PAGKAMALIKHAIN: THE PHILIPPINE CREATIVE INDUSTRIES IN THE TVET PERSPECTIVE

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Executive Summary

"Creative industries" are an important cultural and economic asset to any country, as they foster creativity and communication, ensure the well-being of communities, and improve self-worth and esteem among the communities' members. Creative industries also produce a unique commodity, in that they allow peoples from other countries to experience different cultures. That being said, creative products and services are not given due importance for the longest time due to the prevailing perception that STEM, or Science, Technology, Engineering, and Mathematics, is the key to a country's economic success.

As a result, the Philippines' creative industries continue to be a largely untapped sector, one that experts say can actually drive the country's future economic growth. Compounding matters is the fact that creative industries in the country are still informal and loosely-structured, which provide a host of limitations such as lack of data and poor government support. The Creative Economy Roadmap of 2030 seeks to change that. As creative industries cover a wide-range of other industries and sectors, TVET can also play a major role in raising awareness about creativity and equipping future skilled-workers with the right competencies for the creativity-fueled workplace, particularly those skills influenced by the Fourth Industrial Revolution.

Currently, TESDA only provides limited training for Philippine creatives due to the lack of industry demand, as well as the aforementioned informal nature of creative industries as a whole, among other things. Rectifying this problem, as well as a range of others, will go a long way into integrating TVET in creative industries, and eventually utilize this untapped sector for the country's economic and cultural well-being.

LIST OF ABBREVIATIONS

4IR Fourth Industrial Revolution

ADBOARD Advertising Board of the Philippines

BFAD Bureau of Food and Drugs

CCP Cultural Center of the Philippines
CHED Commission on Higher Education

DCMS Department for Digital, Culture, Media and Sport

DOH Department of Health

DOST Department of Science and Technology

DOTC Department of Transportation and Communications

DTI Department of Trade and Industries

FAMAS Filipino Academy of Movie Arts and Sciences

ICT Information and communications technology

ITES Information technology enabled services

LGU Local government unit

MTRCB Movie and Television Review and Classification Board

NCCA
National Commission for Culture and the Arts
NEDA
National Economic and Development Authority
NHI
National Historical Commission of the Philippines

OPS Office of the Press Secretary

PANA Philippine Association of National Advertisers

PIA Philippine Information Agency

STEM Science, Technology, Education, and Mathematics
STEAM Science, Technology, Education, Arts, and Mathematics
TESDA Technical Education and Skills Development Authority

TVET Technical vocation education and training

UN United Nations

UNCTAD United Nations Conference on Trade and Development

UNDP United Nations Development Programme

UNESCO United Nations Educational, Scientific and Cultural Organization

I. Background

In simplest terms, 'culture' is the collective identity of a society. It encompasses arts, laws, belief systems- basically anything a person obtains that influences the way his or her society functions. Culture also plays a key role in establishing individual identity, as shared stories and experiences form the middle ground that unifies a society's members, giving each and every one of them a sense of belongingness. In the perspective of the United Nations, culture fosters creativity and communication, ensures the well-being of communities, and improves self-worth and esteem among individuals.

Over time, culture has become something of a commodity, becoming the basis of a growing economic segment in the world that can be defined as "the totality of individuals and businesses that produce the cultural, artistic and innovative products and services". This 'cultural industry' was referred to as such during the 1940s, but was eventually re-branded as the 'creative industry' by the United Kingdom and Australia five decades later. The term 'creative' was deemed more appropriate, given that cultural products and services nowadays focus more on fostering creativity, innovation, and technological change, in conjunction with promoting cultural identity.

With the advent of the Fourth Industrial Revolution, or 4IR, the value of creative industries have started to increase. Creative products are now easier to consume, as music, movies, and TV shows are made more compact and more accessible. Digitization ensures that most people can enjoy other cultures more readily, ensuring a growing demand for said products. The perceived negative aspects of the 4IR, that of automation and artificial intelligence replacing traditional occupations, are normally glossed over since creative industries put great stock on creativity and originality- aspects that are currently not replicable by machines.

