

## STEM 2.0 – a Framework for Hospitality Education

*...the only ones among you who will be really happy are those who have sought and found how to serve. (Albert Schweitzer)*

Science, Technology, Engineering, and Mathematics are collectively known as **STEM**. This acronym is typically used to address an education policy or curriculum that emphasizes these academic disciplines. For a number of years, STEM has been all the rage. Why the push? In a word - jobs. Throughout the 2020s, STEM employment is expected to grow 11%; for non-STEM industries, it is less than 8% (<https://www.rclco.com/publication/2021-stem-job-growth-index/0>).

To be fair, STEM is more than just jobs. There are those who maintain that STEM is vital to compete in a global economy - in particular, STEM is necessary to succeed in the “new” information-based and highly technological society. Given its focus, STEM - perforce - increases science literacy. Some claim that STEM engages students and equips them with critical thinking, problem solving, creative and collaborative skills, and prepares the next generation of innovators. Further, they suggest STEM establishes connections between school, the workplace, communities and the global economy (*Why Stem? What is STEM?*, Science Foundation Arizona, <http://www.sfaz.org/stem-stem/#:~:text=STEM%20teaching%20and%20learning%20goes,community%20and%20the%20global%20economy>.)

I think we can agree, STEM is important. So, what is STEM 2.0?

Long before STEM caught the attention of policy makers, educators, and employers, the Hospitality industry and Hospitality educators were practicing and preaching STEM 2.0 in the workplace, and in the classroom. In the workplace, STEM 2.0 drives the Hospitality industry’s train. Managers, supervisors, employees – nay, all team members – live and breathe STEM every day. Every time a customer walks into a restaurant or hotel (or other service-focused setting), there is the expectation that the service will be provided by a team of professionals who are attentive, cordial, observant, etc. In the (hospitality) classroom STEM 2.0 provides focus and, in some sense, serves as a foundation for the core. Further, STEM 2.0 provides context for the coursework that leads to professional success.

So, what is STEM 2.0?

In STEM 2.0 (Hospitality STEM), **S** is for **Service** - the hallmark of hospitality. As detailed in any number of texts and handbooks on the subject, service has multiple factors. In its basic form, there is the technical aspect: serve from the right with the right; clear from the left with the left; etc. But service is way more than that. In one attempt to capture the essence of service,

the SERVQUAL model identifies five dimensions of service quality: reliability, responsiveness, assurance, empathy, and tangibles. In another approach, Danny Meyer refers to the non-technical skills as “emotional hospitality.” For him 51% of job performance is based on how duties are carried out and the ability to relate to others (including customers and other employees).

Customer service is an organization's ability to supply their customers' wants and needs, and excellent customer service (is) the ability of an organization to constantly and consistently exceed customer expectations. Table 1 shows why companies lose customers; as can be seen an attitude of indifference runs against the grain of service.

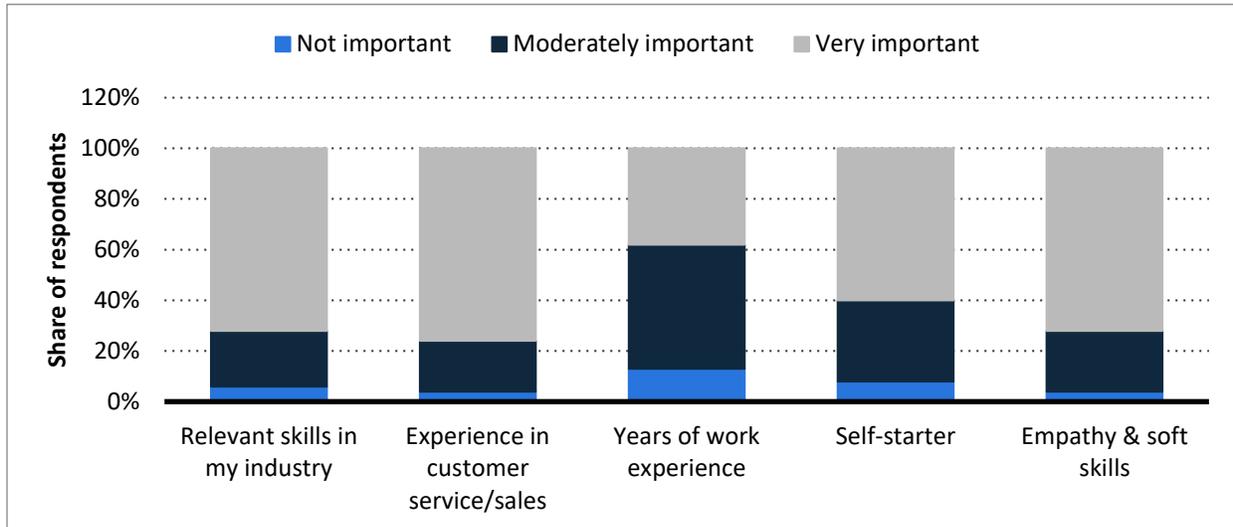
Table 1. Why Companies Lose Customers.	
Reason	%
Die	1
Move Away	3
Influenced by Friends	5
Lured away by the Competition	9
Dissatisfied	14
Turned away by an attitude of indifference on the part of a company employee	68
From: Sanders, B. <i>Fabled Service</i> . Jossey Bass (p. 44).	

