

## COMMENTARY

# Factotum vel Limatulus: Determining a Functional Balance of Required Training Between Generalist or Specialist Positions

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### Abstract

Standardized prerequisite training is required to obtain a job while ongoing general and field-specific training is required to retain that job. The problem is the amount of required training has escalated to the point that an employee can no longer do their basic job.

**Keywords:** Training; KSA; Requirements; Mandatory; Generalist; Specialist

An organization's Personnel or Human Resource Management (HRM) office influences every element of employment which can be summarized in four stages: Identify - what is required for a position; Hire - how well does an applicant meet the job requirements; Maintain - what is needed to retainment employment; Separate - how to transition from the organization. Each stage includes respective requisite knowledge, skills, and abilities (KSAs) [1] which specify the requirements needed. These four stages greatly oversimplify HRM as entire books have been written encapsulating KSAs and the entire HR profession. This commentary, authored from a United States positionality but equitably applicable anywhere, will focus on the training involved during two of these stages.

In the "Identify" stage, standardized prerequisite training is required to obtain a job while the "Maintain" stage prescribes regular ongoing training to retain that job, which can include topics broadly designed for all members of an organization or specifically tailored to one job field. The general problem seems that over time, there has been an overall escalating amount of required training almost to the point of being nearly unattainable.

Establishing a broad or specific criteria or framework for a functional balance of training is highly dependent on many factors, foremost being the profession and the type of training needed to maintain qualifications. Certain fields have inherently more required training due to technical proficiency needed (e.g., firefighter versus administrative assistant) and military services may have general administrative requirements atop extensive technical training for every respective specialty (e.g., tank driver, aircraft pilot, submarine sonar technician, storekeeper, personnel specialist, etc.). The office overseeing training should be attuned to both general and technical requirements to ensure prioritization of training is based on the organization and job specialty.

In certain professions - lawyers, teachers, accountants, nurses, engineers, psychologists, pharmacists, EMTs - license maintenance requires continuing education (CE) which is generally accrued external from the workplace. Non-CE training (i.e., mandatory, statutory, voluntary, professional development, etc.) can be required by the licensing profession, a governmental entity, or the organization. The varied levels of CE and what the organization requires for other training creates, and makes it challenging to accurately assess, potential workload tensions in a profession due to the additional volume.

Delving into one profession, the emergency management field has multiple jobs ranging from professionals creating international disaster policy for the United Nations to individual local volunteer firefighting responders. To initially become a volunteer firefighter as in the "Identify" stage, historically one would simply contact the local fire service or brigade then become trained on how to

handle a water hose to fight a fire. Watching and listening to more experienced firefighters provided knowledge and responding to more calls honed their skills, both which increased their ability to advance within the department. This was a natural development of KSAs, however, that is not how it works anymore.

One of the first comprehensive firefighter job task performance assessments was conducted in 1968 [2]. This California US-based study noted the number of firefighters had doubled since 1946 which improved working conditions by reducing the weekly work schedule from 84 to 56-hours. However, new techniques were needed to address taller high-rise complexes with unique building materials, an expanding general population meant new fire stations had to be manned, and additional workload was incurred to provide ambulance, first aid, and fire prevention services. A 1976 national study [3] recommended 116 standard tasks, many which required new initial (“Identify” stage) and recurring (“Maintain” stage) training.

In 1974, the National Fire Protection Association (NFPA) established a firefighter professional qualifications standard [4] which listed 16 minimum performance standards for a basic firefighter, airport firefighter, engine driver, emergency medical technician (EMT), alarm operator, and master mechanic. The National Volunteer Fire Council (NVFC), established in 1976 as a voice for the 82% volunteer or mostly volunteer fire departments in the US, worked with the NFPA to ensure these standards were achievable for both full-time and volunteer firefighters [5,6]. The most recent consolidated version of the qualification standards was updated in 2024 [7]. Current entry-level US firefighter standards, again for the “Identify” stage, include a high-school diploma or a general educational development (GED) equivalent, basic EMT training, and completion of a fire academy [8].