This can be a boon for the Philippines, whose creative industries were said to comprise roughly 7.3% of its total gross domestic product in 2014. The country has officially recognized creative industries as a key aspect of its strategic framework for development. Under the 2017-2022 Philippine Development Plan, the country intends to (among other things) "boost the development of Filipino creativity as tool for social cohesion and impetus for culture-based industry and creative economy" and to "build public appreciation of Filipino creativity". Fulfilling such plans will require forward-thinking and thorough examination of the country's creative industries, vis-à-vis the 4IR. While there have been studies dedicated to mapping out the Philippine creative economy, this study will give greater focus on its technical-vocational and manpower aspects.

II. Creative Industries and the 4IR

A. Definition

The term "creative industries" does not have a single definition, a fact that has since obliged various groups to come up with their own interpretations. The British government's Department for Digital, Culture, Media and Sport (DCMS) defined such industries as "industries which have their origin in individual creativity, skill, and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property". Admittedly, this is a broad definition that only seeks to distinguish a specific group of products and services from others, but this was nonetheless the first attempt to define creative industries as a whole.

Other definitions have since been formulated. The World Intellectual Property Organization (WIPO), for instance, uses the definition of "industries directly and indirectly involved in the creation, manufacture, broadcast and distribution of copyrighted works", with specific focus on the protection of intellectual property rights. According to WIPO, creative industries can be

classified as 'Core', i.e. those sectors that are wholly involved in the manufacturing and distribution of creative products; 'Interdependent', i.e. those that are involved in providing materials/equipment to help in the manufacturing and distribution of said products; or 'Partial', i.e. those that dedicate only some of their functions in creative products and services.

Meanwhile, the United Nations Conference on Trade and Development (UNCTAD) expands upon these definitions, but goes further by giving attention to the cultural aspect of creative products and services as a whole. According to this definition, creative industries can consist of 'Heritage', i.e. products and services inherently have cultural ties; 'Arts' i.e. that are more generalized forms of creative products; 'Media', i.e. those that convey ideas or provide entertainment through physical or digital means; and 'Functional Creations', i.e. those that have practical applications that directly benefit their end-users.

Given these definitions, creative industries consist of many sub-sectors that can overlap with other industries depending on the definition being used. (See Table 1).

Table 1. Components of Creative Industries, According to the UK DCMS, WIPO, and UNCTAD

UK DCMS Definition	WIPO Definition	UNCTAD Definition
 Advertising Architecture Art and antiques market Crafts Design Fashion Film and video Music Performing arts 	Core copyright Industries: - Advertising - Collecting societies - Film and video - Music - Performing arts - Publishing - Software - Television and radio	Heritage: - Traditional cultural expressions: arts and crafts, festivals and celebrations - Cultural sites: archaeological sites, museums, libraries, exhibitions, etc. Arts: - Visual arts: painting, sculpture,
	 Visual and graphic art 	photography and antiques

- Publishing software
- Television and radio
- Video and computer games

Interdependent copyright industries:

- Blank recording material
- Consumer electronics
- Musical instruments
- Paper Photocopiers,
- Photographic equipment

Partial copyright Industries:

- Architecture
- Clothing, footwear
- Design
- Fashion
- Household goods
- Toys

- *Performing arts*: live music, theatre, dance, opera, circus, Puppetry, etc.

Media:

- Publishing and printed media: books, press and other publications
- *Audiovisuals*: film, television, radio and other broadcasting

Functional creations:

- Design: interior, graphic, fashion, jewelry, toys;
- New media: software, video games, and digitalized creative content;
- Creative services: architectural, advertising, cultural and recreational, creative research and development (R&D), digital and other related creative services.

B. Impact

Regardless of how one chooses to define 'creative industries', the term has nonetheless encouraged educators to rethink the value of creativity in their curricula. Australia, for instance, has started to emphasize the value of arts by adopting a STEAM mindset, i.e. Science, Technology, Engineering, Arts, and Mathematics, in its schools. Unlike the more traditional STEM approach to education, STEAM puts creativity and originality in the same league as arithmetic and critical-thinking, as the former are deemed just as essential in future workplaces as the latter.

This way of thinking has also been adopted by proponents of the Fourth Industrial Revolution (4IR), or the continued integration and advancement of technology in everyday life. Creativity is believed to be one of the many human skills that artificial intelligence will be able to replicate in the future. Until, or if, that time comes, humans must continue to refine how they generate creative products and services. And since creative industries are a lucrative market that will continue to employ highly-creative and artistically-oriented people in the foreseeable future, it will also be in the workers' best interests to continue to refine their skills and adapt to the upcoming change.

