Article

The Thrive Mosaic Developmental Framework: A Systems Activist Approach to Marginalized STEM Scholar Success

Robbin N. Chapman[1]

Abstract

The science of broadening participation explains how science thrives with appropriate frameworks for addressing complex issues. This article presents a developmental framework for equitable STEM scholar development, access, and opportunity. Few issues in academia are more complex than ensuring all scholars can thrive without unwarranted obstacles of intentional disruption or benign indifference. The Thrive Mosaic developmental framework coalesces the best elements of a scholar's networks to support scholar development, advocacy, and self-care, while also working to forestall systemic marginalization and obstructionist practices. The framework uses a systems thinking approach where aspects of the "ecology of academia" important to scholar success are conceptualized as systems that can be adapted to benefit the scholar and support scholar activism. The goal is to mitigate environmental internal and external factors that impede scholar success. Thrive Mosaic is both a resource and a tool for realizing scholar thriving, particularly within privileged and noncollegial environments.

Keywords

diversity, cultural competency, mentoring, systems thinking, developmental networks

> *If you want to go quickly, go alone*
> *If you want to go far, go together*
> —African Proverb

[1]Harvard University John F Kennedy School of Government, Cambridge, MA, USA

Corresponding Author:
Robbin N. Chapman, Harvard University John F. Kennedy School of Government, 79 John F. Kennedy Street, Cambridge, MA 02138-5806, USA.
Email: robbin_chapman@hks.harvard.edu

Historically White Colleges and Universities (HWCU) are often challenging spaces for scholars of color to navigate (Harper, 2012; Steele & Aronson, 2016). Situated within these racialized spaces, scholars of color live very complex lives. The higher education landscape is steeped in a centuries old history of brutalization of Black and Brown bodies and the normalization of exclusion (Feagin, 2013). Therefore, effective mentoring, advocacy, and scholar development relationships rely on open, race-aware engagement, value and respect for the scholar's personhood and scholarship, to realize a strong foundation for scholar success. The Thrive Mosaic (TM) facilitates cultivation of a scholar's academic and social networks while ensuring a contextualized understanding of the barriers the scholar will encounter in academia. This developmental framework shifts the tacit and inaccessible aspects of mentoring to explicit practices by deconstructing the vital components of scholar development.

Systems thinking offers a conceptual model for seeing the whole while understanding and organizing dynamic interactions of HWCU environments and is effective in tackling complex, real-world issues (DeKay, 1996; Joseph & Reigeluth, 2010). Systems theory treats whole systems as emergent constructs of the part and the relationships among those parts, both being of critical importance to the quality of the system. Systems thinking uses a systems theory approach to solve complex, interrelated issues, through emergence, adaptation, goal-seeking, and self-preserving behaviors (Anderson & Meyer, 2016). The TM design engages the scholar in systems thinking, and functions to help the scholar and their allies to observe, learn, and interact within challenging institutional environments that may adversely impact the scholar (Oken, Chamine, & Wakeland, 2015; Stroh, 2015; Henry, 2010). This approach takes into account how behavior of multiple systems (i.e., institutional cultures, historical forces, and social forces) affect scholar success (Stroh, 2015). Systems thinking is used here to address deficits in equitable scholar access and advocacy that often characterize racialized academic spaces.

The sum of an individual's varied and multiple networks represents a relational ecosystem shaped by the broader cultural norms and beliefs of each network, particularly with regard to access, engagement and learning (Dewey, 1997; Wells, 2008). Healthy ecosystems follow principles of interdependence, flexibility, and diversity (Davis, Challenger, Jayewardene, & Clegg, 2014). TM is a network situated centrally within the scholar's relational ecosystem and represents an intersection of the scholars' various networks. TM partners are actors within this intersection who embrace a social justice agenda, work to increase their cultural competency, and practice resilience when engaging across difference. The purpose of this article is to present a framework for equitable scholar enrichment and thriving. Although the article focuses on engaging across race, the TM developmental framework is effective across all relevant identity differences.

