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## ***Digital Skills for Performance: a framework for assessing current and future digital skills needs in the performing arts sector.***

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### **INTRODUCTION**

Digital connectivity has transformed the way people work, learn and communicate and it has become an essential driver of economic growth in today's increasingly digital economy. Digitalisation delivers multiple social, environmental and economic benefits. It is a key enabler and facilitator of wide-ranging examples of innovations focused on addressing climate change and reducing emissions, creating employment, business and leisure opportunities or addressing isolation and remoteness (Webb, 2020). Importantly, digitally-mediated ways of working can drive efficiencies through technological innovation, enhance greater work productivity (Gal *et al.*, 2019) and support work-life integration (WEF, 2016). Digitalisation has also been directly linked with the notions of 'Knowledge' and 'Creative Economy' (Florida, 2014), particularly in relation to capitalising on new opportunities and resources that make business organisations competitive and prosperous, thus contributing to the growth of localities, regions and nations. In the last decade, countries around the world have prioritised digital development to harness socio-economic opportunities the new technologies offer. The UK and Scottish governments have also openly declared their respective ambitions for green, sustainable and inclusive economic growth arising from the advancement in digital technologies and infrastructure (DCMS, 2017; FutureScot, 2020; SCDI, 2016; Scottish Government, 2017).

Even before the COVID-19 pandemic of 2020 a variety of initiatives focused on supporting digital transformation were rolled out across the wider economy to achieve social and economic prosperity (Scottish Government, 2017). Importantly, the pandemic only further emphasised the importance of strong digital capacity for business continuity and economic survival. It has accelerated the need to not only embrace digital ways of working but to foreground 'digital being' as essential. As a direct consequence of world governments taking actions to limit the spread of the deadly virus by instalments of lockdowns and other social control measures, many businesses and organisations had to stop operating, while for many independent workers supplies of work ceased to exist (McQuaid and Webb, 2020). Whilst many sectors seamlessly moved from face-to-face to digital operations, other sectors faced far greater challenges in reaching their customers. Early findings show that the majority of

administrative and some professional jobs across the UK's economic sectors were rapidly moved to the remote (digital) work model (Mallett *et al.*, 2020; STUC, 2021; TUC, 2021). However, not all work could have been organised and performed in technology-mediated mode. The experience-based sectors with predominantly face-to-face interactions and lower digital capacity, such as arts and creative sectors, were hard hit by the COVID-19 pandemic (O'Brien *et al.*, 2020, 2021; OECD, 2020).

The performing arts sector in particular has experienced multiple challenges in producing and reaching audiences during the pandemic. A series of lockdowns implemented in the UK in 2020 and 2021 meant that theatres and live performance venues have been forced to close their doors. In fact, live performance of any kind, except those held in digital space, were cancelled or postponed, and audiences lost opportunities for meaningful aesthetic experience. The sector had to find new ways of working, however, many performing arts organisations were only able to adopt digital in planning and administration rather than performance making and sharing. Despite most strict restrictions being lifted, venues hosting live performance in the UK are slow to reopen fully. In addition, a danger of new waves of pandemic is a serious threat, meaning there remains a pressing need for digital alternatives. While there were many innovative digital practices implemented *ad hoc* during the pandemic, the post-COVID-19 period needs to refocus on development of digital skills and competences to ensure the sector's sustainable and inclusive recovery.

This agenda must involve a key partner, the Higher Education Institutions (HEI), which for a while have been promising the enhancement of graduate employability (PwC, 2015; Weller, 2016). This promise of developing work-ready graduates in Dance, Drama and Performance (DDP) in the post-pandemic reality should result in graduates capable of navigating through traditional, digital and hybrid performance environments. Such importance of digital skills in DDP education has been stressed by the Quality Assurance Agency for UK Higher Education in the subject benchmarks (QAA, 2019), and further highlighted by the impact of the pandemic. Digitalisation can provide useful tools and platforms for creating, collaborating and communicating when producing and sharing performance work. It can also help the entire sector to embed inclusive approaches across the sites of production and consumption. For that to happen, upskilling future performance makers in digital skills seems particularly important. Digital skills seem a focal contributor to the recovery of the performing arts sector, thus helping in repositioning of independent performance makers as key actors of creative economy actively developing and delivering artistic and other creative content (e.g. for use in educational, community and business contexts). Therefore, this paper suggests a clear focus on future workforce development (i.e. current students/future graduates) is needed in order to identify priorities in developing skills necessary to make *digital performance*.

