

**THE INFORMATION
AND COMMUNICATION
TECHNOLOGY (ICT)
IN APPLIED AND
CREATIVE ARTS
ECOSYSTEM**

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Abstract

This paper reviews the primary applications of ICT in Applied and Creative Arts industry in the context of collaborative creativity, cloud computing, data, teaching and learning, marketing and management. The use of ICT has been found to complement the creative process using collaborative creativity, cloud computing and data. However, the extent of its effectiveness is highly dependent on various parties and stakeholders within the applied and creative arts ecosystem. As for arts marketing and management, the use of ICT has revolutionised the way it was done.

Keywords: Information and Communication Technology (ICT); teaching and learning, creative process; applied and creative arts ecosystem

Introduction

Today's technology has advanced into a broader scope of application and usage. With the current trend, ICT has a significant impact on the Creative Arts Industry. It plays vital roles in the advancement of the applied and creative arts ecosystem. The applied and creative arts ecosystem involves several components including the educational institutions, policy makers, organisation, industry, government agencies and others who collectively form the ecosystem.

ICTs consist of several components but not limited to software, hardware, communication technologies, internet and data cloud computing. ICT is utilised almost daily due to its benefits mainly in the creative arts industry. It could be in the forms of products, services, machinery, visual material, performances, entertainment, and more.

Today's technology has advanced into a broader scope of application and usage. Traditionally, the application of ICT in arts and design was a means to an end in which artists merely used ICTs to produce their artwork. New technologies such as Extended Reality (XR), Artificial Intelligence (AI), Cloud Computing and big data have altered this common practice in ways that are unique to specific art field. One type of technology might impact all arts, but one field might be able to capitalise on it the most. The big data technology, for example, would benefit the field of arts marketing and management the most as information is on audiences, the creative markets and external environments are highly sought after by arts marketing manager and other creative managerial personnel to plan and formulate strategies. This paper mainly discusses the advancement of current technologies about applied and

creative arts ecosystem from multiple perspectives including the creative process, teaching and learning of arts and design, marketing in arts as well as arts management.

Role of ICT in Collaborative Creativity

Creativity has now become one of the most critical skills to have. It is well accepted long ago that creativity is a crucial skill in applied and creative arts industry. Mihaly (2015) was slightly interested in discussing the 'where' of creativity instead of the 'what' of creativity. While some argued that creativity is in the mind of a creative person, some perceived creativity as a subjective act of mind. According to Csikszentmihalyi (2015), creativity is defined at two levels: (1) an original idea or product that is valued at the societal level and results in cultural revolution - cultural creativity and (2) novel ideas or experiences at the consciousness of personal level which need not to have impact anywhere else - personal creativity.

The pragmatic approach in the current situated digital environment, creativity skill is closely related to the concept of constructivism and connectivism. Constructivism builds the foundation of creativity where a person constructs the knowledge and meaning from experience (Plasencia, 2009) while connectivism matches the process of "creation" with the current digital age by interaction and communication through the digital artefacts (Mattar, 2018). Being social is a profound aspect that materialises creativity in which the collaborative effort is mediated by a medium such as ICT technologies (Taylor & Littleton, 2012). With the borderless concept of the World Wide Web, a creative brain has endless network possibilities which connect individuals on a complex network. The artist and designer communicate, share ideas and project through the current technologies and as a result, intensify the inspirational process. According to Anastasiades (2017), ICT characteristics (interactivity, rapidness, an assortment of information form) assist creative procedures (imagination, protection, critical evaluation) and support the development of collaborative creativity

Through ICT technologies, artist and designer opt to communicate through platforms such as social media, instant messaging and video conferencing. Furthermore, they could collaboratively work on the same project together via an online platform, from the pre-production to the production stage, and until the post-production. Such interactivity is enabled by the ICT technologies which allow the artist and the designer to participate in the co-create initiative. Each involvement is a blend of the idea, shared knowledge and experience and ultimately contributed to the higher success of the project. According to Anastasiades (2017), there are four areas that facilitate collaborative creativity: (1) the mutuality between team members, where the reciprocal relationship exists within the members; (2) exchanging ideas, experiences, and life experiences, where the members can share their content of cognition including past experiences with others; (3) exploring a shared vision, where all the members need to come to an agreement to achieve the same goal; and (4) negotiating a collective sense where the members corporately act together as a team.