Quality of scholarly relationships varies dramatically within academia, with poor or indifferent scholarly relationships often causing more harm than good (Eby, Durley, Evans, & Ragins, 2008). Marginalized faculty are often perceived as cultural outsiders, particularly within HWCU's where norms around access and opportunity are situated within the dominant White culture (Turner & González, 2014). Additionally,

mentor fears around engaging across difference, assumptions of mediocrity, or inability to recognize the marginalized scholar as a colleague all contribute to deficit-ridden mentoring and advocacy efforts. The results are HWCU environments that function as mentoring and advocacy deserts for marginalized scholars (Stanley & Lincoln, 2005). The TM developmental framework facilitates the thriving of marginalized scholars in HWCU environments by ensuring quality relational and participatory practices within the scholar's developmental networks. TM is critical for marginalized scholars, for whom the seemingly stable structures and clear boundaries of a functional academy seem to operate in flux when they attempt to navigate that academic terrain and find these stable structures and practices (i.e., promotion, access, recognition, collegiality) do not predictively or equitably apply.

Background

Richness of positive social exchange is an important factor to productive socialization and advancement within academia (Adams, 1965; Turner & González, 2014) and such exchanges include the transmission of cultural norms and values of institutions and academic disciplines. However, productive social exchanges are disrupted when the cultural values of institutions and disciplines are grounded within a context of White dominance. Marginalized scholars do not "fit" institutional norms and expectations, and this perceived otherness results in difficulties recruiting White faculty to serve as effective mentors, and so on (Thomas, 2001). This is exacerbated by a condition DiAngelo (2011) termed *White fragility*, where the smallest experiences of racial stress are unbearable, triggering a range of adverse reactions, including silence, withdrawal, fear, guilt, anger, aggression, and other defensive behaviors. Racial stress is triggered by challenges to White solidarity, meritocracy, taboos on talking openly about race, and assumptions of entitlement to racial comfort. These and other factors (i.e., biases and stereotypes) leave many marginalized scholars bereft of rich mentoring. Ironically, scholars of color bring assets often missing from HWCU environments in the form of cultural capital and practices of resilience not readily present within these institutions (Bourdieu, 1986), such as the scholar's community cultural wealth (Yosso, 2005) and academic capital (Gruber, 2004). Community cultural wealth is the cultural stores of competencies, knowledge, and networks that contribute to the scholar and institution success. This debunks deficit-based narratives about marginalized communities and instead positions community cultural wealth as a legitimate asset (Chapman, 2016a; Kafai, Peppler, & Chapman, 2009), including, for example, pluriversal perspectives, fluency in context switching, practices of resilience, openness to unfamiliar ideas, and appreciation of the perspectives of others (Pöllman, 2013; Rendón, Nora, & Kanagala, 2014). The community cultural wealth of scholars of color enriches the academy and contribute to rigor and innovation in research and teaching (Bouncken, Brem, & Kraus, 2016; Hajro, Gibson, & Pudelko, 2017).

TM partners fuel this scholar and ally developmental framework. TM partners and their scholars have credible relationships that are open, proactive, resilient, and value a social justice perspective. TM partners bring their own privileges, assumptions, biases,

and power to that relationship, therefore, must continually increase their capacities to engage across race (or other relevant social identities), particularly when TM partners and scholars differ in social group memberships that reinforce power differentials. These high trust partnerships rely on TM partner capacities for color insight (Armstrong & Wildman, 2007) and understanding of racial privilege dynamics, which is why TM partner resilience is a critical benchmark in these deepening relationships (Bonilla-Silva & Embrick, 2006). TM partners intentionally engage in practices of reflection, mindfulness, cultural humility (Gallardo, 2013; Hammell, 2013) and cultural competency (Turner & González, 2014) as a response to their own biases and assumptions. TM partners position themselves as mutual learners in the relationship and work toward deeper understanding of the scholar's perspectives, background, and aspirations. For most TM partners, their first experiences of noticing the impact of race on scholar development occur as they enter a TM relationship. TM partners often push up against social taboos around advocating across difference, requiring them to resist pressures to maintain the status quo. These relationships are the heart of the social justice struggles within the academy and represent a form of scholar-activism aimed at disrupting inequitable institutional structures.

