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Building Sustainable WAC Programs: A Whole Systems Approach

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From: Katherine T. Bridgman

Date: 02/19/2016

To: Jeffrey Galin

Subject: Question about WAC consultation

Hi Jeffrey,

I am currently the Writing Center Director at Texas A&M-San Antonio, and I have been tasked with helping our relatively new university start a WAC program. So far, we have established our WAC committee as a subcommittee through our Faculty Senate that includes representatives from our colleges as well as the WAC director (me). . . . We are also getting ready to downward expand this coming fall and admit our first classes of first and second year students. We currently serve only third and fourth year students as well as graduate students. A primary task of our WAC committee will be to begin outlining policies for faculty support, student support, and expectations for writing-intensive courses. Writing-intensive courses are one of the four high-impact practices that we are targeting with our downward expansion.

* * *

As I plan our first meetings – which will be condensed into two "retreats" this semester – I was thinking about the possibility of inviting a guest speaker to speak with my colleagues. While I have a small budget to work with, my budget would not allow us to bring someone to campus. Do you know of consultants who would be willing to Skype in for a session with our faculty?

Thank you for your time,
Katherine

We open with this message sent to Jeff because, as co-chairs of CCCC's WAC Standing Group, we continue to be impressed by the number of WAC programs just getting started. We often hear from those launching programs or re-starting dormant programs at the annual CCCC's WAC meeting or through requests for consultations, such as this one. In their 2008 national WAC/WID survey, Christopher Thaiss and

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Tara Porter (2010) partly based their claim that the WAC movement is "alive and well" on this continued launching of new programs. In their survey, more than a third (36.3%, n = 206) of the institutions that identified as having a WAC program either have a program that is "just starting" or has existed for 1–5 years (p. 542). In addition, 152 institutions reported having plans to start a WAC program (p. 541).

We also open with Katherine's email because it represents the kinds of institutional challenges that WAC programs face, such as how to create institution-wide initiatives, plan for program growth, sustain program momentum, and prioritize strategic reforms over short-term fixes. These challenges often lead to program failure. Thaiss and Porter point out that "well over half of the 418 programs identified in [McLeod's] 1987 survey either no longer exist or have been 'restarted' in the years since" their 2008 survey (p. 558). Such a significant failure rate of WAC programs warrants serious attention.

In response to queries like Katherine's and out of concern for the writing programs we direct, we developed a systematic approach for building sustainable WAC programs. In this article, we provide an overview of our whole systems approach, offering a comprehensive theoretical model, which is derived from theories of complexity, systems, social network, resilience, and sustainable development. From these theories, we derive a set of principles and ground this theoretical framework in a WAC program-building methodology and corresponding set of strategies. Throughout this article, we return to the WAC program at Texas A&M-San Antonio (TAMUSA) to demonstrate how the theoretical framework works to develop a WAC program from the ground up. Although we present TAMUSA as a concrete application of our theoretical framework, our primary purpose is theory building: to lay out the broad strokes of the whole systems approach to initiate new ways of conceiving WAC program formation. More detailed applications of our theoretical framework to various WAC program contexts can be found in our monograph *Sustainable WAC: A Whole Systems Approach to Launching and Developing WAC Programs* (2018).

Why Theorize WAC Program Development?

In WAC literature, theory tends not to focus on the complexities of higher education or program administration, but rather on the writing pedagogies that are at the heart of WAC programs. This point is exemplified in "Theory in WAC: Where Have We Been, Where Are We Going?," in which Thaiss (2001) provides a comprehensive review of the writing theories that have informed WAC practice but does not touch upon theories related to WAC leadership or program development. This is not an oversight by Thaiss, but emblematic of a field that focuses more on theorizing WAC instruction than the administration of WAC programs. This focus on pedagogy may be inherent to the ways the field of WAC has developed and defined itself. Russell

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(2002) attributes the success of the WAC movement to its focus on pedagogy, as faculty are asked to commit to a "radically different way of teaching" that offers "personal rather than institutional rewards" (p. 295).

When the literature does focus on WAC program administration, it tends to emphasize program description and advice rather than building a theory of administering and building WAC programs. The WAC literature describes individual programs (Fulwiler & Young, 1990; Segall & Smart, 2005; Thaiss et al., 2012); provides advice for developing specific program elements, such as faculty workshops or writing fellows initiatives (Mcleod, 1988; McLeod & Soven, 1991; McLeod et al. 2011; International Network of WAC Program, 2014); and describes challenges to WAC programs and steps WAC directors may take so that their programs persist (Townsend, 2008; Young & Fulwiler, 1990). All of these texts offer nuts-and-bolts advice for building and developing WAC programs rooted in experience, knowledge of the field, and writing theory and research—but not theories of writing program administration or methodologies for creating sustainable programs. Extending the focus on the features of enduring WAC programs, William Condon and Carol Rutz (2012) introduced a taxonomy for categorizing WAC programs according to their characteristics, identifying four types: foundational, established, integrated, and institutional change agent. However, like the earlier literature on enduring programs, Condon and Rutz do not attempt to explain the underlying reasons why WAC programs at higher levels in this taxonomy outlast programs at the lower levels. Even WAC surveys over the years that have looked at the issue of program longevity (McLeod, 1997; Thaiss & Porter, 2008) have identified representative program features that may be replicated rather than offering a systematic understanding of why these traits lead to program persistence.