In a 2015 report from the UN Development Programme, the value of creative industries is said to have totaled to about USD 624 billion in 2011, up from USD 559.5 billion in 2010 and USD 62 billion in 2002. Demand for such products is expected to increase as changes in social interaction and connectivity, and as the demand for new cultural experiences also increase. It is only prudent for the Philippines to capitalize on this lucrative market, seeing as how much value other countries put on their creative industries.

III. The Philippine Creative Industries

A. Mapping

The first effort to identify the country's creative industries was conducted by the WIPO in 2003. This study viewed creative industries according to ownership, as listed in Table 1, determining the involvement of entities in the creation of products. By using a copyright perspective, the Philippine creative economy consists of 'Core' industries (i.e. film, TV, and radio), 'Interdependent' industries (i.e. cinema and photography equipment), and 'Partial' industries (i.e. jewelry, footwear, and toys). A fourth segment, 'Non-dedicated Support' industries, was also identified, consisting of telecommunications, internet, transportation, and the like. These

industries are defined by the WIPO as those facilitating distribution and sales of copyrighted-products. Through this study, the Intellectual Property Office of the Philippines (IPOPHIL) was able to identify key creative industries (based on copyright) that are considered high-value, namely media (i.e. television, motion picture, and radio), entertainment (i.e. music and performance arts), and software (see Figure 1). IPOPHIL also realized that through this strict definition, some 530,000+ full time employees were working in creative industries, a number that excluded freelancers in the country.

COPYRIGHT BASED INDUSTRIES	IPOPHIL 2010 Data Value (PHP'000)
CORE CBI	460,340,207
Press & Literature	88,316,156
Music, Theater, Opera	71,733,219
Motion Picture & Video	9,289,765
Radio & Television	240,471,317
Photography	2,025,666
Software & Databases	42,596,043
Visual & Graphic Arts	1,558,685
Advertising	4,349,356
INTERDEPENDENT	118,420,896
PARTIAL	45,876,646
CORE CBI as % of GDP	5.11%
TOTAL CBI as % of GDP	6.94%

Figure 1. Value of Philippine Creative Industries, According to Copyright (IPOPHIL, 2010)

This study was followed-up in 2011 with another, separate mapping conducted by Mr. Eduardo Morato of Bayan Academy, which also used data from the WIPO study. Six (6) major fields of Philippine creative industries were identified, namely: Heritage and Fine Arts, Design and Architecture, Audiovisuals, Printing and Publishing, Creative Services, and Science and Technology.

The study further explored these fields based on their interactions with other industry sectors, actors, and government agencies, as well as the specifics that go into their creation of products and services. This helped in distinguishing one field to another. 'Heritage and Fine Arts', for example, is said to comprise performing and visual arts, arts and crafts, and heritage sites. As such, actors in this segment included not only artists and choreographers, but also members of local communities. Practitioners in 'Heritage and Fine Arts' go to special art schools and universities, and are refined through production guilds, events companies, sponsors, and the like. Government institutions that delve in 'Heritage and Fine Arts' include the National Commission for Culture and the Arts, Department of Education, and Commission on Higher Education. Table 2 further explores these creative fields.

Perhaps no other place exemplifies the value and potential of Philippine creative industries than Baguio City, which was the first city in the country to have been included in the UNESCO Creative Cities Network. This distinction was granted in 2017 specifically for the City's showcasing of Cordillera culture through crafts and folk-art, as it did in the Baguio Creative Festival in November 2018. Ultimately, however, the city's prominence is but a glimpse of the country's overall creative economy landscape, which has not been fully mapped-out despite the previous researches' efforts.

