

The Sectoral and Skills Mismatch between the Senior High School Program and the Top In-Demand Jobs and Projected In-demand Jobs in the Province of Cebu, Philippines

Glenn G. Pajares,

University of San Jose-Recoletos,
Cebu City, Philippines.

Marietta Bongcales,

University of San Jose-Recoletos,
Cebu City, Philippines.

Luzviminda Roda,

University of San Jose-Recoletos,
Cebu City, Philippines.

Ricky Villeta,

University of San Jose-Recoletos,
Cebu City, Philippines.

Marilou Yadao,

University of San Jose-Recoletos,
Cebu City, Philippines.

Jessica Avenido,

University of San Jose-Recoletos,
Cebu City, Philippines.

Jojit Foronda,

University of San Jose-Recoletos,
Cebu City, Philippines.

Jesse Susada,

University of San Jose-Recoletos,
Cebu City, Philippines.

ABSTRACT

This study aims to decipher whether the senior high school tracks, academic strands, and the Technical Vocational and Livelihood (TVL) specializations offered in the different congressional districts in the Province of Cebu match with the needs and demands of the local jobs and industries. In order to determine if there is a match or a mismatch, the study compares the top-5 in-demand jobs of 2017 and top 5 projected in-demand jobs (2018-2022) in the identified districts with the top 5 senior high school tracks, academic strands, and top 5 Technical-Vocational and Livelihood (TVL) specializations offered using descriptive survey method. The study finds that there exists a sectoral or district mismatch because most of the senior high school tracks specifically the TLV strands do not match with the most in-demand and projected in-demand jobs per district. A skills mismatch also exists particularly the skills gap or the skills deficit because the skills of the senior high school tracks and TVL strands offered in the different districts do not match with the skills needed or required by the most in-demand and projected in-demand jobs of these districts. The study concludes that the existence of sectoral or district mismatch and the skills mismatch is due to the fact that most senior high school tracks and strands that are offered in the different congressional districts of the province of Cebu are not in accordance with the most in-demand and projected in-demand jobs of the districts. Hence, the study recommends that there should be close coordination among stakeholders in order to address the skills gap in the province of Cebu. Also, there is a need to offer senior high school tracks, strands and TVL specializations that address or respond to the skills needed by the most in-demand jobs and projected in-demand jobs in every district. Finally, there has to be a periodic close monitoring on the job-skills mismatch in every district of the province through research and evaluation.

Keywords: Most-in-demand jobs, Projected in-demand jobs, Senior High School Tracks, TVL Strand, sectoral mismatch, skills mismatch, Province of Cebu.

INTRODUCTION:

Philippine Education in its response to the Asian regionalism and globalization fully implemented the K-12 program in 2016 introducing 2 years of senior high school after the existing 4 years of junior high school. The Philippine Senior High School Program consists of the following: 1) Academic Track which has different tracks namely Business- Accountancy, Business and Management (ABM), Science & Engineering- Science, Technology, Engineering and Mathematics (STEM), Humanities & Social Science (HUMSS), and a General Academic strand (GAS); 2) Technical-Vocational-Livelihood Track also known as TVL composed of the following strands: Agri-Fishery Art, Home Economics, Information and Communication Technology (ICT), Industrial Arts, and TVL Maritime (all with highly specialized subjects with Technical Education and Skills Development Authority (TESDA) qualifications); 3) Sports Track, and 4) The Arts and Design Track (Department of Education).

The Department of Education (DepEd) of the Philippines emphasizes that the Senior High School Program offers a lot of benefits to Philippine education. One of which is that graduates of the Senior High School Program especially the Technical Vocational and Livelihood (TVL) track will be readily employable (Del Mundo, 2013) and (Bacarra, 2016). It will equip the graduates with the skills that will make them more productive members of society (Patrinos & Samer, 2016). This suggests that the Senior High School program will address the skills need of the jobs in the different industries in the local community.

However, since the senior high school program is still new, there are still very few studies conducted about the senior high school program especially on whether the tracks and strands offered in the different congressional districts of Cebu respond or answer to the skills needs of the local jobs and industries. It is for this reason that this study is conducted.

The scope of the study zeroes in on the different congressional districts of the Province of Cebu. Cebu is one of the most developed provinces in the Visayas Region (Central Philippines) with Cebu City as its capital. Cebu City is a global center of business process services, trade, commerce, tourism, furniture making, and heavy industry (Philippine Information Agency). The study also focuses only on the senior high school tracks, strands and TVL specializations offered in the said districts and province.

This study is funded by the Ramon Aboitiz Foundation Incorporated (RAFI), a non-stock and non-profit organization founded in 1996. RAFI's focus is on integrated development, micro-finance and entrepreneurship, culture and heritage, leadership and citizenship and education (Ramon Aboitiz Foundation Inc (RAFI)).