In the context of the sector's increased appetite for digital provision, it is crucial to review digital content and skills in the existing university degree programmes in the DDP subject area to assess its readiness for the digital shift. This paper aims to set a framework for digital skills currently associated with the digital making and sharing of performance work to provide important considerations for educators, practitioners and policy-makers striving to facilitate the development of the emerging field of *digital performance*. In doing so, it will outline the context of digitalisation in the UK in order to critically explore the notion of *digital performance* and highlight importance of digital skills, including aesthetic aspects of digital creation, which we will refer to as *digital aesthetic identity*. This framework will then be used to review the current digital skills offering in performing arts training and education at the Scottish universities. The paper will finish by outlining a set of recommendations and priorities to accomplish the next stage of digital skills development in performance education.

### **DIGITAL SKILLS IN THE DIGITAL ECONOMY**

To set the context for the emerging notion and practice of *digital performance*, this section will highlight key points of political discourse pertaining to the importance of digital skills and competencies in a wider economy. This is set against the backdrop of significant developments in technology and infrastructure that have altered the way organisations conduct their business and the way people work. Remote working, not bounded geographically (or to a specific site of production), is the most cited advantage of digital technologies application, which has been noticeably utilised during the COVID-19 pandemic (Mallett *et al.*, 2020; STUC, 2021; TUC, 2021). Although the use of technologies in the workplace have been criticised for excessive monitoring and surveillance that is damaging trust and employment relations (TUC, 2020), it has been also praised for the holistic benefits to organisations and employees. On the one hand, technological innovation has facilitated digitally-mediated work leading to enhanced workplace productivity and business efficiency (Gal *et al.*, 2019). On the other hand, it has enabled a greater work-life integration, thus helping to achieve healthier and happier working lives organised around personal and family needs (WEF, 2016). There is no doubt that digitalisation has become an essential driver of economic growth with a potential to offer multiple social and environmental benefits. Examples are wide-ranging, from climate action, community engagement, through to education and labour market interventions (Webb, 2020). Importantly, through exploitation of digital business and leisure opportunities some jobs have already been transformed and many new ones will emerge.

National policies emphasise the benefits of digitalisation in promoting development and creating employment. For example, the Scottish digital strategy sets out a vision for Scotland

as an inclusive, ethical, innovative and productive digital nation (SCDI, 2016) which rests on a highly-digitised, data-driven and low carbon economy that utilises cloud computing, 5G, Internet of Things, Big Data, and successfully implements these technologies into new business models, practices, products and services (FutureScot, 2020). Various labour market forecasts predicted that 'Digital Economy' would offer access to good employment opportunities on the condition that a range of new sets of skills and competencies were acquired to satisfy employers' digital priorities (CEBR, 2018). This means that in addition to the range of job specific and transferable skills, current and prospective workers need to develop digital skills to maximise chances of successful employment in the digital economy. Digital skills and competencies are also central to achieving political aspirations for finding innovative global and local solutions to address social, economic and environmental problems. The European Union's digital competency framework includes physical, technological and human capital dimensions related to successful implementation of digitalisation (DESI, 2020). The latter, in form of digital skills, has been importantly recognised amongst key areas of focus.

However, digital skills remain currently only loosely defined as the term covers a wide array of competencies, knowledge and skills for all sorts of jobs. An important distinction has been made between 'baseline' digital skills (i.e. those that are easily transferrable from one role to another, and from one sector to another), and 'specific' digital skills (i.e. those that are role or sector-distinguishing) (Nania *et al.*, 2019). 'Baseline' digital skills relate to basic abilities of working with computers and communicating using standard digital processors, emails and the internet. These digital skills are listed in 75% of job openings across all skills levels, which suggests they are a near-universal requirement. 'Specific' digital skills are commonly described as skills needed to manipulate large data set or to facilitate automated ways of production and are associated with the following seven clusters: Software & Programming, Computer & Networking Support, Data Analysis, Digital Design, Customer Relationship Management, Digital Marketing, Machining & Manufacturing Technology. These specific digital skills tend to be required for jobs in a specific role or a business domain. They may include a competence in using digital software such as Adobe Photoshop for designers; computer-aided design for engineers and manufacturing workers; customer relationship management software for sales and marketing professionals or computer programming for IT professionals.