Table 2. Fields in the Philippine Creative Industries

Creative Fields	Creative Sectors Involved	Creative Originators	Creative Enablers and Facilitators	Creative Transformation Mechanism	Creative Products	Creative Distribution Mechanisms	Public Institutional Involvement
Heritage and the Fine Arts	 Performing Arts Visual/Literary Arts Traditional Arts & Crafts Cultural Sites 	 Artists (Choreographers, Painters, Writers, etc.) Local and Indigenous Communities 	 Special Art Schools & Universities LGUs Local and National Art Guilds 	 Production Houses/Guilds, Events Companies, Sponsoring Groups from Gov't and Private Institutions 	 Show (Dance, Music Theater etc.) Fine Art Product Tourist Attractions 	 Theaters Stage Venues Galleries Exhibit Halls and Local Sites LGUs 	NCCANHILGUsCCPDepEdCHED
Industrial Design and Architecture	 Packaging Design Textile/Fashion Design Interior Design Architecture Product Design (Hardgoods) 	 Product Designers Architects Interior Designer Fashion Designers Craftsmen 	 Special Training Schools & Universities LGUs Local and National Art Guilds Artisans 	 Manufacturing Firms Production Firms Product Factories Design Companies Entrepreneurs 	 Model Housing Units Product Collection New Packaging Design Structure and Design 	 Real Estate Co. Fashion Houses and Brands Packaging Distributors 	NCCANHACHEDDTI
Printing and Publishing	 Print Media (News) Books and Magazines Dissertations/Articles 	WritersLayout ArtistsResearchersAuthors	 Special Art Schools and Universities LGUs 	Publishing Companies, and Printing Houses	MagazinesBooksNewspaperJournals	 Book and Magazine Stores Newspaper stands Internet 	 PANA PIA National Library of the Philippines DTI OPS NCCA
Audiovisuals	 Broadcast (TV/Radio) Film New Media (Internet/Mobile Devices) 	 Writers Artists Directors Creative Director Content and Substance Providers 	 Special Talent Centers / Groups/ Schools Production Houses 	 Film Production Companies TV and Radio Companies Content Providers 	TV/Radio ShowsWebsites and Film Outfits	 TV/Radio Networks Cinemas and Special Theaters Record Companies 	MTRCBOPSLGUsDOTCNCCAAdboard

Pagkamalikhain: The Philippine Creative Industries in the TVET Perspective

Science and Technology	 Research & Development in Manufacturing (Electronics and Communication, Food, Drug, Housing and Transport) ICTs 	 Inventors Designers Culinary Scientists Research and Product Development Units Doctors, Engineers 	 Schools & Universities LGUs Local and National Science Guilds 	 Manufacturing Firms Factories Laboratories Real Estate Companies ICT Investors 	 New Food Variety Drug Cosmetics New Engine, New Appliances Transportation Innovations 	 Retail and Wholesale Stores/Outlets Exhibits Drugstores 	DOST DOTC BFAD DOH COCA CHED DTI
Creative Services	 Animation and Gaming Advertising and Graphics Recreational Services ITES 	 Artists Gaming /Rides Inventors Creatives Director Graphic Designers and Recreational Designers 	 Schools & Universities LGUs Local and National Science Guilds 	 Advertising Firms Design and Graphic Arts Studio Recreational Planners and Design Firms 	 Advertisement Games Animated Product Recreational Attractions 	 TV/Radio Networks Mass Transport Advertising Avenues Print Media Amusement, Gaming and Recreational Facilities 	• Adboard • DOTC • DOT • CHED • DTI

With studies such as this serving as academic reference, the Philippine government entered into multiple partnerships with other groups that already have their own initiatives for creative industries. Chief among these was the Creative Economy Council of the Philippines (CECP) that created a "Creative Economy Roadmap" alongside the Department of Trade and Industry (DTI) and the Board of Investments (BOI), in the hopes promoting and developing the country's overall creative economy to be a leader within the ASEAN by 2030. This Roadmap envisioned a multi-agency effort to develop and market Philippine creative products for international consumption, with key performance indicators such as job generation and IP creation closely monitored.

ROADMAP TO 2030	2018-2020	2020-2025	2025-2030	
CREATIVE POLICY	Creative Economy Task Force	Creative Economy Agency	ASEAN Creative Economy Lead	
	Set Baseline & Goals: GDP, Jobs, IP	Deliver KPIs: GDP, Jobs, IP	KPIs: GDP, Jobs, IP, Regional Ranking	
CREATIVE INDUSTRIES	Identify & Prioritize Creative Industries for	Invest, Incentivize & Incubate Priority	Accelerate Growth of Priority Creative	
	Accelerated Growth	Creative Industries	Industries	
	KPIs: Reputation, Revenue, Market Share	KPIs: Reputation, Revenue, Market Share	KPIs: Reputation, Revenue, Market Share	
CREATIVE CLUSTERS	1-5 Special Economic Zone	5-10 Special Economic Zone	10+ Special Economic Zone	
	Creative Clusters	Creative Clusters	Creative Clusters	
	KPIs: Reputation & Revenue Growth	KPIs: Reputation & Revenue Growth	KPIs: Reputation & Revenue Growth	
CREATIVE CITIES	1-2 PH Cities in UCCN	3-4 PH Cities in UCCN	5+ PH Cities in UCCN	
	KPIs: Tourism & Inclusive Development	KPIs: Tourism & Inclusive Development	KPIs: Tourism & Inclusive Development	
CREATIVE TOURISM	Develop PH as destination for Creativity	Competitive in ASEAN for Creative	Competitive in APAC for Creative	
	(Festivals, Conventions, Shows, etc.)	Tourism (top 3)	Tourism (top 3)	
	KPIs: Visitors, Revenue & Reputation	KPIs: Visitors, Revenue & Reputation	KPIs: Visitors, Revenue & Reputation	
CREATIVE EDUCATION	CREATIVE EDUCATION CREATIVE EDUCATION Creative Education at all levels KPIs: Competitive & Employable Talent		Competitive in APAC for Creative Education (top 3) KPIs: Competitive & Employable Talent	