In order to determine if there is a match or mismatch between the senior high school programs with the skills needs and demands of the local jobs and industries, this study aims to identify the top 5 most in-demand (2017) and projected in-demand (2018-2022) jobs in the different congressional districts in the Province of Cebu; second, it establishes the profile of the Senior high school tracks, academic strands, and the TVL specializations offered in the different districts; third, it determines if there is a sectoral and skills mismatch between the senior high school tracks and strands and TVL specializations with the in-demand jobs (2017) and projected in-demand jobs (2018-2022) in the different districts. Finally, based on the findings, what conclusion can be drawn and what recommendations can be proposed.

This study is relevant for it determines, verifies, and validates whether there is match or a mismatch between the in-demand jobs and projected in-demand jobs and the senior high school tracks and TVL specializations. It helps generate recommendations and proposals for government agencies, the industry, schools, and the private sector to address the issue. It helps schools, colleges, and universities to respond to the demands of the industry and revise or improve curricula of their senior high school programs to address the needs of the labor market especially in the local and regional levels.

As framework, the study makes use of the two types of mismatch in the analysis namely: the Skill mismatch and the Regional or sectoral mismatch. Skills mismatch has two types: skills gap or deficit and skill underutilization or over skilling. The former refers to worker's skills which are not up to the job while the latter refers to the skills that exceed what is required for the job. Regional or sectoral mismatch arises when the locations and sectors where job openings are available are poorly matched with potential employees (Rodriguez). In this study, the Regional mismatch is referred to as district mismatch/sectoral mismatch and in-demand jobs and projected in-demand jobs in the district are matched not with potential employees but with the senior high school tracks and strands and TVL specializations.

REVIEW OF RELATED LITERATURE:

(Horn, 2006) claimed that in South Africa, there are only around 5-7% of the graduates of Grade 12 end up

finding jobs in the formal sector. This means that it is not a guarantee that senior high school students will have a job after graduation. The reasons for this is that there is a structural change in the economy towards a knowledge-based service sector. Also, senior high school students lack the entrepreneurial skills and competence. Finally, teachers in the senior high school have low morale that they are not able to prepare the students for the real world of work.

In fact, the Deputy Minister of Higher Education and Training in South Africa Mduzi Manana in his visit to the Central Methodist Mission in Joburg in one of its career expos, urges senior high school and college students to take up programs that will address the needs and demands of the industry because senior high school and college students are not taking programs in line with the demands of the industry. He urges them to take up vocational courses as post school-skills because the future demands of the industries are leaning towards jobs that require technical vocational skills. He has observed that South Africa is outsourcing skills from other countries because of the prevalent skill and job mismatch in the country (The Star).

The job skills mismatch problem is not only a concern of South Africa but of the entire African continent. Countries in Africa have a very low productivity in terms of human capital because educational institutions are offering programs that are not based on local needs. This is supported by the Africa Competitiveness Report 2011 jointly produced by the World Bank, African Development Bank (ADB) and World Economic Forum. Based on the recommendation of the report, African countries need to focus on programs in science, math, technology, and entrepreneurship that will address the problems of the locality and the continent. There is also a need to improve the curricula, more access to tertiary education, more funding and support to tertiary education, more coordination between governments and higher education institutions, and a closer monitoring of higher education institutions for them to be able to cope with international standards (Sawahel, 2011).

(Lagami, 2016) affirms that most African youth miss the opportunity of getting employed because they lack the skills in innovation and science and technology requirements needed to accomplish Africa's transformation agenda. With only 28% of African students enrolled in the STEM (Science, Technology, Engineering, and Math) program and with the majority of students studying social science, this does not address the continent's priority demands in the following sectors: agriculture, green energy, mining, healthcare and manufacturing. This explains why there is large gap between the skills of young graduates and Africa's employment needs.

In Asia, (Veal, 2013) claims that though there has been a significant economic boom in the region, job mismatch remains a major concern. In Maldives for example, in which diving is a major industry, there was no training provider offering high level dive master qualifications until very recently. This caused skills shortages in its diving industry. In Nepal, though the manufacturing industry is flourishing, training providers are not offering programs on manufacturing. Provisions of TVET has not responded to the needs of the industry, nor adapted and changed to mirror new economic conditions. In Bhutan also, there is an oversupply of well-educated people seeking for jobs but whose qualifications do not match with the demands of job openings.

A recent report on "Skills development in South Asia: Trends in Afghanistan, Bangladesh, India, Nepal, Pakistan and Sri Lanka" shows that the region lacks 96 million out of the 100 million trainees needed to meet the demand for continued economic development. This explains the high unemployment as well as job skills mismatch in the region. The report presents four key challenges: 1) an unstructured and irregular market with uncoordinated policies and no ownership of the skills development agenda, 2) there exists a wide capacity gap and issues of equity and access, associated to limited funding to meet demand, feeble curriculum models not aligned with needs of employers, 3) misalignment between industry and graduate needs, inadequate interaction between state and private sector on planning, 4) Negative public perception of the Technical Vocational Education (British Council).

In the Philippines in 2007, the Department of Education (DepEd) implemented the Strengthened Technical and Vocational Education Program (STEVP) in public secondary school in the 16 regions of the country to provide graduates of secondary schools with opportunities to obtain certifiable vocational and technical skills that would give them more options in pursuing their career after graduating either for a college education, other technical-vocational courses, entrepreneurship, or apprenticeship that will lead them to a formal employment. To achieve this goal, the Department of Education has worked closely with relevant stakeholders including the academe, TVET institutions and the industry (Valles, 2012).

