

Thesis

MA Visual Effects – University of the Arts London

**“The impact of the development of visual effects on the entry of new companies
and directors into the traditional film industry and future trends”**

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Abstract

This thesis analyses the question of whether the cost of visual effects is a barrier for new directors and small companies to enter the market, and in order to explore this topic, the thesis unearths many information sources, visual effects-related papers, government measures, and technological developments in the last two years, and concludes the results of this question with predictions for the future. The results of the research indicate that the democratisation of technology, government support, and international co-productions can all make it easier for new directors and small companies to enter the film market. The various studies in this thesis can also support more visual effects enthusiasts to create better works using the discussions here.

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Literature Review

The price quoted by VFX companies for effects varies, from \$5,000 for a short film to \$5,000 for a minute (Lugo, D., 2023). In major studio productions, the cost of each

special effects shot can now reach \$46,000 or more, which is a result of the increasing demand from audiences for special effects films (Benham, W., 2022). Many of the visual effects artists graduating from school are not good enough to cope with the demands of special effects companies, so the bar level of the industry has been raised (Televisual, 2014). Pat Joseph, co-founder and Chief Creative Officer of The Mill, and the authors at Nesta, have even found through research that many students currently lack the skills to use NUKE, the most critical software in the compositing process (Livingstone and Hope, 2013).

In terms of policy, the UK government has proposed a policy on tax relief for visual effects artists, which will soon reduce tax rates for the industry and exempt visual effects companies from the current 80 per cent cap on expenditure (GOV.UK., 2024). This policy will allow the local visual effects industry in the UK to develop rapidly and will allow international junior effects artists to carry out their work more smoothly for local effects companies in the UK (Chapman,P., 2024). Tracy McCreary, MD of Bluebolt said: “This new tax incentive is very welcome and will help position the UK's visual effects industry as a top destination for international film and TV production.” (Bickerton, J., 2024) Meanwhile, the UK Screen Alliance estimates that this will generate 2,000 new high-tech and high-productivity jobs in the visual effects sector, as well as a further 800 indirect jobs (UK Screen Alliance, 2024).

On solutions to the problem, Rahul Rahi said that current technological advances have gradually made the cost of visual effects a more cost-effective solution, enabling filmmakers to reduce production costs (Rahi, R., 2023), and Jessica Sheng said that advances in software and hardware have also made professional-grade tools more affordable and accessible to independent filmmakers and small studios (Sheng, J., 2022). Then in terms of technology, the replacement of traditional green screens by LED screens has also become an important change in this field, the technology will make the production of traditional single shots easier and cheaper, and will make the final film better, and the whole world is now collaborating in this field (Tycoon Success, 2023). And in Giralt's article on the interchangeability of CGI and live action, she says that photorealism is in a delicate position in the VFX world, and that

surrealistic scenes can even give some viewers a bad taste in their mouths. And new filming tools such as LED scenes may be able to solve these problems (Giralt, 2017). Also in the AI space, Vitrina said in a post that AI can already learn in-depth about automated tasks such as tedious keying and auto-tracking, which are tedious and time-consuming (Vitrina, 2024). And in some extreme cases, such as mimicking film movies, AI can automatically boost the noise of CGI to match the noise of the film camera (Sheikh, Sharma and Singh, 2023). However, all of these techniques must be operated via humans, and AI only plays a supporting role, so AI cannot replace the work of traditional visual effects artists (Chaudhary et al., 2021). This research will assist small visual effects (VFX) companies, as well as novice directors entering the film and television industry, and simple VFX enthusiasts in gaining a deeper understanding of the technique.

Research methods

This thesis will be based on reports on the development of the visual effects film industry as well as the television drama industry in recent years as a base source and qualitative research based on peer-reviewed information from Google Scholar searching for relevant academic journals, which contains previous research on the topic as well as models for future predictive data. In addition, this research found more books in the LCC library that had relevant information on how individual designers or companies can grow in the industry.

The main research starts around the means of technical communication, using the existing cases of visual effects as well as the actual operations of the company as the criteria, industry forecasts as well as further research on small businesses as well as individuals entering the industry based on the resources available at the University as well as academic search engines, which have been used to compare and contrast with the subsequent findings for the purpose of generating and developing information, and therefore contributing to this thesis.

Chapter 5 Draft

The democratisation of technology is an integral part of the flourishing of the arts. In digital media arts, the democratisation of technology has stimulated the advertising industry to collaborate more intensively with companies, and this technological development has not only increased the flexibility and creativity of the advertisement production, but also enabled companies to be more directly involved in the creative process, which in turn improves the overall quality and effectiveness of the advertisements.

In addition, the democratisation of technology has played a crucial role in the history of the absence of smart devices. For example, the craft movement (e.g. the Arts and Crafts movement in the UK) in the late 19th and early 20th centuries advocated a return to handmade production, opposing the mechanisation and standardisation of industrialised production, and emphasising the originality and artistry of design. This movement promoted the revival and development of craftsmanship skills and stimulated people's enthusiasm and creativity in art and design.

I. Increase in relevant school resources, including online instruction

As visual effects (VFX) technology has advanced, the availability and diversity of educational resources has increased significantly. Many universities and online platforms now offer specialised VFX courses covering a wide range of content from fundamentals to advanced applications. For example, online education platforms such as Coursera, Udemy and Khan Academy provide students with the opportunity to learn VFX techniques, making these techniques no longer limited to a few elite schools. Additionally, more and more schools and universities are updating their curricula to include the latest VFX techniques and software to help students quickly adapt to industry demands after graduation. This democratisation of educational resources is enabling more students aspiring to enter the film and television industry to acquire the necessary skills, thus lowering the barrier for new companies and directors to enter the industry.

II. The Role of Artificial Intelligence Creation Tools in the Visual Effects Field

The use of Artificial Intelligence (AI) authoring tools in VFX is changing the industry landscape in significant ways. AI not only accelerates the traditional VFX production

process, but also significantly reduces costs. For example, AI tools such as DeepDream and Runway ML can help artists and designers automate the generation of complex visual effects, significantly reducing the time spent on manual operations. Additionally, AI is able to create highly realistic visuals by learning and mimicking the styles and techniques of human designers, which is especially important for small companies and independent directors with limited budgets. The use of these AI tools makes the creation of visual effects easier and more efficient, further democratising the technology.

III. Megatrend of Co-Production in the Film and TV Industry

The growing popularity of the co-production model in the film and TV industry provides more opportunities for new companies and directors. By collaborating with other companies or teams, producers can share resources and technology, and share the high costs of production. For example, *Fast & Furious Presents: Hobbs & Shaw*, which was directed by two new directors, Bilal Farah and Adil El-Arbi, managed to deliver high-quality visual effects by collaborating with several VFX companies such as Image Engine and DNEG. This model of collaboration not only reduces the risk of individual projects, but also facilitates the exchange of skills and ideas, allowing more innovation to be realised.

IV. Simplicity and user-friendliness of production tools

The development of modern VFX tools focuses more and more on simplicity and user-friendliness, making it possible for non-professionals to get started quickly. Many, such as Adobe After Effects and Blender, offer intuitive interfaces and a wealth of tutorial resources to help users quickly master basic operations. The ease of use of these tools has made it possible for even independent directors and small studios to produce high-quality film and television productions using advanced VFX technology. The popularity of such tools has further lowered the technical barrier to entry into the film and television industry, facilitating the production of more innovative and diverse content.

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