Thrive Mosaic Network Morphology

My grandmother was a civil rights activist and avid reader who always advised, "Never, ever waste a good obstacle." Her wisdom is my inspiration for the TM design as, specifically, a design for activism to disrupt the status quo of obstructionism in academia. The TM design actualizes the scholar's conscious decision to thrive in problematic spaces and the TM partners intentional ally-ship and activism in operationalizing practices and relationships that are race-aware, honoring the scholars' personhood, and traversing this social justice learning ground together (Chapman, 2016a; Yip & Kram, 2016).

TM deconstructs the traditional academic mentor relationship into six distinct roles: associate, advocate, connector, mentor, coach, and targeted training (Figure 1). A TM partner typically takes on one of these roles. As the TM partner increases culturally competency and resilience, they may take on additional roles.

When sourcing potential TM partners, scholars should actively reach across identity dimensions, communities, and scholarly disciplines. Potential TM partners often must address their cultural assumptions and biases before being includred in the TM. Once admitted, discussions between the scholar and TM partner should include how biases, assumptions, and stereotypes may affect TM advising and strategies for advancement. Deeper discussions should cover race privilege and proactively explore how the scholar may gain access to currently inaccessible academic and other capital and networks. TM partners must be cognizant of their unconscious biases with regard to identity dimensions and work to minimize the negative influence of those biases. Any candidate TM partners unwilling to engage in introspection, ally-ship, and scholar activism are not suitable additions to the TM.

Figure 1. Thrive Mosaic (TM) developmental framework with TM partner roles. Initial TM partners often come from the collection of the scholar's networks.

Associate TM Partner

Associates are mutual accountability partners and the relationship focuses on both scholars setting and meeting deadlines, completing their respective projects, and meeting aspirational goals. These TM partners help the scholar set realistic goals and reevaluate work strategies. The power of this relationship is the accumulation of mastery experiences, meta-scholar development, and sharing of vulnerabilities around work quality and completion. Over time, scholars increase awareness and self-control over their scholarship practice (Biggs, 1985; Flavell, 1979) and internalize successful practices and habits of scholarly productivity (Chapman, 2017).

Advocate TM Partner

Advocates are academics or professionals who know the scholar's work and accomplishments and can facilitate access to scholarly opportunities. Advocates may come from any field, discipline, or community and can speak credibly about the scholar's work, write letters of support, and submit nominations for awards, appointments, and access to leadership opportunities. Advocates are critical to career advancement and leadership opportunities for marginalized scholars. Often, these scholars are overlooked for promotions and other career advancement opportunities (Smith, 2005).

Advocates understand how racism and lack of sufficient academic capital affect access to opportunity, so these TM partners proactively use their power and position to redirect opportunities, including privileges and opportunities that the scholar may not be aware.

Connector TM Partner

Connectors may belong to networks previously unknown or inaccessible to the scholar. It is important that the connector abandons assumptions about the scholar's access to particular networks and instead proactively works to connect the scholar to all available networks. Connectors may be required to go to extraordinary lengths to connect the scholar to influential people and networks, and must be willing to take risks, if necessary, to expand the circle of influencers to which the underrepresented scholar has access. Fear and anxiety are sometimes part of the connectors experience, as they may experience push back, often from exclusive networks that exclude marginalized scholars. Insistence on and normalization of race-talk within exclusive networks, for example, could put the TM partners membership in jeopardy. Engagement in practices of resilience and perseverance is critical. Connectors are invaluable for increasing the number of TM partners in a scholar's Thrive Mosaic. Scholars must cultivate a broad collection of connectors from a variety of academic, professional, and community backgrounds to increase their access to privileged networks. The Connector is an excellent entry level role within the TM and as the relationship develops additional roles may be added.

