

SKILLS FADE AND THE IMPACT ON RIGGERS RETURNING TO WORK FOLLOWING THE LIFTING OF RESTRICTIONS ON LIVE EVENTS

The following companies or associations endorse this NRAG Guidance



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The advice contained within this guidance is presented without warranty and compliance with it does not of itself confer immunity from any legal obligations. Any recommendations reflect the conclusions of the National Rigging Advisory Group only and have no legal precedent. The reader remains free to take other action.

Introduction

This guidance has been produced by the NRAG and PLASA to support all those working in the events sector who are commissioning or undertaking rigging work.

Its purpose is to identify that 'skills fade' is a real issue, raise awareness and understanding, and outline some actions that can be taken to mitigate the impact of skills fade on riggers.

Background

Since March 2020, large sectors of the live events industry have been unable to operate due to the restrictions put in place by the UK Government in response to the coronavirus pandemic.

This means that the many specialists who work in this sector have had little or no work to do. The lack of work has affected many professionals in the industry, including technicians, crew, performers, and of course riggers.

Prolonged time-out from any professional practice has the potential to impact on skills, and therefore competence. This is of critical interest to employers, those commissioning work, and those in control of premises because of their duties to ensure those that carry out the work have the relevant capabilities – skills, knowledge and experience – to carry out the work safely.

Riggers play a safety-critical role in the staging of many types of events, and some will have gone from routinely carrying out regular shifts to having no rigging work at all during the entire period that restrictions have been in place.

This means that they won't have undertaken any work at height, they won't have used any of the usual equipment, they won't have worked as part of a team, and they won't have worked in the normal production environment which is a dynamic and fast moving shared workplace.

The consequence is that some degree of skills fade is almost certain.

Skills Fade

Skills fade is the decay of any skill over a period of time when the skill is not practiced. It occurs with any activity, for example playing a musical instrument, sporting endeavours or operating equipment, be that a fast-jet or a bicycle. Skills fade in some areas isn't a problem, but in safety-critical jobs such as rigging it can become a significant risk. It can occur with both cognitive and motor skills.

Skills are developed over a period of time, and the longer spent honing and practicing them the more embedded they are likely to become. Someone who learns to ride a bike at an early age may accumulate thousands of hours of experience. They could get on a bike again after a prolonged break and, whilst it might not be pretty, it should be functional and relatively safe. The skills fade in this case has affected only the top end of the skills spectrum.

Skills which have been developed more recently may decay faster and to a lower level in the skills spectrum. If a rigger has recently acquired skills, with no prolonged period of development and use before the time-out, they are likely to fade more than core skills, possibly to a dangerous level.

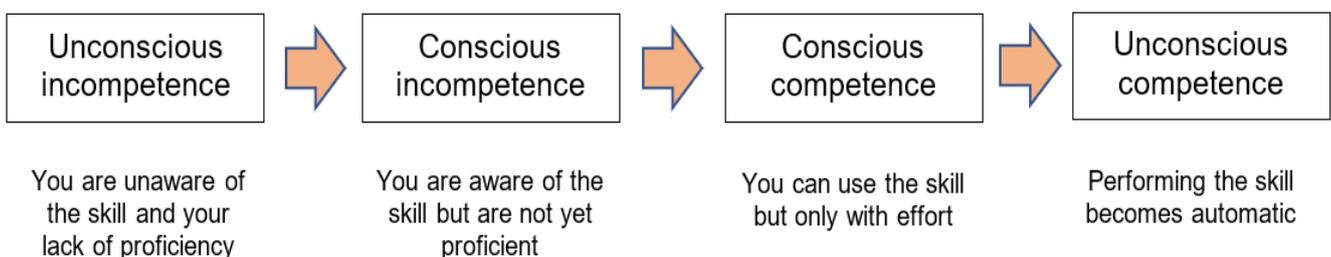
The level of skills fade that occurs during time-out will depend on a number of factors including what the task or activity is, previous level of training, the retention interval and the individual.