The level of digital skills and competencies varies largely across the sectors but these skills are in high demand. While digitalisation tends to be blamed for job losses, specific digital skills are listed as key in helping workers reduce the risk of automation (*ibid.*). As roles requiring digital skills tend to pay more than those 'analogue', they increase a financial gain and can

further support career progressions. However, despite an overall positive score in comparison with many EU countries (DESI, 2020), the UK currently faces a digital skills gap. This means that many workers simply do not have the sufficient levels of basic and advanced digital skills to meet the demands required by business and industry in the digital economy. Therefore, they are not yet fully prepared to utilise opportunities of digitalisations. Even before the pandemic, employers have recognised pressing digital skills shortages (with 88% of organisations across the UK noted to be lacking in digital skills). This trend was expected to further increase by 2025 along with the predicted rise of digital employment (OU, 2019). To an extent, such a trend was observed during the COVID-19 pandemic amongst companies that have capitalised on increased demand for a variety of products sold online (McQuaid and Webb, 2020). Currently all eyes are focused on the recovery from the devastating impact of the pandemic, particularly in the hard-hit sectors such as arts. There is a scope for all sectors, especially those that can generate creative digital content, to harness the new opportunities.

#### **DIGITAL CAPACITY IN THE PERFORMING ARTS**

The COVID-19 pandemic has exposed generally low levels of digital capacity across many sectors that predominantly rely on face-to-face interactions. The performing arts sector in particular has experienced multiple challenges in producing and reaching audiences. The pandemic has revealed gaps in digital making and sharing of creative work because performance has been widely organised and distributed accordingly with a traditional theatre-based model until the pandemic arrived. A high level of disruption caused by a series of lockdowns implemented worldwide, and in the UK, meant that theatres and live performance venues have been forced to close their doors for a great majority of 2020 and 2021. Suspending all in-person social interactions, which are the essence of live performance and community arts, was a major problem for theatres, performance makers and performers, who became the cultural sectors' biggest victims (O'Brien *et al.* 2020, 2021). The sector had to find new ways of reaching to audiences, sharing their work and maintaining presence by using digital technologies. Even though arts organisations mentioned the importance of technology for continuing their operations during the pandemic, many only managed to utilise digital opportunities with respect to remote communication, administration and planning, rather than in artistic delivery/making (Creative Scotland, 2021). In addition, levels of digital capacity within the sector have not been fully interrogated. Neither were the digital skills suggested as being an essential factor for immediate recovery and resilience-building in the longer term, particularly in the face of possible future uncertainties and other potential crises.

Partial or full digitalisation of performance making and sharing, can be a significant tool in recovering from the pandemic in the way that also responds to the changing consumer needs

and preferences in terms of how they want to engage with art consumptions. Pandemic might have accelerated an appetite for a rapid shift to online production and consumption of arts based on the e-commerce model, yet clear gaps in the sector's digital capacities have emerged. Little is currently understood about what *digital performance* is and what skills and competencies are required to achieve it. This is particularly important point of reflection when the sector relies on digital technologies to recover from the shock of the pandemic and to future proof its business operations. The Scottish Government (2018) promised a significant investment in education, training and support for development of digital and technology skills and the HEI is expected to be a key partner in digital upskilling. In the process, it needs to define the specific digital skills needs and develop subject-specific curricula that address the emerging and future skills gaps. In this way universities will fulfil their institutional responsibilities for the preparedness of students for work (PwC, 2015a,b) and in addressing skills gaps reported by employers (UKCES, 2014). As such a gap is present also in the arts sector, this paper aims to define digital skills in relation to *digital performance*. It will first define what *digital performance* encompasses, and therefore how the digital skills in this subject area can be categorised and developed.

## **DIGITALISING PERFORMING ARTS**

### *DEFINING DIGITAL PERFORMANCE*

The use of digital means in performance is not a new phenomenon but, as with the broader context of the digital skills landscape outlined above, digital training and education in the performing arts sector is limited. Of the substantial studies produced that discuss the wide range of *digital performance* practices, the focus is largely on artistic practice rather than conveying technical application. The scarcity of technical skills training is perhaps partly because categories and definitions of *digital performance* are so broad and therefore difficult to implement. The range of nomenclature used to describe what is broadly termed as '*digital performance*' is wide-ranging: intermedial, multimedia, transmedial, interactive digital performance, Internet performance, podplays, telematic performance, new media performance, cybertheatre, mixed media theatre, computer theatre, and virtual theatre (see Klich and Scheer, 2012). Steve Dixon's (2007, p.3) seminal work on *digital performance* in theatre, dance, and performance art offers a helpful, yet still a wide, definition of *digital performance* categorised as "all performance works where computer technologies play a key role rather than a subsidiary one in content, techniques, aesthetics, or delivery form". Others, for example Blake (2014) is resistant to defining *digital performance*, as are Klich and Scheer (2012, p.8) who observed that a term 'multimedia' is "often used to describe digital systems organised around online environment, virtual reality systems and computer games in the sense that these are systems that support the *interactive* use of text, audio, images, video,

and graphics." Despite definitional nuances, it can be agreed that the term '*digital performance*' is used to refer to work made using technology and mediated, at least partially, through technology.