Figure 2. Overview of the 2030 Creative Economy Roadmap (CECP)

Among the priority sectors identified in this Roadmap are the following:

- 1) Advertising
- 2) Film
- 3) Animation
- 4) Game development
- 5) Design (specifically graphic and digital design)

Graphic and Digital Design were specifically mentioned because of the prevalence of freelance artists in the country, many of whom are already serving foreign clients. It should be noted that "Design" also covers other sectors that are not directly related to creative industries, such as architecture and information technology, and is therefore hard to pin down onto a specific type of good or service.

a. Sub-Sector: Advertising

The Philippines was quick to embrace all media platforms for advertising. According to the National Telecommunications Commission, in 2015 there were 132 AM and 349 FM radio stations in the country, plus 285 television stations, which were mostly distributed among six major television networks. In terms of print media, there were nine dailies, 19 tabloids, and more than a hundred regional newspapers and other publications that cover a wide array of topics.

While use of Facebook, YouTube, Linked-in, and Twitter is common in the Philippines, Internet access remains low compared to other Asian countries. However, thanks to the prevalence of cellular devices, there are about 110 million mobile subscriptions in the country (exceeding its 2019 population of 100 million+), which is why many advertising firms opt to reach out through text rather than the Internet.

Filipino advertisers, on the other hand, have garnered international recognition through the Gold Quill Awards of the International Association of Business Communicators (IABC) and the New York Festival's International Advertising Awards, among other awards.

b. Sub-Sector: Film

In 2011, it was reported that local movies contribute only to about 0.06% to the

country's GDP. In addition, locally-produced films tend to earn double the revenue

from foreign films, which speaks a great deal about the average Filipino's tastes.

However, creative and original films do not necessarily equate to success in the box

office, as award-winning films can still fall short of sales expectations if the films

tackle topics other than comedy, romance, and science fiction. A good example of

this is "Katas ng Saudi", which earned the FAMAS (Filipino Academy of Movie Arts

and Sciences) Best Picture Award in 2008, but only earned PHP 3.2 million at the

box office¹⁴.

Motion pictures are regulated by the MTRCB. Employment in the industry reached

to some 3,531 workers in 2011, representing only 0.10% of all domestic

employment. This number increased only marginally in 2017, amounting to 3,742.

Morato (2011) discovered that for the most part, those considered part of the

backroom crew (i.e. lighting, video editors, cameramen, etc.) learn their trade

through experiential and/or informal means, which is quite limited to overseas

workers seeking employment in the film industry. Take note that "employment" in

this regard is limited to those engaged in "motion picture, video and television

programme activities" as defined by the PSA, which also includes post-production

activities such as crediting and subtitling.

c. Sub-Sector: Animation

One relatively-unknown fact about the Philippine animation sub-sector is that

Scooby Doo, Tom & Jerry, Dragon Ball, and other famous cartoons had been

produced by Filipino animators. All in all, the industry's export markets include the

US, Australia, Europe, and Japan, and the industry seeks to expand its market-base

14

even further. The animation industry generated an estimated USD 22.3 million in revenue in 2015.

In 2016, it is estimated that about 55% of all animation work done in the Philippines were 2D in nature, most of which being offered to TV, advertising, and film jobs (29%, 27%, and 16%, respectively). From a workforce of about 1,700 individuals, the industry is expected to include up to 4,395 workers in 2022.

d. Sub-Sector: Game Development

Game development is new in the Philippines as far as creative industries go; the sub-sector is also lumped in together with the information technology – business process management (IT-BPM) sector of the country. It is reported that there were only about 90 game development workers in 2006, which grew to more than 2,100 in 2015, and this number is definitely expected to grow further in the future.