Barbara Walvoord's (1996) "The Future of WAC" departs from this largely descriptive body of literature as the first attempt to theorize the vulnerability and endurance of WAC programs. Walvoord draws on social movement theory to analyze why WAC programs and the field at large have been vulnerable to such a wide range of challenges. Exploring program variability, for instance, Walvoord argues that WAC has been largely decentralized, realized through the development of programs on individual campuses and spread through conferences and a group of "traveling workshop leaders" (p. 61), but never becoming a national movement through the development of a national WAC organization. Walvoord sees this decentralization as strengthening individual WAC programs because it allows them to form their own goals in relation to their individual contexts, but also as leaving them "vulnerable to cooptation, becoming special interest groups, settling for narrow goals and limited visions, or simply being wiped out by the next budget crunch or the next change of deans" (p. 62). Indeed, the loss of so many WAC programs as indicated by Thaiss and Porter's 2008 survey is evidence of this continuing vulnerability.

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Walvoord uses social movement theory to distinguish between micro-level actions (such as "changing personal behavior") and macro-level actions (such as "changing structures and organizations") (p. 60). For instance, she argues that faculty workshops, long the "backbone of the WAC movement," are effective at the micro-level as they "generate high energy and enthusiasm" for teaching writing among those that attend (p. 63), but do not lead to changes at the macro-level because they do not affect the wider campus culture or university structures. She then turns to the future of WAC, drawing on strategies used by social movements to suggest approaches for strengthening WAC programs, such as coming to a deeper understanding of the wider campus and societal contexts within which WAC programs live, connecting to other institutional and national movements, and connecting to university missions and accrediting bodies' standards. Though Walvoord's article has been widely cited, we do not see scholars taking on her larger claims or more pointed insights about WAC.

Our approach builds on Walvoord's germinal work. We start with her premise, using theory to better understand WAC program development within the complex and dynamic contexts of higher education. Like her, we theorize practice by providing WAC directors with strategies to develop enduring WAC programs. Like Walvoord, we keep our focus on program administration rather than pedagogy. As WAC program directors, we understand and value the power of WAC pedagogy on faculty and have ourselves led many workshops, but we believe that WAC directors need to do more than train individual faculty. They should aim to transform a campus culture to create lasting change by approaching the problem of program sustainability systematically. Departing from Walvoord, we find social movement theory inadequate. While it provides a useful lens for considering program vulnerability and suggesting strategies, social movement theory cannot provide WAC directors with a comprehensive theoretical framework, methodology, and set of strategies for launching, revitalizing, and reviving WAC programs, as does the whole systems approach we develop here.

To introduce this theoretical framework, we return to the email that opens this article. The newly appointed WAC director of TAMUSA, Katherine Bridgman, contacted Jeff to consult on their nascent program at a moment when we were drafting material on the planning stages of WAC program development for the whole systems approach. Jeff spoke with Katherine several times to learn more about the situation. He learned that TAMUSA is a branch campus with about 5,500 students. About 60% of their population are first generation college students, 70% are Hispanic or Latinx, and 64% of their students are first generation (Texas A&M). At the time Jeff met the director in January of 2016, TAMUSA was making plans to transition from an upper division two-year college to a four-year institution for fall 2016. Prior to starting these changes, the institution established a four-semester set of mandatory one-hour student support courses and a university-wide e-portfolio. Further, he learned that

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TAMUSA planned to establish a WAC program that same fall, which would feature what the committee defined as a writing-intentional (W-I) program.

Like many new WAC directors, Katherine started by examining programs and practices at other universities as a way to conceptualize their own. She selected two WAC initiatives that proved effective on other campuses—student writing portfolios and writing-intensive requirements—and reached out to a WAC consultant for guidance on moving these initiatives forward. The primary problems with this approach are: (a) it looks outward, away from the institution, rather than inward to understand existing or previously existing writing initiatives; (b) it focuses primarily on isolated practices rather than a systematic process for integrating curricular change at a given institution; and (c) it concentrates on program initiation but not necessarily sustainability.

To address these problems, for TAMUSA and other new WAC programs, we need a theoretical model that can build from context and represent the complexity of large-scale reform. This model also needs to provide WAC directors and committees guidance on evaluating needs, setting goals, planning programs, implementing projects, assessing initiatives, and tracking sustainability. To create such a theoretical model, we turn to theories that provide tools for describing and introducing change to dynamic systems.

Theories That Inform Our Whole Systems Approach

Complexity theory, first used in computational and scientific fields to describe complex phenomena, provides an umbrella framework for our approach and offers ways to study the interactions among a large and diverse group of actors and organizations within a complex adaptive system. When scientists talk about such systems, they often refer to examples such as flocking birds, each of which makes minute adjustments in their flight in relationship only to the birds next to them. These decentralized decisions among individual birds are driven by feedback loops that either magnify a small action across the system or keep it in check. A flock of starlings, for example, can appear in such numbers that they seem to fill the sky. As one watches these large flocks, one sees how the micro-relationships among individuals can result in a flowing mass that sometimes splinters off but often forms amoebic shapes. Complex systems science works to understand the emergence of these coordinated macro-behaviors, the local rule-following activity that leads to these behaviors, how the system (flock) remains identifiable, and how the system maintains its relative internal stability (Leon, 2014).

Some scholars have argued that universities are complex systems (Leon, 2014) with multiple levels of stakeholders (students, faculty, administrators, board members). If we imagine the university as a social ecosystem, we can better understand

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how adding stresses within the system can lead to behavioral adaptations until the stresses become too great and lead to program failure. While a WAC program is not a complex system itself, it might lead to adaptive behaviors within the system that both increase its complexity and contribute to collective pattern-forming processes of the larger complex system. The greater the diversity and connectivity of the individuals at the lowest levels of the system, the more complex the system becomes and the more likely emergent and adaptive behaviors will be introduced. Perhaps this is the reason why WAC lore has often emphasized the need for WAC programs to start by gathering grassroots support and create an advisory board early in its development. According to complexity theory, the more top-down the program, the fewer interactions among individual actors in the system, the weaker the feedback loops, and the less likely emergent behaviors will spread across the system. It also stands to reason that systemic transformational change may have roots in top-down decisions or strategic plans but cannot be realized unless those goals resonate at all scales within the system.

