ENHANCING FIREFIGHTER TRAINING

THROUGH BLENDED LEARNING PROGRAMMES

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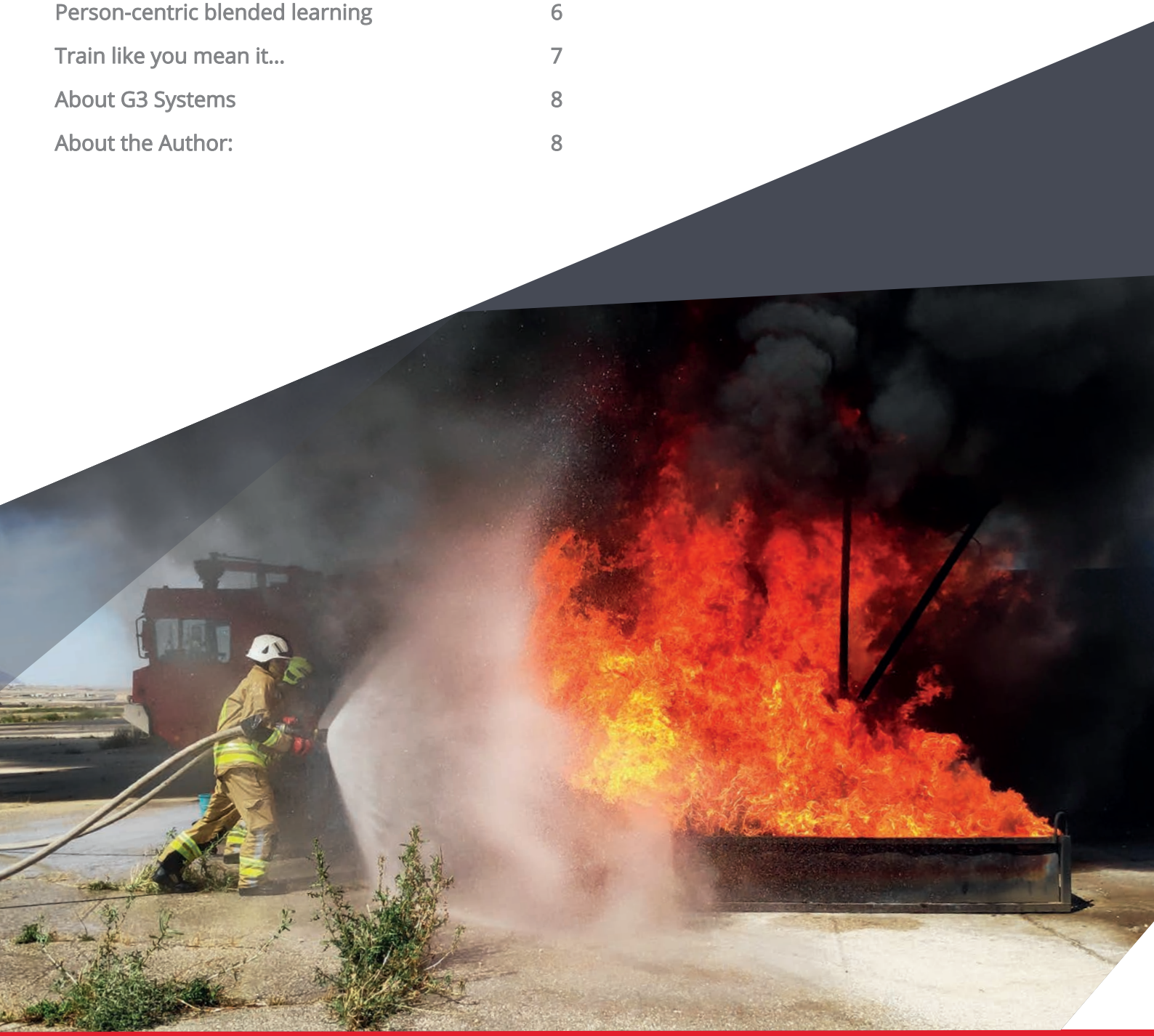


Introduction

Firefighter training is evolving as new technologies, equipment, techniques, and restrictions impact the ways in which firefighters initially learn and then maintain their skills. Merely learning to "put the wet stuff on the hot stuff" is no longer sufficient!

Hands-on training to learn live firefighting techniques is the cornerstone of firefighter development within fire and rescue services around the world. However, it's also an area of training that's never ever complete. There will always be innovation, improvements to old techniques and the need for continuous professional development to ensure that firefighters always remain safe and skilled.