For some activities a very high level of initial training and performance is required, and this can reduce the rate and extent of skills fade. Examples here might include surgeons and other medical practitioners or performers who do extraordinary things but are actually working well within their capabilities, such as circus acts and dancers.

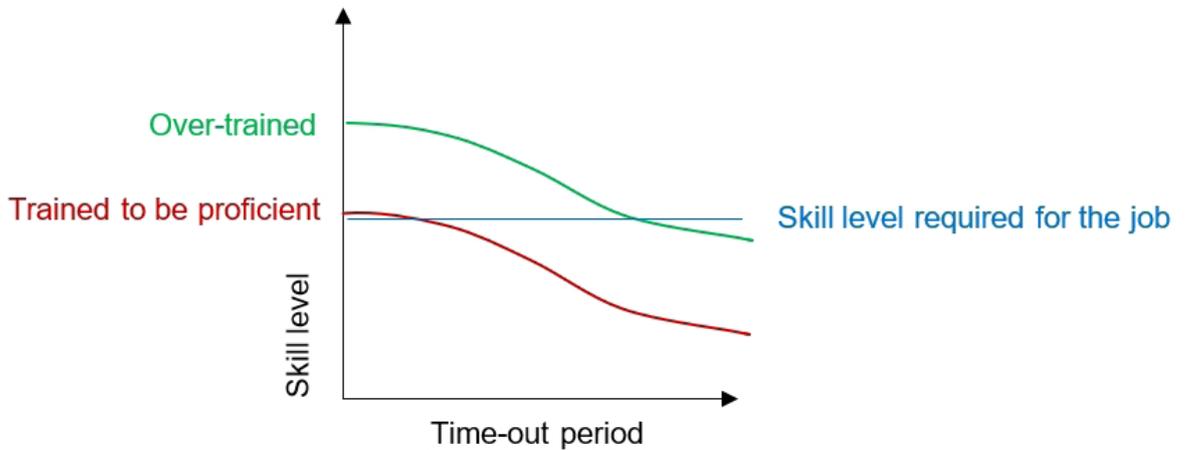
Ongoing maintenance will also help reduce the rate and extent of skills fade, for example ballet dancers who have carried on with class and athletes who continue to train even though they're not competing. Skills fade will affect the highest level of performance first in these cases – taking the edge of their ability to do the “work” at the very highest level. Most continuous professional development programmes include a requirement for “maintenance of skills”, recognising that this is a key component of ongoing competency.

Where people have been over-trained – that is trained well beyond the basic capabilities for the job, any skills fade that does occur during time-out may only relate to skill levels that are not actually required to do a job safely and proficiently.

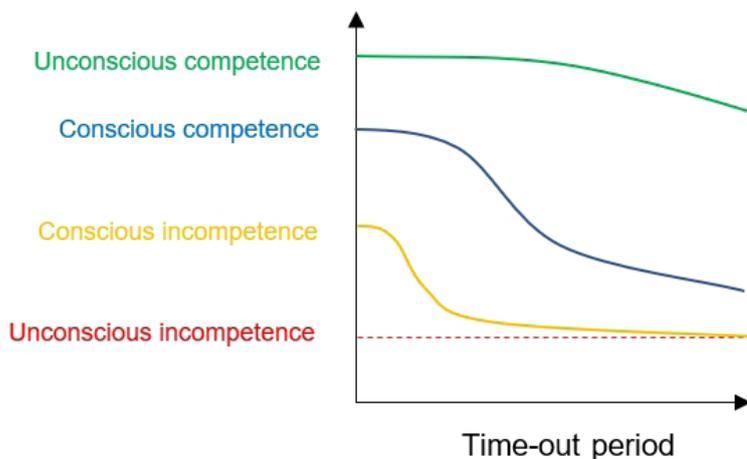
The well established principle of the four stages of competence is worth bearing in mind here:



Trained skill level



Level of competency and effect on rate and degree of skills fade



As one might expect there is evidence to suggest that short breaks from an activity will have less impact than long breaks, but there can be little doubt that 12 months is a significant period over which skills fade is a foreseeable risk when it comes to safety-critical activities. Any motorcyclist who puts their bike away for the winter would need to take it steady on the first few journeys in the spring; they haven't forgotten how to ride in three months, they've just lost some of the top-end skills beyond basic proficiency.

