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### Why Would a Firefighter Need A College Education to "Pull Hose"?

#### "Putting the Wet Stuff on the Red Stuff" No Longer Comes Close to Describing a Firefighter's Job

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Even though there are national standards for fire service training, there is little continuity for educational requirements for firefighters. Some states deliver training through a fire academy, and firefighters may choose to pursue college courses locally or online. Education and training are incorporated into degree programs in the community college systems of other states, while some states offer both options.

One constant over the years of change in the fire service is the reluctance by some within it to embrace higher education. The question is still posed, "Why does a firefighter need a college education to pull hose?" While this sentiment may be acceptable from the public, it is hard to comprehend from those within the fire service. Firefighters today know that "putting the wet stuff on the red stuff" no longer comes close to describing their responsibilities. Firefighter/Paramedic Gray Cable of Parris Island, SC, Fire and Rescue, believes that, "My career has become a thinking man's job. The fire service has evolved from the days of just putting out the fire to an industry with the ability to mitigate emergencies involving hazardous materials, confined-space rescue and emergency medical services." As a result, maybe the question should be, does anyone still just "pull hose"?

Education beyond high school and career training is becoming necessary, not only for the fire service, but for other technical-based occupations as well. Workers in areas such as heating and air conditioning, welding and construction have a better chance of advancement and higher earnings with an associate's degree. Employers see a college education as an asset in their employees. Battalion Chief-Fire/Rescue Training Eric Carlson with Lake Travis, TX, Fire and Rescue, said, "Several departments either encourage or require college to promote, and for a good reason. The more comfortable a person is with their 'basic' skills, they are usually more productive in the majority of the tasks beyond 'pulling hose.' "

No one believes that the chiefs or other officers who have risen through the ranks to their current positions are inadequate because they do not have degrees. Quite the contrary — there are chiefs and officers who achieved their positions with only a high school diploma and years of experience who are exemplary leaders. Undoubtedly, they have natural leadership skills and a drive to self educate. Unfortunately, increased responsibilities mean that fire departments cannot afford to let their officers learn through trial and error.

Another consideration is the skill level of today's high school graduate. A 2005 article by Michelle Diamant in *The Chronicle of Higher Education* states, "As many as four in 10 high-school graduates are not ready for the demands that they face after graduation, whether they are going to college or to work." Fire departments do not have the means or manpower to teach new recruits basic communication, math and leadership skills. Colleges, particularly community colleges, can help firefighters improve the knowledge and skills necessary for a well-rounded firefighter and leader. Todd Milam, a former training officer and current volunteer firefighter who is also a full-time fire science instructor at Greenville Technical College in South Carolina contends that, "Many young firefighters are promoted to

positions before they are ready. These programs provide those firefighters with the knowledge they need to serve and protect their communities."

Even if you do not have aspirations to be the next chief of your department, each firefighter has an opportunity and an obligation to be a leader within the department and the community. As Chief Wes Williams from Simpsonville, SC, Fire Department, says, "To be the next leader of your department you must have the education to complement your experience. Experience itself will not get you to where you want to go." Firefighters who are college graduates or current college students articulate well how their courses have helped them on the job. Fire science and fire administration courses, as well as general education courses that are required for all majors, complement and enhance the students' prior training skills.

The National Fire Academy has made a clear commitment to higher education in the fire service. It created the Fire and Emergency Services Higher Education (FESHE) program to help support this commitment. College programs that follow this model give firefighters an advanced education in fire-related areas and degrees in fire science and fire administration. Firefighters receive the general education courses that build well-rounded people and the specific courses to aid them in their chosen profession. The courses in a fire-related degree program may sound similar to training courses, so the question arises, why take college classes for areas where you have already received training? Training classes tend to last anywhere from a single day to a couple of weeks, whereas college courses based on a semester system require a minimum of 45 contact hours. Instructors are able to go more in depth on subject matter and a higher level of retention is a benefit of spending more time on a subject.