#### EXAMPLES OF DIGITAL PERFORMANCE

There are many examples of theatre companies and artists whose work is inherently digital. Some key names include Blast Theory, Robert Lepage, The Builder's Association, and Gob Squad, who use digital technology as a central feature in both making and presenting performance through site-specific practices with use of smartphone apps and other technological forms. In addition, there are many accounts of practices in telematic performance defined as the "science of the long-distance transmission of computerised information, including video screening" (Kelly, 2010 p.50) which also applies to the other terms used to refer to *digital performance* (see Brooks, 2014; Brown and Hauck, 2008; Popat, 2017). Matt Adams, the founder of Blast Theory, acknowledges that the digital dimension is inherent to the theatrical performance (Blake, 2014) and digital innovation in theatre and performance practice is an ongoing and ever-changing project. As Blake (2014, p.12) suggests, "we need to be careful not to treat the digital – or the theatre – as an established or stable object of investigation, either historically or in the present". The companies cited by Blake as examples of those working with digital technologies offer some clarity about what a term like '*digital performance*' might mean but it also leaves many questions about what specifically constitutes *digital performance* in practice. This opaqueness simultaneously presents a problem, when considering the relationship between the digital and performance, and an opportunity to define the field in a different way than to simply point to the use of digital technologies in making, recording and sharing.

#### DIGITAL TECHNOLOGIES IN PERFORMANCE

Twenty-first century technological advances have enabled the development of live *digital performance* that incorporates gaming and immersive technologies into the theatrical performance. A survey of digital and multimedia performance demonstrates a vast array of digital work and practices that have been emerging for a while (Dixon, 2007). *Dream* (2021) is such an example developed in a response to the restrictions imposed by the COVID-19 pandemic, and as a collaboration between the Royal Shakespeare Company (RSC) and a range of partners from the arts, higher education, music, gaming and the social enterprise sectors.

There are various techniques used by performance makers that utilise hypermedia and user-oriented technologies to create and narrate stories. For example, in *Karen* (Blast Theory, 2015), spectators interacted with a life coach via an app, which prompted them to respond to a series of questions at various points in the day. Using psychological profiling

questionnaires to influence the story, *Karen* exemplifies the notion of hypermediality in ways that are often not achieved in other performances. In contrast, Gob Squad's *Room Service* (2003-2018) is performed live to an audience, seated in the public area of a hotel whilst the performers' actions are broadcast from individual rooms. The interaction between audience and performers comes through telephone communication. Both performances, despite their contrasting uses of technology (landline phone and smartphone app) allow their spectators to interact in a meaningful way. Although the narratives in each performance are clearly stage managed as there are only a finite number of possible actions, an impression is given that genuine choice and agency are offered to the participants making them responsible for an outcome of the artistic production. Similarly, in the RSC's *Dream* (2021), the newest technologies such as Virtual Reality was used with similar intention of enabling an interactive dialogue within the performance space, which requires a degree of reciprocity between an artist and audience. In the 'space' of a *digital performance*, these reciprocal exchanges are less tangible but can be immediate and influential, they are however limited by the choices offered by technology itself and those controlling the technology.

#### *DIGITAL AESTHETIC IDENTITY*

In this context, all the technologies used in and for the needs of performance provide specific digital skills and competences to devise and create immersive live theatre experiences. These could include principles of User Experience, gaming platforms, Virtual /Augmented/Mixed Reality, motion capture technology, Artificial Intelligence/robots, smartphone apps or other digital media techniques. While the technologies used to make *digital performance* remain well documented, the notion of *digital aesthetic identity* seems absent from the body of literature discussing *digital performance*. Some companies, artists and performance makers might have a recognisable aesthetic (such as in the work of The Builder's Association or Robert Le Page) developed over time through an organic creative process. Admittedly, the term 'aesthetic' can be interpreted in several ways. Aesthetics, in the etymological sense and in relation to the arts, might concern the nature of experience through the senses or, most commonly, the appreciation of beauty (Cambridge Dictionary, 2021). For the purposes of this discussion, the term aesthetic is used to refer to the style or sensibility of a particular artist or, more specifically, performance maker. In other words, it is the feature of a specific work that makes it identifiable as made by a particular individual or company, and which marks their artistic identity.

