T-Shaped Professionals: The Past, Present, and Future of MyT-Me Development

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ABSTRACT

This paper discusses the past, present, and future of developmental planning for T-shaped professionals (Gardner 2017; Freund 2018; Saviano et al 2016). Professionals with extensive T-shape experience are able to combine deep problem-solving expertise with broad communications skills across different roles and work more easily across disciplines, cultures, systems, emerging technologies, work practices, mindsets, and more. While the general notion of a T-shaped professional is well established in the literature, strategies for creating a "personalized T-shape development plan" for an individual, team, or organization remain elusive. A central challenge to date for creating a T-shape development plan is establishing a baseline assessment from which to set developmental goals. Herein, we present a proposed approach to meeting this need. MyT-Me is a prototype web-based T-metric tool that computes a MyT-Me score based on an analysis of a resume or LinkedIn profile and then displays a T-shape profile in a dashboard compared with the 25th, 50th, 75th, and 95th percentile scores of stratified subsets of others who are also on the MyT-Me platform. With the rise of generative AI for coaching tasks, there has never been a better time to revisit this topic of developmental planning for T-shaped professionals. While much work remains, our motivation in this conceptual paper is to begin to illuminate both diverse challenges and exciting opportunities ahead.

Keywords: MyT-Me platform, Developmental planning, T-shaped professionals, T-shaped skills

INTRODUCTION

What does "T-shaped" mean in the realms of education, training, and work? The letter T is a paradigm for the idea that every professional has achieved some level of depth in a system or field of expertise (the Stem of the T) and some level of breadth across many systems or disciplines (the Top of the T) (Gardner, 2017; Freund, 2018; Saviano et al., 2016). Becoming more T-shaped, then, means adding depth or breadth through any one of a myriad of possible activities and occasions. "More" T-shaped means more depth and breadth are harnessed through your achievements, roles, recognitions, and other activities. The concept of the "T-shape" professional is helpful

for understanding how our working personas develop throughout lifetimes of experiences. Articles in the professional press, conference proceedings, research reports, and academic papers have appeared frequently over the past 10 years as the concept became defined, adopted, and refined by academics, service and manufacturing corporations (see next section).

Variations of the graphic in Figure 1 have been used extensively to represent a T-shaped professional model, with "T-Stem" and "T-Top" as stacked boxes.
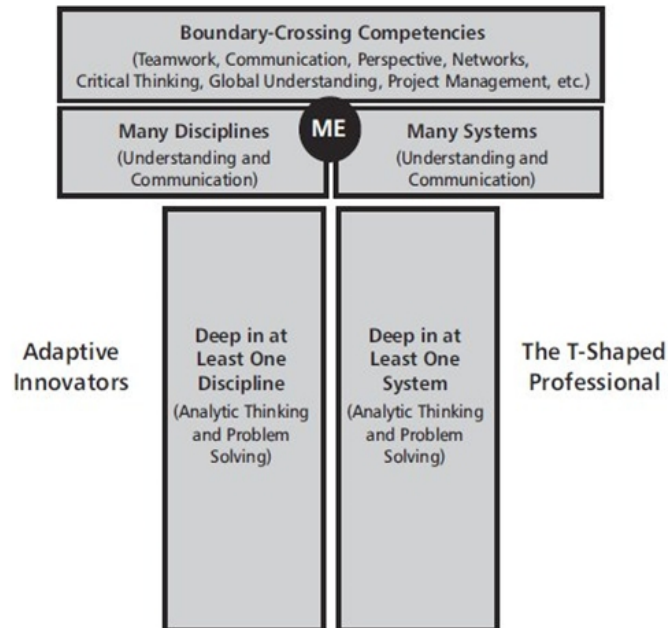

Figure 1: A T-shaped professional model (Gardner, 2017; Spohrer & Maglio, 2010).