While complexity science provides ways to understand how complex systems work, it does not offer strategies for intervening within the systems it studies. As scholars began to extend complexity theory from natural systems to social networks like corporations, they desired theoretical frameworks that were not just descriptive, but also predictive and focused on intervention.

Systems theory focuses primarily at the macro-level, mapping the system to better understand the relationships that govern it. Systems theory encourages us to approach complex systems by focusing on relationship patterns and by "using the concept of wholeness to order our thoughts" (Checkland, 1981, p. 4). Systems practice begins with stakeholder discussions of relationships among system structures and processes to paint a rich picture of the whole. These actors also create a conceptual model that exposes ideologies structuring the system and defines their ideal vision of it. This focus on system mapping to direct change requires moving beyond "parochial boundaries" (in the case of a university, individual courses, departments, and colleges) and finding the points of leverage where "actions and changes in structures" can lead to "significant, enduring improvements" across the system (Senge, 1990, p. 114). Points of leverage are highly connected places where even a small change might have significant ripple effects for the entire system (for example, linking a student writing portfolio to a graduation requirement rather than a first-year writing requirement). These ripple effects are what Senge refers to as reinforcing processes, where a single intervention can have a snowball effect on students, faculty, and the campus culture of writing.

A WAC director applying a systems approach might begin not by choosing WAC initiatives to implement, but by taking the time to study the campus system to create

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a rich picture of writing across the university. In fact, this is the first activity that Jeff encouraged the WAC committee at TAMUSA to undertake, work that they did in preparation for his second consultation. Their goal was to map the different writing activities happening on campus and then identify the stakeholders that impact or are impacted by these writing activities.

Figure 1: Photo of whiteboard program mapping completed by TAMUSA WAC committee.

This rough sketch provides a baseline understanding of a campus writing culture that stakeholders can use to consider their ideal goals for writing on campus and create alternative models of the system. The complexity of this rough sketch grows as the stakeholder group discusses lines of communication and interaction among each node, enabling them to identify points of leverage for introducing change to the university's curricular ecology.

Systems theory—and especially the more recent approach of "critical systems theory"—also recognizes that disparities of power exist in all human systems; changes to a system can affect different groups within the system differently; and when introducing change to a system we need to be particularly cognizant of those groups with less power, less of a voice, and less visibility in the system (see, for example, Flood, 1990; Jackson, 1985; Midgley, 1996). In the WAC literature, two groups of marginalized faculty and students have emerged as a focus: contingent labor and multilingual student

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writers (see, for example, Cox & Zawacki, 2011; LaFrance, 2015; Johns, 1991; Zawacki & Cox, 2014). Systems theory reminds us that it is important to consider potential unintended ripple effects in a system early in WAC program planning.

While systems theory provides a framework for considering the macro-level, to focus more on the micro-level, we draw on **social network theory**. This theory originated as a way to understand how ties among individuals impact social networks, beliefs, and behaviors, and it considers a group of people (e.g. faculty and staff) as an interconnected system of nodes with a wide range of ties, or links, to others. These connections can be visually mapped to examine the lines of communication, patterns of interaction, and distribution of knowledge within that system. Mapping communication pathways along a network of nodes can help to identify individuals who serve as conduits or bottlenecks. This theory prioritizes "the relationships and ties with other actors within the network" (Marsden, 2005, p. 8) rather than attributes of individual actors. For example, when considering the effectiveness of a WAC director, it is more important to examine the web of relationships that a WAC director establishes with others on campus than to focus on the director's personality traits.

Albert Lazlo Barabasi (2002) argues that interactivity with network hubs is key for innovative programs (such as WAC) since in complex networks, failures predominantly affect the smallest nodes first. Barabasi also points out that there is a critical threshold (the tipping point) where the number of links an innovation connects to begins to increase exponentially, and conversely, if an innovation fails to reach a threshold number of nodes, it is bound to fail. Finding points of interactivity in the university system is also key because of the network analysis concept of *preferential attachment*: actors are more likely to link to nodes that are already well connected and popular than to more isolated and less popular nodes.

The methodology that emerges from this theory is typically called social network analysis or organizational network analysis (ONA). Typically, ONA practitioners survey every member of the targeted group to uncover a specific set of organizational patterns within the group. Once the data is collected, the individual actors are visually mapped as a set of nodes in a three-dimensional network that provides links among actors in the form of lines connecting individuals, subsets, and larger groups. Such a detailed and comprehensive survey would not be practical or even necessary for most WAC programs. However, simply mapping the relationships among stakeholders could prove useful. At TAMUSA, this map would identify several sets of actors connecting the director to WAC committee members and each of those members to their respective departments. Katherine would also be connected to the writing center, which she directs, and the newly forming FYC program. Also included would be links to individuals in the library, faculty who will receive training, managers of

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e-portfolios, and curriculum committee members that will review course proposals across the institution.

Figure 2: Early network map of TAMUSA's WAC program constructed by Jeff in consultation with Katherine Bridgman.

The more a stakeholder group can visualize the nodes, hubs, and links within the network, the easier it becomes to identify bottlenecks such as the "gatekeeping courses" mentioned in the institutional map, as well as conduits of change.

Complexity, systems, and social network theories offer approaches for describing, visualizing, and analyzing a complex system. To consider the effects of change on a system, we turn to resilience theory and sustainable development theory.