Mentor TM Partner

Mentors focus on the scholar's overall career trajectory and progress or on specific areas of development (e.g., grant development, selecting journals for publication, etc.). These TM partners are active in bringing the scholar more deeply into the "society of the discipline," serve as a sounding board, and advise on how to navigate the institution and academy. High trust is the cornerstone of this partnership, particularly when mentoring across difference (Turner & González, 2014). To be effective, mentors must actively work on building their resilience for discussions of race so they can gain fluency in normalizing race talk. Mentors often need to increase their understanding of how dominant academic and social systems work to obstruct and invalidate marginalized scholars. These deeper understandings nuance advising and better equip TM Mentors to offer race-aware strategies to the scholar (Higgins & Kram, 2001).

Coach TM Partner

TM coaches function similarly to athletic coaches. The coach identifies the scholar's star quality and advises on actions to help that star shine brighter. Coaches evaluate scholar strengths and weaknesses and develops training recommendations and behavioral practices for working toward aspirational goals. When selecting a coach,

Figure 2. A redacted snippet of the author's Thrive Mosaic tracking document.

the vetting process must uncover whether the potential TM partner has the capacity for cross-cultural engagement and can articulate how race awareness influences their coaching practice.

Targeted Training TM Partner

Targeted training narrowly focuses on specific skill building and often is time-sensitive (i.e., just-in-time, on demand). The goal of this TM partner is to bring the scholar to a necessary level of proficiency and procedural knowledge. The learning experience is laser-focused and typically occurs in workshops and other formal training venues. Vetting includes inquiry into any aspects of training content that may benefit from an intersectional perspective.

Thrive Mosaic Activation

Activating the TM requires contacting the appropriate TM partners across various roles, a process that is both strategic and systematic. TM partners provide a treasure trove of advice, action, and support often critical to realizing short-term projects and long-term goals (Figure 2). However, the scholar should have specific goals in mind before activating this precious resource. For example, a goal may require mentoring around grant management, targeted training for budget administration, and a TM Associate to ensure grant deadlines are met.

Discussion

The Thrive Mosaic developmental framework relies on a mutuality approach that Dutton and Heaphy (2003) describe as a process of cultivating high-quality relationships where trust, respect, directness, and active engagement are shared values. TM is
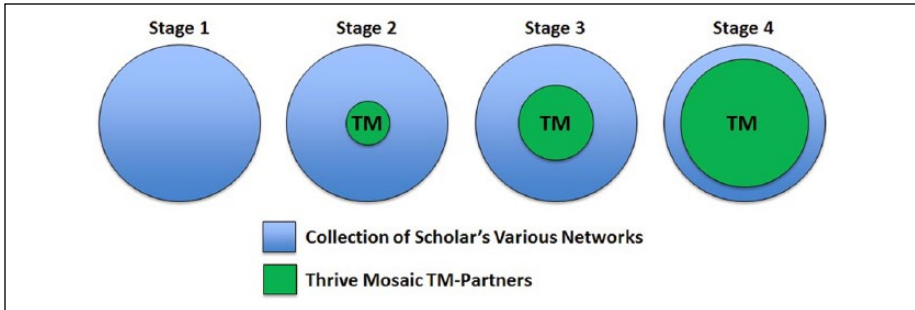
Figure 3. Thrive Mosaic (TM) emergence occurs over time and accelerates once a critical mass of TM partners are active in the network.
Note. Stage 1—initial collection of pre-TM networks; Stage 2—initial TM partners drawn from pre-TM networks; Stage 3—poised for rapid growth in volume of TM partners due to critical mass and breadth of TM; Stage 4—rapid growth partially due to new TM partners being identified by current TM partners.

fueled by the mutual learning, self-growth, social awareness, and social justice activism of TM partners and the scholar. A goal, over time, is to increase the footprint of TM Partners within the scholars's larger, general network (Figure 3). Serving as a TM partner is not a neutral act. TM partners are activists disrupting the well-worn paths of oppressions that obstruct marginalized STEM scholar development and opportunity. TM partners commit to ensuring equity within academia and persist through whatever episodes of discomforts that inevitably occur during those processes. Marginalized scholars must cultivate TM-partner relationships from all of their networks, including their community cultural wealth to grow their TM. Scholars should think broadly when seeking TM partners as this breadth maximizes the perspectives, advice, and actions available to the scholar.