Training teaches through repetition. Education teaches understanding and critical-thinking skills. Battalion Chief-Fire/Rescue Training Eric Carlson of Lake Travis, TX, Fire and Rescue said this about his fire science courses: "They gave me a more in-depth understanding of several essential components firefighters need to know, such as tactics, chemistry, building construction and fire protection systems."

"Building Construction," "Fire Protection Systems," "Chemistry of Fire" and "Legal Consideration for the Fire Service" are all examples of classes that are required for these degrees. In addition, these classes often take student firefighters out of their comfort zone. City of Cedar Park, TX, Assistant Fire Chief James Mallinger believes that, "Education also allows others to express ideas you may not hear within a normal training class."

Firefighters who are attending or have attended college give valid examples of college courses that have helped them on the job. Lieutenant Aaron Collette of the Burlington, VT, Fire Department, said it well when he described his "Concepts of Fire Science" class. "This course went into detail about fire behavior, fire propagation and development," he said. "Armed with experience and education, decisions could be made whether or not to stretch a line versus trying to affect a rescue of trapped occupants based upon the fire conditions on arrival, the fuel arrangement and the anticipated fire growth."

Experience and education go hand-in-hand in the fire service of the future. There is not a question of one over the other, but the need to recognize both as essential. Another benefit to having college credit for these courses is that you earn a degree that goes with you wherever you go. It is not a folder filled with certificates that means something to your department and/or your state, but a degree that shows you took the initiative to go beyond the minimum requirements. Even if you leave the fire service, a college degree will mean something to employers in other areas, just as degrees outside of fire science and fire administration can be beneficial to firefighters.

One argument in the discussion over college degrees is whether it matters if the degree is fire-related. How is a bachelor's degree in English or history relevant to someone in the fire service? Alone, no one will argue that it is.

However, if you put someone with a degree through an excellent training program, then you have a well-rounded firefighter.

Chief Don Alleckson of the Duncan Chapel Fire District in Greenville, SC, was educated and originally employed in Oregon, where associate degrees are the standard for members of the fire service. He said that his general education courses "have laid the foundation for understanding complex situations and aid in the execution of common sense as well as provided the fundamentals to produce sound policy and guidelines."

There are diverse reasons why people with degrees outside of the fire service are entering the fire service and even why a current firefighter would pursue a non-fire-related major. Majors outside of the fire service should not be disregarded as non-beneficial, just as they should not be used solely to justify promotion. Clearly, firefighters feel they have benefited from the general education courses that are required by all degrees. Without hesitation, firefighters who have completed college courses agree they have improved their critical-thinking skills. As Chief Steve Graham of Boiling Springs, SC, Fire Department, stated, "Higher education drives the critical-thinking skills that are vital to all emergency service managers."

Critical-thinking skills are of the essence on the fireground and in the firehouse. When faced with day-to-day activities or repetitive situations, emergency service personnel's training kicks in and there is a clear course of action. It is when an event that is uncommon or a "one-of-a-kind" incident is faced that the ability to make decisions and problem solve create defining moments.

Lieutenant Daniel Byrne of the City of Beaufort, SC, Fire Department, said, "Our firefighters need to out-think the problem, out-think the fire and out-think the environment and the structure."

Obviously, general education courses alone are not going to give a firefighter all of these capabilities, but combined with training, a foundation is laid. Critical-thinking skills cannot be easily measured or agreed upon, but one concrete skill set that is improved by attending college is math. Math skills are critical for everyone in the fire service, from the front-line firefighter to the chief of the department.

Firefighter/Paramedic Missy Thorpe of Parris Island, SC, Fire and Rescue said, "As a young firefighter or apparatus engineer, having a good background in algebra made my understanding of fire service hydraulics easier."

When you are "pulling that hose," someone must be able to make the necessary hydraulic calculations. Before firefighters ever arrive at the scene, someone has completed hydrant-flow calculations. If the firefighter is a paramedic as well, then math is needed for administering correct medications to patients. The need for math only increases as the firefighter advances. Chief Karl Ristow of the St. John's Island, SC, Fire Department, explained that math skills are needed "for budgetary work, data analysis for decision-making and even teaching other firefighters." Another skill that is reinforced through education is communication. This includes written communication, oral communication and the use of computers. Firefighters today must do everything from writing daily run reports to grant writing that could mean millions of dollars for their departments.