The sub-sector employs different skillsets, from graphic design to programming, for both local and international clients, as well as for both computer and mobile games. That said, the Philippines is primarily preferred for its services in game management support, which involves interacting with game communities and ensuring player retention for games. Revenues reached about USD 24.1 million in 2015 mostly from computer games, and are expected to reach USD 51.3 million in 2022.

Game development is considered one of the priority sectors for the IT-BPM sector, and by extension Philippine creative industries. This is due to the growing prominence of mobile games which are expected to account for about 25% of the sector's revenues in 2022¹⁵. As game devices and technologies become smaller,

Pagkamalikhain: The Philippine Creative Industries in the TVET Perspective

and as more and more people are connected to play online games from across the

world, this share is almost guaranteed to increase in the future.

e. Sub-Sector: Design

As previously stated, "Design" encompasses a great variety of products and

services, as even the UNCTAD defined the sub-sector as anything from digital

design, to interior design, to fashion. As such, no unified data for design products

and services in the Philippines is currently available. That being said, efforts to

promote Filipino design have been ongoing since at least the 70s, with the issuance

of Presidential Decree No. 279 that created the Design Center of the Philippines,

mandated to "develop, promote, develop, promote, and enhance the design of

Philippine-manufactured products".

B. SWOT

In 2017, British Council Philippines analyzed the status of the Philippine's creative

industries by their strengths, weaknesses, opportunities and threats:

• Strengths: among the strengths identified in the country are the highly-

skilled Filipino workers' solid grasp on English and Western culture, which

make them sought-after by international brands. Cities such as Baguio,

Cebu, and Manila are also recognized for their efforts in economic

development. Coupled with strong overseas linkages and active

government participation, these cities were able to create environments

conducive to investments, foreign and domestic alike.

Weaknesses: production costs in the Philippines remain quite high,

particularly in terms of utilities (i.e. electricity), licensing, and professional

16

fees. Additionally, due to the informal nature of the country's creative industries, obtaining industry-related data is quite difficult, which does not bode well for investments, linkaging, cultural posturing, and national positioning. Perhaps most pressing is the lack of a unified approach when teaching entrepreneurship, management, and creative skills (though this also affects other industries other than creatives), quite reflecting the perceived lack of value and importance given to such careers.

- Opportunities: despite the aforementioned setbacks, however, the potential in Philippine creative industries is quite promising, thanks in part to the growing market for advanced technologies in the country, as well as the large pool of prospective workers in tech-related careers. These can be the basis for a support structure to fuel more creative products and services in the country. Efforts are also underway to stimulate more investments for creative industries, which will hopefully culminate in the creation of more Creative Cities in the country for further economic growth and global competitiveness.
- Threats: it is important for skills to keep up with the times if Filipino workers wish to engage in occupations related to creative industries. 'Originality', 'creative thinking', and 'teamwork' are just some of the skills that will see a greater demand in the future, owing to the fact that the aforementioned advances in technology could take care of the technical aspects of work. The Philippines' susceptibility to natural and political problems may also make it less appealing to foreign investors, who are already finding difficult to justify their entry into the creative industries due to the lack of market/industry data, as said before.

C. In the Context of the 4IR

4IR generally means automation: the replacement of human workers with machines and artificial intelligence. However, citing the framework of Frey and Osborne, Canare, et. al. (2019) claimed that the Fourth Industrial Revolution will not greatly affect the Philippines' creative industries, simply by the virtue of computer hardware not having enough 'creative intelligence' to mimic human behavior. In other words, Filipino workers in creative industries generally will not be replaced in the near-future since robots are not yet smart enough to write their own novels, formulate their own creative designs, and the like.