Resilience theory helps us understand how systems handle stresses yet maintain a relatively stable state. Resilience theory was first introduced to help understand the "capacity of ecosystems to handle challenges or changes to the system while maintaining a relative balanced state or to shift to an alternative, potentially transformative, state" (Folke et al., 2010, para. 3). For example, an ecosystem with an existing dam that has been in place for many years tends to reach a relatively stable state. As certain factors change over time, that same system can cross a threshold and reach an alternative stable state, which may or may not be as desirable as the previous state. For example, if the dam breaks and is not repaired, the system will settle into an alternative transformed state. The key to understanding these system changes are the feedback loops that "determine their overall dynamics" (Folke et al., 2010, para. 6). In the example of the dam, changes in the relatively stable state may be much less dramatic than a break, but lead nonetheless to equally significant shifts in the homeostatic state that the system reaches over time. Over-farming upstream could release enough phosphates into the lake to eventually result in a massive blue-green algae bloom that causes a

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mass fish kill. Resilience theory has implications for WAC program adaptation and longevity in relation to the curricular ecology—the relationship between social and curricular practices—of an institution. At TAMUSA, the introduction of downward expansion, e-portfolios, and a writing-intentional program all at once would put too much strain on faculty and curriculum committees to create a stable writing culture, so slowing down the development of the W-I initiative to ensure resilience became crucial. This shift enabled the WAC committee to propose a four-year timeframe for implementation so faculty could develop W-I courses and get them approved in sufficient numbers to avoid course bottlenecks for students taking these required courses.

Resilience theory reminds us that resilience and adaptability are dynamic processes that require constant monitoring and intervention. That initial stable state is going to shift over time as practices are tested and revised, as personnel come and go, and as program elements shift in purpose or function. To promote program resilience, the TAMUSA WAC committee established a system for re-certifying their W-I courses every three years and planned for the WAC committee to conduct an "annual program assessment using work that students include in their writing portfolios along with other documents from the program" (Texas A&M, 2017). Building in such monitoring is needed since interventions like the development of writing-intensive courses can easily shift away from their original intent with changes in the faculty who teach the course.

Compared to the other theories we've presented, **sustainable development theory** is significantly more project-focused and action-oriented, as it emerged to solve serious global challenges. Broadly defined, sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations World Commission, p. 43). This same UN report, referred to as the Brundtland Report, laid out the goal of building a future "that is more prosperous, more just, and more secure" (para. 3). This ambitious political agenda requires buy-in from stakeholders at every level of the system as well as clear guidelines for building consensus and introducing and assessing change. This theory thus provides a practical whole systems methodology for introducing change into a system by grounding program development in discrete projects that work through cycles of planning, doing, checking, and improving (Environment Canada, 2013) and for monitoring progress through sustainability indicators (Bell and Morse, 2008), further discussed below.

Sustainability serves as a core value and outcome of any significant curricular initiative, which is as important as the guiding vision of the curricular reform itself. No institution would undertake a potentially paradigmatic shift in its mission, with the time, money, and resources it takes to do so, without a desire for these changes to persist. Thus, in creating our whole systems approach for WAC program development,

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we've borrowed heavily from sustainable development theory. Inspired by a report on sustainability indicators that emerged from a sustainable development conference in 1996 in Bellagio, Italy (referred to as the Bellagio Report), we've developed a set of principles for sustainable WAC program development, while integrating insights from across the theories we introduce here. From sustainable development theory, we reconceptualized WAC programs and interventions (i.e. writing-intensive requirements, writing fellows programs, and faculty development institutes) as projects—each with their own cycles of development and assessment. And we've borrowed the idea of using sustainability indicators to guide program and project assessment. Below, we list the guiding principles we derived from the Bellagio Report and the five theoretical frameworks introduced above for developing WAC programs and then describe a methodology—also inspired by sustainable development theory—for putting these principles into action.

Principles for a Whole Systems Approach for WAC Program Development

The following principles represent a synthesis of our theoretical framework. They are interrelated and meant to be used as a full set, rather than piecemeal.

1. **Wholeness**: understanding a WAC program as a significant intervention within a complex system with competing ideologies and many levels, actors, and practices.
2. **Broad participation**: engaging stakeholders from all levels of the institution to help plan, approve, implement, and assess program goals, outcomes, and projects.
3. **Transformative change**: identifying points of leverage for introducing change to the university system at multiple levels, including changes in ideologies and practices as they relate to writing culture.
4. **Equity**: working to minimize disparities in current and future generations of WAC faculty and student writers.
5. **Resilience**: adapting to program challenges, maintaining self-organizing practices, and increasing the capacity for learning and adaptation to sustain desirable pathways for development.
6. **Leadership**: identifying leadership that can serve as the hub for the program, with the authority on campus to lead a cohesive effort of planning, launching, developing, and assessing WAC.
7. **Systematic development**: building a WAC program incrementally over time with a clear mission and prioritized goals.

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8. **Integration**: building program components that synchronize with national and local mandates, integrate into existing structures and practices, and facilitate collaborative campus relationships.
9. **Visibility**: ensuring that program development, assessment, and change are transparent, regular, and public as well as promoting program events and successes through multiple means of reporting.
10. **Feedback:** identifying indicators and repeated measures to reveal trends, stimulate recursive and adaptive change, promote collective learning and feedback for decision-making, and determine whether a WAC program is in balance and whether individual WAC projects are sustainable and achieving their goal.

These principles underlie our methodology and strategies, which we describe below.