This idea of an aesthetic identity is particularly pertinent in the context of *digital performance* as it involves and presupposes active audience interactions. Interactivity is one of the five characteristics of computer-based multimedia work (along with integration, hypermedia, immersion, and narrativity), and it is a significant feature of *digital performance* work that

utilises audience participation (Packer and Jordan, 2001). Hypermedia, perhaps more so than traditional (analogue) performance, creates possibilities for spectators to actively participate in its reception. By giving spectators some control over interaction with the work (in the form of "clicking the links"), performance makers facilitate audience immersion in the unfolding story, which make their experience of the performance more complete (Klich and Scheer, 2012). At the same time, thanks to a greater interaction and connection with performance work, an audience develops a clearer appreciation of both the performance and performance maker, thus further strengthening their unique recognisable *digital aesthetic identity*. This area of designing interaction with audiences emerges as another example of new skills required by 'digital' performance-makers.

### **DIGITAL SKILLS FOR PERFORMANCE FRAMEWORK**

From the picture presented above it is clear that, despite the importance of digital skills to the current and future economy, there is much work to do in making digital upskilling an essential feature of training and education for DDP students. Literature pertaining to *digital performance* largely discusses it through the analysis of its artistic merits and perceived meaning rather than the actual hard or technical skills needed to produce it. Nor is there wide discussion of the soft digital transferable skills associated with ways of working and collaborating digitally. The development and implementation of digital and media/computer-mediated technologies redefines the notion of performance and establishes a more active relationship between makers and spectators. It is evident that these technologies offer new tools for artistic expression and unique aesthetic identity, which we propose, needs to be further explored but also developed and nurtured as an essential part of professional training. In this way, we see *digital aesthetic identity* as a layer of digital capability that current and future performance makers must develop in order to practise *digital performance* successfully.

Performance makers must know what tools are available to them, and how to use them. They must develop their specific style within the boundaries of technology-driven possibilities. At the same time, they need to swiftly grasp the organisational layer of theatrical production, that is typically collaborative in nature. They need to know how to utilise technologies commonly used across workplaces to communicate, collaborate and manage work projects. In the context of performance training and education, specific technical, as well as baseline, digital skills and the *digital aesthetic identity* all need to be given consideration. Therefore, drawing on categorisation of digital skills in the wider economy, we propose a framework of *Digital Skills for Performance*, which understand *digital performance* as constituted by three distinctive layers listed below in Table 1, each encompassing particular skillsets and competencies.

**Table 1. Digital Skills For Performance Framework (developed by authors).**

LAYER OF SKILLS AND COMPETENCIES	DEFINITION	EXAMPLE
<b>Specific 'technical' digital skills:</b>	relating to the use and adaptation of specific digital technologies, devices, applications, systems and software, and other technological/internet and media solutions for performance	Use of motion capture suits and VR technology such as in the RSC's <i>Dream</i> (2021).
<b>Baseline 'transferable' digital skills:</b>	relating to ways of working and enabling communication, collaboration and management of performance work and projects	Using Zoom and other web conferencing technologies to collaboratively produce performance work, such as Creation Theatre's <i>The Tempest</i> (2020).
<b>Digital aesthetic identity:</b>	relating to digital construction of self and a specific style or sensibility of a performer/performing company	<i>The Show Must Go Online</i> (2020) created a web series of Shakespeare's plays performed using Zoom and broadcast live on YouTube. In addition to this innovation, the company aim to 'provide a progressive vision for the future of theatre, with gender balanced casting and proactive inclusion of underrepresented groups' (Rob Myles, 2020).

This three-layered digital skills framework will be used to map out the current HE educational provision and to further explore readiness of the Scottish HE institutions in preparing DDP students to work in the realm of *digital performance*.

## **MAPPING OUT THE CURRENT DIGITAL SKILLS OFFERING**

### *METHODOLOGY*

A pilot desk-based study has been conducted to map out the current digital offering within major performance programmes offered at the Scottish universities. Fifteen HE institutions in Scotland were identified and selected, based on their degree programmes in the QAA defined subject area of DDP. Publically available documentation in the form of programme specifications and individual module descriptors were scanned and analysed. Aligned with the proposed three layers of *Digital Skills for Performance Framework*, the exercises focused on identifying a digital skill and competency development opportunity for students enrolled on performance programmes. The exercise did not set out closed search terms but instead followed the frame outlined above and scanned the documentation for specific, baseline and *digital aesthetic identity* skills. In doing so we wanted to account for a potential difference in naming various digital skills. This open approach also enabled capturing of embeddedness of digital skills within performance programmes that is both explicit (i.e. digital skills that programmes claims to develop) or only implicitly stated (digital skills offering without reference to digital terms).