(Sarmiento & Ronald, 2016) made a comparative review of related literature on senior high school curriculum of the Philippines, Japan, and the United States. They found out that the senior high school curriculum of these countries are intended to prepare graduates of the senior high school program to enter college, become an entrepreneur, and find work in the industry. According to the study, the Philippines has a clearer senior high school program because its program has four definite tracks. Whereas Japan only has two tracks one academic

and the other technical vocational. While the United States have indefinite tracks considering that the curriculum varies from one state to another for it is up to these states to decide for their curriculum. The study also found out that there exists a stigma among students across the three countries to take the vocational track because they think that vocational courses are for poor performing and problematic students. In fact, the enrollment in the technical-vocation courses in the United States has declined. In the three countries, finding qualified teachers in the Senior High School remains an issue.

Based on literature review, this study found out that previous studies on employability of graduates and skills mismatch of graduates in the Philippines focus on the tertiary or college levels considering that the Senior High School Program is new to the Philippine educational system. Most if not all of them are tracer studies. For example, (Bringula, Balcoba, & Basa, May 2016) studied the employability of the graduates of Information Technology (IT). They found out that only a small portion of the graduates are considered employable. They also found out that very few studies have been conducted in the Philippines to determine if the curriculum sufficiently addresses the needs of the industry. (Aguila, De Castro, Dotong, & Laguador, 2016) finds in their study that the average employment rating of BS Computer Engineering graduates from 2013 to 2015 is 84.6 percent. Skills that students learned in college in Information technology, communication and problem solving are regarded as most useful. Work ethics, good values and right character also contribute to the graduates' job placement.

Since there is a dearth in the literature on the employability of senior high school graduates and on skills mismatch between senior high school programs and the demands of local jobs and industries in the Philippines and in Cebu, this study is a significant contribution to existing literature on the senior high school program in the Philippines. Also, since job mismatch is a prevalent issue not only in the Philippines but also in different countries and regions of the world, this study is worth pursuing.

METHODOLOGY:

The study employs descriptive survey method and data mining using an interview guide and a self-made checklist. Using the interview guide as an initial data gathering tool, list of jobs were taken from the first three (3) municipalities which was the then the basis in coming up with the checklist. The checklist was then used in gathering relevant data in the remaining cities and municipalities for ease and convenience of the respondents. However, during the conduct of the study, respondents or informants were further asked questions related to the checklist especially for items that are not found in the instrument.

The data of this study are gathered from June 2017 to October 2017. All towns and cities in the Province of Cebu were approached as respondents. However, out of 44 municipalities only 27 provided data and out of 9 cities only 6 responded. The respondents and key Informants of the study are purposively selected from the local government units of the different municipalities and cities of the different districts like the public employment service officers, the planning and administrative officers, the town mayors and their secretaries. Information and data on the curriculum of the senior high school program are taken from the website of Department of Education because it is the agency responsible of designing the curriculum.

The Top in-demand jobs and projected-in demand jobs are ranked according to frequency as determined by the respondents and key informants. Considering the numerous jobs per district, this study clusters the different jobs into industries to facilitate the presentation and to save space and pages for publication purposes. In turn, the industries are ranked. The industry classification of jobs is based on the classification provided by the Department of Labor and Employment (DOLE) of the Philippines (Bureau of Local Employment-DOLE).

One of the limitations of the study is that not all cities, municipalities, and government agencies have complete data on the most in-demand and projected in-demand jobs of their respective municipality, city, and district.

District 1 and District 7 are not able to answer the checklist. However, they provide business lists of the respective municipalities (towns) and cities as bases for identifying the top jobs in different industries of the locality. The rest of the districts are able to provide data on the in-demand jobs and projected in-demand jobs.

The Department of Education (DepEd) regional and provincial offices also do not have complete data on the number of students enrolled in every senior high school track and strand. Likewise, the Chambers of Commerce of the City of Cebu and the City of Mandaue do not have data on the most in-demand jobs, the emerging jobs, and projected in-demand jobs in the Province of Cebu.

Another limitation of the study is that no municipality/city answered the question about the emerging jobs (new jobs that are nonexistent before) in their locality. What they provided are only the projected in-demand jobs (jobs that are not new but will be in-demand in the future).

FINDINGS AND DISCUSSION:

I. The top 5 most in-demand Jobs of 2017 and projected in-demand jobs (2018-2022) in the different Congressional Districts in the Province of Cebu

District 1:

District 1 of the Province of Cebu is composed of the cities of Talisay, Carcar, and Naga and the municipalities of Minglanilla, San Fernando, and Sibonga.

In-demand jobs	Projected in-demand jobs
1. Manufacturing 2. Agribusiness 3. Hotel/restaurant/food business/tourism 4. Wholesale/Retail trade 5. Transportation and logistics.	No data Available

The Municipalities of District 1 are not able to provide data on projected in-demand jobs.

District 2:

District 2 is composed of the Municipalities of Argao, Dalaguete, Alcoy, Boljoon, Oslob, Santander, and Samboan.