This is one of the reasons that with certain jobs there are minimum hours requirements, for example pilots have to keep up their hours and carry out certain tasks within prescribed time periods to maintain their entitlement to fly.

Whilst not quite so prescriptive, the NRC renewal process also requires evidence that a rigger has been undertaking ongoing rigging work since the previous card issue.

Skills fade can affect both motor skills and cognitive skills such as processing and decision making.

A rigger's physical strength, condition and techniques will decay without the regular activity of hauling points or lifting equipment in and out of cases. The muscles used may have lost some of their strength and will take time build back up.

Riggers who use specific equipment in regular workplaces, such as components of personal fall protection systems (PFPS), may have a high degree of familiarity with particular equipment and muscle memory can play a part in the safe use of such equipment. This may have degraded to some degree compared with daily use, so there is a risk that the equipment will be inadvertently misused, or things could just take longer.

There are a range of processes that either evolve in particular environments or are prescribed by the organisational context, such as the procedures for using fixed PFPS or particular control systems. Familiarity with these processes will also have degraded and this could affect how slick the operation is, having knock on effects on efficiency, timescales and workplace pressure.

The environmental context is also important when considering competency. A typical production arena functions seamlessly during a fit up and strike with many different departments cooperating with each other in a highly coordinated way, achieving safe and efficient progress. A significant factor in ensuring this works well is the familiarity all the crew have with the process and environment and what everyone else is doing at any given time. This comes from experience and cannot really be taught. This "second nature" factor may have been diminished during time out, leading to uncertainty and a feelings of doubt; suddenly people may feel uncomfortable in the environment in which they previously felt entirely at home, or have reduced confidence in their actions.

Some elements of this environment may also be subject to significant changes due to the measures put in place to manage the risk from COVID-19. Whilst this isn't strictly skills fade, it is "different", so needs to be factored into any return to work protocols.

Competent riggers with sufficient on-the-job experience will not easily forget how to do their job. However, during time-out, they may experience a drop in both the physical and mental skills that they usually take for granted, leading them to perform at a slightly lower level, possibly make mistakes or cause injury to themselves or others. In the rigger's safety-critical role, it is a foreseeable risk and needs to be addressed before riggers are deployed on an event site.

Acceptance

It is critical that every duty holder understands the reality of skills fade and acknowledges the level of risk it can present.

There may be barriers to this acceptance at every level, however it is important to recognise that an enforced and extended break is likely to lead to some degree of skills fade, and it may be more significant than one might imagine. There is no one-size-fits-all response due to the number of different factors involved, however accepting there could be an issue and committing to deal with it is the first step.

Information, instruction, training and supervision are key elements for effective safety management, and skills fade relates directly to them. The duty to provide training doesn't stop at initial training, it requires ongoing monitoring of performance to establish whether skills developed from previous training and instruction are still being used correctly, or whether there is a need for some form of refresher. The load-in for a large tour is not the best time to find out the rigger's skillset isn't quite there.

There is enough recent anecdotal evidence that highly trained and experienced crew working in the entertainment industry have suffered degrees of skills fade during periods with no work, leading to lapses and errors when returning to work. Whilst many incidents will have few if any safety implications, the rigger's work does, and the possible outcome of ignoring skills fade is fairly clear. Riggers work both at height and on the show floor, and there is the potential for both falls from height and from falling equipment if mistakes are made. The most likely outcome of both these scenarios is a high degree of harm.

Duty Holders

Riggers

Riggers may think they are still on top of their game and assume it will be back to business as usual, unaware there may be a problem until they turn up on site for their first call. Riggers are responsible for both their acts and omissions – that is what they both do and do not do – in relation to safety. They must also cooperate with their employer in terms of the arrangements the employer puts in place for safety, which may include requirements for refresher training.

