how I am doing, my level of success, or if I really stay here" (Lacks Support System)	• "I don't want to impose on the teacher, because they are very busy, not accessible, and not important" (Lacks Mentor)	
Transformational Culture Success Factors		*Relationship*
• "I am obligated to step up and help others so that my contribution increases the success of all involved" (Assertive) • "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)	• "When things get difficult I must reach out to others instead of withdrawing and hiding from everyone" (Asking For Help) • "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)	

Cultural Aspect of Education 11: Scope of Learning

Scope of learning refers to multiple contexts in which learning occurs and demonstrates how that learning is applied in those contexts. Spelt, et al. (2009) classify three broad, prevailing practices as: (1) the traditional learning culture which facilitates domain-specific knowledge and general skills development within a given discipline; (2) multi-disciplinary learning as an additive approach where instruction is organized to advance students' engagement through meaningful connections across multiple subject areas; and (3) inter-disciplinary learning which describes boundary-crossing skills or the ability to change perspectives and synthesize knowledge of different disciplines and complexity. Ivanitskaya, et al. (2002) differentiate interdisciplinary learning as "integration of multidisciplinary knowledge across a central program theme or focus." With repeated exposure to interdisciplinary thought, "learners develop more advanced epistemological (theory and organization of learning) beliefs, enhanced critical thinking ability and metacognitive skills, and an understanding of the relations among perspectives derived from different disciplines" (p. 1). In essence, as the scope of learning advances, one gains a complex cognitive skill (metacognition) that consists of a number of sub-skills (Van Merriënboer, 1997), such as the ability to create and apply meaningful connections across disciplines. Institutionally, research has been shown to become more robust with centers of excellence incorporating many disciplines and solving institutional problems has become more effective with cross-functional teams. This scope of learning aspect is a balance of increasing the depth and productivity of disciplinary expertise vs. the increase in potential productivity enhancement through expanding interdisciplinary expertise and collaborations.

Traditional Culture

Institutions prescribing to a traditional culture pursue scholarship, program design and implementation of courses that focus on the knowledge and skills that are highly valued by their disciplines (Hintze, Beyerlein, Apple & Holmes, 2011). The constant expansion of essential disciplinary knowledge creates new tradeoffs between the amount of disciplinary depth and the need for additional time for its mastery. Competing academic priorities and pressures necessitate limited student learning of complex inter- and cross-disciplinary engagement, including the integration of general education courses since the disciplines are still trying to find time for expanding the disciplinary development. The faculty responsibilities to the department are so demanding and extensive, they can't find the time for interdisciplinary collaborations and projects.

Transformational Culture

Institutions supporting transformational culture foster a multi- and inter-disciplinary faculty, programs and curriculum (Hintze, Beyerlein, Apple & Holmes, 2011). Students are encouraged to major in more than one discipline to increase their multi-dimensional growth and skills across diverse contexts. Their engagement with diverse disciplinary perspectives helps raise awareness of patterns, similarities, commonality and shared principles leading to greater interest in seeking diversity. The complexity of integrating disciplines also helps them more readily adapt to new situations, have greater balance, and increase meta-cognition. Faculty are encouraged to participate in multi-disciplinary research programs and centers of excellence, collaborate with faculty across campus, and reach out into the community to help improve local conditions.

Table 12 Cultural Aspect 11: Scope of Learning

Institutional Values	Traditional Culture Risk Factors	*Scope of Learning*
	• Top 25 program • Number of majors	• Disciplinary cited papers • Credentials of your disciplinary faculty
	Transformational Culture Success Factors	*Scope of Learning*
	• Shared faculty • Interdisciplinary team teaching	• Specialize major and double majors • Service courses designed for other disciplines