For the “Maintain” stage, in addition to regular physical fitness requirements, there can be progressive initial and recurring training as nozzle man, pump operator, driver, protective breathing apparatus, personal protective equipment, cardiopulmonary resuscitation (CPR), EMT, Paramedic, vehicle extraction, collapsed building extrication, confined entry, trench rescue, high-angle rescue, water rescue, swiftwater rescue, ice rescue, self-contained underwater breathing apparatus (SCUBA) diver, hypothermia treatment, urban search and rescue, epidemic and pandemic response, chemical-biological-radiological-nuclear defense, situation reporting, and incident data entry. Depending on locale, aircraft and helicopter response, wilderness medicine, wildland fire, security clearance, Incident Command System, Emergency Operations Center, public affairs, radio communications, protocol, incident action planning, after-action report writing, supply ordering, financial reporting, and computer upgrades or new systems. On top of this will be annual general administrative training including computer cyber security awareness, equal rights, sexual harassment prevention, and any other ‘topic du jour’ that may arise. Initial training for any of these subjects could vary from 4 hours to 16 weeks while the interval for recurrent training may be periodically during the year, annually, or on multi-year schedules.

All these training requirements makes one wonder: Does the firefighter even have time to fight fires anymore? While training is required to maintain skill proficiency, the real question for agencies might be, “How much extra training is too much training?” with a corollary “What duty or training is being given up in order to include a new one?” This latter should be the query when higher-level administration mandates specify a set number of hours of training versus functional time and a prioritization of training. A topic-specific instructor may rightfully believe it takes 8-hours to relay the necessary information for students to fully comprehend the requirements of a specialty class. From a former instructor’s perspective, if the requirements of a 4-hour CPR class could be taught, practiced, and learned in 10-minutes, do students really have to sit through 3-plus more hours of lecture if they had the ability to comprehend, gained the knowledge, and repeatedly demonstrated the skills?

Originators of a desired topic should examine why the training is required and what it should encompass, which may mean removal of extensive background information. Instructional design specialists outline how a course is presented resulting in the amount of time needed in order to meet the requirements; pre-directed mandates of a set number of hours should not dictate the length of training. Certification bodies, topic originators, agencies, and instructional designers should then work together to streamline all training to ensure it meets any higher-level requirements but functionally works for their organization. This includes making it impactful to the recipients.

Among the reasons why administrative or technical training is ineffective is when the employees are not interested in the topic or when they do not regularly use the training afterwards. Cybersecurity training is one such example. While employees at financial institutions, telecommunications, utility services, and government agencies may take this seriously, an employee in a small business, dental office, or grocery store may not feel excited about it. But when the training demonstrates how their role plays a part in not allowing a system breach, the training becomes personally relevant on a regular basis. This was evident from the 2014-15 US Office of Personnel Management data breach which involved multiple layers of lax cybersecurity, down to the individual employee, and prompted US government-wide annual mandatory cybersecurity training; unfortunately, data sharing and stolen passwords were still being used 3-years later.

Returning to the example, most firefighters are generalists - they know a little bit about a lot of firefighting situations; some firefighters are specialists - they know a lot about very specific firefighting situations. But most generalists will listen to a specialist to ensure the safety of everyone. Firefighters - bomberos, shōbō riin, Feuerwehr, or any other languages - are indispensable disaster emergency responders and too many firefighters have died when they entered contaminated zones without the right gear, went into a trench only to have it collapse due to improper shoring, or attempted a water rescue without understanding the power of water. While specialization is highly needed to ensure safety of the rescuer and the individual needing rescue, the required training needs to be balanced with the needs, and functions, of the service.

Technology has been employed in making some training more time-efficient. On-line courses have optimized the time needed so the training can be completed in less time than an in-person course. An on-line course with a “test-out” function allows a person with the knowledge to complete the course in 10 minutes, however, if a person does not “test-out” or if the course does not allow this function, completion of the entire 4-hour block is required. Thus, technology has yet to create greater consistent efficiency.

In virtually every employment field, some training is needed. No single formula can answer the question of how much time an organization should afford towards training to ensure the work can still be done. If the training is mandated, the organization needs to build that into their overall business model - with top-to-bottom compliance - to ensure every firefighter still has time to fight the fire.

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