However, it is not only "professionals" who have T-shaped attributes – we submit that everyone does, to a greater or lesser extent; professionals in every sector, blue-collar workers, agricultural and mining workers, factory workers, service workers, and all others. We begin adding to our T-shape as we pursue our studies and working lives, and each person's T-shape continues growing (seldom decreasing) at different rates through their lifetimes. After reviewing the history of the T-shaped model, this paper describes a metric system for establishing everyone's T-Score called MyT-Me, and then explores future AI-enabled possibilities.

PAST: HISTORY OF T-SHAPED

While the term "T-shaped skills" has been popular for decades (see Donofrio et al., 2018 for a concise history of origins and advocates), the term is especially popular in the ISSIP.org (International Society of Service Innovation Professionals) community of practice. Service innovations integrate technical, business, and social innovations requiring T-shaped skills (Moghaddam

et al., 2018a; Gardner and Maietta, 2020), and T-shaped skills may help people keep up with accelerating change in the AI era (Spohrer et al., 2022). Even before the first publication mentioning T-professionals in 1991, the skills needed by professionals using computer technology to lead digital transformation in their organizations were rapidly changing (Gardner and Spohrer, 2020). In contrast, I-shaped skills are vulnerable to automation and disruption by technology (McGowan and Shipley, 2020; Boehm and Koolmonojwong, 2019).

Table 1. Publications with "T-shaped..." in the title highlight emerging research clusters.

"T-shaped..."	References	Research Focus
...Manager in title	(Hansen and Von Oetinger, 2001; Ing, 2008)	Good at transferring implicit knowledge across silos
...Innovator in title	(Demirkan and Spohrer, 2018; Barile et al., 2015a)	Service innovation focus, faster digital transformation cycles
...Knowledge, Competency Profile, Expertise, Skills, Capabilities in title	(Barile et al., 2012; Uhlenbrook and De Jong, 2012; Conley et al., 2017; Hamdi et al., 2016; Hafeez-Baig and Gururajan, 2012; Trogstad et al., 2021; Saukkonen and Kreus, 2022)	Directed lifelong learning and knowledge management in fast changing, complex environments with technology uncertainty (wicked problems, holistic view)
...Professional in title	(Donofrio et al., 2018; Demirkan and Spohrer,, 2018; McIntosh and Taylor, 2013; Enders and de Weert, 2009; Karjalainen et al., 2009; Moghaddam et al., 2018; Bierema, 2019; Caputo et al., 2023; Ninan et al., 2022)	Collaborative leadership in times of accelerating change (digital transformation), changing nature of academics and career readiness in knowledge society – design, engineering, management
...Engineer in title	(Oskam, 2009; Tranquillo, 2017; Rogers and Freuler, 2015; Boehm and Koolmonojwong, 2019; Babatope et al., 2020; Sanders et al., 2021; Dekoninck and Bridge, 2023)	21st century engineer curriculum requirements for holistic, parallel, interdisciplinary, humanity-centered systems thinkers – design engineers
...Other such as: Lawyer, People, Educational Approach, Community, Model, Metaphor, Identity, or Teams in title	(Smathers, 2014; Mak, 2017; Barile, 2015b; Rippa et al., 2022; Eady et al., 2021; Ruokonen, 2020; Chan et al., 2020; Wetcho et al., 2022; Ho & Gan, 2024)	Challenges of sustainability, technology (including AI) and ethical dilemmas – roles and contexts, including entrepreneurship & employability

What is the T-shaped advantage? T-shaped professionals have the ability to communicate across boundaries and learn new areas of expertise as needed (Moghaddam et al., 2018b). When the CEO of IDEO advocated the need for T-shaped design professionals, this gave a big boost to the popularity of T-shaped skills (Brown, 2009). The popularity of T-shaped skills has risen each time an innovation leader wrestled with skill gaps (Donofrio and DeMarco, 2022). Vocal leaders, advocates, and influencers have used the

metaphor of T-shaped skills to describe integrating across silos to drive innovation (Iansiti, 1993; Hansen and Von Oetinger, 2001). 21st century T-shaped skills are strategic to US National Science Foundation programs aimed at revolutionizing engineering departments (NSF 2023). Table 1 summarizes research clusters that explore the T-shaped advantage.