Whole Systems Methodology

Our whole systems methodology creates an iterative and participatory cycle to establish institutional change that integrates ongoing assessment of sustainability. It is designed for developing entire WAC programs as well as particular WAC projects (i.e. WI programs, faculty seminars, etc.) and tracks sustainability through the use of sustainability indicators (SIs) (see figure 3). We developed this methodology from two models used in sustainable development: Canada's Federal Sustainable Development Strategy (FSDS) (Environment Canada, 2013) and Bell and Morse's (2008) Imagine approach. The FSDS model was developed to implement a national strategy for sustainable development in Canada through a "plan, do, check, and improve" multi-stage approach. Like the FSDS model, Bell and Morse's Imagine model is project-based and cyclical, with stages of understanding context, imagining alternative scenarios, and publicizing projects. However, Bell and Morse's Imagine model places more focus on the participatory process of developing and using sustainability indicators to track and predict project sustainability.

SIs are the most significant distinguishing feature of sustainable development methodology. Emerging from the idea of indicator species, an SI may be understood as "a quantitative tool that analyzes changes, while measuring and communicating progress towards the sustainable use and management of economic, social, institutional, and environmental resources" (Olsson et al., 2004, p. 8). Rather than look at a single indicator, SIs "aim to develop a framework that tries to bring the economic, social and environmental aspects of society together, emphasizing the links between them" (Olsson et al., 2004, p. 9). For example, when considering the sustainability of a natural resource, one would not only focus on availability of the resource (say, coal), but also on environmental aspects (such as the impacts of extracting and burning coal on air and water quality and the release of toxic materials into the soil), economic

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aspects (such as the number of related jobs, impact on other industries in the area), and social aspects (such as the working conditions of coal miners and health risks to the local community). And each of these indicators must be clearly defined, reproducible, unambiguous, understandable, and practical. It should be possible to deduce from a set of chosen indicators the viability and sustainability of the given system being studied in comparison to alternate development paths, in this case, coal mining within a specific local ecology.

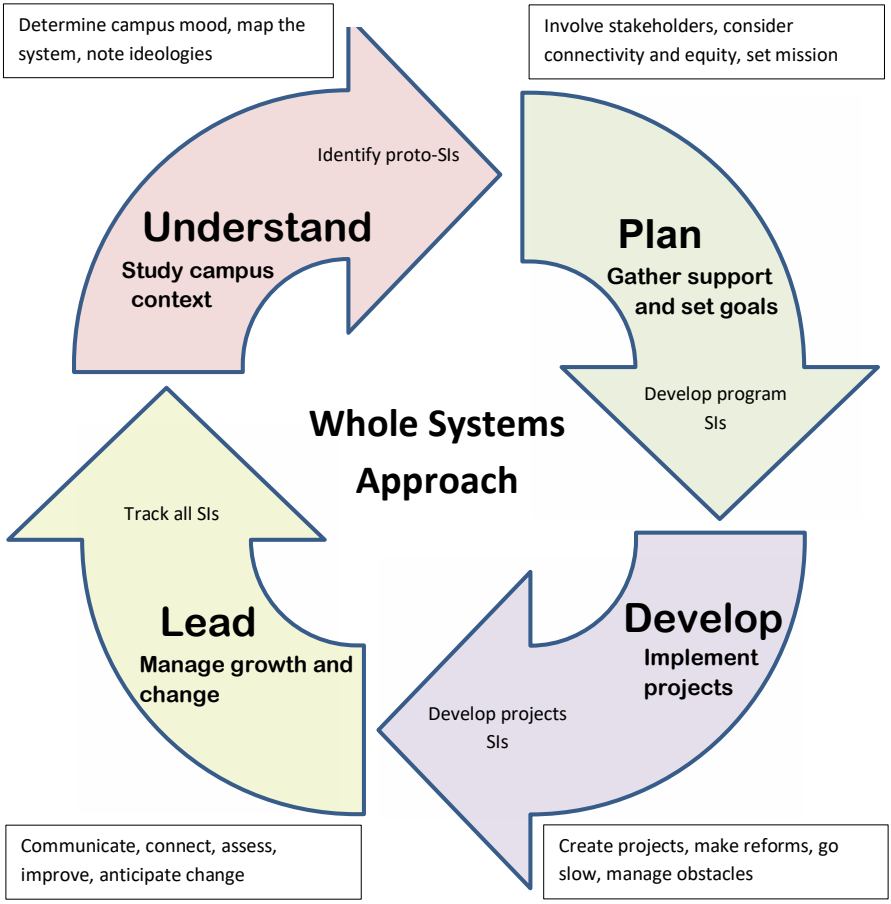

Figure 3. The whole systems methodology for transformative change.

To aid WAC directors in identifying SIs, we turn to a model introduced by Hardi and Zdan (1997) and extended by Bossel (1999). Their model focuses on three major systems, two of which include subsystems: the human system (comprised of

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individual development, the social system, and the government system); the support system (comprised of the economic system and infrastructure system); and natural system. These systems are outlined in figure 6, which Jeff adapted from Bossel (1999, p. 18) to reflect WAC concerns.