Employers

Employers may not be aware of the potential issues and be looking forward to as simple a return to business as possible. Factors other than skills fade may be given higher priority. Employed riggers may not be consulted about hazards that could arise from skills fade. Other skills that are subject to skills fade in normal times such as first aid, rescue techniques and others that are not routinely used may be pushed further down the line. Focus may be on changes required to be COVID-secure at the expense of the still-significant risks associated with the work riggers do.

Freelance/self-employed riggers effectively have the same responsibilities as an employer in terms of their own training, skills and capabilities – there should not be an assumption that someone else will sort it out.



Venues

Venues may take differing views depending on the nature of the tenancy, some may be more active than others in seeking to address any issues. Those in control of premises have an interest in, and responsibility for, making sure all the work that goes on is planned and carried out safely by competent people. Riggers with skills fade may not meet the requirements for competency.

Commissioning Clients

Commissioning clients, producers, promoters, host employers etc. may be unaware of the potential risk or consider it to be someone else's problem to deal with.

Solutions

Riggers

Stay connected with the industry. There are forums and groups that provide regular online opportunities to stay in touch.

It has been shown that simple visualisation for a specific task can help reduce skills fade. Also sometimes referred to as 'mental rehearsal', it is a technique often used by athletes who visualise their actions before doing them for real. Thinking through all the processes and actions you usually undertake, in sequence, will keep them current in your mind, and should help you perform them better when you return to work, and maintain the right mindset.

Stay fit – whilst specific muscle strength and memory may deteriorate slightly it shouldn't take long to come back if general fitness is maintained.

Be aware of the potential for skills fade, take your time with tasks you would normally do at pace, and be prepared to concentrate harder than normal as you reverse the effects of skills fade. Consider yourself to be 'consciously competent'.

Establish buddy systems on site to check the use of equipment such as PFPS. This should be part of the process anyway, a second set of eyes on everything you do should identify any lapses and help improve any drop in confidence.

Equipment can also deteriorate over time. Check all your own equipment is in good order and still fit for purpose.

Employers

Assess the risk from skills fade. Talk to the riggers and discuss any concerns.

Establish appropriate refresher training requirements and carry them out. If you use freelance riggers ask them what arrangements they are making to mitigate the risks from skills fade or consider including them in the arrangements you put in place for your own staff.

Assess the level of resources required on site to compensate for skills fade.

Does a rigging call need more time? More riggers? Greater levels of supervision? On-site training? What other resources might be appropriate?

Venues

Check competency records including any refresher training from incoming riggers.

Maintain minimum requirements in terms of the competency of riggers permitted to work in the venue.

Commissioning Clients

Producers, promoters, production and other commissioning clients have a responsibility to ensure those working on their production have the relevant competencies. This would include ensuring the proposed work is not adversely affected by skills fade. Additional resources over and above those typically used for similar work before the pandemic may be required. Making up numbers with unskilled labour is unlikely to be effective and could be highly detrimental in terms of safety management.

Checks should be made that rigging suppliers have made sure their riggers are back up to speed.

Share information early with rigging suppliers about proposed rigging requirements and ensure cooperation and coordination between the different employers/works in the venue.

Where riggers are booked direct, some steps to help control the risk might include:

- Simplifying production rigging requirements
- Allowing more time for work to be carried out safely
- Allowing more space for work to be carried out safely
- Providing increased levels of supervision

There is consistent anecdotal evidence that as crew are returning to work and carrying out routine tasks for the first time, the work is taking considerably longer (up to twice as long in some cases) than it would normally take.

Few would consider reopening a show that has been dark for months without appropriate rehearsals with the cast and crew. There is no real difference with a fit up and strike. These too are carefully choreographed activities using skilled crew and should also be afforded the appropriate resources to ensure those carrying out the work can do it safely.

If managed properly, skills fade resulting from time-out during the pandemic will be a short-lived risk.

If ignored, it has the potential to create significant risk at a time the industry is uniquely vulnerable.

Further references

The HSE has provided useful general guidance on “Easing of COVID-19 Restrictions: Returning to work safely – business considerations” which can be found [here](#).

An explanation of the four stages of competence can be found [here](#).

Industry-specific guidance signposted by PLASA can be found [here](#).

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