Lieutenant Aaron Collette of the Burlington, VT, Fire Department, said, "One of the classes that helped me the most was my advanced writing course. This course helped me with department memorandums, correspondence and report writing."

Firefighters have to not only communicate with each other, but with the public as well. By learning the use of PowerPoint in computer classes, firefighters are able to create presentations for the public on fire safety and training officers can better engage their firefighters during classroom training.

Better communication skills can also help in less obvious ways. Paul Menches, department chair for the Fire Protection Technology program at Austin Community College in Texas, said his communication courses "improved my ability to motivate change within executive and blue-collar levels with persuasive speaking."

Another area that many do not consider when they dream of becoming a firefighter and charging a line on an engulfed building is the state of mind of the people they will have to deal with on a daily basis. Chief Jay Mitchell of Gantt, SC, Fire Department, explained the job of a firefighter to a group of Cub Scouts by saying, "When we are dealing with people, they are having a bad day."

Being able to handle situations with people who are stressed, injured and possibly irrational takes a specific skill set. Not everyone has these skills naturally. Not everyone can learn them, but psychology and sociology courses expose student firefighters to aspects that help them begin to understand how to deal with these situations. These courses also help the firefighter in the firehouse. A lot of a firefighter's time is spent in the firehouse with the members of the shift. Knowing how to effectively communicate with them and understand why they do what they do can mean the difference between a dysfunctional team and a great team.

"Understanding group dynamic during a sociology class has helped me understand the differences with my peers and has helped me to become a better leader by understanding how people are more likely to act in a group than individually," Thorpe said.

Being able to understand different points of view outside of the firehouse is especially important in today's world where the population a department serves is becoming ever more diverse. The fire service is a tight-knit group — a family. This is one of the dynamics that attracts many people to the fire service. For the most part, this is positive, but it can have a downside. When you spend your days with people who think like you and do the same things you do, tunnel vision can set in. Simply being enrolled in any college course will affect how you see the world, as Beaufort Lieutenant Reece Bertholf discovered.

"Being in the learning environment again, i.e., the classroom, with a very diverse group of people allowed me to remember to look at things apart from how they are perceived in the firehouse at the coffee table," Bertholf said. Higher education combined with training is the future of the fire service. Beaufort Firefighter III and Investigator Ray Murphy said, "I believe in the next five to 10 years you will need a degree just to become a firefighter." There is no going back to the time when a high school diploma and years of experience were all that were needed to advance. As a volunteer firefighter, "pulling hose" may be all that is required, but the career firefighter should look beyond the hose he or she is pulling. In today's complex fire service, on-the-job training is not acceptable. The community expects more from first responders. The community expects first responders to protect them, educate them and manage fire department budgets in a responsible manner. Higher education gives the fire service a way to meet these expectations, and provide an education and path beyond that of basic firefighter.

As a firefighter, think about whether you want to spend your career looking at where you've been or leading where you're going. Those who say, "How can I get where I want to go?" are proactive, are those who look to the future and those who will progress. In five, 10 or 15 years, will you still be sitting in the day room arguing that a college education shouldn't be required for you to be promoted, while the firefighter hired three years after you earned an associate degree and just became the new lieutenant? If you are already an officer on your way to retirement who has no higher education, will you mentor your firefighters to prepare for tomorrow or tell them not to bother with college because you didn't need it?

Does a college degree guarantee someone will be an excellent firefighter or officer? Of course not, but that's no reason to believe that higher education is not beneficial. Every profession has individuals who show little "common sense" or don't measure up to what one expects of a college graduate. The fire service will be no exception. There will always be the example of the great officer with a high school diploma and experience. There will also always be the ineffective officer who has a degree. However, the compelling evidence from firefighters themselves is that a college degree benefits the one "pulling hose" today in more ways than one and ultimately leads to a more productive tomorrow.

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