Cinesite: Black Panther: Wakanda Forever © Marvel Studios

The Core Skills of VFX Handbook 2025

15 CHAPTERS FOR FUTURE VFX TALENT

Collated by Saint John Walker with contributions from over 100 VFX contributors

UK SCREEN ALLIANCE

BFI

THE NATIONAL LOTTERY

WELCOME TO THE CORE SKILLS OF VFX HANDBOOK

The original Core Skills of the VFX Handbook has long been regarded with high esteem within the industry and academia, often described as a benchmark for curriculum development in higher education.

Its influence has been almost legendary, shaping the training standards for countless aspiring artists and professionals. However, since its publication by Creative Skillset (now ScreenSkills) in 2017, the landscape of VFX has undergone profound transformation. Remote working, the integration of real-time engines into pipelines, virtual production, and, of course AI, underscoring the urgent need for a comprehensive update.

Recent modifications to our system of audiovisual expenditure credits are poised to attract increasing international production to the UK and to our award-winning VFX industry. After a challenging few years, the industry is set to resume a pattern of sustainable growth. It will be essential that new entrants are equipped to engage with current and future practices in a sector characterized by rapid technological innovation and expanding creative possibilities.

The UK Screen Alliance is proud to partner with the BFI Metro London Skills Cluster in supporting this important initiative. I extend my congratulations to Saint John Walker for his leadership in bringing this project to fruition, and my thanks to all contributors for their time and expertise. This comprehensive blueprint for curricula will serve as a vital resource for industry, academia, and above all the graduates aspiring to thrive in our pioneering sector.

Neil Hatton MBE, CEO, UK Screen Alliance

CPD Nuke session by Next Gen Skills Academy for tutors

FOREWORD Saint John Walker, Collator

This Handbook is about spreading what it's like to practice VFX. It's for anyone who wants to know how to go about learning at high quality.

Whilst the Core Skills of VFX Handbook is free it won't teach you for free. It's purpose is to give learners an awareness of what you need to know and do and how you might go about learning. The rest is up to you. It's designed to have an impact on teachers, tutors, and those in charge of students who want to understand how to build quality contemporary VFX courses, or update existing ones.

The Core Skills of VFX Handbook is the voice of over one hundred passionate professionals from all sides of VFX- specialists, generalists, both multinationals and boutiques, technical and creative, producers, supervisors, HR and directors. I'm not the author, I've just done my best to collate expert comments.

How did we get here?

This is the third edition of the Core Skills of VFX Handbook. The first published by Skillset was in 2011, a bit of a skunkworks type project in the evenings by myself and Ian Murphy (now NFTS) and a group of industry contributors. The second emerged in 2016/17. By this time Skillset had become Creative Skillset, and were moving towards their third incarnation, ScreenSkills. Time seems to have speeded up in the intervening years- more changes seem to have happened to the industry in the last couple of years, with several contributors like Jellyfish, Axis and MPC no longer part of the story.

So is this the best time to release an update? Well, we need to remember today's young people have other choices of career. There's also the backdrop of art choices in schools shrinking considerably. The Cultural Learning Alliance (CLA) 2025 states there is a 42% fall in Expressive Arts GCSE entries since 2010, and a 27% decline in arts teacher numbers.

These days the VFX industry has to fight for mindshare with other industries, so a Handbook that not only outlines how to learn from the best, but also exemplifies the excitement of the VFX community and sociability of creatives seems like exactly what we should be doing right now.

What's in it?

A lot has changed in the VFX landscape since 2016, but a lot has stayed the same too; the core creative skills of communication and aesthetic composition to name but two.

If it ain't broke, dont mend it.

Some chapters weren't overhauled but tweaked. At the other extreme it was important to create new chapters- Virtual Production was not on the VFX radar last time. The current mental health and wellbeing crisis was not so pronounced either, and career advisors will tell you GenZ (who we'll rely on increasingly) are interested in the social and communal so we've included a chapter on People and Wellbeing.

The Process

This Handbook is the result of around 18 months of consultation kicked off with a focus group during FMX 2024. 2024 and 2025 saw evening focus groups at Framestore and Cinesite where organisations like ILM, Framestore, Jellyfish, Union, Blue Bolt, fed in new ideas. However it became clear the tactic of physical focus groups wasn't as impactful as in the previous (pre-Covid) editions. Soho and the West End were no longer the populous hubs for VFX house habitués who could stroll over whilst leaving their work rendering like slow cooked meat.