In-demand jobs	Projected in-demand jobs
1. agri-business 2. hotel/restaurant/food business/tourism 3. construction 4. information technology business 5. manufacturing	1. agri-business 2. hotel/restaurant/food business/tourism 3. construction 4. information technology business 5. manufacturing

District 3:

District 3 consists of the towns of Aloguinsan, Asturias, Tuburan, Barili, Balamban, Pinamungajan, and Toledo City.

In-demand jobs	Projected in-demand jobs
1. construction 2. health and wellness 3. agribusiness 4. hotel/restaurant/food business/tourism 5. Banking and finance and manufacturing.	1. Construction 2. Agribusiness 3. Hotel/restaurant/food business/tourism 4. Banking and Finance 5. Manufacturing

District 4:

The 4th Congressional District of Cebu is composed of the following municipalities: Bantayan, Medellin, San Remigio, Tabuelan, Daanbantayan, Santa Fe, Tabogon, Madridejos, and Bogo City. Geographically it is located in the northern part of the province.

In-demand jobs	Projected in-demand jobs
1. Agribusiness 2. Hotel/restaurant/food business/tourism 3. Construction 4. Information Technology business 5. Manufacturing and health and wellness	1. Agribusiness 2. Hotel/restaurant/food business/tourism 3. Construction 4. Manufacturing 5. Information Technology business

District 5:

District 5 consists of the following municipalities: Borbon, Carmen, Catmon, Compostela, Danao, Poro, Pilar, San Francisco, Tudela, Liloan, and Sogod.

In-demand jobs	Projected in-demand jobs
<ol style="list-style-type: none"> Hotel/restaurant/food business/tourism Transportation and logistics Manufacturing Wholesale and retail trade Construction and banking and finance 	<ol style="list-style-type: none"> Hotel/restaurant/food business/tourism Transportation and logistics Manufacturing Wholesale and retail trade Construction and banking and finance

District 6:

District 6 is composed of the City of Mandaue and the towns of Cordova and Consolacion.

In-demand jobs	Projected in-demand jobs
<ol style="list-style-type: none"> hotel/restaurant/food business/tourism construction information technology business manufacturing health and wellness 	<ol style="list-style-type: none"> information technology business construction hotel/restaurant/food business/tourism manufacturing health and wellness

District 7:

District 7 is in the southwestern part of Cebu and is composed of the towns of Alcantara, Alegria, Badian, Dumanjug, Ginatilan, Malabuyoc, Moalboal, and Ronda.

In-demand jobs	Projected in-demand jobs
<ol style="list-style-type: none"> wholesale/retail business banking and finance agri-business hotel/restaurant/food business/tourism construction 	No data available

Municipalities in this district are not able to provide date on projected in-demand jobs.

II. Senior High School (SHS) Tracks and Strands and TVL Specializations’ Profile of the Different Congressional Districts in the Province of Cebu.

This section presents the Senior High School Tracks and TVL Strands offered in the different Congressional districts arranged according number of tracks and strands offered per district.

District 1:

The First District of the Province of Cebu is composed of the cities of Talisay, Carcar, and Naga and the municipalities of Minglanilla, San Fernando, and Sibonga.

SHS Tracks and Academic Strands	TVL Specializations
<ol style="list-style-type: none"> General Academic Strand (GAS) Technical Vocational (TVL) Accountancy and Business Management (ABM) and Humanities and Social Sciences (HUMSS) Science Technology, Engineering , and Math (STEM) Arts and Design 	<ol style="list-style-type: none"> Bread and Pastry Cookery Computer Programing Electrical Installation and Maintenance Shielded Metal Arc Welding

District 2:

The Second District of the Province of Cebu Argao includes the following municipalities *Dalaguete, Alcoy, Boljoon, Oslob, Santander, and Samboan.*

SHS Tracks and Academic Strands	TVL Specializations
<ol style="list-style-type: none"> GAS TVL ABM and HUMSS STEM Sports Track 	<ol style="list-style-type: none"> Bread and Pastry Computer Hardware Servicing Food and Beverage Services Computer Programming Horticulture

District 3:

The 3rd District is composed of the following municipalities: *Aloguinsan, Asturias, Tuburan, Barili, Balamban and Pinamungajan, and Toledo City.*

<i>SHS Tracks and Academic Strands</i>	<i>TVL Specializations</i>
<ol style="list-style-type: none"> 1. GAS 2. TVL 3. HUMSS 4. ABM 5. STEM 6. Sports Track 	<ol style="list-style-type: none"> 1. Shielded metal arc welding 2. Food and beverage services 3. Cookery 4. Bread and pastry 5. Computer hardware servicing

District 4:

District 4 consists of the municipalities of *Bantayan, Medellin, San Remigio, Tabuelan, Daanbantayan, Santa Fe, Tabogon, Madridejos, and Bogo City.*

<i>SHS Tracks and Academic Strands</i>	<i>TVL Specializations</i>
<ol style="list-style-type: none"> 1. GAS 2. TVL 3. ABM 4. HUMSS 5. STEM 6. Arts and Design 	<ol style="list-style-type: none"> 1. Food and beverage services 2. Bread and pastry 3. Cookery 4. Computer hardware Servicing 5. Housekeeping