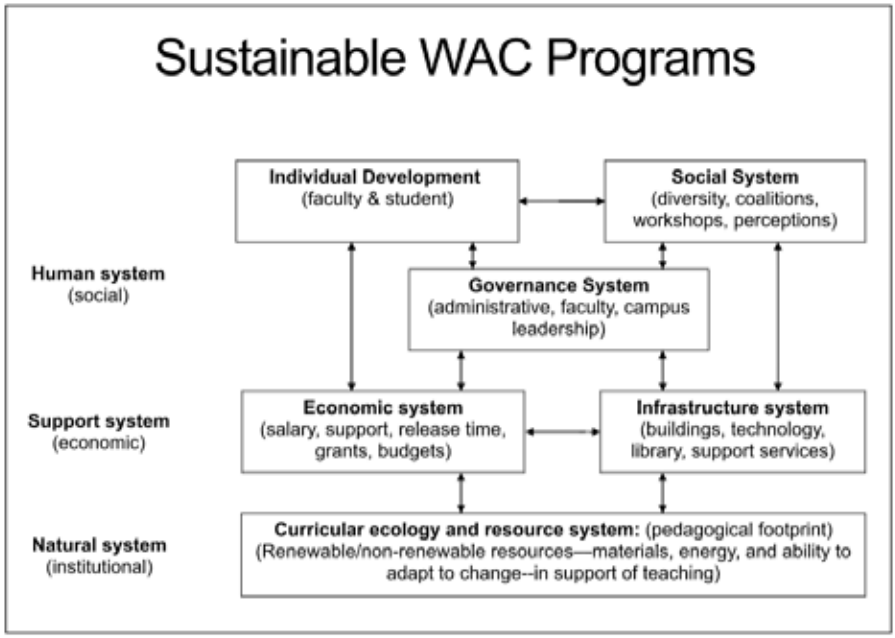

Figure 6: The six major systems of the anthrosphere and their major relationships. Reprinted from Galin, Jeffrey R. (2010), Improving rather than proving: Self-administered sustainability mapping of WAC programs. Council of Writing Program Administrators Conference, Minneapolis, MN.

These six systems of the WAC anthrosphere may serve as a heuristic for identifying SIs, particularly indicators of distress. Table 1 below demonstrates how TAMUSA might apply this heuristic to develop SIs for their W-I program:

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Table 1

Example Indicators of Distress for TAMUSA

Level	**Example indicators of distress**
Individual	Director's time commitment increasing for WAC management without commensurate release time or compensation Compliance of W-I syllabi dropping significantly Student or faculty perceptions of WAC shifting negatively
Social	Membership of WAC committee decreasing or shifting so that it is no longer representative across campus Increase in administrative obstacles to program management or growth
Governance	Increasing class sizes resulting from university policy changes Dynamic program director leading too many faculty workshops to focus on other program development Decrease in writing quality in e-portfolios resulting from new statewide outcomes
Financial	Diminishing budget resulting from increased pressure from competing units Budget threshold overrun resulting from new costs and/or projects without commensurate budget increases
University Curricular Ecology	Fall in departmental participation resulting from merging or fracturing of college departments or divisions Insufficient classroom, office, or meeting space resulting from substantial changes in allocated space

Tracking SIs is so integral to sustainable development that we have included them in every stage of our methodology. The SIs themselves, however, are only the means of assessing the visibility and sustainability of a given program or project. Each of the four stages of the whole systems methodology—understanding, planning, developing, and leading—is scaffolded by a set of strategies that enable sustainable program development and growth.

Understanding, a stage we borrowed from the Imagine approach, involves examining the campus context, including the structures and network of relationships of the system.

Strategy 1: Determine the campus mood. "Campus mood" refers to the overall readiness of an institution for increased commitment to student writing. Determining the campus mood is a mix of collecting data, talking to stakeholders, reflecting on current writing practices across university contexts, identifying points of conflict and agreement about possible WAC program models, and identifying the current state of writing and teaching of writing on campus. This understanding will allow the WAC director to establish proto-SIs that mark the pre-implementation status of a WAC

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program. Determining the campus mood will also help program leaders facilitate an overall approach to program initiation, development, and timing. For example, if upper administration wants a WAC program but will not provide funds for a dedicated director, faculty support, or assessment processes, the mood for WAC might be judged somewhat hostile. Such a context would warrant a slower development, broader outreach, and possibly pilot projects that can be evaluated and then reported back to upper administration.

Strategy 2: Understand the system in order to focus on points of interactivity and leverage. Institutions of higher education are complex entities that not only foster connectivity through nodes and hubs (such as academic senates and centers for teaching), but also segregation and isolation (the siloed structure of departments and colleges). Creating rich visual maps of the places where writing occurs, the requirements involving writing, hubs of writing instruction, and the units and stakeholders impacting writing will help WAC directors choose interventions that will have leverage to make significant and sustainable change.

Strategy 3: Understand the ideologies that inform the campus culture of writing. The ideologies that define campus writing will inevitably shape the behavior of individual faculty and administrators. Understanding these ideologies helps to locate reinforcing processes that amplify problematic attitudes or behaviors. For example, an institution that is focused on timed writing tests is informed by a theory of writing as a product and creates an ideology and a process that reinforces that writing tasks can be completed and assessed in a single draft. Shifting from timed writing to portfolio assessment would not only change the theory of writing under which the system operates, but also could reinforce positive changes to students' conception of writing processes and teachers' writing pedagogies.

Planning involves gathering support, such as a WAC advisory board, and working with this group to determine program goals and the sustainability indicators that will guide program development.

Strategy 4: Involve multiple stakeholders in the system. Building WAC programs that have a high level of connectivity and influence requires the involvement of multiple stakeholders across the system and across scales, from individual faculty to department chairs to academic senate committees to deans and provosts. These stakeholders are crucial for building a WAC program through participatory processes, including collaborating to map the system, setting the mission and goals, determining and operationalizing program sustainability indicators, and setting the agenda for program development.

Strategy 5: Work towards positioning the WAC program so that it has greater interconnectivity and leverage in the institution. WAC programs that do not fully integrate into existing institutional structures and do not move beyond a small core

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group are rarely sustainable. From their inception, every WAC program should aim to be a hub within its institutional network and not just a node. Furthermore, it is more effective to locate a WAC program in existing hubs that are connected across disciplines preferentially, like writing centers, centers for teaching, and independent writing departments, than a less connected node like a traditional English department. WAC directors can also link to highly connected institutional structures such as the faculty senate, libraries, academic assessment, or the office of institutional diversity. Connecting the WAC program in these ways also increases program stability by not being perceived as marginal or temporary, but integral to the institution.