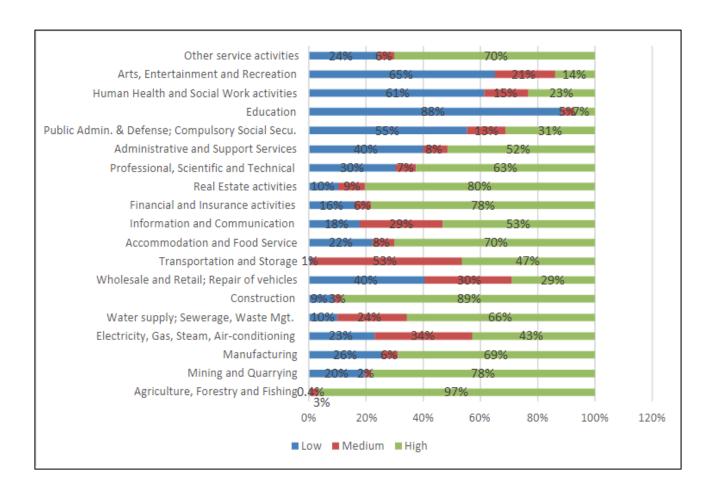


Figure 3. Proportion of Filipino workers in low, medium, and high-risk jobs, by sub-sector (Canare, et. al.; 2019)

However, there is emphasis on 'yet', as 4IR technologies will eventually reach the point that they will be able to replicate human creativity. The World Economic Forum predicts that by 2027, artificial intelligence will be able to replicate famous pop stars and create its own music, and a best-selling publication by 2040. Even now, several news outlets in America are relying on 4IR tech to help them write sports and entertainment articles, using artificial intelligence to determine their readers' wants and preferences.

Even now, creative minds are already expected to espouse those traits that a 4IR future will surely require. Soft skills such as communication, critical thinking, and teamwork remain at the core of 4IR-workers, including those involved in creative industries. It is for this reason that skills-upgrading is still essential for Philippine creative workers to remain competitive amidst the 4IR. The British Council even made the following recommendations:

- IP Literacy must be enhanced so that creative workers will better leverage
 4IR technologies to create new products
- Entrepreneurship and marketing should be emphasized, as these are part of the skills now expected from creative minds, especially when catering to younger audiences.
- (Related to the preceding) Audience development must also be emphasized so that younger Filipinos will be made more aware of Philippine creative brands and subscribe to them more.
- Career-relevant technical skills should still be taught, but with greater focus
 on catering to international tastes so that Philippine creative industries
 become even more competitive.

IV. TVET Situation

A. Demand and Supply

The rather-informal nature of the Philippines' creative industries mean that the relevant work-related technical skills can encompass various sectors. Thus, training and education for creative industries is quite modular, i.e. training for employment in one industry can also be applied to creative industries within reason. However, as of June 2019, TESDA only offers training for the following creative industry occupations with associated training regulations (TRs):

Table 3. Creative Industry Occupations with TRs (as of September 2019)

Occupations	Sector	Corresponding TRs
DressmakerGarment Sewer	Garments	■ Dressmaking NC II
■ Tailor ■ Garment Sewer	Garments	■ Tailoring NC II
Animator	IT-BPM	2D Animation NC III3D Animation NC IIIAnimation NC II
Software Developers	IT-BPM	 Web Development NC III Game Programming NC III Programming (.Net Technology) NC III Programming (Java) NC III Programming (Oracle Database) NC III
Web Developer	IT-BPM	Web Development NC III
Graphic Artists	IT-BPM	 2D Animation NC III 3D Animation NC III Animation NC II Visual Graphic Design NC III
Programmer	IT-BPM	 Game Programming NC III Programming (.Net Technology) NC III

		Programming (Java) NC IIIProgramming (Oracle Database) NC III
Game Developer	IT-BPM	 Game Programming NC III 2D Animation NC III 3D Animation NC III Animation NC II
IT Developer	IT-BPM	 Web Development NC III Game Programming NC III Programming (.Net Technology) NC III Programming (Java) NC III Programming (Oracle Database) NC III
Back-up SingerSolo SingerBand Vocalist/LeadSinger	Social, Community Development and Other Services	■ Performing Arts (Song) NC II
Professional Photographer	Visual Arts	■ Photography NC II
Comics ArtistBook/MagazineIllustratorCartoonist	Visual Arts	■ Illustration NC II

As seen in this table, majority of available TRs for creative industries are currently lodged in the IT-BPM sector. This could be due to the growing importance of IT-BPM workers in the country, which is something that the country could leverage to improve its creative industries as well. But on the other hand, the prevalence of this sector coupled with the lack of sufficient data about the country's creative industries mean that it will be hard to pin down exactly how many graduates of these TRs eventually work on creative products/services and those who work directly in the IT-BPM sector. Further compounding matters is the increased integration of ICTs in almost every industry, resulting in the creation of IT enabled services or ITESs that would more towards IT-BPM than creatives (strictly speaking). Unfortunately, the lack of data in this regard makes it difficult to come up with conclusions.