In Hospitality STEM, the **T** stands for **Teamwork**. Every aspect of the hospitality experience relies on teamwork. The need for communication, coordination, and cooperation is clear. In a restaurant the FOH and BOH must be in sync to provide the customer an optimal dining experience. Likewise in a hotel, housekeeping must be in sync with the other functional departments. Not only is teamwork important from the guest’s perspective, employees have indicated that teamwork in the workplace (between departments) is important/very important (SHRM, *Employee Job Satisfaction and Engagement*, April 2016). The hospitality environment depends on teamwork; the workplace defines teamwork.

The ability to detect when things are going well or, conversely, when things are amiss are among the abilities associated with **Empathy** – the **E** in STEM. Recognizing emotions and active listening will give insight in order to provide a memorable event. “Walking a mile” in someone else’s shoes mentally assists in crafting a meaningful customer experience – and illustrates the spirit of Empathy. It is more than just prompt and technically correct service. Empathy is identifying needs, understanding what other people feel, seeing things from their point of view, and imagining yourself in their situation. How your actions make the customer feel and the

desire to please are key measures of empathy. Table 2 shows how important empathy can be in customer interactions.

Table 2. Agent qualities for customer service and sales call center employee.



Liveops; CTI Forum, Worldwide; 2018; 750 respondents; customer service leaders, (Statista, 2022).

Bad service happens all by itself, good service has to be **Managed** (Jim Sullivan, <https://www.youtube.com/watch?v=ytD9KcwEYY0>). In hospitality STEM, **M** is for **Management**. Ensuring safety and or compliance with rules, maintaining regulatory or compliance documentation, keeping operational records and managing inventories of products or organizational resources, and resolving customer complaints or problems are tasks and activities performed by managers.

But management is much, much more. This becomes clear as we examine the KSAOs as detailed in O\*Net. For example, Restaurant Managers need to be familiar with customer and personal service. This includes customer needs assessment, meeting quality standards for service, and evaluating customer satisfaction. Further, management in hospitality means having a service orientation, and actively looking for ways to help people. Likewise, Lodging Managers must know the principles and processes for providing customer and personal services. Moreover, hotel managers confer and cooperate with other managers to ensure coordination of hotel activities. **They must field** inquiries pertaining to hotel policies and services, and resolve guest complaints. In addition, they must be sensitive to their employees and customers, and have the ability to tell when something is wrong (or going wrong).

Foodservice managers and lodging managers must be skilled active listeners; they must look for ways to help people, they must be aware of others' reactions and try to understand why they

react as they do, and they need to be able to convey information effectively. But more than that - Hospitality Management includes coaching, planning, forecasting, motivating, organizing, staffing, etc. Management brings it all together.

So, what is STEM 2.0?

Hospitality STEM (STEM 2.0) brings a hospitality focus to the workforce and to the classroom. In the same way that STEM emphasizes Science, Technology, Engineering, and Mathematics, STEM 2.0 focuses on Service, Teamwork, Empathy, and Management.

Hospitality education is unique in that it offers a number of experiential opportunities including lab courses, internships, and hands-on class activities/projects. Experiential courses put principles to practice. The instructional labs are the playground for STEM 2.0 and provide HTM students a solid grounding in systems and processes. As a result, HTM graduates often have a leg up when it comes to operating hospitality businesses. In the same way that important content - like writing - can be woven throughout the curriculum, STEM 2.0 helps frame the subject as appropriate.

The need for Hospitality STEM has never been greater. Job growth for Lodging Managers is expected to be 9% between 2020-2030; for Food Service Managers, 15%; and for Meeting, Convention and Event Planners, 18% (BLS, Occupational Outlook Handbook). Hospitality STEM is vital to compete in a global economy i.e., to succeed in the “new” information-based and highly technological society. Further, it engages students and equips them with critical thinking, problem solving, creative and collaborative skills. STEM 2.0 creates critical thinkers, increases service literacy, enables the next generation of entrepreneurs and - ultimately - establishes connections between school, the workplace, the community and the economy.