So a new tactic evolved, that of online collaboration, powered by my mosquito-like hassle via email requests to various professionals asking if they'd mind looking at the 2016 chapters and commenting, updating or correcting? Many responded and this version took shape. There is a widely shared desire to give back that led to this publication. People gave what they could- some a cursory nod, whilst others kindly wrote pages.

It's here I'd like to thank Neil Hatton and UK Screen Alliance for supporting this project via the BFI's Metro London Skills Cluster.

What's next:

Ilt's not over, its never going to be complete. Incidentally (before you ask) the chapter on Machine Learning and Generative AI will need to wait- very few industry voices wanted to engage with this at this moment, although AI is mentioned at key points throughout this edition.

I'm a big disciple of William Gibson's "the street has its own use for things" adage. Whether the Core Skills of VFX Handbook will need updating again soon, that'll be up to the collective will of the industry.

Saint John Walker, Collator

Bild Studios/MARS Academy

CONTRIBUTORS

I'm grateful to the following contributors who have built on previous editions:

Thanks to
Rebecca Barbour
Amy Backwell
Chris Bouchard
Dave Barnard
Colin Birch
Devrishi Chatterjee
Charles Chorein
Debra Coleman
Christine Caspars-Roemer
Klaudija Cermak
Gianluca Dentici
Simon Devereux
Julien Ducenne
Steve Ellis
Andrew Fineberg
Ricardo Ferreira
Lee Greatorex
Hugo Guerra
Lance Gaunt
Rebecca Gill
Florian Gallier
Michael Geissler
Harvey Goodall
Daniel Horne

Jonathan Hunt
Emma Ibbetson
Emma Ihecherenoma
Michael Illingworth
Roberta Jablonskyte
Harry Jones
Roo Knight-Jones
Emma Kolasinska
Ben Krolick
Abbie Kennedy
Jonathan McFall
Michael McKenna
Ian Murphy
Olly Nash
Josh Parks
Victor Perez
Paula Pope
Laurie Priest
John Rowe
Seran de Schot
Pete Seager
Mark Spevick
Paul Silcox
Amy Thomas
Jodi Tabor-Nelson
James Uren
Laura Usaite
Alfie Vaughan
Arpita Venugopal

Tory Wire
Tammy Willbourne
Rehan Zia

Images:

Helen Moody Cinesite
Nene Parsotam Access:VFX
Tori Stockdale Framestore
Amy Backwell ILM
Teila Smith Escape Studios
Ben Rust Next Gen Skills Academy
Jahirul Amin Cave Academy
Ethan Francis CG101
Suchi Sandhu DNEG
Katie Hubbard Lux Aeterna
Jennie Kitchin DNEG
Sophie Spalding Union VFX
Jonny Adamson DNEG
Martin Bowman University of Hertfordshire
Hugo Guerra Hugo's Desk
Ian Murphy NFTS
Rosie Ginger Final Pixel
Rowan Pitts Bild Studios
Hayley Miller, World VFX Day

THE CHAPTERS

Mickey17, Image Courtesy of DNEG

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- Learning isn't over when you get the job! Ask questions of your colleagues if you get stuck. It's in all your best interests to support each other.

- Consider a mentor to guide you. As you grow, be a mentor yourself. You have experience starting a job, you can help others who are just graduating.

SUGGESTED CONTENT:

In many cases, the only experience students have of the world of work can be part-time, casual or in the gig economy or service industry as they pay their way through college. Work can be seen as 'extractive' taking away from them, rather than an exchange. This experience can generate low motivation levels, and colour their impression of all work.

As such they can lack information on recruitment and human resources departments in the VFX industry, so spend some time explaining the process and roles of people they will encounter on their journey into work. Also explain the general goals and milestones these people might have- what are they after, and how might the student/prospective applicant be the answer?

We want to give them some tools to help them navigate full time work in an industry that they are passionate about and in which they want to grow in their careers.

When teaching any aspect of VFX, ensure there is a social dimension to learning- group tutorials, teamwork, dailies, so that students get to discuss, debate and grow their confidence.

As the course progresses you can explain you are changing mode away from an academic format to a more workplace mode, where the tutor may role-play a department head or senior artist and present feedback in a more impersonal, business-like way.

Ensure students understand the personnel they may meet on the journey from job application to employment, and the different registers of communication they need to adopt. What are the 'rules' of communicating to a recruiter, from 'cold calling' to responding to a job application?

Role play (possibly with help from a friendly VFX company) a mock job interview, where the student gets to talk about their work to a recruiter, and learns to think about what the recruiter's needs are and respond to them. Just as importantly, ensure feedback is given. Sometimes guest recruiters will give the tutor a summary of their feedback on all the students they met, and this can then be fed back into how you improve your preparation of the students next time.

Epic Universe at Battersea, Framestore

You need to change your relationship to notions of failure. If you cultivate a Growth Mindset, failing in a task can be seen as an accelerant to learning and getting better. It's easy to think you are the only one who makes mistakes, but that's because you don't necessarily see everyone elses! Creating a perfect final shot on the first version is very rare! Instead, it's an iterative process - so is learning. After any perceived error, try to do a post mortem or reflection. What could you do differently?

Explain employment law in practical ways, and show students examples of contracts they might encounter (suitably anonymised or in template form). You needn't get too lawyerly about this- one session may do for students to understand rights, working time directive, overtime, remote working restrictions etc.

Explain that growth is not going to be linear — there may be curves, ups, dips and false starts along the way. There may also be times when it goes slower or faster depending on the nature of the work required.

The power of Mentoring:

Not every mentor/mentee relationship is the same and they'll come in lots of different shapes and sizes. So understanding and being flexible around each other's needs will help your relationship progress and for you to make the most from it. As a mentee you may need more help and advice in some areas than others, you might like to check in more frequently with ad hoc questions, you might like to save up questions for a more regular catch-up. It's a joint venture that will work best when you both actively take part.

Mentors can help their mentees identify gaps in their skills and knowledge; provide advice, guidance, and feedback; share experience and expertise; act as a sounding board for ideas; Listening & feedback: encourage questions, actively listen and provide constructive feedback; offer encouragement and support to try new things; help their mentee to build confidence, move out of their comfort zones & understand when things don't go as planned; celebrate their successes; share any resources that will help them develop ie training tools, books, websites or forums.

Employment Types and Contracts:

Different companies will have their own rules with regard to the types of contracts they offer.

Explain employment in practical ways and the types of contracts they may be given.

Permanent means there is no fixed end date, all tax deductions are made at source and employees accrue any agreed benefits ie holidays and pension.

Fixed Term PAYE means a fixed period of time for the contract, all tax deductions are made at source and employees accrue any agreed benefits ie. holidays and pension.

Freelance means the person will be engaged on a non-PAYE basis assuming the project length and requirements meet freelance and IR35 requirements and the person being engaged is responsible for their own taxes, tax returns, they are not eligible for benefits.

You could show students examples of contracts they might encounter (suitably anonymised or in template form).

It would also be helpful for students to understand that if they are perm/fixed term they will receive payslips showing any tax, NI (National Insurance) and pension contributions.

That if they are freelance they will need to set themselves up as freelance, do an annual tax return and submit accurate and timely invoices.

You needn't get too lawyerly about this - one session may do for students to understand the general basics of a contract, the working time directive and overtime etc.

Working Together In Person:

These days some studios will be fully remote, some will be all in-house, some will be a combination of the two.

Every studio will be different and will have different requirements for their staff. Embrace the differences and if the studio is fully in-house or requires in house attendance a number of days a week, seek the opportunities this brings. These include:

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Collaboration and Idea Sharing: In-person interactions allow for spontaneous ideas exchange and collaboration across teams.

Effective Communication: Face-to-face discussions and feedback often lead to faster problem-solving and clarity across all departments.

Learning and Mentorship: Employees learn not only through formal instruction but also through osmosis— by observing, walking by, or reaching out to colleagues for advice. This can sometimes be referred to as the "Water Cooler moment" where a chance encounter can lead to unexpected positive progress.

Access to Tools and Resources: The office guarantees a comfortable desk, the right equipment, and an optimal tech setup.

Client Relationships: Building relationships with clients who visit in-house strengthens work and collaboration.

Social Connections and Company Culture: Social events and gatherings help to connect employees from different teams and build relationships. They're also fun!

Working Remotely:

Remote working is now more common but studios will have clear expectations about what days you might be expected to be in studio or be online, including core hours. Some tips to help studios navigate this working landscape:

Communication: Keep in regular contact with your team to avoid misunderstandings

Documentation: Make sure your work is well documented so it can be picked up by others if needed

Respect Boundaries: Be aware of time zones and work hours of colleagues

Self-Motivation: Without the structure of an office, you'll need to be proactive about managing your own schedule

Professional Environment: Have a workspace that is free of distractions, as much as possible

Security: Follow company guidelines about data protection and secure connections

Pride London, Framestore

Mental Health: Working from home can be isolating. Make time to check in with colleagues and maintain social connections.

Keeping Well - how to help look after yourself: Practical Tips and Resources

Looking after yourself is essential in any workplace. Work can sometimes become more high pressure at times and you will hopefully have a good team and more senior staff to help support you. Students will also need to take ownership of managing themselves as they become employees.

Time management and workload and workload tips

Use simple tools like to-do lists, digital calendars (e.g. Google Calendar), or project management apps like Trello or Notion to stay organised.

Break work into manageable tasks and set realistic deadlines.

Don't be afraid to ask your lead or Production or your manager to help you prioritise when things feel overwhelming.

Look for internal time management workshops or online courses (e.g. on Coursera, LinkedIn Learning, or YouTube).

Advice for students managing stress and building resilience

Stress is natural, but it shouldn't be constant. Techniques like mindfulness, breathing exercises, and journaling can help manage daily stress.

Don't ignore how you're feeling—talk to a colleague, your Head of Department, HR or a Mental Health Advisor.

Try using wellbeing apps (e.g. Headspace, Calm, or Moodpath).

Step away from your desk regularly—take short walks, stretch, eat away from your screen.

Don't skip your lunch break, and aim to have a clear end-of-day routine that separates work from personal time.

Internal wellbeing initiatives (e.g. lunchtime talks, yoga sessions), or tools like Pomodoro timers (e.g. Focus Keeper app).

Staying connected and grounded- keeping a life outside of work

Prioritise relationships and hobbies that energise you. A well-rounded life supports better focus and creativity at work.

Join interest groups, attend events or meetups (in-person or online), and schedule regular catch-ups with friends or family.

Look at organisations like **Access:VFX, Animated Women UK, or UK Screen Alliance** for networking opportunities and community support.

People: A note about access and diversity

Embracing diversity and inclusion is not just a moral obligation; it is essential for the cultural resonance and creative output of the industry.

One of ACCESS:VFX's **(www.accessvfx.org)** core motivations is to demystify and open up the "hidden careers" within the creative industries.

ACCESS:VFX champions and supports free targeted outreach and skills development programs through initiatives like mentoring, workshops, internships, apprenticeships, and bootcamps. These efforts aim to break down barriers to entry and connect underrepresented talent, such as women, people with disabilities, people of colour, and individuals from lower socioeconomic backgrounds, with tangible career pathways.

They actively engage with educational institutions, community organisations, and social enterprises to introduce the world of VFX and animation to schools that may lack access to creative industry resources.

Their online mentoring program is a key component, enabling meaningful, ongoing connections between aspiring talent and industry mentors, with 70% of mentees being female and/or BAME, and students feeling energised and inspired.

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KEY TEXTS/LITERATURE:

Shepherd, S. (2022) *A Growth Mindset For Teens: Practical Lessons & Activities To Build Confidence, Problem Solve, Grow Skills, And Become Resilient in 31 Days* ISBN-13979-8364652591

Dweck, C. (2017) Mindset - Updated Edition: *Changing The Way You think To Fulfil Your Potential,* Robinson, Great Britain

Arthur I. Miller, A. I.(2020) *The Artist in the Machine: The World of AI-Powered Creativity* MIT Press, USA

There are a range of podcasts on the people of VFX available through **https://www.accessvfx.org/** Also, catch "**VFX Notes**" Hugo Guerra and Ian Failes' popular podcast on YouTube

Harfoush, R (2019) *Hustle and Float: Reclaim Your Creativity and Thrive in a World Obsessed with Work* Diversion Books

Lau, V (2021) *Why I Do VFX: The Untold Truths About Working in Visual Effects* ISBN-13 : 979-8743649792

Ross, S. (2024). *Upstart.* Native Book Publishing.