The following TRs are also listed in TESDA's course offerings, but are unutilized due to the lack of trainers and/or training centers:

- Fashion Design (Apparel) NC III Garments
- Performing Arts (Dancing) NC II Social, Community Development and Other Services
- Performing Arts (Ballroom Dancing) NC II Social, Community Development and Other Services
- Performing Arts (Magician) NC II Social, Community Development and Other Services
- Pyrotechnics NC II Pyrotechnics
- Furniture Making (Finishing) NC II Furniture and Fixtures
- Footwear Making NC II Footwear & Leathergoods

B. Other Initiatives

The aforementioned facts illustrate that TESDA still has plenty of room for improvement in terms of training and support. However, while the idea of reinvigorating the unutilized/underutilized TRs is sensible, Morato (2011) suggests an approach geared towards the creation of more design-related courses. Design, he claimed, possess the greatest potential for growth among other Philippine creative industries, especially considering that Filipino digital and graphic designers are already garnering international fame. It is for this reason that CECP is also pushing for the establishment of Creative Hubs, similar to Economic Zones, which elevate certain cities as centers for a particular creative trade. Examples include:

- Makati City, for advertising and promotion
- Quezon City, for TV and film production
- Cebu City, for design

Doing so will hopefully lead to recognition from the UNESCO Creative Cities Network, which in turn will lead to other cities joining Baguio City as internationally-recognized hubs for creative products and services in the Philippines.

V. Moving Forward

• TESDA's efforts to support Philippine creative industries remain limited due to the informal nature of the said industries as a whole. While organizations like the CCA and CECP have been established to regulate Philippine creatives, a stricter structure must be created so that agencies like TESDA will know how exactly they could intervene and render the appropriate assistance. In the meantime, TESDA must continue its participation in the Creative Economy Roadmap, specifically by "mainstreaming cultural education in technical education" and by "continuing to develop cultural assets in the country" (see Figure 4).

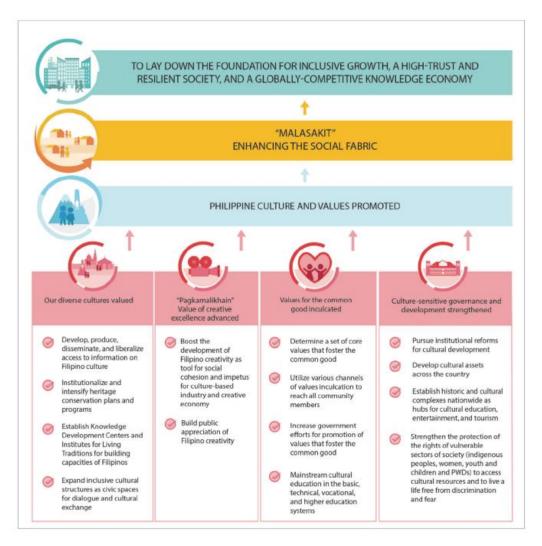


Figure 4. Strategic Framework for the Promotion of Cultural Values 2017-2022

- The lack of data about Philippine creative industries remains ta major hurdle for developing initiatives. This includes data on the specific skills requirements of the creative industry and the quantity of the workers needed. Initially, TESDA is encourage to conduct consultation with the industry and sub-sectors to collect evidence-based information on the need of the industry.
- The unutilized/underutilized TRs mentioned in Part IV of this document must be reviewed to see if they are still viable course offerings in the Philippines. If not, then the skills found in their supermarket of competencies must be reintegrated in some way or form in other courses in order to equip students with creative skills appropriate for their trade. In a similar vein, TESDA should explore the possibility of creating new TRs or competencies for the skills recommendations of the British Council in Part III, Letter C, as these pertain to skills needed for the 4IR workplaces of the future.
- The growing proliferation of STEAM, instead of STEM, indicates a trend for all types of education systems to integrate arts and culture into their curricula. With this in mind, TESDA may want to also focus on artistic and cultural appreciation, instead of just science, technology, engineering, and mathematics, when creating new training regulations or reviewing current ones. Naturally, this should be done within reason as not all trades have an artistic/cultural bend in them.

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