While a popular metaphor, quantifying and scaling its adoption in practice has been a thorny issue. Some progress occurred at T-Summits co-sponsored by IBM, Michigan State University, ISSIP, and the US National Academy of Engineering (Gardner and Spohrer, 2020; Moghaddam et al., 2018b). This paper's first author ran workshops at T-Summits for individuals to "code" their resume to discover their MyT-Me T-score using a spreadsheet (Freund, 2018). These workshops set the stage for exploring individual development and learning plans, another important area of research (Seibert et al., 2024; Solberg et al., 2018).

PRESENT: MYT-ME OVERVIEW

MyT-Me (pronounced "mighty-me") aims to provide a comprehensive scoring system for any person to develop his or her own MyT-Me T-scores based on his or her experiences, accomplishments, and activities. As the user enters information about the activities and achievements in their jobs, voluntary activities, awards, publications, and similar accomplishments, the MyT-Me system assigns weights to each entry based on an internal weighting algorithm. The sums of the assigned weights become the T-Stem and T-Top metrics.

Metric for the T-Stem: The T-Stem score reflects the depth of a person's knowledge and experience in various areas, such as memberships in professional organizations, publications, attendance and roles in professional meetings, and awards or recognitions that have been received. Educational achievements, certifications, licenses, and teaching and training experiences also contribute.

Metric for the T-Top: The T-Top score reflects a person's total experience in various dimensions related to leadership and communication as well as their accumulated experience in project management, organizational design, communication skills, critical thinking, teamwork, networking, empathy, perspective, and global understanding. Each of these aspects is assessed based on professional and voluntary roles, as well as types of personal experiences.

The MyT-Me Score: The MyT-Me total score combines the T-Top and T-Stem scores and becomes a quantifiable representation of your background relative to the factors related to the T-Shape paradigm. The system provides a graphical representation of your score as you enter information. Other aspects, such as your industry sector diversity, non-paid roles, and online persona metrics, are also included in the score report. This scoring algorithm is designed to help individuals assess and represent their professional depth and breadth based on weights standardized across professions, jobs, and business sectors.

MyT-Me Resume-Based Profile: A MyT-Me profile is initiated and managed in the web app named MyT-Me. Authorized users (all members of

ISSIP www.issip.org, for example) can register by using their LinkedIn accounts. LinkedIn is preferred so the user can use MyT-Me to upload their current complete public LinkedIn profile automatically. Other registration approaches are provided for users without LinkedIn profiles.

After the resume or LinkedIn profile has been uploaded, users will see tabs at the top of the Profile Dashboard page to select and view various components. There are separate tabbed sections for their **Positions** (including paid and volunteer positions), their **Educational** background and degrees earned, their **"Deeds"**, reflecting achievements, awards, publications, and similar accomplishments, and the **Skills** and **Tools** they have competency in using.

As they review the contents in each of these tabs, users can edit information that has been uploaded from their LinkedIn profile or resume and add any information or new records that were not included in the uploaded profile or resume.

MyT-Me Data Fields: Each item adds to your T score, but they are optional.

A. **Positions:** Detail about each paid or voluntary role, projects lasting longer than 3 months, committees. The position's location, primary function, role, team size, team multi-disciplinary makeup, multi-cultural makeup. Also, 3 aspects of the scope of responsibility have dropdowns
B. **Education**: A record for each academic degree
C. **Deeds**: Honors, awards, certificates, licenses, writing, travel, languages
D. **Skills**: Level of expertise in doing things and roles taken on
E. **Tools**: Level of expertise in using things, hardware, software, etc

Figure 2: MyT-Me user's positions (sample screenshot).