Our analysis is based on the publically available information and therefore all statements and observations made are subjected to the quality and depth of information disclosed by the Scottish universities. We are aware that some of that information might not be updated frequently or might be withheld for strategic reasons. The state of the current offering is predicted to quickly change in response to the new post-pandemic reality. For example, a new postgraduate MA in Digital Performance has been recently announced by one of the Scottish universities with the first delivery scheduled for an academic year of 2022-2023. Therefore, the validity of presented summary of findings is claimed to be true at the time of writing. There are further empirical limitations of this initial study, which is based on the secondary data analysis. Future follow-up research is being currently designed featuring the primary data collection from a range of stakeholders. However, under the current conditions, it is important to share these initial results as quickly as possible to help the performance sector influence a development of digital skills. In line with this paper's practical orientation and heightened by the need for the sector's fast post-pandemic recovery, the emerging ideas presented here are crucial for sustaining a timely and necessary sector-wide conversation and exchange of good practices to address current low levels of digital skills in DDP.

## FINDINGS AND DISCUSSION

Of the fifteen Scottish universities identified as part of this study, six offer undergraduate and two offer taught postgraduate degrees in DDP and related areas. All programmes aim to develop creatives such as actors, directors, performers and performance makers, although it should be noted that university courses are not specifically vocational like those provided by the Royal Conservatoire of Scotland (RCS). In surveying the available programme specifications and module descriptors, it is apparent that little attention has been given to digital skills training (see Table 2). Whilst all the programme specifications mention the use of 'digital portfolios' and 'digital performance' relating to some of the definitions outlined earlier in this paper, there is little specific detail concerning baseline (transferable) or specific (technical) digital skills such as competency in specific computer programmes or other technologies. More notably, there is a complete absence of programme content relating to *digital aesthetic identity*. From available programme documentation, only two Scottish universities listed modules titled 'Digital Performance' and 'Live and Online'. In the former instance, the content relates largely to artistic and analytical appreciation of *digital performance* works rather than developing a digital construction of self and specific digital style or sensibility of a performer (although some attention is paid to making work). The discussion below, therefore, aims to explore how these shortfalls might be addressed.

**Table 2. Digital Skills in Performance Offering Within Scottish HEI (developed by authors)**

Scottish Institution/Programme Type	Specific digital skills	Baseline digital skills	Digital aesthetic identity	No Performance related provision
1. University of Aberdeen				X
2. Abertay University				X
3. University of Dundee				X
4. University of Edinburgh				X
5. Edinburgh Napier University (UG and PG)		development of IT skills		

6. University of Glasgow (UG and PG)		effective and appropriate use of IT		
7. Glasgow Caledonian University				X
8. Heriot Watt University				X
9. Queen Margaret University (UG)		development of IT skills		
10. Robert Gordon University				X
11. University of St Andrews				X
12. University of Stirling				X
13. University of Strathclyde				X
14. University of the Highlands and Islands (UG)		'Live and Online' digital performance module offered at Level 8		
15. University of the West of Scotland (UG)		'Digital Performance module offered at Level 9; digital portfolio assessments		

The programme content of the HE providers surveyed is surprising, particularly given the QAA's subject benchmark statements for DDP stressing the importance of digital skills. For example, 'digital arts and new technologies', 'digital media', 'intermedia', 'computer-aided design', 'literacy in digital vocabularies', 'information technologies' and 'digital platforms' are mentioned in several areas including those pertaining to graduate attributes. The embedding of 'digital' in programme design is essential in addressing the skills gaps identified in the first part of this paper. The QAA's DDP subject benchmarks state that the "broad, multidisciplinary and interdisciplinary nature of dance, drama and performance makes it inappropriate to identify prescriptively the knowledge and understanding, which are to be expected of a

graduate in these subjects" (QAA 2019, p. 7). However, the multiple mentions of 'digital' in the benchmark statements clearly indicate the significance of DDP graduates being digitally competent. As these expectations of digital competencies are likely to increase, there will be a need for focused attention on digital skills development within the DDP programmes content, specifically to address demands of Digital Economy.