Failes, I. (2016). *Masters of FX.* CRC Press.

SUGGESTED LEARNING ACTIVITIES:

Get students to do a SWOT analysis at the start and end of a module or series of workshops. Employers really want to see evidence of 'soft skills' or transferable skills, so work with students to highlight what these are and give examples where interpersonal skills really help, and how you might practice these. It is important students understand they do not need to be extroverts or great conversationalists, but within the boundaries of VFX production being able to commit to teamwork and see the bigger picture beyond your role is crucial.

Growth mindset: After any perceived mistake, get students to talk in small groups about failures and discuss what they did to make things right, do a post mortem or reflection. What could you do differently? Ask for feedback from someone more senior when they have the time.

Ask them to put themselves in the next person's shoes. If they have a Lead or Producer on a project, what would most help them to ensure the project was able to deliver?

Encourage students to talk to a Mentor, or a personal/pastoral tutor. Can your institution get more involved with Access:VFX?

Institute some form of 'dailies' where students need to respond to criticism, and iterate work, as well as pay attention to notes. It should be made clear that critique from your seniors may not be as 'sugar coated' and as encouraging as the student is used to in an academic environment, neither does directness imply negativity towards the individual. Having a growth mindset will help students understand directness isn't rude but a quick method to getting the work better.

It should be made clear that critique from your seniors may not be as 'sugar coated' and as encouraging as the student is used to in an academic environment.

Directness doesn't imply negativity toward the individual.

Having a growth mindset will help students understand directness isn't rude but a quick method to improve work.

Professional Etiquette in the Industry

Alongside the above areas there's the professional etiquette to working in any industry, not just VFX, that will help students integrate into the working world. These factors and others might not be known to students who are focussed on working towards getting marks and not always quality, that extensions to deadlines are always possible or still don't know if VFX 'suits' them.

Take personal ownership of absolutely everything. Your relationships in the office (good and bad), the quality of your work, your timekeeping, your learning, your approach and your ego. With humility, passion and a strong work ethic, you will succeed.

If you are a runner or in a similar junior position, and want to be Producer for example, be the best runner you can and show you've absolutely understood what's needed and deliver it. If you're always trying to be two steps ahead and not trying to be the best at the role you're in at the time, you can miss essential information, relationships and tools that will be helpful to you at later stages in your career.

Be on time both for work and to meetings, dailies, reviews.

Communicate clearly and regularly and when you can, ahead of time.

Know when to escalate if you need help or have questions.

Work collaboratively and listen to other's input.

Have respect for others at different stages of their craft.

Understand that you're working as part of a team and how your input contributes to the effectiveness and efficiency of the whole team.

Support your team in both the good and challenging times - they will support you in turn.

Be engaged; ask questions, take notes, be pro-active, do self-research.

Learn from others about the cues for when to have a longer discussion or ask more questions - learn to read the room.

Explaining supporting roles in a company to students

Head of Department: The Head of a Department oversees all aspects of their department. This includes managing all the personnel aspects of their team, ensuring project deadlines and budgets are met, and maintaining the quality of work produced within the department. They collaborate with other department heads and the HR team to ensure the wellbeing of their team and can help find the right support for you.

HR (Human Resources): The HR team plays a vital role in fostering a positive work environment and can help with any personal or professional questions in a safe and confidential way and help to find you the right support. They look after the full life-cycle of an employee from recruitment, onboarding new talent, managing employee relations, overseeing benefits and compensation to ensuring the company's policies and procedures are followed.

Mental Health Advisor: A Mental Health Advisor can support the wellbeing of the teams. They can provide a space for staff to talk to in a safe and confidential way for advice and support. Their role is to listen and act as a point of contact and reassurance and help guide you to professional or internal help.

Hugo Guerra, Ian Failes Podcast "VFX Notes"