District 5:

District 5 consists of the city of *Danao* and the municipalities of *Borbon, Carmen, Catmon, Compostela, Poro, Pilar, San Francisco, Tudela, Liloan, and Sogod,*

<i>SHS Tracks and Academic Strands</i>	<i>TVL Specializations</i>
<ol style="list-style-type: none"> 1. GAS 2. TVL 3. ABM and STEM 4. Sports track 	<ol style="list-style-type: none"> 1. Food and beverage services 2. Bread and pastry 3. Cookery 4. Computer hardware servicing 5. Computer programming

District 6:

The 6th District of the Province Cebu consists of the *Mandaue City* and the towns of *Cordova and Consolacion.*

<i>SHS Tracks and Academic Strands</i>	<i>TVL Specializations</i>
<ol style="list-style-type: none"> 1. GAS 2. TVL 3. HUMSS 4. ABM 5. STEM 6. Arts and Design 7. Sports track 	<ol style="list-style-type: none"> 1. Bread and pastry 2. Food and beverage services 3. Animation 4. Computer hardware servicing 5. Cookery

District 7

The 7th District consists of the municipalities of *Alcantara, Alegria, Badian, Dumanjug, Ginatilan, Malabuyoc, Moalboal, and Ronda.*

<i>SHS Tracks and Academic Strands</i>	<i>TVL Specializations</i>
<ol style="list-style-type: none"> 1. GAS 2. TVL 3. ABM 4. HUMSS 5. STEM 6. Arts and design and Sports track 	<ol style="list-style-type: none"> 1. Cookery 2. Food and beverage services 3. Bread and pastry 4. Computer hardware servicing 5. Electrical installation and maintenance

Based on the findings, the most offered senior high program in the different congressional districts of the Province of Cebu, Philippines is the academic track particularly the General Academic Strand (GAS). This is so because this strand does not require highly specialized laboratories, equipment, and teachers to teach the courses in its curriculum for the reason that it does not have major courses or specializations. Due to budget constraints and the lack of specialized resources all senior high schools (both private and public) can easily

offer this strand (Ibanez & Kristine, 2017)

The second most offered Track is the TVL Track. This is also easy to offer because the specializations under this track are readily available at the TESDA Training Centers and accredited schools in the different towns and cities in the Province of Cebu. Besides, most TESDA programs are not expensive. Hence, teachers and schools can easily afford to avail of the training, assessment, and accreditation. Moreover, many TESDA programs are already available online making it more accessible to schools and individuals (2017).

Among the TVL specializations, the most offered are: Food and Beverage Services, Bread and pastry, and Cookery. These programs do not really need expensive equipment, laboratories, and highly specialized teachers. Thus, they can easily be offered by both private and public schools.

The findings also show that both the Sports Track and the Arts and Design Track are the least offered programs. These program require expensive equipment and facilities like gyms, stadiums, studios, theaters and the like which are difficult to offer due to budget and resource constraints of schools. Also, they require high specialized or skills teachers which are rare to find considering that these programs are newly offered.

Budget constrain, the lack of equipment, laboratories, and specialized teachers are the main factors that determine the kind of programs senior high schools offer in the different congressional districts in the province of Cebu, Philippines.

Finally, aside from teachers' qualification, resources, and cost as the foremost consideration, the Department of Education (DepEd) conducted a survey among junior high school students on what tracks and strands they will enroll in senior high school. Based on the result, most students in the country opted to enroll in the General Academic Strand and the TVL Track. The survey also showed that there are only very few students who will enroll in the Arts and Design and Sports Tracks. For this reason, public and private schools around the country used these data as bases of their senior high school program offerings (2017).

III. Matching between Senior High School Tracks and TVL Strands and the top 5 in-demand jobs and top 5 projected in-demand jobs in the different Congressional Districts of Cebu.

This section determines whether or not there exists a skills match or mismatch between SHS tracks and strands and the TVL specializations offered with the top in-demand jobs and projected in-demand per congressional district.

District 1:

SHS Tracks and Academic strands vs. In-demand jobs and projected in-demand jobs:

SHS Tracks and academic strands	In-demand Jobs	Remarks	SH Tracks	Proj. In-demand Jobs	Remarks
GAS	Manufacturing	mismatch	GAS	N/A	N/A
TVL	Agribusiness	mismatch	TVL	N/A	N/A
ABM	Restaurant/Food	mismatch	ABM	N/A	N/A
HUMMS	Wholesale/Retail	mismatch	HUMMS	N/A	N/A
STEM	Transportation	mismatch	STEM	N/A	N/A

TVL Specializations vs. In-demand jobs and projected in-demand jobs:

TVL specialization	In-demand Jobs	Remarks	TVL specialization	Proj. In-demand Jobs	Remarks
Bread & Pastry	Manufacturing	mismatch	Bread & Pastry	N/A	N/A
Cookery	Agribusiness	mismatch	Cookery	N/A	N/A
Computer programming	Restaurant/food business	mismatch	Computer programming	N/A	N/A
Electrical Installation	Wholesale/retail trade	mismatch	Electrical Installation	N/A	N/A
Shielded Metal Arc Welding	Transportation and logistics	mismatch	Shielded Metal Arc Welding	N/A	N/A

District 2:

SHS Tracks and Academic strands vs. In-demand Jobs and Projected In-demand Jobs:

SHS Tracks and Academic strands	In-demand Jobs	Remarks	SHS tracks and Academic strands	Proj. In-demand Jobs	Remarks
GAS	Agribusiness	mismatch	GAS	Agribusiness	mismatch
TVL	Hotel/restaurant	match	TVL	Hotel/restaurant	match
ABM&HUMMS	construction	mismatch	ABM&HUMMS	Construction	mismatch
STEM	Information tech	mismatch	STEM	Information tech	mismatch
Sports	Manufacturing	mismatch	Sports	Manufacturing	mismatch

TVL specializations vs. In-demand Jobs and projected In-demand Jobs:

TVL specialization	In-demand jobs	Remarks	TVL specialization	Proj. In-demand jobs	Remarks
Bread and Pastry	Agribusiness	mismatch	Bread and Pastry	Agribusiness	mismatch
Computer Hardware Servicing	Hotel/restaurant/food business	mismatch	Computer Hardware Servicing	Hotel/restaurant/food business	mismatch
Food and beverage	Construction	mismatch	Food and Beverage	Construction	mismatch
Computer programming	Information Tech Business	match	Computer Programming	Information Tech Business	match
horticulture	Manufacturing	mismatch	Horticulture	Manufacturing	mismatch

District 3

SHS Tracks and academic strands vs. In-demand Jobs and Projected In-demand Jobs:

SH Tracks and academic strands	In-demand Jobs	Remarks	SH Tracks and academic strands	Proj. In-demand jobs	Remarks
GAS	Construction	mismatch	GAS	Construction	mismatch
TVL	Health and Wellness	mismatch	TVL	Agribusiness	mismatch
HUMMS	Agribusiness	mismatch	HUMMS	Hotel/restaurant	mismatch
ABM	Hotel/restaurant	match	ABM	Banking and Finance	match
STEM	Banking and Finance (BF) and Manufacturing	Mismatch (BF) Match (Manufacturing)	STEM	Manufacturing	match

TVL specializations vs. In-demand Jobs and Projected In-demand Jobs:

TVL specialization	In-demand Jobs	Remarks	TVL specialization	Proj. In-demand Jobs	Remarks
Shielded Metal Arc Welding	Construction	match	Shielded metal arc welding	Construction	match
Food and Beverage	Health and Wellness	mismatch	Food and Beverage	Agribusiness	mismatch
Cookery	Agribusiness	mismatch	Cookery	Hotel and restaurant	match
Bread and Pastry	Hotel and restaurant	match	Bread and Pastry	Banking and Finance	mismatch
Computer Hardware Servicing	Banking and Finance and Manufacturing	mismatch	Computer Hardware Servicing	Manufacturing	mismatch

District 4:

SHS Tracks and academic strands vs. In-demand Jobs and Projected In-demand Jobs:

SHS tracks and academic strands	In-demand Jobs	Remarks	SHS tracks and Academic stands	Proj. In-demand Jobs	Remarks
GAS	Agribusiness	mismatch	GAS	Agribusiness	mismatch
TVL	Hotel/restaurant	match	TVL	Hotel/restaurant	match
ABM	Construction	mismatch	ABM	Construction	mismatch
HUMMS	Manufacturing	mismatch	HUMMS	Manufacturing	mismatch
STEM	Information Technology/business	match	STEM	Information Technology/business	match

TVL specializations vs. In-demand Jobs and projected In-demand jobs

TVL specialization	in-demand jobs	Remarks	TVL specialization	Proj. In-demand Jobs	Remarks
Food and beverage	Agribusiness	mismatch	Food and beverage	Agribusiness	mismatch
Bread and Pastry	Hotel/restaurant	match	Bread and pastry	Hotel/restaurant	match
Cookery	Construction	mismatch	cookery	Construction	mismatch
Computer Hardware Servicing	Manufacturing	mismatch	Computer hardware servicing	Manufacturing	mismatch
Housekeeping	Information Technology/ Business	mismatch	housekeeping	Information Technology/ Business	mismatch

District 5: SHS Tracks and academic strands vs. In-demand Jobs and Projected In-demand Jobs:

SH Tracks and academic strands	In-demand Jobs	Remarks	SH tracks and academic strands	Proj. In-demand Jobs	Remarks
GAS &TVL	Hotel/Restaurant	Mismatch (GAS) match (TVL)	GAS & TVL	Hotel/restaurant	Mismatch (GAS) Match (TVL)
ABM	Transportation and Logistics	mismatch	ABM	Transportation and Logistics	mismatch
HUMMS & STEM	Manufacturing	mismatch	HUMMS & STEM	manufacturing	mismatch
Sports	Wholesale and Retail trade	mismatch	Sports	Wholesale and Retail Trade	mismatch
	Construction and Banking and Finance	N/A		Construction and Banking and Finance	N/A

