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Improving Logistics Skills and Competence in Indonesia: Bitung Logistics Community College (LCC)

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Outline

Preface

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Preface (1/2)

*“Indonesia’s prevailing vocational education and training system needs reforms and reorientation towards a demand-driven system, ... **curriculum, learning materials, work practice, testing, and certification should be adjusted with demands from the business world and industries** ... From 7.56 million of open unemployment, 20.76 percent are vocational school graduates. In terms of age, the number of unemployed people at the age of 15-19 reached 23.23 percent back in 2010, while in 2015 the figure rose into 31.12 percent... big population can also become potentials to improve the country’s productivity if they are well-prepared from now; yet if we fail to do so, the big population will potentially create problems, especially unemployment at young age.”* [President Joko ‘Jokowi’ Widodo during a limited cabinet meeting on vocational education and training at the Presidential Palace, Tuesday, 13 September 2016. (<http://setkab.go.id/en/vocational-education-system-needs-reforms-reorientation-president-jokowi/>).

*“Evidence is mounting to suggest that there is a global shortage of people with the right skills to meet the evolving needs of the logistics industry. Especially emerging regions are lagging behind, inhibiting economic growth. Thus, governments should systematically assess and address skills shortages in logistics. Commissioned by the World Bank, we devised a toolkit for assessing the availability of logistics skills within low- and middle-income countries. We built on the maturity model concept and embedded it into an assessment and policy recommendation process. An international panel of logistics training experts provided advice on the toolkit development. The toolkit allows government officials and staff from international organizations to gain a quick but comprehensive overview of the logistics skills and training situation in a particular country. A pilot study done in Togo demonstrated the toolkit’s relevance and practicality. The toolkit is the first of its type to help governments undertake a systematic analysis of logistics skills and training at the macro level. **Previous research in this area takes a micro-level perspective focusing on the logistics workforce of individual companies.**”* [Alan C. McKinnon, Kai Hoberg, Moritz Petersen, Christina Busch: *Assessing and Improving Countries’ Logistics Skills and Training*]. (https://tubdok.tub.tuhh.de/bitstream/11420/1489/1/mckinnon_hoberg_petersen_busch_assessing_improving_logistics_hicl_2017.pdf).

Preface (2/2)

To resolve the national shortage of people with the right skills to meet the evolving needs of the logistics industry particularly within low-and middle-income countries, the development of Logistics Community Colleges (LCC) in Indonesia needs to be supported fully so they can progress better.

- The World Bank's Logistics Performance Index (LPI) 2019: Indonesia ranks 46 (score 3.15 (1-5 scale)). Malaysia ranks 41 (score 3.22), Viet Nam ranks 39 (score 3.27), Thailand ranks 32 (score 3.41). Measured performance aspects are inputs on supply chains, i.e.: customs clearance, infrastructure quality, competence on logistics services, ability on track-and-trace on consignee, and delivery time.
- In the last few years Indonesian logistics cost as percentage of the national GDP is 22% (2019). Singapore: 8,0%, Viet Nam: 8,5%, Malaysia: 13,0%, Thailand: 15,0%.

It is to note, however, that logistics challenges faced by Indonesia as an archipelagic country are hugely more difficult compared to that of the other land based countries. With 273 million population Indonesia is the largest archipelagic country having 5,174,263 KM2 area, and, two third of it are water with 16,766 islands, separating Asia and Australia continents.

A. Legal Basis for the Establishment of Logistics Community College (LCC) - (1/2)

I. Presidential Regulation (PR) No.26/2012 on the Development of National Logistics System (SISLOGNAS)

- a. Prepared and proposed by business associations, academicians, practitioners and government representatives;
- b. Issued to be used as reference to national logistics development for relevant stakeholders and on policy coordination:
 - Among its 6 key-drivers and main action plans: (1) improvement of human resources related to the development of national logistics system; (2) establishment of national education and training institutions of international standard for logistics professions; (3) Establishment the Port of Bitung (in North Sulawesi Province) to be the international hub port to serve eastern Indonesia and Pacific waters (the other is the Port of Kuala Tanjung (in the Regency of Batu Bara, North Sumatera Province)) to serve western Indonesia and Atlantic waters; (4) Establishment of port supporting facilities (Special Economic Zones of Bitung) and surrounding fishery processing companies.

II. Law No. 12/2012 on Higher Education

- a. Article 59 (7): community college (of one or two years program) is vocational oriented in nature and is established based on the local comparative advantage or specific need;
- b. Article 81 (1,2): provides legal ground for the local governments to establish community colleges;
- c. Articles 83-89: guidance for collaboration/participations among community members, industries, local and central governments;
- d. Article 90: guidance for collaboration with overseas' good/best practices.

A. Legal Basis for the Establishment of Logistics Community College (2/2)

Notes:

1. The regulations specify that the LCC can be initiated by any of these 3 entities: (a) the industry; (b) the trade/industry association, and (c) the local government. For the industry and association the return on investment is critical for the sustainability, but for the central and local governments, unemployment and how to cope with the bulk of the new labors entrance (about 1.8 million/year) is the major issue.
2. An important issue is the self-sustainability (“mandiri”) status of the LCC which means that the LCC is fully prepared to be handed over, and, to be managed by the central Government (i.e. The Ministry of Education, Culture, Research and Technology/MoECRT). The LCC will then become a state vocational education institute which will be funded by the central government with certain contributions from the local government, business sector and the local community. There are three major requirements to be fulfilled for Mandiri status:
 - a) The Local Government is to grant a plot of land for the construction of the LCC and to build the infrastructure, which are to be handed-over to the MoECRT, and after which it will become a state vocational education institute with funding from the Central Government [for the LCC in Bitung, the construction of the LCC and the infrastructure are completed. The handing over to the MoECRT is in progress];
 - b) Availability of qualified teaching staffs and facilities, and equipment. In principle, the lecturers and trainers of the LCC (colleges with Diploma 2 degree) should have a Master Degree [for the LCC in Bitung, the fulfilment of this requirement is in progress];
 - c) To establish a proper organizational structure for the management and operation of the LCC and to have an approved curriculum. Involvement of the local and regional business sector (an Industry Council) is required and should be part of the LCC organizational structure. Their support to the LCC is through the establishment of the curricula which ensure that it addresses the subjects and qualification needed by the industry, and, through the hosting of internships and employments opportunity [for the LCC in Bitung, the fulfilment of this requirement is in progress].

B. Bitung LCC (1/7) – Location



In 2014, the National Team of SISLOGNAS supported the local governments of Batu Bara (in North Sumatera) and Bitung (in North Sulawesi) to initiate the establishment of LCC in their jurisdiction. Thus far, however, the Bitung LCC is more advanced than the one in Batu Bara. This, in part, is due to the need to support the Port of Bitung (<https://www.marinetraffic.com/en/ais/details/ports/19935?name=BITUNG&country=Indonesia>); the Fishery Port of Bitung (<https://www.semanticscholar.org/paper/Analysis-of-leading-commodities-from-capture-at-Kusumaningrum-Lumingas/abf8c9a87fd88961143e069e8fa4aa1f77158581>), and the Special Economic Zones of Bitung (<https://jurnal.uns.ac.id/GeoEco/article/view/59528>). Thus, this presentation only covers the Bitung LCC.

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<https://m.facebook.com/campus.blcc/about/>; <https://www.youtube.com/watch?v=1i4RM-Nmqys>

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Majors : Two years (four semesters), Diploma 2 Degree: Port & Shipping, Warehousing and Transport.
30% descriptive (theoretical) and 70% hands-on.

B. Bitung LCC (2/7): College Building (2018); School Board and Private Sector Meeting; Internship at One of 41 Logistics Supporting Companies; Graduation (2021).



B. Bitung LCC (3/7): SISLOGNAS Team and World Bank's Consultant at Bitung LCC and Met with the Representatives of Bitung Municipality and Local Supporting Logistics Companies



Members of the SISLOGNAS team and the Consultant from the World Bank met with: (1) the lecturers, staffs and students of the Bitung LCC, and with (2) the Education Board of the Municipality of Bitung and the representatives from the private sector (September 2017).

B. Bitung LCC (4/7) – Curriculum: Diploma 2, Ports Operations

Diploma 2: Ports Operations

1st year

Ports Operations

	<i>Hours</i>
<i>General</i>	<i>144</i>
Bahasa	36
Maths and Calculation	36
English	72

Subjects *756*

Communication skills	36
Computer skills	72
Professional ethics	36
Writing and Reporting	72
Introduction to Ports	96
Warehousing	48
Port equipment	72
Containers	72
Breakbulk/RoRo	36
Customs	36
Safety and security	36
Handling dangerous goods	36
Port documents	72
Port rules and regulations	36

Special Subjects *54*

Ports Simulation Game 2x	54
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Total **954**

2nd year

Ports Operations Planning

	<i>Hours</i>
<i>General</i>	<i>144</i>
Bahasa	36
Maths and Calculation	36
English	72

Subjects *756*

Communication skills	36
Computer skills	72
Writing and Reporting	72
Port Logistics	108
Port Logistics Labs	36
Customs	72
Information&Comm Technology (ICT)	72
Cargo handling techniques	72
Port operation planning	72
Port ICT systems	72
Port documentation	72

Special Subjects *54*

Ports Simulation Game 2x	54
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954

B. Bitung LCC (5/7) – Curriculum: Diploma 2, Warehousing

Diploma 2: Warehousing

1st year

Warehouse Operations

	<i>Hours</i>
<i>General</i>	<i>144</i>
Bahasa	36
Maths and Calculation	36
English	72

Subjects *756*

Communication skills	36
Computer skills	72
Professional ethics	36
Writing and Reporting	72
Introduction Warehousing	144
Loading/unloading	36
Loading/unloading Practice	36
Internal Transport	36
Forklift truck driving Practice	18
Inventory	36
Inventory Practice	36
Order Picking	36
Order Picking Practice	36
Safety and Security	36
First Aid	36
Rules and regulations	18
Barcodes and scanning	36

Special Subjects *54*

Warehouse Simulation Game 2x	54
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Total **954**

2nd year

Warehouse Operations Planning

	<i>Hours</i>
<i>General</i>	<i>144</i>
Bahasa	36
Maths and Calculation	36
English	72

Subjects *756*

Communication skills	36
Computer skills	72
Writing and Reporting	72
Warehouse planning	180
Logistics	72
Cost Calculation	36
Budgeting	36
Planning and Organisation	72
Marketing	36
Human Resources Management	36
Management Information Systems	36
Relevant Laws and Regulations	36
Safety and security	36

Special Subjects *54*

Warehousing Simulation Game 2x	54
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954

B. Bitung LCC (6/7) – Curriculum: Diploma 2, Transportation

Diploma 2: Transportation

1st year

Transport Operations

	<i>Hours</i>
<i>General</i>	<i>144</i>
Bahasa	36
Maths and Calculation	36
English	72

<i>Subjects</i>	<i>756</i>
Communication skills	36
Computer skills	72
Professional ethics	36
Writing and Reporting	72
Introduction Transport	72
Road Transport	72
Truck Mechanics	72
Professional Driving	72
Professional Driving Practice	36
Safety and Security	36
Geography and Topography	36
Truck management	36
First Aid	36
Traffic rules and regulations	36
Loading/unloading	18
Loading/unloading Practice	18

<i>Special Subjects</i>	<i>54</i>
Transport Simulation Game 2x	54

Total	954
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2nd year

Transport Operations Planning

	<i>Hours</i>
<i>General</i>	<i>144</i>
Bahasa	36
Maths and Calculation	36
English	72

<i>Subjects</i>	<i>756</i>
Communication skills	36
Computer skills	72
Writing and Reporting	72
Road Transport Management	72
Cost Calculation	72
Budgeting	36
Planning and Organisation	144
Marketing	36
Human Resources Management	36
Trip and Route Planning	36
Management Information Systems	36
Multimodal Transportation	72
Relevant Law and Regulations	36

<i>Special Subjects</i>	<i>54</i>
Transport Management Game 2x	54

Total	954
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B.Bitung LCC (7/7) – Numbers of Lecturers and Students, Bitung LCC's Graduates Employed by Local Supporting Logistics Companies, and List of Some of Supporting Logistic Companies

A.Number of Lecturers: (1) Permanent: 40 (including from the State Polytechnics of Samarinda); (2) Assigned by Local Supporting Companies: 6.

B. Number of Students:

1st Batch (2015): 152 Students — Only residents of Bitung are eligible

2nd Batch (2016): 120 Students

3rd Batch (2017): 150 Students

4th Batch (2018): 92 Students — Began to open eligibility to residents from other local governments within North Sulawesi Province

5th Batch (2019): 38 Students

6th Batch (2020): 49 Students

7th Batch (2021): 36 Students

C. Number of Graduated Students being Employed by Local Supporting Logistics Companies: 220.
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D. List of Main Local/Domestic Logistics Supporting Companies include:

PT. Salim Group; PT Pelindo IV; TPB; ALFI-ILFA Bitung; PT. AWN; PT. Dunia Expres Transindo; Dinas Kelautan & Perikanan Bitung; Perum Pelabuhan Bitung; PT Sari Cakalang; PT.Indofood; KSOP; PT Temas; TKBM; PT. Rizky Samudra; Gudang BULOG Bitung; PT. Misa Utara; Perum Pelabuhan Bitung; PT. Tanto Intim Line; PT. Meratus; PT. Laduna Express.

C. Expected Support/Cooperation

Supports/Cooperation to further develop Bitung LCC is crucial as they are urgently needed. Not only the supports will eventually provide the Country's return on investment in the logistics sector, but it also provides employment opportunities for the bulk of Indonesian millennials. Supports are to be focused on:

1. Trainings toward the Recognized Certification of Bitung LCC and its students at both national and international (Korean, or other countries) levels for the three majors.
2. Certified trainings that contribute to further fine-tuning of the curricula, such as: forklift drivers, crane operators, electronic based integrated warehouse operating systems, with teaching materials in Bahasa and English.
3. Learning/teaching equipments and recommendation for required laboratory/simulators, and their financing schemes.
4. The possibility to add the cold chain warehouse system as a new major study at Bitung LCC as the availability of cold chain warehouse system is urgently needed to support the current development of Bitung International Port, Special Economic Zones, and the Fishery Ports.
5. