Busy Times, Productive Students: Cutoff Points Marking Time in University Engineering Culture

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Abstract: Understanding how engineering students cope with increasing academic and professional-skill-building demands on their time has important employment implications. Through individual and group interviews, we focus on the ways in which students navigate time in relation to their academic, extracurricular, and personal activities. Time markers of various types emerge as a key theme as students are exposed to unfamiliar academic content and an increase in course workload. Students believe extracurricular activities enhance their appeal to prospective employers. Students surviving an intense and rigorous program offer insight into the organizational culture of an engineering school and student preparation for the job market.

Every year, millions of U.S. university students are indoctrinated into an oftentimes intense culture of learning as academic demands rise. Simultaneously, students are typically transitioning into adulthood, acquiring daily life skills in a setting frequently at a distance from sources of parental support (Astin 1993). Time, in all of its dimensions, plays a critical role in shaping student experiences, perspectives, and performance (Burke et al. 2017; Liao et al. 2013). A focus on time in relation to student activity enables us to explain how a university organizational culture functions and has the potential to leave an indelible mark on student preparation for the future workforce.

Understanding Time

Definitions and Categorizations

The concept of time defies commonality in definition and description. For Durkheim, time is "the rhythm of a life…in which all participate" (1965: 489-90). Weber's understanding of time is largely evaluative: "Waste of time is…the deadliest of sins" (Weber 1958: 157). Hall (1983: 3) considers time "as a language, as a primary organizer for all activities …" among many other descriptors. Cheng (2017: 145) asserts that time is "a type of social fact that is defined by social institutions and social practices."

A common focus in temporal research involves capturing study-participant perspectives and other elements of reckoning time. Time associated with both work and social settings has been categorized as "scheduled," "personal," "thought," "compressed," "wasted," "project," and "timeless" (Liao et al. 2013; Ylijoki and Mantyla 2003; Zucchermaglio and Talamo 2000).

Another way of understanding time involves identifying attributes such as regularity (i.e., routine) and density (i.e., constancy) (Snyder 2013). Kluckhohn and Strodtbeck's (1961) work, analyzing perspectives on the past, present, and future in five cultural communities, has served as the foundation for understanding cross-cultural differences from a values perspective (Hofstede 1991). Hall (1983) contrasted cultures with distinctive time orientations. Monochronic-time cultures conceptualize time as sequential: tasks are the focus of attention, handled one at a time, and typically coordinated within schedules. Monochronic time tends to be found in cultures where a high value is placed on getting the work done (e.g., U.S., northern Europe). Polychronic-time cultures are synchronically-oriented: a number of activities occur in parallel; plans may change since social relationships are prioritized over tasks (e.g., the Orient, Latin cultures). Considering the various meanings study participants ascribe to time is a first step in understanding how temporal elements are interwoven in a particular cultural context.

Busyness in Time and Culture

One dimension of time has received significant attention across disciplines and in selected Western nations including the U.S. It is referenced as "busyness," "harriedness," "acceleration," "compression," "intensification of time use," and "time squeeze," among others. In general, these terms and phrases suggest engagement in activity on a relatively continuous basis and at a fast pace (Graesch 2009; Levine 2005; Starkey 1988). The busyness literature is tied directly to *culture*, defined by Ferraro and Briody (2017) as "Everything that people have, think, and do as members of their society." Indeed, time and culture are virtually inseparable (Hall 1983); as culture evolves, conceptions of time change (Starkey 1988) – including busyness. A definition from the turn of the 15th century emphasized being "constantly occupied with many things" (Snyder 2013: 258), suggesting an array of different activities. By the mid 19th century, the term busy referenced the continuous movement of squirrels, some of which seemed decidedly less essential than others (Greenfeld 2005). Busyness as portrayed in U.S. advertisements at the turn of the 20th century implied "distractibility and lack of focus" (O'Malley 2005: 377).

Busyness became linked with the intensity and pace of work through Taylorism, particularly "the 'one best way' of doing work" (Starkey 1988: 101). After World War II, the concept of work became increasingly dominant such that leisure time was largely belittled (Levine 2005). That leisure pattern reversed, introducing a paradox: as leisure time has increased, so too has busyness (Gershuny 2005). Busyness is tied to everyday activities (Darrah 2007; Darrah, Freeman & English-Lueck 2007), with some arguing it stems from a lack of prioritization of activities (Greenfeld 2005), and others asserting it has become culturally expected, and viewed as a crucial personal value, marker of identity, and even a social norm associated particularly with prosperous or privileged groups (Bellezza, Paharia & Keinan 2017; Gershuny 2005, Graesch 2009). In our earlier work, we simply found that the term "busy" was associated with being "fully-scheduled and fast-paced" (Briody et al. 2019).

Time Management and Peer Collaboration

The use of time intersects with students' lives at multiple levels. For instance, students new to university life and culture have to become conversant with the requirements, content, and strategies to complete their programs successfully. Their days are structured by various activities including courses: "scheduled time...gives people on a modern university campus their rhythm of life" (Liao et al. 2013: 148). Organizing and planning daily and weekly activities, or time management, becomes an essential skill in response to "institutionally imposed time structures" (Burke et al. 2017) such as a course schedule or tutoring hours. Time management has helped students navigate academic and personal challenges and reduce stress (Misra and McKean 2000).

Synchronizing learning opportunities through collaborative group work can help address academic challenges (Briody et al. 2018). Students introduce and discuss ideas and typically

arrive at a shared understanding of a particular engineering concept or question. Group work and collaborative learning are contingent on aligning schedules to avoid "disorganized rhythms" (Southerton and Tomlinson 2005: 232). Examining how students relate to the temporal conditions associated with their university department or school's organizational culture enables us to make sense of their preparation for the workplace. Both the university and the workplace are complex environments requiring prioritization and time management.

Our focus is on the organizational culture of the Engineering School (ES), with particular attention to its temporal elements. We explore the connections between aspects of time relevant to ES students, and their perceptions of their potential future. Key questions include:

- 1) How do students describe their engineering program? Which dimensions of time are salient for them as they pursue their degree?
- 2) How do students adapt to the rigorous demands of their engineering program?

Methodology

Our interdisciplinary team from anthropology, sociology, mechanical engineering, and industrial engineering used an anthropological approach. We employed ethnographic methods – a mix of individual and group interviews, documentary/digital sources, and survey data. IRB approval was secured, and all participants consented.

Data Collection

Data gathering targeted ES students, primarily through interviews (See Table 1). We used nominated-driven sampling to identify interviewees who were willing to share their ES experiences with us (LeCompte and Schensul 2010). This kind of sampling is common in anthropological research because it relies on developing rapport and building trust with interviewees. Our sample was self-nominated based on professors' networks and "opencalls" in selected ES classes where we described the study and solicited volunteers.

We conducted 10 of the 12 individual interviews at the start of our project in 2015, focusing largely on 4th year students (4YS) who had the longest association with the ES. We conducted 21 of the 23 group interviews in 2016-17; they were designed to enhance our understanding of the student experience at the outset and midpoint of the major by involving third year (3YS) and second year (2YS) students. The interview questions target viewpoints on ES organizational culture generally, and student daily life specifically. We also sought student perspectives on success during their university experience.

	4 th Year Students (4YS)	3 rd Year Students (3YS)	2 nd Year Students (2YS)	Total ES Students
Number of Individual Interviews	7	4	1	12
Individual Interview Average Duration (min.)	61	38	34	52
Number of Group Interviews	2	6	15	23
Number of Group Interview Participants	6	14	72	92
Group Interview Average Duration (min.)	69	69	58	62

Table 1: Interview sample by number of bachelor students and time duration

Data collection included explorations of the university and ES websites. We sought information on ES organizational culture including ES values, program offerings, and highlighted benefits. We also examined ES brochures offering detail on program requirements and courses, study abroad, work opportunities, and extracurricular activities.

Finally, we conducted surveys each semester between 2015-2017 by sending emails to ES students. Among the 629 valid responses, 31% (N=194) responded to the relevant survey questions which focused primarily on work-life balance.

Data Analysis

We used content analysis to identify themes and patterns in the interview data (Bernard 2011). As we read the transcripts, it became clear that various elements of time were a dominant theme (e.g., complaints about insufficient time for homework and studying). Three members of our research team completed a preliminary coding of a sample of interviews and settled on a set of codes for the larger interview data set. Our process involved continual or constant comparison of the codes and the segments of text associated with them.

Next, we compared key themes from the interviews to themes from the survey results and documentary/digital data. Selected survey analyses and data from documentary sources helped broaden our understanding of the temporal features of ES organizational culture. We focused on the extent of similarities and differences across the entire data set to refine our analysis and its interpretation. Our findings were validated through informal conversations with ES students who did not participate in the study, as well as with selected faculty.

Background

The setting for this study is a large, public, midwestern university in the U.S. with over 30,000 students. As a R1 doctoral institution, a designation by the Carnegie Classification of Institutions of Higher Education, this university is credited with extensive research activity. The 80 ES faculty members primarily focus on research. Faculty are expected to teach at least one course per semester to the 1,400 ES bachelor students. Professors work together to agree on and teach course content in engineering fundamentals to new majors.

Admission to the ES major is highly competitive, requiring 128 course credits for graduation with a Bachelor of Science degree. The ES website, admissions' brochures, and other documents laud its educational and work-related opportunities. ES students acquire analytical, problem-solving, and "hands-on" skills through their courses. Students gain "global perspectives" by working or studying abroad; internships and coops help connect classroom learning to engineering practice.

Results

The ES Experience through the Lens of Time

Student Descriptions. ES majors allude to various aspects of time (in bold font) including their schedule and its pace:

- "I do homework and study pretty much the **entire day** with the exception of when I go to class, of course, and eat dinner. Sometimes I'm doing homework until **8:00 p.m.** and starting at waking up at like **9:00 a.m.**" (2YS).
- "Just as far as time goes with ES, it almost seems like the entire semester we're running 100 miles per hour" (3YS).

Their statements make clear *what* they are doing – studying, including tasks like homework and exam preparation. Moreover, their work is interwoven with pre-set *time frames* (e.g., for lecture, project, homework) suggesting their work occurs seemingly continuously.

Other student comments move beyond daily schedules to emphasize deadlines. One stated, "**Then** when it's the **day before** the homework is **due**, the (tutoring room) is packed and all the seats are taken so you kind of have to wait outside" (2YS). Another responded:

There have been **days** that have just been demoralizing with how much (work) was **due** for so many different classes. The **day after fall break** we came back, and we had an exam **that night** from **8:00-10:00 p.m.** We had a lab report that was **due at midnight**.

We had a pre-lab which was **due** the **next morning** – for me by **8:00 a.m.** And, we had a homework that was **due** pretty **soon after**, and **then** I had other homework for my tech elective that was also **due** on **that d**ay, and I had to finish my final section (of homework) **before** I went into that (class) (3YS).

A greater focus on academic activity seems to prevail around these cutoff times – whether related to help seeking, completing assignments, or studying. The amount and pace of activity leading up to a deadline increases and then is followed by some evaluation of student performance (i.e., through grading).

Time and Workload Beliefs. Views of time and workload change as ES students progress through the program. 2YS students articulated concerns about course expectations. One of them commented, "The workload they give you makes it pretty explicit that they (professors) want us to spend a lot of time studying and doing homework" while another remarked, "This year we have to work all the time to be able to be successful." Ultimately students learn to accommodate the workload demands during their university experience which translates into many hours of academic work. A 4YS student offered, "It's tough. The material's really hard. Yeah, I just want to get through at this point." We also discovered that while ES students mention being "busy," it is a term used rarely – despite the amount and intensity of their workload. Of the 104 study participants, only six used the term at all, and none used similar expressions such as hectic or harried.

ES majors mention their satisfaction in acclimating to the program. A 2YS student stated, "As the exams progress, you really get to assimilate all of the data that you've learned and... realize how much you end up learning **over the semester**" (3YS). The adjustment proceeds at varying rates during the students' second year, despite the uptick in workload: "It was basically the workload that surprised me because during the **first year** I was like, 'How can a person do more than this?' And **then** we come into ES (and) it's double the amount of workload, and it's like, 'How will I be able to manage it?' And **now** it's like, 'Okay, it's fine.'" Attitudes generally shift from time and workload toward pride in accomplishment.

Adjustment Strategies

Mastering the Technical Content. Students navigate the program by using various work strategies. They may employ tips from professors and academic advisors that are helpful in "time management" such as "seek out peer help," "plan out the entire semester (and) put it on the Google calendar," along with accessing resources (e.g., tutoring rooms staffed by Teaching Assistants). Students routinely work collaboratively. One commented, "I have a study buddy (partner) that I'll do a lot of the homework with so that we can bounce ideas off each other and...won't be stumped on one problem forever" (3YS), while another stated, "If I'm on strapped time...I can just ask my friends" (2YS). ES majors also share tips, advising each other. Work and time are interwoven throughout their discussions; the concepts of work and time often carry an implied (or explicit) reference to each other.

A second strategy entails trial and error learning. Delaying assignments can inspire a change in behavior. One 3YS student indicated he learned from the following experience:

The homeworks (sic) were **always due on Fridays**, and I fell into a peer group that **always** did those homeworks on **Thursdays** (**at night**), and that was never a good idea...You can't go and ask a TA (**then**), and the people who are awake doing it are the people who also **procrastinated**.

Others advocated: "setting **more time** for preparing for exams" (2YS) or "just choosing to use your **time efficiently**" (3YS). Maximizing one's productivity is helpful: "**Time**-to-benefit ratio – when you have all these assignments, you have to **prioritize**" (3YS). 2YS students suggested doing homework **between classes**, giving **priority** to exams over homework, and considering the student role as a job: "Honestly, you get up, you work an **eight-hour day**, and that's, I think, how you ultimately become successful in ES." A learning curve is

embedded in the identification and use of successful work strategies; once put into practice, students indicate getting better at time management.

Work-Life Balance. Time management pertains to all aspects of the student experience:

It's super-fast-paced. I'm learning everything – a ton of different stuff each week –

which is good. But, it's hard to keep up...just because you're so overwhelmed with trying
to balance ES with your social life, ... family, and all these other parts in your life (2YS).

When possible, students try to integrate areas of their lives together. Many combine studying
with socializing: "If I'm not super time-crunched, I prefer (studying) with friends, just
because I can get stuff done and socialize at the same time" (2YS), while others mix
extracurricular activities with the social or personal: "That's like my extracurricular time –
Baja (a hands-on engineering experience in which students build and race an off-road
vehicle). It's not really...a burden. It's my fun time, my getaway time" (4YS). Another
strategy is socializing largely within ES, increasingly evident over the three-year major: "I find
it hard to maintain relationships with people who aren't in a similarly time-intensive or
difficult major" (3YS). These comments are consistent with survey results in which 44% of
respondents (N=194) reported that achieving work-life balance is "always" or "most of the
time" a source of stress.

Almost all ES students engage in more than one extracurricular activity, with a high proportion linked to engineering (e.g., racing teams, mentoring). ES majors sometimes have minor concentrations in other disciplines or participate in specialty certificate programs. Most take part in one or more internships, co-ops, or study abroad experiences. They are also involved in university club sports, tutoring, fraternities, volunteer service, religious ministries, and exercising/working out. Such high levels of involvement offer a refreshing alternative to their studies. Yet, the cumulative effect of all these activities can lead to recurring issues. Common 2YS statements included: "I get to a point sometimes where I have a free half an hour...I'm excited to not have to have anything to do...because I feel like I'm always doing something," or "I don't think I slept earlier than 2:00 a.m. or 3:00 a.m. for the past two and a half weeks" (2YS). Survey results paralleled these statements: 65% of respondents (N=194) indicated that they get less sleep than they would like "always" or "most of the time."

Learning Now for the Future

Time-Sensitive Advice. We asked study participants for their advice for new ES students. Their comments resulted in 110 suggestions, of which 43% were time-related such as:

- "Procrastinating will kill you" (2YS).
- "It's always better to ask a question **early**, because **then** you're going to have A) **more time**, and B) ...you're not going to have the anxiety factor" (2YS).
- "From the time you're up in the morning...until whenever you're done in the day,...work that entire time and you can take it easy at night" (4YS).

Although the remaining suggestions did not explicitly reference a temporality, the vast majority pertained to coursework and studying, in which time could be inferred: "Don't be afraid to ask somebody else for help" (4YS), "Take old exams...that's part of surviving here" (4YS), and "When you're just doing homework, don't just complete it; try to understand it" (2YS). Such advice can aid comprehension in the present, rather than delaying it.

The Payoff. Infused in ES-student comments about their anticipated degree was a sense of self-satisfaction and pride: "A **four-year** degree will really give me focus and confidence and the ability to **get through** a lot of hard things in life" (2YS), "**When you come out**...you are going to be the most qualified engineer that you can possibly be" (3YS), and "300, 350 companies want to come (here) to meet with engineering students – and that's because (prospective recruits) are expected to be top of their grade, top of their class" (2YS). One 4YS student offered her hopes for ES' future: "Maintaining the integrity of the program...that

they're not just letting people skate by with whatever...I have strong standards...I want a school that has esteem because that's kind of what's backing me."

Discussion

On Time Generally

Many writers have attempted the challenging task of defining the concept of time, its dimensions (e.g., sequential vs. synchronized; past, present and future orientation), its attributes (e.g., regularity; sequence), and the ways in which it has been categorized (e.g., "scheduled," "busy"). Unlike Cheng's (2017) approach to time, ours is not intended to be comprehensive; instead, it examines time during a particular period in the lives of our study participants based on their perspectives. Narrowing the focus enables us to concentrate on the experience of ES majors in a relatively-bounded ES organizational culture.

ES structure (e.g., schedule, sequencing,) and expectations (e.g., course requirements, professors' tips) help create frameworks and beliefs for organizing the student experience in the present time and through time. Students undergo this period in their lives subjectively – that is, as individuals (Gershuny 2005; Liao et al. 2013). Yet, the behavior that ES students exhibit is cultural, that is, it is learned and shared, positioning us to understand their behavior as part of a larger system in which time and activity are integral to culture (Hall 1983). ES organizational culture, interwoven with Hall's concept of monochronic time, is characterized by rigid schedules, concentration on a single task at a time, sequential activities, and efficiency. Activities among ES students, as with ES faculty, are typically compartmentalized, a key exception involving socializing while in study groups or during extracurriculars.

Notable about the ES-student experience, and expanding on Hall's monochronic time portrayal, is the array of time markers (e.g., "in between classes," "at night") mentioned Students use these time markers to signal the sweeping focus time has on their activities (e.g., studying, club involvement) which satisfy ES expectations. These time markers are unlike a typology of time categories (e.g., scheduled time, wasted time) (Liao et al. 2013, Ylijoki & Mantyla 2003, Zucchermaglio & Talamo 2000). Instead, they reference moments both explicitly and implicitly linked with *cutoff points* (e.g., homework is "due," exam begins "at 8:00," a "free half an hour" ends). ES majors become increasingly adept, particularly in 2YS, at managing their activities in relation to mandatory deadlines (e.g., lab report due date), pre-set schedules (e.g., tutoring rooms), and agreed-upon time frames (e.g., study group meetings) (Briody et al. 2018). Cutoff points in a student's day, week, semester, or entire university experience are a critical mechanism fueling the acquisition of time management skills, which in turn, help students organize their workload, improve their productivity (Starkey 1988) and engage in extracurricular and personal activities.

Time markers also indicate the value students ascribe to their activities. For example, the terms "prioritize" and "procrastinate" repeatedly appeared in our interviews and focus groups. Students advised prioritizing activities (e.g., "exams over homework," understanding not "just doing homework") and keeping up with the workload (e.g., "Procrastinating will kill you"), thereby denigrating any delays that substantially shift their focus away from academic work. Prioritizing and keeping up with their studies are cultural rules that ES students share widely with each other. These cultural rules represent time-management advice that has the potential to help students "stay on track" and enhance their performance; over time, they may help students reduce stress and confront academic challenges (Misra & McKean 2000).

On Busyness Specifically

To what extent is busyness connected with ES organizational culture? Elsewhere we argued that busyness is a "defining characteristic of ES organizational culture" (Briody et al. 2019), though we did not define it. When considering the "emic" or insider perspective, we discover a surprising pattern: ES students rarely self-identify as "**busy**." Even more surprising, we find a strong tendency among them to augment their seemingly full university days with

additional hours of skill-building extracurricular pursuits in which they relish. Given their crowded slate of activities, ES students seem to meet key definitions of busyness such as having "hectic schedules" (Graesch 2009:85) or facing a "crunch of either speed or activity, or both" (Levine 2005: 356) which stem from "an offshoot of fixed schedules" (364). To understand busyness, Darrah et al. (2007: 257) advise us to examine the "minutiae of other peoples' lives." From a layperson's perspective, students are busy; their activities reflect the regularity in their schedules, the high volume of work, and the degree of variety (e.g., coursework, extracurriculars, internships) – all of which suggest they are indeed busy (Snyder 2013).

However, what might explain why ES students do not explicitly mention busyness in their discourse? First, we wondered if the term busy might mask certain ES-student behaviors. We know that busyness is tied to certain evaluative undertones including an alignment with restlessness, lack of prioritization (Greenfeld 2005), and fragmentation (O'Malley 2005). While these features may characterize some 2YS as they acclimate to ES expectations, this characterization conceals the most salient responses to the ES experience: focus and prioritization. Students' ability to concentrate on their courses and supplement them with the acquisition of professional skills have their undivided attention. They build their knowledge and skills for a specific purpose – to complete their degree, thereby readying themselves for the workforce. We believe one reason ES students do not self-identify as busy is because they are absorbed in their work. This singular focus, not explicit in Snyder's (2013) analysis, demonstrates not how busy ES students are, but rather how productive they become.

Second, the literature suggests that busyness has become normative with respect to privileged or higher status groups (Bellezza, Paharia & Keinan 2017; Gershuny 2005, Graesch 2009). For example, busy people are perceived to be more ambitious, signaling a higher demand in the job market (Bellezza, Paharia & Keinan 2017; Gershuny 2005). We suggest that ES students do not self-identify as busy because their ES peers are similarly focused. ES students are largely homogeneous in terms of their work-related behaviors and worldview since they are part of the same ES organizational culture. Indeed, if any exhibited "busyness as a badge of honor" (Gershuny 2005: 287) or were identified as a status symbol based on busyness (Bellezza, Paharia & Keinan 2017), all of them would be. Primary circles of interaction are in ES where a concept like busyness does not serve to distinguish ES students from each other. Regardless of whether outsiders (or readers of this article) view ES students as busy, we can say that

- 1) students' attention to their work and learning is singularly focused, not scattered
- 2) their participation in ES organizational culture unifies, rather than differentiates them
- 3) their assessment of their experience from both a technical content and life-skills perspective has been "worth it."

Implications

This analysis of time opens up a space for understanding the student experience through students' own perspectives captured in their discourse. The critical effects of cutoff points for attending lecture, submitting assignments, taking exams, and meeting for study groups signal the salience of time in university education. While such deadlines may create stress for students, they also act to focus attention on the learning tasks at hand. In the end, students often reflect back on this kind of timed-learning process, viewing it as an advantage. Study tips and advice, trial and error approaches, peer collaboration and *communitas* (i.e., community spirit among ES students – Briody et al. 2018), and engineering-aligned extracurriculars all work in concert to propel students toward their bachelor's degree. Students may perceive time as a threat (e.g., to keep up with homework, not to procrastinate) as is common in monochronic cultures (Hall 1983), but they figure out how to prioritize, focus, problem solve, and be productive. Faculty should recognize that students are not only trying to learn the technical material and applicable skills of their courses and engineering-related extracurricular activities, but that they are also developing

and refining the process of how they learn best. Continually encouraging experimentation with various learning techniques will help students discover effective strategies for absorbing, mastering, and retaining the engineering content.

As students adjust to the increased workload and pace of coursework as 2YS, their behavior blends in with those around them (e.g., upperclassmen, faculty). This consistency in both behavior and beliefs is a hallmark of organizational culture. Students, like faculty and staff, recognize the "rigor" within the ES and the pride and reputation interwoven throughout. Professors serve as role models, teaching incoming students about their expectations, thereby helping them to acculturate to new demands on their time (Starkey 1988) at this point in their lives. Students are not busy for the sake of being busy (O'Malley 2005). Instead, they are focused on achieving an outcome – their bachelor's degree – that they believe reflects the blood, sweat, and tears of the productive selves that they have become.

Our goal has been to describe and explain the ways in which students navigate time within an organizational culture, complete their engineering studies, and prepare for the workplace. We use their own statements to depict their experiences. Throughout the four years, ES students build a work ethic that incorporates learning strategies, technical content, and time – all of which get tested and refined in their courses and related co-curricular experiences. Students indicated to us their pride in the ES program for its "rigor," "intensity," and preparation for overcoming some of the "hard things in life." Time – in its various dimensions – plays a critical role in helping them learn to set priorities, work within constraints, and establish the groundwork for future employment.

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