TVL specializations vs. In-demand jobs and projected In-demand jobs:

TVL specialization	in-demand jobs	Remarks	TVL specialization	Proj. In-demand jobs	Remarks
Food and beverage	Hotel/restaurant	match	Food and beverage	Hotel/restaurant	match
Bread and pastry	Transportation and logistics	Mismatch	Bread and pastry	Transportation and logistics	mismatch
cookery	manufacturing	mismatch	cookery	manufacturing	mismatch

Computer hardware servicing	Wholesale and trade	mismatch	Computer hardware servicing	Wholesale and trade	mismatch
Computer programming	Construction and banking and finance	mismatch	Computer programming	Construction and banking and finance	mismatch

District 6: SHS Tracks and academic strands vs. In-demand Jobs and Projected In-demand Jobs:

SH Tracks and academic strands	In-demand Jobs	Remarks	SH Tracks and academic strands	Proj. In-demand Jobs	Remarks
GAS	Hotel/restaurant	mismatch	GAS	Information Technology/Business	mismatch
TVL	Construction	mismatch	TVL	Construction	mismatch
HUMMS	Information Technology/Business	mismatch	HUMMS	Hotel/restaurant	mismatch
ABM	Manufacturing	mismatch	ABM	Manufacturing	mismatch
STEM	Health and Wellness	mismatch	STEM	Health and Wellness	mismatch

TVL specializations vs. In-Demand Jobs and projected In-demand Jobs:

TVL Strands	In-demand Jobs	Remarks	TVL Strands	Proj. In-demand jobs	Remarks
Bread and Pastry	Hotel/restaurant	match	Bread and Pastry	Information Technology/Business	mismatch
Food and Beverage	Construction	mismatch	Food and Beverage	Construction	mismatch
Animation	Information Technology/Business	match	Animation	Hotel/restaurant	mismatch
Computer Hardware Servicing	Manufacturing	mismatch	Computer Hardware Servicing	Manufacturing	mismatch
Cookery	Health and Wellness	mismatch	Cookery	Health and Wellness	mismatch

District 7: SHS Tracks and academic strands vs. In-demand Jobs and Projected In-demand Jobs:

SH tracks	In-demand jobs	Remarks	SH tracks	Proj. In-demand jobs	Remarks
GAS	Wholesale/Retail trade	mismatch	GAS	N/A	N/A
TVL	Banking and Finance	mismatch	TVL	N/A	N/A
ABM	Agribusiness	mismatch	ABM	N/A	N/A
HUMMS	Hotel/restaurant	mismatch	HUMMS	N/A	N/A
STEM	Construction	mismatch	STEM	N/A	N/A

TVL specializations vs. In-demand Jobs and Projected In-demand Jobs:

TVL specialization	In-Demand Jobs	Remarks	TVL specialization	Proj. In-demand Jobs	Remarks
cookery	Wholesale/retail Trade	mismatch	GAS	N/A	N/A

Food and Beverage	Banking and Finance	mismatch	TVL	N/A	N/A
Bread and Pastry	Agribusiness	mismatch	ABM	N/A	N/A
Computer Hardware Servicing	Hotel/restaurant	mismatch	HUMMS	N/A	N/A
Electrical Installation and Maintenance	Construction	match	STEM	N/A	N/A

The results show that there exists a sectoral or district mismatch and skills mismatch in the different congressional districts in the Province of Cebu. A sectoral or district mismatch exists because the Senior High School tracks and academic strands offered in the congressional districts do not actually match or fit with the in-demand jobs, projected in-demand jobs, and industries of the districts.

It follows that a skills mismatch also exists particularly skills gap or skills deficit because if the senior high school programs offered in the different districts do not match or fit with the in-demand jobs, projected in-demand jobs, and industries of these districts, then the skills and competencies of the senior high school programs offered also do not match and fit with the skills required of the in-demand jobs, projected in-demand jobs and industries of the local community.

Moreover, the existence of a mismatch show that coordination and consultation among stakeholders had not been enough or sufficient.

Furthermore, the existence of a mismatch reveals that the senior high school programs offered has not been designed or customized according to needs and demands of the locality.

This is so because the Department of Education (DepEd) and the schools in the country did not base their Senior High School program offerings on the in-demand and projected in-demand jobs and industries in the locality. Instead, what they did, they made a survey among the junior high school students on what programs they will take or enroll when they go to senior high school. Likewise, the program offerings were based on schools' existing resources and capability not on what is demanded by the local industries (Formoso, 2016) and (Philippines' K12 Program: Four Senior High Career Tracks).

CONCLUSION:

This study concludes that majority of graduates of the senior high school programs will not be readily employable in their respective districts because their programs and skills do not match with in-demand and projected in-demand jobs and industries of the locality. Therefore, the senior high school program in the province of Cebu has not yet addressed its goal which is to provide the skills and competencies that will make the graduates of senior high school readily employable and become more productive and relevant members of their local communities.

RECOMMENDATIONS:

There should be a closer coordination and periodic consultation and dialogue among stakeholders namely, the schools, the local government, the Department of Education, the chambers of commerce, the industries, Department of Labor, TESDA, among others to address the concerns on job-skills mismatch.