The days of sitting in a classroom being taught the basics of firemanship, fire behaviour, incident command and the rules and regulations of building fire safety, before heading to the fire training ground to practice drills, have been replaced by 'blended learning', a more holistic, and 'person-centric' approach to knowledge and skills acquisition and development.

Practical skills acquisition and refresher training of firefighters is an expensive, but nonetheless essential part of Fire and Rescue Service operations and employers have a duty of care to ensure that their staff remain safe, competent, compliant, and confident in their skills and current in terms of their certification.

While blended learning is not intended to ever replace the requirement for exposure of firefighters to practical, realistic, and safe fireground training, an investment in blended learning can help a Fire Service train its people faster, train more regularly and deliver its training requirement more cost-effectively, especially for fire services with high numbers of retained or volunteer firefighters and fire officers.

Blended Learning encompasses technology driven e-learning, traditional classroom based theoretical learning, practical fireground skills training and development and leads ultimately to multi-agency exercises to develop, test, and refine collaborative working with colleagues across the entire Emergency Service and Civil Contingency sector.

Knowledge transfer and skills acquisition

Ensuring the effective acquisition and transfer of firefighting skills, knowledge and experience is the primary goal of Fire Training academies and instructors within fire services around the world. Competence and currency are essential to ensure that Fire and Rescue Services and their staff can deliver the services that are required in the safest and most effective manner.

Skill's 'fade', where competence declines over time through lack of practice, is a problem that impacts many firefighters.

This is especially true as the number of actual fire incidents attended has largely decreased over the years, in part due to the continuing investment in community fire safety and prevention work designed to help the public remain safe in their homes.

To combat the issue of declining skills, this essential firefighting and rescue training must be regular, repetitive, engaging and obviously, as realistic and safe as possible.

The delivery of an initial firefighter training curriculum must still cover all the basics of safe firefighting, delivered following an effective risk assessment process and risk management / mitigation methodology, but thereafter, how the necessary information, skills and techniques are communicated to the firefighter is changing rapidly.

Increasing use of computer, web and mobile technologies is transforming the ways in which we educate our firefighters. Today, a firefighter can access training courses and programmes on-line via their pc, tablet, or mobile phone. They can download information directly from the web, work through their on-line training courses and then complete a test of their knowledge from almost anywhere, at any time.

Utilising slide shows, course materials, images, embedded interactive video and animation, even 'show and tell' classes such as pump operations and ladder drills can initially be provided on-line, providing learners with an opportunity to see and understand the course content and to familiarise themselves with equipment or techniques before they even reach the training ground and get 'hands-on'.

This approach is particularly useful in the preparatory phase of training, where on-line assessments can be built into the training packages to assess and monitor the efficacy of the learning and the degree of understanding demonstrated by individual students.

Such an approach is very helpful to Course Instructors, as they can immediately identify any knowledge shortfalls across and within the cohort and highlight areas of weakness and strength in understanding before any practical training begins. Individuals can receive further coaching before the practical course, ensuring that the entire class has reached a minimum standard of knowledge. Course content can also be modified to focus on the weaker areas of understanding, enhancing the training, maintaining student engagement, and saving time (and cost) in the classroom.

Overall, while each individual firefighters' hours at the Training Academy itself may reduce, the number of hours students engage in blended learning may in fact increase. Training Academy fire ground capacity and utilisation can also be improved, making the training operation and organisation more cost effective.

Simulation – Saving time and the environment

Classroom course content and delivery is also changing as new technologies are utilised to enhance the learning experience.

Recent developments both in Virtual Reality (VR) and Simulators bring additional learning opportunities for firefighters, while allowing training to be conducted within a safe, non-threatening and controlled 'virtual' environment.

Such software programs immerse the student into a virtual world created to simulate the incidents and situations that a firefighter may find themselves facing during their working day. These simulations can be based on real-life experiences or imagined scenarios and can be escalated as appropriate to the individual's role and responsibilities. Simulations can also expose the learner to hazardous situations that they may be less likely to encounter regularly (such as a nuclear incident or aircraft crash, for example) and that are difficult and costly to replicate in a real-world environment, while enabling the student to practice firefighting techniques or procedures repetitively and with the ability for the course instructor to provide instant feedback during the training.

With the continuing emphasis on fire services to reduce their environmental impact and improve sustainability, simulation can remove much of the need to conduct live fire burns, in turn reducing smoke pollution, water run-off, excess foam use and contamination of structural fire kit, equipment, and PPE from potentially harmful carcinogenic deposits.

