

# Mastering the Arts and the Sciences of Animation

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AS A CHILD OF THE '80S I BELONG TO A GENERATION raised by television and video games. Like many children today, I sat on my living room floor, legs crossed, glued to the television, watching cartoons, mainly produced in Japan and Korea but dubbed in English for foreign audiences. With the advent of cable and channels such as Nickelodeon and Cartoon Network, my afternoons and Saturday mornings were spent watching cartoons such as Dragon Ball Z, Cowboy Bebop and Batman: The Animated Series. Like many of my peers and students, this is where my passion for art and drawing began: pencil and paper in hand, pausing the VCR to trace the characters on the television.

My requests for art supplies and extra drawing classes were met with encouragement, but they were also paired, compliments of my parents, with extra classes in math and computer science. Upon beginning my undergraduate degree in Design and Animation, I quickly found that the worlds of animation art and of science were intertwined. My understanding of computer science, physics, and biology made me more versatile within the animation-production environment. While the core principles of animation can be explored by drawing in the corner of a textbook, professionally, the process is far more complex. Animation has evolved from the days of Walt Disney with a team of fine artists working over drafting tables and light boxes, drawing hundreds of images of Mickey Mouse.

## Artistic Skill Set

Today, teams of people using powerful computers and cutting-edge technology

create lifelike animation using skills ranging from three-dimensional modelling and digital painting to even computer programming and physics-based simulations. While the skill set of an animator is firmly rooted in drawing and artistic expression, modern animation requires the blending of fine art and science. Animation as we now know it today has some of its roots in the sciences, with many of the early examples of computer-based animation being created by mathematicians, computer scientists, and even nuclear physicists.

Animation is, essentially, an exercise of the creative imagination and a professional skill that is being sought by a large number of young people in Jamaica and globally. Until recently, the only avenue to study and work in animation was overseas. Like many of my peers of over a decade ago, I pursued my education in animation in the United States, and I imagined that it would be unlikely to return to Jamaica and find employment in my field. However, today, I am very much based in Jamaica teaching and working in the field of animation and motion graphics at the Caribbean School of Media and Communication (CARIMAC), in the Faculty of Humanities and Education, UWI. For many others like me, the local animation landscape is rapidly changing for the better.

The list of local animation firms is growing steadily, with studios such as Real Rock GSW, Alcyone Animation, Liquid Light Digital, and Pixel 3D – all based in Kingston. They are creating animated content not just in the form of cartoons, but also architectural visualisation, video games and motion graphics for broadcast and advertising. CARIMAC, the first local institution to offer certificates and now pioneering a Bachelors degree in Animation, is among several other tertiary educational institutions in Jamaica offering varied training programmes in the field, including the Edna Manley College, the HEART Trust/NTA and University of Technology.

To the surprise of many, a leading proponent of animation training is none other than the World Bank, a global institution more readily associated with major infrastructure projects, agricultural enterprise, and urban development. Some of the Bank's more imaginative leaders quickly recognised that national economic development also involves developing the creative competences of young people who can combine art with the science of design and computing. In this process, the World Bank has joined local institutions in twice hosting

the regional animation festival called “Kingstoon” in Jamaica. The Kingstoon Animation Festival not only brought representatives from the regional and international animation industry to Jamaica, it also showcased the work of local animation firms and independent animators. The educational institutions now work closely with the Ministry of Science, Energy and Technology to help grow the nation’s capacity in animation education and employment.

## Major Players

This relatively recent increase in animation activity locally is fuelled by the success stories of countries such as India, South Korea, and the Philippines, which have become major players in a global animation and gaming market valued at over US\$243 billion in 2016. Animation is being seen as an avenue towards increased local job creation, especially among young people. The success of the leading countries is largely due to their low-cost yet highly-skilled labour force trained in both the arts and the sciences. Locally, call centres are currently at the forefront of the outsourcing debate, but much more is possible given the talent and creativity of our people. Animation may well prove to be the next frontier for digital services export from Jamaica and the Caribbean.

This is especially the case as the role of the animator is expanding beyond just the creation of two-dimensional animated cartoons and now becoming an integral part of the special effects and often outsourced post-production pipeline in the creation of blockbuster movies. One simply has to look at the credits of any recent Avengers or Transformers movie to see the list of hundreds of animators, writers, and digital artists from close to a dozen studios spread across the world who contributed to the creation of the final film. This collaborative approach is also possible in Jamaica and in humanities faculties such as UWI’s and Edna Manley’s, drawing on the writing, storytelling, and creative abilities of students and staff.

While Jamaica’s animation industry is still in its early stage, with only a few small firms currently operating, the country’s shared language and proximity to production markets in the United States and Canada are valuable assets in becoming a destination for animation outsourcing. As India and Korea and

other animation markets worldwide grow, outsourcing firms have begun to look towards subcontracting their animation contracts to smaller, newer, and more affordable markets. This is in line with one of the current visions for the development of Jamaica's future animation industry.

The development of a diverse and highly-skilled creative workforce is essential to creating a sustainable animation sector. The foundation for this has to be laid in the primary, prep and all-age schools throughout the country, including the introduction to visual art at an early age. Putting high school students into boxes called arts on the one hand, and sciences, on the other, can frustrate those who want a career in both arts and sciences, through pursuits such as animation and game design. The future of Jamaica's animation industry is being advanced by educational institutions and small firms led by visionaries and staffed by creative people passionate about animation and storytelling. The future of Jamaica's fledgling animation sector rests in the hands, literally, of the current generation of young animation enthusiasts sitting in front of their televisions and computers knowing that they can become not just consumers of foreign animation, but also creators of local animated content through multifaceted training and a broad-based education.