As we established, the development of digital skills in performance context relates to a performance product and production process alike. While the first one focuses on the production of a specific outcome and therefore needs specific technical skills to achieve such a goal, the process skills focus on abilities relating to collaboration, organisation and coordination of work at distance in effective manners. There is however a clear layer that escapes this binary and somehow simplistic categorisation. On one level, it is to do with a critical competence of knowing what technologies are to be used, when and how, to achieve a purposeful and desirable outcome that is crucial to an authentic creativity-led process, rather than a result of a random choice of available technology. On an even deeper level, that intelligence will champion a choice of unique aesthetic values and will underpin a maker's artistic development and *digital aesthetic identity*. These unique qualities are then a part of the aesthetic digital product as well as forming a recognisable style associated with a specific artist. The challenge for the education sector will be to find appropriate mechanisms and pedagogical approaches for teaching or coaching the development of that unique voice alongside upskilling in baseline and specific digital skills.

Although there is an acknowledgement of the importance of working digitally, DDP programmes lack specificity about development of which digital skills are prioritised and how these skills might be taught. Whilst the time constraints of a university course might make it unrealistic to deliver a wide range of technical skills in areas such as programming or using specialist software, there are missed opportunities for aspects of this kind of training to be embedded within DDP curricula. For example, graduates working in the creative industries are often at the forefront of innovation. Advancements in and availability of technology mean that it is possible to create substantial *digital performance* work, even by a solo artist without institutional support or resources needed in traditional collaboration-based methods of making work such as ensemble devising. This technological transformation removed some of the resource-related barriers performance-makers used to face, offering them new opportunities for making work cheaply. Therefore, it is necessary to foreground specific skills training to meet expectations of graduate attributes and the professional world of theatre.

Multiple references to 'digital portfolios' in the surveyed programmes suggest that this is the most well-developed area of practice but with a further training still required to ensure that technologies and digital platforms are used effectively. This area should also include training

in etiquette for working digitally with collaborators but also with audiences, as there is a need to develop and foster a new relationship with remote audiences. Undoubtedly, these new interactions links with *digital aesthetic identity*, which is potentially the most significant area for consideration in development of *digital performance* skills in the years to come. A notion of digital etiquette might be a valuable step for understanding how the self is presented online and in other virtual formats, and importantly, how it is being received by audiences who watch. In doing so, a recognisable style might emerge that identifies work as belonging to a specific company or individual. This should not be concerned with presenting a prescribed method for working digitally. Rather, it can be a way of encouraging collaboration in learning such that digital aesthetic identities emerge organically through the process of learning. Central to this approach is a pedagogical shift to the educator as facilitator (Ellerani and Gentile, 2013) that promotes experiential student-centered learning (Weibell, 2011) through inclusive curricula and by affording diverse learning opportunities. This shift in pedagogy seems an important bridge between an active learning of performance-makers and an expected active engagement of audiences in the performance work.

Given the projections for increased engagement with digital arts in post-pandemic times, the unique digital artistic style easily recognisable by audiences is considered to be critical for successful performance makers, if they are to become innovation leaders in *digital performance*. In fact, the proliferation of *digital performance* is an opportunity to stand out in a sector that is notoriously challenging in terms of securing paid jobs and achieving sustained employment (Equity, 2021; McRobbie, 2015). A strong *digital aesthetic identity* and skills might be a gateway to a successful career in the performing arts. It may be that the teaching of digital skills in DDP programmes can be easily addressed if it is unanimously supported by the government and HEIs in terms of appropriate levels of investment. However, there will be real barriers to the embedding of digital skills in DDP programmes, for example, a lack of resources, staff training and equitable access to digital infrastructure, software and content, especially for students from disadvantaged backgrounds (OU, 2019). QAA Scotland (2021) has promised to tackle the digital divide in the Scottish higher education sector. Although details of this project are currently scant, it seems that there will be a focus on embedding digital skills and digital ways of working across practices in the Scottish HE sector, from programme design and delivery to quality assurance. Digital inclusivity of modules, courses and programmes will be central in fulfilling all the ambitions related to the digital agenda for increasing employment opportunities for graduates.

*Digital performance* should not be understood as means to replace or substitute traditional theatre-based production but rather as an alternative format to complement and support the current practices. As argued in this paper, providing there is sufficient level of digital expertise

and infrastructure, digital technologies offer ways to recover from the shock of the pandemic and prepare for potential future disruptions. At present, *digital performance* is in its infancy. However, there is no doubt that it can offer a more inclusive engagement for audiences, who have been marginalised, either because of health problems or lack of geographical and physical access. For makers and performers, the digital realm offers another way of reaching to audiences and clients, thus creating more job opportunities in this competitive and precarious sector of work. Time will tell what the future of *digital performance* is, but if any of these opportunities are to be fulfilled, development of digital skills should be a priority for the sector's training providers and HEIs. The layers identified in this paper's *Digital Skills for Performance Framework*, must be further explored to inform educational activities, and guide creative performance practice collaboratively shaped by performance makers, theatre venues, digital providers, technicians and media specialists.