Through my experiences working with faculty and academic leadership over the years, I have learned that various combinations of TM roles are more salient at different stages of a scholar's career.[1] At the graduate student and postdoctoral stages, associates connectors, mentors, and advocates are important. At the assistant professor/lecturer stages the mentor, advocate, and targeted-training roles are most important to cultivate and activate. A variety of mentors, both at the scholar's home institution and beyond can help the scholar transition into academic life and can ensure development in areas critical to promotion. Advocates will be important external writing promotion letters and ensure the scholar has opportunities that solidify promotion readiness.

At the associate professor/senior lecturer career stages, coach, connectors, mentors, and target-training become more salient. Coaches help the scholar explore talents and new scholarly interests. Connectors plug the scholar into networks that can feed burgeoning interests, and into discipline-based inner societies. Targeted-training and mentors are helpful in preparing the scholar for leadership opportunities, both inside your institution and within your disciplinary societies that contribute to promotion readiness. Finally, mentors, targeted-training, coaches, and connectors are crucial

when moving into academic leadership roles. Identify mentors who can help with transition from the faculty/lecturer arena and as leadership roles often require the scholar to relate to the institution differently. Connectors bring the scholar into leadership practitioner networks, (i.e., colleagues in similar roles at other institutions, consortia). Broad and diverse TM will be robust, and the scholar should seek relationships outside of the scholar's usual networks or comfort zone. Reach out across race, gender, other identities, as well as across disciplines, institutions, and nations. The scholar must reaccess TM partners, on occasion, to determine if they may be ready and interested in adding a new role to their TM portfolio.

Conclusion

We cannot ignore the historical context of an academy constructed and maintained within a society of discrimination and privilege. Persistent exclusionary practices are barriers to marginalized STEM scholar success. The stakes are high. Valuable talent is being rendered invisible and thoughtlessly discarded. The integrity and quality of academic institutions and STEM-disciplines is being compromised. There is much work to be done before academia can provide an objective meritocracy and equitable, thriving academic experience for all students.

The science of broadening participation initiative understands the critical importance of evidence-based policies and practices. Therefore, next steps for the TM include further research to garner relevant data, and to contextualize and test the framework. Measures of resilience and work satisfaction, modes of scholar support, scholar efficacy, TM-partner growth in critical areas of cultural competence, and so on, will extract a more complete understanding of the synergies these within TM ecologies. Exploring the dynamic behavior of the TM ecologies will aid in optimizing the framework (Cabrera, Cabrera, & Powers, 2015; Joseph & Reigeluth, 2010). Social network analysis will increase understanding of homophily, centrality, relationship strength, and other important metrics and their importance to optimizing scholar thriving. Additionally, the design of digital technologies to support TM activities, namely TM partner tracking, TM cultivation, system usage analytics, and recommender functions for TM activation will increase TM robustness. The goal is to nuance our understanding of the TM ecology, including how the scholar finds solutions for harmful issues, and the developmental growth of both scholar and TM partner.

The Thrive Mosaic developmental framework supports scholar-activism by marginalized scholars and their allies for disrupting the discriminatory practices that jeopardize equitable opportunities in academia. The Thrive Mosaic foundational philosophy rests on an unshakeable belief in the brilliance and personhood of all STEM scholars and their TM Partners.

For my nephew, Brandon—
I remain resilient so that you may know resilience as your legacy.

Declaration of Conflicting Interests

Funding

Note

1. For information about how to leverage the Thrive Mosaic in support of the various career stages, see Chapman (2016b).

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Author Biography

Robbin N. Chapman, Ph.D., is a computer scientist and educational researcher. She currently serves as Associate Dean for Diversity, Inclusion, and Belonging at the Harvard Kennedy School. Her scholarly interests include frameworks and technology support for scholar activism, with a focus on increasing equity within the academy.