Virtual Reality v. Live Fire Training

Simulations and Virtual Reality (VR) cannot however replicate the practical fire training experience in its entirety. The immersive sound, smell, heat, flame, and behaviour of a real fire are still essential for a firefighter to witness first-hand on the training ground as this 'experiential' training is what fuses and reinforces each firefighter's prior knowledge and study into a learned skillset. The training experience should always realistically reflect what firefighters are likely to face in real life, so that they are ready and prepared.

Firefighter safety and environmental protection is critical during all live fire training evolutions.

Utilising gas fires in training rigs can help to reduce smoke emissions and heat exposure, while carbonaceous (wood) burns are widely recognised as providing the most realistic fire situation for fire fighters, but with the attendant issues of potential smoke emissions (unless scrubbers are incorporated in the training rig design), heat exposure and contamination of structural fire kit and equipment to the carcinogenic products of combustion.

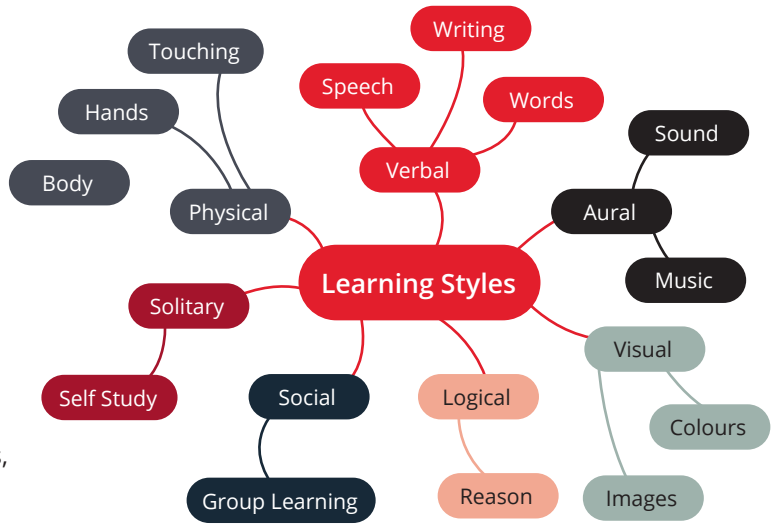
Complex fire behaviour such as flashover and backdraft can be very effectively demonstrated using containerised training rigs with carbonaceous fires.

Person-centric blended learning

Another advantage of a blended learning approach to firefighter training is that the various methods of training and learning delivery suit individuals with different core learning styles.

Visual learners may be more successful using interactive e-learning media to see how equipment and techniques should be used, while auditive learners may prefer lectures within the classroom teaching environment, where they can listen to presentations and speak to the instructor and their peers. Reading/writing learners may prefer more traditional textbooks and course materials while a kinaesthetic learner will be more comfortable learning through physically experiencing the task.

By taking a blended learning approach, each student can effectively learn through a combination of delivery methods, focussing upon the method or media that best suits their individual learning style.



Train like you mean it...

The single over-riding rule with any emergency service training is to train like you mean it, because one day your own life, or the lives of your colleagues and the public we serve may depend upon it.

The practical skills gained should become second nature as muscle memory makes responses almost automatic, while the techniques and considerations of dynamic risk assessment enable your strategic and tactical decision making to guide your actions and responses.

Irrespective of how we choose to deliver firefighter training, the emphasis must always be the safety of our staff.

Regular acquisition and refresher training courses that are constructed and delivered in compliance with the appropriate national or international requirements and guidance, delivered by experienced, competent, professional Fire Instructors are essential to ensuring that the highest standards of firefighter training are developed, delivered and maintained.

About G3 Systems

G3 Systems provide fully managed on-site Fire and Rescue Services to Aviation, Oil, Gas, Chemical, Energy and high-risk critical infrastructure operators around the world.
Our contracts with NATO in Afghanistan included the training of firefighters and fire officers from around the world in both aviation and structural firefighting.

Our core aim is to reduce the risk of emergency situations by being prepared, ready and able to respond to any incident and to ensure and manage the regulatory compliance of our clients and their sites.

We tailor our Fire and Rescue services to suit our customers specific needs and site requirements, while providing a professional fire safety, prevention, response, command, and control function for your organisation.

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Chris Thain manages Fire & Rescue Service business development for G3 Systems Ltd, a UK based company that provides fully managed and compliant on-site Fire and Rescue Services for industrial, aviation and military clients around the world, specialising in operations in austere and hostile working environments.

G3 Systems Ltd. is a wholly owned subsidiary of IAP Worldwide Services Inc. – a global provider of services to government and commercial customers.

Chris previously worked with Devon and Somerset Fire and Rescue Service, where he directed and managed the commercial trading business of the Fire Authority.

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