Selecting a data field tab presents a list of all of the records currently entered for that tab. Clicking on any record displays data associated with that entry, and the ability to edit, update, or correct it. New records can be created with an "Add" button at the upper right corner of each tab screen. For

example, Figure 2, below, shows the top of the Positions tab for a co-author of this paper. Note the five data field tabs across the top, when clicked open a group of records already entered.

MyT-Me Dashboard: The Dashboard tab is at the far left of the top line of tabs in Figure 2. Clicking on this tab opens a set of diagrams that display the composition and size of your T-Top and T-Stem scores. An example of these charts, two for each score component, is shown in Figure 2. One display is the pie chart representation of the components. The other is a spider diagram of the component scores, shown relative to each other. Together, these two figures indicate strengths and primary experience, as well as potential directions for further development.
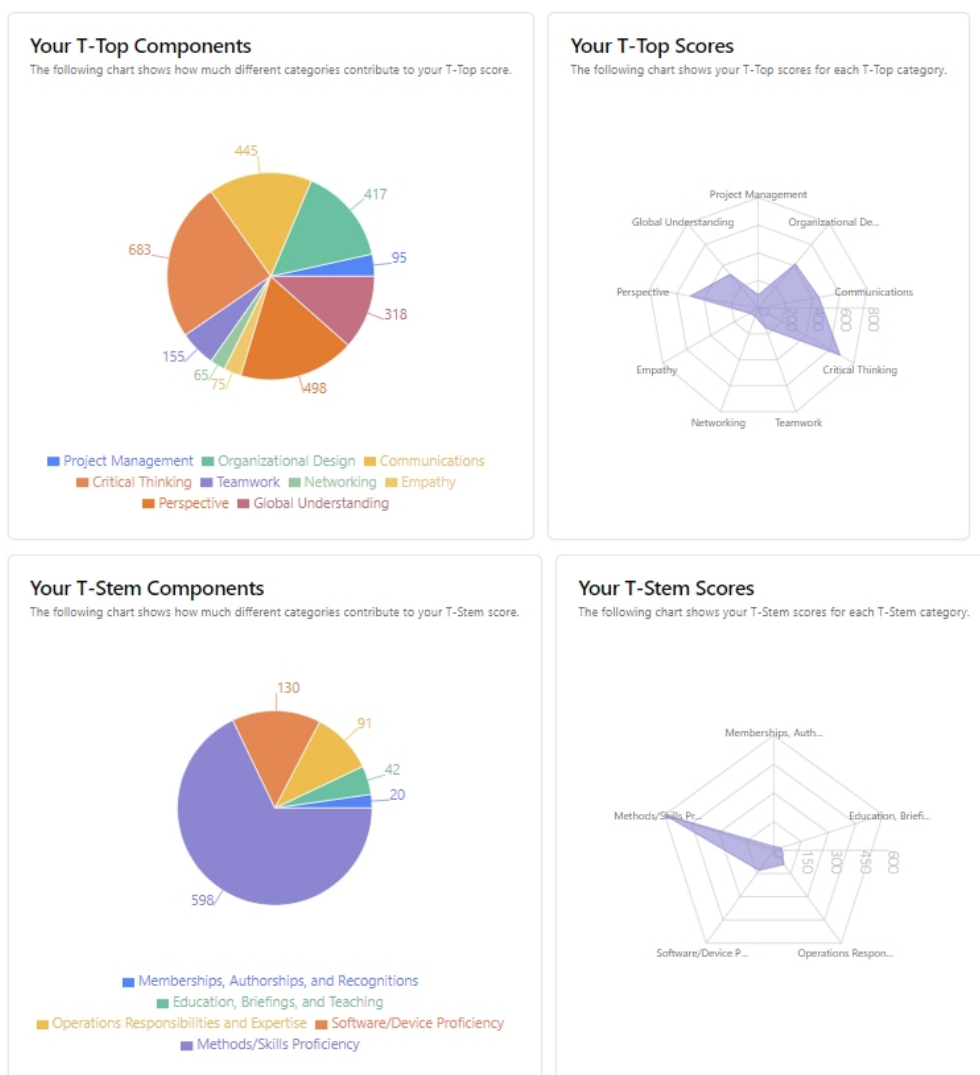

Figure 3: MyT-Me user's T components, T-Top, and T-Stem – pie chart and spider diagrams (sample screenshot).