Strategy 6: Consider the impact of WAC on faculty and student equity. A whole systems approach acknowledges that disparities of power exist in all human systems, that changes to a system typically affect different groups unevenly, and that when systems change, particular attention should be paid to groups with less power and visibility. For instance, the creation of WAC curriculum such as first-year writing seminars could unintentionally increase reliance on non-tenure track faculty or workload for junior faculty (LaFrance, 2015). The creation of a timed writing assessment could lead to inequitable conditions for multilingual students (Janopoulos, 1995). How WAC affects the faculty it involves and the students it serves should be considered in the early stages of program development and tracked with one or two SIs.

Strategy 7: Set mission, goals, and sustainability indicators. While WAC programs often develop organically and even opportunistically, those that set a mission statement, goals, and sustainability indicators in the development phase are more likely to have a system-wide impact, since they will be more coherent and goal-driven. These goals and indicators should be shaped by a group of stakeholders from across the networked system, such as a WAC advisory board. The mission, goals, and program outcomes then serve as a foundation for systematic program development and assessment.

Developing uses a systematic approach to fulfil mission and goals through project development and assessment.

Strategy 8: Maximize program sustainability through project-based program development. Translating program outcomes into action requires an intentional project-based approach. WAC projects such as writing-intensive initiatives or faculty development retreats are self-contained to a large degree, each targeting a specific problem/outcome and moving through a full set of stages from inception to implementation and assessment. SIs are developed in the initial stages of the project and evaluated regularly to establish threshold boundaries within which each project can be expected to function successfully. Taken together, a set of projects is used systematically to fulfill the program mission and goals. Using a project-based approach enables

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WAC leaders to prioritize which programs should be developed, in what order, and on what timeline to most impact the system.

Strategy 9: Make reforms at both the micro-level and the systems-level. In WAC programs, working at the micro-level (i.e. consulting with individual faculty, giving classroom presentations) and working at the systems-level (i.e. working with a department to create a departmental writing assessment plan, instituting a writing-intensive requirement) go hand in hand. Typically, when WAC programs start, the director focuses on the micro-level. This work is rewarding and can help the director establish relationships with faculty, create credibility, and build critical mass. However, if directors spend most of their time at the micro-level, then they can't spend much of their time at the systems-level, which is necessary for making enduring changes to the campus culture of writing.

Strategy 10: Plan for gradual rather than rapid reforms to the system. Academic institutions are complex organizations that do not change course easily. WAC programs seek to shift the culture of writing at the institution, and this kind of change happens incrementally. From established WAC programs, we know it can take many years to transform the writing culture a campus. Even specific projects can take years to develop fully. For example, a shift to building a writing-enriched curriculum model that involves departments making multi-year commitments to curriculum analysis and change might take several years to gain footing. Quick change can end in disaster, as quick changes do not allow time for cross-institutional buy-in or an understanding of the potential impact on other parts of the system.

Leading focuses on promoting program sustainability through program guidance and management.

Strategy 11: Deal with obstacles to program or project development systematically. The resiliency of a WAC program depends on its ability to overcome challenges and obstacles, which will inevitably arise throughout its development**.** A systems process for resolving conflicts necessitates a broad understanding of an obstacle, which includes collecting necessary data, considering the scope of its reach, coordinating with relevant stakeholders, balancing concerns that need to be considered, compromising, and proposing clear models or simulations to help predict the system's performance before the changes are implemented. For example, a dean who appeared supportive of WAC suddenly decides that a writing-intensive program cannot work because so many departments have large section courses. Rather than taking personal offense and confronting the dean, an approach might be to bring an external visitor to campus who made such a program work at another institution or encouraging use of breakout sections with TAs for the writing in these courses.

Strategy 12: Communicate regularly and at all levels of the system to keep the program visible. For WAC programs to be perceived as integral to the institution,

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they need to stay visible through good PR, partnering with popular campus hubs, and reminding other units of the program's relevance. This maintenance of visibility can take many forms—through WAC websites, newsletters, and event announcements—but also through such activities as preparing annual reports, attending campus meetings, joining university committees related to teaching and learning, and publishing results of WAC initiatives both locally and nationally. Creating visibility can also be about branding signature events like faculty retreats or student recognition ceremonies. Tracking visibility through SIs ensures that the program remains visible to faculty and administrators while not over inundating them with messages and events.

Strategy 13: Be aware of systems beyond your institution and connect to those that are beneficial to the WAC program. Changes in systems beyond your institution may affect the campus culture of writing. Some of these effects may be negative, such as a state government slashing funds for basic writing programs, and some may be positive, such as disciplinary accrediting bodies like IEEE, ABET, or CCNE increasing emphasis on written communication. Still other systems—such as the CCCC WAC Standing Group, the WAC Clearinghouse, IWAC conference, the WAC Summer Institute, NCTE, the Association for Writing Across the Curriculum, and the AACU—may provide a WAC leader with important resources, such as access to mentors, scholarship, and position statements. Tapping into such resources will assist WAC leaders as they seek to create change on their campuses.

Strategy 14: Assess and revise the WAC program. Systems tend toward segregation and stagnation, and comprehensive writing programs are susceptible to becoming static rather than dynamic if assessment feedback loops are not built into them. For example, a writing-intensive requirement without oversight or regular faculty development will most likely face dwindling enthusiasm and less coherence as a program. Ideally, WAC directors should identify a set of questions based on organizational and program maps (i.e. which departments are contributing WI courses?); identify the necessary but sufficient set of indicators to track program sustainability (i.e., what balance of WI course instructor rank would indicate a sustainable WI initiative?); develop an assessment model that keeps track of the full picture; and revisit the pool of questions and indicators as programs grow and change.