This paper represents a first step in recording the current comprehension of the emerging practice and theory of *digital performance*. The *Digital Skills for Performance Framework* outlines key areas of skills and discusses considerations required for development of digital agenda in this unique artistic context. It is useful for informing initial setting of priorities and goals, however, further research is needed. Future research could focus on exploration of specific digital technologies considered by performance makers and employers as crucial in this evolving field. It is also important to understand expectations of current students as well as readiness and appetite of performance audiences for this type of experience. At the same time, this new agenda of research must focus on understanding challenges and constraints for HEIs in meeting the demand for digitally fluent performance makers fulfilling aesthetic needs of current and new audiences.

## **CONCLUSIONS AND RECOMMENDATIONS**

In the context of post-pandemic recovery, the performing arts sector needs to find creative and resilient strategies to ensure its sustainability. Investing in development of *digital performance* provides exciting opportunities, but it must be accompanied by sufficient resources and sound competencies in producing and sharing performance digitally. Higher Education is critically important in ensuring the development of graduate digital attributes. In this critical stage of post-pandemic recovery, HE must proactively devise innovative pedagogies to prepare future graduates to work in reality, where digital interactions and digital cultural consumption has become a norm. It is therefore crucial that skills development is prioritised to address the current and future skill needs in the area of performance. This early study offers important contribution to the discussion on future developments of skills and curricula in the Higher Education performing arts subjects addressing the three distinctive layers of *Digital Skills for Performance Framework*. Based on this preliminary research, there

is an urgent need for DDP programmes to reevaluate and update their content to develop digitally capable and work-ready performance makers and artists. Digital upskilling of students and future graduates seems particularly important in sizing and exploiting new work opportunities after the COVID-19 crisis, but equally in the process of redefining the field of performance in the next decades.

To align with an increasing digitalisation in the wider economy, performance programmes must feature strongly the development of relevant and unique sets of digital skills. This paper's framework offers useful foundation focusing on three main areas in which digital skills need to be developed but these conceptual blocks need further exploration and development. The teaching of specific technical and transferable digital skills can offer a meaningful collaboration between educators and learners that allows for a *digital aesthetic identity* to emerge. Such sustained interaction between seeking critical understanding of the subject matter, and applying technical skills to make *digital performance*, might allow for organically artistic growth fitting the needs of our times. In line with the required cultural and pedagogical shifts to a more engaged and student-driven learning, specific interdisciplinary collaboration with other subject areas such as Business, Leadership, Digital Design and Computer Games Design could provide opportunities to deepen the subject knowledge, share pedagogies, industry practices and networks, therefore enhancing graduate employability, and most importantly, making the sector more resilient and prepared for any future major disruptions.

For that to happen, the following four recommendations are suggested for policy-makers and actors working across the DDP educational provision to enable an accelerated development of digital skills:

1. **Investment in Training for Staff:** it is essential that educators have sufficient skills to deliver digital curricula and develop digital skills. Universities, HE unions, Advance HE, QAA and all other relevant actors can all contribute to a development of flexible professional development and training opportunities.
2. **Skills monitoring:** the sector's skills councils should help to collect data on digital skills needs and gaps in the performing arts sector's skills pipeline. This type of analysis can identify specific needs ahead of the future skills demand and feed into skills development planning.
3. **Investment in Digital Access and Infrastructure:** policy-makers and HE need to eliminate a digital divide and remove barriers to digital access through investment in the digital infrastructure (internet connectivity) and ensure disadvantaged individuals have access to hardware/software.

4. **Building Strategic Partnerships:** *digital performance* can learn from film, media, screen and games sectors currently leading in the adoption of digital technologies. Strategic lasting partnerships are necessary to enable cross-artform learning and innovation in performance production and consumption.

It is hoped that early findings presented here will help influence an accelerated development of digital skills in performance education and practice. As theory of developing digital capacity within the performing arts sector is currently very limited, this paper makes an important and timely practical contribution in setting out the emerging ideas useful to address the current lack of focus on digital skills in the DDP curricula. With the heightened need for the sector's post-pandemic recovery, the skills development must become an area of great priority for policy-makers, employers and educators. This paper calls all key stakeholders to sustain this conversation by exchanging good practices and implementing changes to support the development of competence in the emerging field of *digital performance*.

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