A unique graphical display of each person's position relative to a population of members is also included in the user's Dashboard (Figure 4). The design enables the user to view T-Score, T-Top, and T-Stem scores, as well as all components of each score. using drop-down selectors. The horizontal scale locates the user relative to their Years Since their last Degree, Years Since beginning their First Degree, or Years Since beginning their First Position. The three bands indicate (from the bottom) the 25th to 50th, 50th to 75th, and 75th to 95th percentiles.
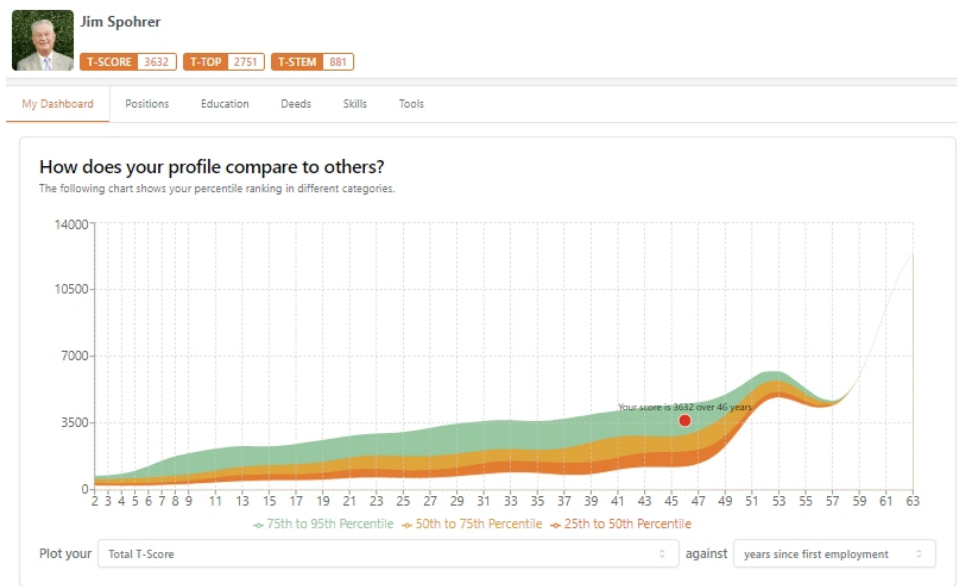

Figure 4: MyT-Me users dashboard – compared to others (sample screenshot).

FUTURE: POSSIBLE DEVELOPMENTS FOR MYT-ME

Gap analysis with AI: By framing goals within the context of the MyT-Me platform, the system can be used to forecast the impact of planned activities before they take place. The activities can be scheduled or hypothetical. In addition, an AI tool is contemplated to recommend possible activities for consideration to fulfill near and long-term MyT-Me framed goals.

Team and Department T-Scores with AI: Teams have Team T-Shapes, and MyT-Me can be extended to present a Team Dashboard based on the MyT-Me scores of its members. The impact of adding and removing specific team members can be clearly displayed in the Team T Dashboard. AI-based recommendations as to which individuals could enhance Team T-Shape targets could be offered.

Student and other user group versions and guidebooks: The terminology and drop-down list options currently in MyT-Me can be modified to align more closely with students and other specialized populations. User guides can be developed to provide assistance with MyT-Me profile management and use.

Specialized Weighting Systems: MyT-Me scores are based on an internal weighting system that is constant across all users. Organizations may wish to modify the weighting system based on the company's priorities and goals.

CONCLUDING REMARKS

This conceptual paper has introduced the MyT-Me platform as a tool for individuals, teams, and organizations to explore their T-scores and discover ways to increase both their T-Top and T-Stem scores. Using AI to assist in generating personalized developmental plans based on T-scores is future research.

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