Strategy 15: Create a plan for sustainable leadership. There are many tales from WAC lore of vibrant WAC programs that crumbled when the leader stepped down or left for another institution. Distributed leadership models can help guard against this reliance on a single individual's energy or career choices. From a systems perspective, leadership that is located at only one point in the system and that comes from only one perspective is not as effective as leadership that is collective and disbursed throughout the system. Tactics include developing a critical mass of individual teacher-leaders across disciplines, working with a WAC advisory board or committee, creating

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graduation writing requirements that are overseen by cross-disciplinary committees, and developing an assistant director position.

The Whole Systems Approach at TAMUSA

When Katherine first reached out to Jeff, she described WAC as on the brink of the *developing* phase. Jeff convinced her and the WAC committee to take more time in the *understanding* and *planning* phases before moving forward. In his first meeting with the WAC committee, Jeff introduced four key points about program development, including the need to: (a) map visually how the program they were imagining would tie into existing initiatives on campus; (b) establish a clear mission statement and goals; (c) develop a set of sustainability indicators to track the emergence, growth, and sustainability of their WAC program; and (d) operationalize each SI by determining their bands of equilibrium with measurable thresholds of success and distress. This six-member committee had broad participation, with members from each college and the WAC director. It also had leverage to make change, since it was a subcommittee of the faculty senate and also had a direct line of communication to the provost.

Originally, the committee was going to propose only a single writing-intensive course requirement, but in an email to Katherine, Jeff prompted the committee to think about the larger goal of system-wide change:

> I would encourage you to think of WAC as the introduction of transformative change for the curriculum on your campus. If you can get [the committee] to think about more than just adding writing, but changing the way that writing is taught and perceived at the institution, then you have room to think of WAC as a shift in the whole curricular system, even if it is only starting with a few WI designated courses and some faculty support. If the committee can realize that a sustainable WAC program at most universities is much larger than a single WI initiative, they can set criteria for WI that situates it in this larger context. (Jeff Galin, personal communication, March 18, 2016)

The committee was persuaded by Jeff's argument that WAC should be thought of as a transformative intervention into the system, and they decided to aim for a more expansive four-course WI requirement. They slowed down the implementation process, established pilot courses to test out strategies, developed W-I criteria, extended the period for course development and faculty training to four years, and formulated an assessment plan.

During this process, the committee thought about project sustainability by considering the number of courses that need to be certified W-I (sufficient sections across the majors prevent bottlenecks for student progress), number of faculty trained (all

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faculty teaching W-I courses need to participate in WAC workshops), and sufficient funding (WAC director release time, faculty workshop stipends, assessment raters, departmental grants, additional faculty as course size drops). These parameters could all easily be translated into SIs. For example, they decided to cap W-I class sizes at twenty students. To establish an SI related to course size, they could set the band of equilibrium between fifteen students per course (a sign of distress, as it might indicate that students are putting off the requirement) and twenty-five students per course (another sign of distress, as it may mean that not enough sections are being offered). Indicating the band of equilibrium within which each SI remains sustainable can help WAC directors monitor initiatives and make arguments for appropriate funding and support.

When the new provost arrived mid-summer, he supported the committee's desire to slow down the implementation process from fall 2016 to fall of 2021. He also supported the committee's recommendation to shift from writing-intensive to "writing-intentional" courses and enabled one course to be piloted. The shift to W-I reflects a desire to focus on quality over quantity and an emphasis on high impact practices as defined by the AACU (Katherine Bridgeman, personal communication, April 18, 2017). A small group of instructors are now planning to pilot W-I courses in fall 2017 after participating in a six-week required training course and working with the WAC director. By 2021, all entering students will be required to take four W-I courses, thus increasing the chances for transforming the institutional culture of literacy.

The careful and strategic process that the WAC committee engaged in reflects a whole systems approach that values incremental but sustainable reform over quick and easy reforms that often fail due to lack of buy-in or lack of influence on and leverage within the system.

Building Sustainable WAC: From the Campus to the Field at Large

Our principles and methodology provide the coherent and theorized approach that has been missing from the WAC lore, while still taking into consideration the highly specific contexts of an institutional landscape, comprised of curricular histories and politics, changing faculty and student demographics, and evolving missions and goals. Furthermore, our approach provides justification for moving slowly and systematically, positioning WAC programs within institutional hubs, and supporting WAC leaders with adequate resources for making the kinds of transformative changes to campus writing culture that we know WAC can generate and sustain.

This focus on transformative change, and the theoretical and methodological sophistication needed to develop sustainable WAC programs, may seem intimidating at first. However, we feel that the typical process to starting a WAC program is more intimidating. Many new WAC directors jump right into program implementation

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and then become overwhelmed, as they have not laid the groundwork, coordinated with stakeholders, or created a strategic plan. This accelerated startup leads quickly to director burn-out. This may have been the path that TAMUSA took if they had not taken up Jeff's suggestions to slow down, think systematically and strategically, and pilot a program before full implementation. Furthermore, our approach provided justification to upper administration for a slower roll-out, more institutional resources, and more stakeholder collaboration, which may lead to more buy-in across campus.

WAC leaders have always stressed that WAC is not a quick fix to a "problem" with student writing but has the larger goal of transforming a campus culture of writing. Until now, WAC has not had a theoretically-based framework, methodology, principles, and strategies for enacting this goal. We hope our whole systems approach provides this. We are also hopeful that the whole systems approach can begin to address the larger concerns that Walvoord expressed about the sustainability of WAC as a field. Walvoord argued that the lack of a coherent theory for WAC, as well as the field's focus on how WAC plays out on individual campuses, has prevented WAC from achieving the status of a national movement. In our larger project, we explore the implications of this framework for better understanding the vulnerabilities of the field at large and creating structures that promote sustainability, such as an umbrella organization for WAC.

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