There should also be a periodic formal study or survey on the in-demand-jobs, projected in-demand jobs, emerging jobs, skills and qualification requirements and updates as bases of consultation among stakeholders in addressing the jobs-skills mismatch or gap.

Moreover, the Department of Education and the Senior High schools of the different districts must redesign their programs and offer programs that are aligned or that will respond to the demands and needs of the local industries in order to narrow or shorten the skills gap or mismatch in the locality.

Finally, there should be a massive campaign, education, and orientation of parents and students on programs and careers that students must take that are aligned with the demands of the employers and industries.

REFERENCES:

- Aguila, G. M., De Castro, E. L., Dotong, C. I., & Laguador, J. M. (2016). Employability of Computer Engineering Graduates from 2013 to 2015 in one Private Higher Education Institution in the Philippines. *Asia Pacific Journal of Education, Arts and Sciences*, 3(3), 48-54.
- Bacarra, R. V. (2016). *Why the K-12 program will benefit the Filipino youth?* Retrieved from <http://lifestyle.inquirer.net/227819/why-the-k-12-program-will-benefit-the-filipino-youth/>
- Bringula, R. P., Balcoba, A. C., & Basa, R. S. (May 2016). Employable Skills of Information Technology Graduates in the Philippines: Do Industry Practitioners and Educators have the Same View? *The 21st Western Canadian Conference on Computing Education*. (p. 10). ACM.
- British Council. (n.d.). *South Asia faces demographic disaster unless skills increase*. Retrieved from <https://www.britishcouncil.org/organisation/press/south-asia-faces-demographic-disaster-unless-skills-increase>
- Bureau of Local Employment-DOLE. (n.d.). *OECD, ADB, DOLE Collaborate to Study Philippine Job Skill Mismatch Issue*. Retrieved from <http://ble.dole.gov.ph/index.php/more/179-oecd-adb-dole-collaborate-to-study-philippine-job-skill-mismatch-issue>
- Del Mundo, F. (2013). *K to 12 Program Goal: Jobs for High School Graduates*. Retrieved from <http://newsinfo.inquirer.net/423489/k-to-12-program-goal-jobs-for-high-school-graduates>
- DepEd. (n.d.). *Department of Education*. Retrieved from Senior High School: www.deped.gov.ph/k-to-12/faq/senior-high-school
- Formoso, C. B. (2016). *SHS tracks offer career paths to students*. Retrieved from <http://newsinfo.inquirer.net/782629/shs-tracks-offer-career-paths-to-students>
- Horn, G. (2006). Educational solutions to improve the employability of senior high school learners. *South African journal of education*, 26(1), 113-128.
- Ibanez, C., & Kristine, F. M. (2017). *DepEd: Ready for Senior High*. Retrieved from <http://newsinfo.inquirer.net/788008/deped-ready-for-senior-high>
- Lagami, C. (2016). *High African youth unemployment fuelled by jobs-skills mismatch: report*. Retrieved from <https://www.equaltimes.org/high-african-youth-unemployment?lang=en#.WuenBf6cHIU>
- Patrinon, H. A., & Samer, A. S. (2016). *Weighing the Benefits of senior high school in the Philippines*. Retrieved from <https://blogs.worldbank.org/education/weighing-benefits-senior-high-school-philippines>
- Philippine Information Agency. (n.d.). *Cebu*. Retrieved from <http://pia.gov.ph/provinces/cebu>
- Philippines' K12 Program: Four Senior High Career Tracks*. (n.d.). Retrieved from <http://k12philippines.com/philippines-k12-program-four-senior-high-career-tracks/>
- Ramon Aboitiz Foundation Inc (RAFI)*. (n.d.). Retrieved from <https://www.rafi.org.ph/about-us/>
- Rodriguez, R. R. (n.d.). *Job Skill Mismatch: Is there an Effective and Quick Solution?* Retrieved from https://www.britishcouncil.ph/sites/default/.../ruthr_rodriguez_skills_job_mismatch
- Sarmiento, D. H., & Ronald, O. (2016). *Senior High School Curriculum in the Philippines, USA, and Japan*. Retrieved from https://www.researchgate.net/publication/318494693_Senior_High_School_Curriculum_in_the_Philippines_USA_and_Japan
- Sawahel, W. (2011). Retrieved from AFRICA: Serious mismatch between skills and needs.: <http://www.universityworldnews.com/article.php?story=20110520184126297>
- The Star. (n.d.). *Students urged to address jobs mismatch*. Retrieved from <https://www.iol.co.za/the-star/students-urged-to-address-jobs-mismatch-9316284>.
- Valles, M. C. (2012). Integrated skills: an approach for strengthening the Technical and Vocational Education Program (STVEP) in the Philippines. *OECD Local Economic and Employment Development (LEED)*, 12, 71.
- Veal, K. (2013). *Skills in Asia: Shortages, gaps and mismatch*. Retrieved April 30, 2016, from <https://blogs.adb.org/blog/skills-asia-shortages-gaps-and-mismatch>