Faculty Mindset	**Traditional Culture Risk Factors**	*Scope of Learning*
	• "I share my experience when I have extra time, but only in areas where I have expertise"	• "I give strong real-world examples from my discipline"
	Transformational Culture Success Factors	*Scope of Learning*
	• "I want students to see how knowledge in our discipline can support and be connected to other disciplines" • "I want students to be able to truly understand the ways of being and knowing of the discipline"	• "I want students to be able to perform with different disciplines and in different cultures" • "I need to help students maintain balance in their collegiate life by checking in on them to see how it is going"
Faculty Practices	**Traditional Culture Risk Factors**	*Scope of Learning*
	• 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	• 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 interdisciplinary mindset
	Transformational Culture Success Factors	*Scope of Learning*
	• Spread the work so students can complete their work outside of crunch time periods • Have them create a plan for your course and integrate their other courses into their plan • 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	• 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 • 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
Student Mindsets	**Traditional Culture Risk Factors**	*Scope of Learning*
	• "I just need to do it the way the teacher told me to do it in the areas the teacher showed me" (Lacks Metacognition)	• "I just need to focus on the area the teacher wants me to focus on and not waste time exploring other options" (Non-Interdisciplinary)
	Transformational Culture Success Factors	*Scope of Learning*
	• "I need to take care of myself with sleep, healthy diets, exercise, social engagements, and renewal within my weekly challenges of college" (Wellness) • "I value how different disciplines think and can help in solving large scale problems" (Seeks Diversity)	• "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) • "Since things change all the time, I must be able to perform in any situation or challenge that I confront" (Adapting)

Cultural Aspect of Education 12: Self-Awareness

This aspect is about the value of self-development in the culture and the degree to which reflective and self-assessment practices are used by individuals to foster self-understanding and the growth of learning skills (Apple, Ellis & Hintze, 2016k). It is an inward process that requires consistent, timely reflections using and contrasting feedback from others and self to honestly review one's actions with the aim of improving self-understanding and future performance Steiner (2014). The self-awareness process provides individuals with greater control over choices, events and experiences in what Steiner perceives as "meaning-making." Self-awareness expands the Process Education practice of SII-assessment (Apple, Morgan & Hintze, 2013) and incorporates structured reflection with detailed step-by-step methodologies to conduct reflection and self-assessment (Desjarlais & Smith, 2011). Unfortunately, although it is very desirable to be a self-grower with very strong meta-cognitive abilities, most individuals have difficulties making the time for developing this capacity (Davison, 2015).

Traditional Culture

The institutional focus on hiring the best "qualified" faculty and recruiting the "best" students based on their past achievements sets the stage for producing learning situations that will work effectively for students. An environment is created where students who work "hard" to gain the required knowledge by doing extensive homework are rewarded for their efforts. This is similar for the faculty; those who work hard for their college are also rewarded (Hintze, Beyerlein, Apple & Holmes, 2011). This environment leads to people who cannot justify the investment in growth for the return it will produce because: 1) they fundamentally believe in a fixed mindset; 2) there is too short a time period to make investment; or 3) they have already produced significant success thus keep producing vs. diverting time and resources to increase capacity. Although students are task-oriented learners and produce a lot of learning as demonstrated by their products, they often do not understand the learning process any better and do not increase their learning capacity (i.e., no self-growth). When people are so focused on doing what is in front of them and being very productive in doing so, they still may miss the big picture of how it relates to the meaning of life. Without a self-growth mindset, students will have reduced ability to synthesize information, reflect and self-assess, correct misconceptions through introspection, accept feedback, or ask questions.

Transformational Culture

A transformational culture is based on the Process Education philosophy of helping each and every stakeholder of the educational institution to increase self-growth capacity (Academy of Process Education, 2017). Self-development, through personal development plans, reflective practice and self-assessment, is a significant component of every system, process, and practice. Mentoring is a key value in the teaching and learning process and extends throughout the organization to include new faculty and staff. Growth is valued as a critical component of the evaluation system and assessment is frequent before, during and after all key evaluations helping to leverage evaluation into assessment mindsets (Apple, Ellis & Hintze, 2016h). With this culture, people become disciplined enough to integrate self-growth meaningfully and systematically in their daily practices, use methodologies for building stronger meta-cognitive understanding of how they do what they do, use reflection on a very timely basis to build self-awareness on how, what and why is behind actions and decisions, and update their life vision and plans on an annual basis to direct self-growth goals (Jain, Apple & Ellis, 2015).

Table 13 Cultural Aspect of Education 12: Self-Awareness

Institutional Values		
Traditional Culture Risk Factors		*Self-Awareness*
• Hire the best	• Annual performance reports	
• Your individual past achievement	• Individual workload assignment	
Transformational Culture Success Factors		*Self-Awareness*
• Unlimited potential	• Annual assessment reports	
• Professional development	• Mentoring system	

Faculty Mindset	**Traditional Culture Risk Factors**	*Self-Awareness*
	• "If I do what I have always done that has been successful for myself and my students, I will continue to be successful"	• "As I can get the student to work harder, I can make them more successful"
	Transformational Culture Success Factors	*Self-Awareness*
	• "I model my process knowledge with methodologies that provide students an abstract generalization" • "I realized that learners need planned reflection time and means to process experiences to bring meaning to them"	• "I constantly want to know what students want from life, college, and my course" • "I will constantly put challenges up in front of students with firm deadlines and hold them accountable"
Faculty Practices	**Traditional Culture Risk Factors**	*Self-Awareness*
	• Faculty assigns lots of homework practice problems • Having students write lots of academic papers to illustrate knowledge	• Faculty takes attendance • Fix mistakes on tests to ensure the holes are fixed
	Transformational Culture Success Factors	*Self-Awareness*
	• 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 • 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	• 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 • 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
Student Mindsets	**Traditional Culture Risk Factors**	*Self-Awareness*
	• "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)	• "I have so much to do, I can't take out time for anything else" (Unaware)
	Transformational Culture Success Factors	*Self-Awareness*
	• "I will do the things I must do in favor of things I would like to do in order to succeed" (Self-Discipline) • "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)	• "I regulate my use of a process by consistently documenting and assessing my performance against a methodology" (Methodologies) • "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)

Cultural Aspect of Education 13: Social Orientation

This aspect is about the level of collaboration, cooperation, teaming and community desired in the environment to support the learning, teaching, administrative and research processes and resulting outcomes. Some educational cultures believe in independent intellect and solo performance where merit is based on one's own ability to produce results (Hintze, Beyerlein, Apple & Holmes, 2011). Major arguments for this culture are ideas such as: freeloading occurs; competition between individuals brings out the best in everyone; performance is rewarded thus provides increased incentives, and assignments are easier to define and distribute. Other cultures believe in the synergy and additional power that comes from the collaboration, peer support, diversity of talents, and people teaching and mentoring each other in the process of development and growth (Hintze, Beyerlein, Apple & Holmes, 2011).

Traditional Culture

A traditional environment values an individual's self-reliant performance within the bounds of a given discipline. Characteristically, it recognizes self-sufficiency and individual responsibility above inter-dependency and shared accountability, and identifies collaborative groups with bureaucracy (believes that collaboration is inefficient, e.g., committee work). The learner performance is evaluated by the instructor based on students' individual work products. The learning process focuses a learner's use of the general structure of course experiences to develop their own expertise. Such practices involve reading, listening to lectures, solitary thinking, doing homework (alone), studying for tests, writing their own papers, assembling individual projects, and trying to impress the instructor of individual intellect. A downside of focusing exclusively on individual performance and development leaves little room for purposeful collaboration, teamwork and interactive communication, resulting in a limited development in public-speaking and teamwork skills.

Transformational Culture

Social orientation is a critical aspect of human behavior and learning. It is based on the notion that people learn by observing others. From infancy on, humans learn through observation and then model the learned behavior. As a concept recognized under social learning theory (Bandura & Walters, 1963; Miller & Dollard, 1941), social orientation explains why a person has particular behaviors, relationships and adaptations with other people and/or society in general

Table 14 Cultural Aspect of Education 13: Social Orientation

<table>
<tr><td rowspan="4">Institutional Values</td><td colspan="2">Traditional Culture Risk Factors</td><td>Social Orientation</td></tr>
<tr><td>• Individual merit
• Intellect</td><td colspan="2">• Disciplinary focus
• Self-reliance</td></tr>
<tr><td colspan="2">Transformational Culture Success Factors</td><td>Social Orientation</td></tr>
<tr><td>• Community
• Teaming</td><td colspan="2">• Holistic development
• Servant leadership</td></tr>
<tr><td rowspan="4">Faculty Mindset</td><td colspan="2">Traditional Culture Risk Factors</td><td>Social Orientation</td></tr>
<tr><td>• "Students don't work effectively together and only a few of the students do all the work"</td><td colspan="2">• "It is very hard to get students to speak up and say something new, different, or insightful"</td></tr>
<tr><td colspan="2">Transformational Culture Success Factors</td><td>Social Orientation</td></tr>
<tr><td>• "I know from the research and first-hand experience that cooperative learning increases learner productivity and professional growth"

• "I expect all students to play spokesperson on a rotating basis"</td><td colspan="2">• "I challenge learners to actively question, listen, articulate, and rephrase each other and including myself?"

• "I want students to think, learn, and solve problems with other students"</td></tr>
</table>

(Kuperminc & Allen, 2001). Throughout his writings, Dewey (1916-1938) perceives education as a social construct and continually argues that education and learning are social and interactive processes, and the school itself is a social institution. Two key characteristics of social orientation are interdependence and shared responsibility within one's community. Vygotsky (1962) argues culture as the primary determining factor for knowledge construction, and that learning takes place through student interactions with their peers, teachers and other experts. Consequently, teachers can create a learning environment that maximizes the learner's ability to interact with each other through discussion, collaboration, and feedback. A transformational education culture values interdependence and shared accountability above individualism. The faculty constructs active and holistic learning communities in classrooms through collaborative and cooperative learning, team-based learning, team projects and students doing teaching and discussion-based learning (Barkley et al., 2005). This helps students become members of teams where extensive interactive discussions, formal roles, learning activities, presentations, and team challenges contribute toward refining their collaborative teamwork, communication and public-speaking capabilities (Apple, Ellis & Hintze, 2016l). Similar approaches can be accomplished at the institutional level where collaborative teaching, research partnerships, Academic Quality Improvement Program (AQIP) cross-functional project teams, and Interdisciplinary Centers of Excellence.

Faculty Practices	**Traditional Culture Risk Factors**	*Social Orientation*
	• 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	• 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
	Transformational Culture Success Factors	*Social Orientation*
	• Assign and rotate team roles after each learning activity • Use the teamwork methodology for helping teams build and strengthen their performance • 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	• 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 • 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
Student Mindsets	**Traditional Culture Risk Factors**	*Social Orientation*
	• "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 Teamplayer)	• "I will embarrass myself if I offer my ideas because I don't know if they are correct" (Insecure Public Speaker)
	Transformational Culture Success Factors	*Social Orientation*
	• "I can help others become more effective and as a result I gain as much as I give to the team" (Team Player) • "I can voice my ideas in public and represent all perspectives" (Public Speaker)	• "In order for me to work with others and to perform in organization I need to keep improving my communication skills" (Communicator) • "With strong team work skills I can improve upon learning and problem solving" (Collaborative)

Cultural Aspect of Education 14: Transparency

Transparency is the degree to which stakeholders are able to view individual, team, and institutional processes, systems and performances (Hintze, Beyerlein, Apple & Holmes, 2011). Jankowski et al. (2012) identify three areas for academic transparency and accountability: (1) access, cost, student progress, and student outcomes; (2) easy access tool for students, families, and high school counselors by presenting clear, accessible, and comparable information on the undergraduate student experience; and (3) support of institutions in the measurement of student learning outcomes through original research and by providing a forum for collaboration and exchange. These three areas have essentially become Federal mandates for higher education to participate in financial aid. Transparency and trust are two very critical values in higher education (Gross, 2015). When an institution has things that are not complimentary, they hide them rather than make them known, which can easily appear later on the internet sites, leading to trust issues. The distinction between the two cultures is the need to know, i.e., who should have what information, when and for what purpose, along with purposeful communication strategy and informational system design.

Traditional Culture

The traditional culture's emphasis on structure focuses provision of specific information to specific people at specific times when it is fully processed and ready for distribution. Accordingly, only a select group of individuals in the organization who have the most responsibility, visibility, authority and access to various aspects of performance, processes and systems, will be given the relevant data and information. These individuals will be responsible for filtering out irrelevant or inappropriate information to the people who report to them. They also know who they want to inform and what they want the others to know. Characteristically, these systems, processes and channels are top down and layered so that the 'need-to-know' prevents unauthorized people access to vital secured information, whether in classrooms, at the departmental level or the president's office. When performers can't calibrate the quality of their performance to the norm of others' performances, culturally they need constant reinforcement that they are doing a good job (affirmation). When things are in flux, changing, and individuals feel uninformed, there is a decreased willingness to take risks. Additionally, informal channels of rumor and innuendo arise when there is minimal transparency.

Transformational Culture

Transformational learning occurs in an environment that encourages and rewards openness and transparency. Characteristically, a transformational environment encourages inquiry. It opens conversation and interaction for new ideas, and readily embraces the evolving change. As each process, system, activity, and change becomes more transparent, it increases the stakeholders' desire and willingness to experiment in finding better ways to make effective contributions to these changes. They ask more questions, interact with new ideas through open conversation, embrace the evolving change, are willing to take greater risks because they feel more connected to the bigger picture, and know what they are doing is positively impacting other areas of the institution (Beyerlein, Holmes & Apple, 2007). This means that as the instructor "opens" the classroom so students are more informed and their collective performances can be observed, students will share effective learning practices and become more open to faculty experimenting and advancing the use of new teaching and learning practices. The advancement of AQIP and Quality Enhancement Plans have shown the more transparent these change projects become, the more impact the organizational culture evolves (Biswas, 2006).

Table 15 Cultural Aspect of Education 14: Transparency

Institutional Values		
Traditional Culture Risk Factors		*Transparency*
• Confidentiality	• Need to know	
• Decisive decision making	• Promote excellence	
Transformational Culture Success Factors		*Transparency*
• Equity in informational access	• Public measures	
• Full disclosure	• Inclusive decision-making	

Faculty Mindset		
Traditional Culture Risk Factors		*Transparency*
• "I know that I can improve with new teaching/ learning practices, but I think I will wait till I get more effective"	• "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"	
Transformational Culture Success Factors		*Transparency*
• "I want students to solve their own problems with full knowledge, thus I challenge them to learn new things on their own" • "Provide challenges that exceeds students' current capabilities"	• "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"	

Faculty Practices		
Traditional Culture Risk Factors		*Transparency*
• 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	• 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	
Transformational Culture Success Factors		*Transparency*
• 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 • 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 • 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	

Student Mindsets		
Traditional Culture Risk Factors		*Transparency*
• "How well am I really doing and what do my peers and teacher think of me?" (Seeks Affirmation)		
Transformational Culture Success Factors		*Transparency*
• " I always want to know everything about everything; when it will be useful in learning new things or solving complex problems" (Inquisitive) • "I can learn from others, try out new ideas, practices, strategies, and schemas that will improve my performance" (Open Minded)	• "In order to improve I must listen to feedback to see how I really can improve performance" (Listens Actively)	

Conclusion

The purpose of this article was to analyze the two contemporary cultures of teaching and learning, traditional and transformational, so that readers could reflect on their own institutional culture. We achieved this by modeling both cultures in comparative table formats corresponding to 14 defining aspects of educational culture. We trust this framework will help educators envision the type of students they want to develop, and the ways they the teaching/learning environment can be adjusted to create desired outcomes. Process Education is embodied in the transformational culture by its values, its mindset, its teaching/learning practices, and its focus on self-growth within students (especially learning skills).

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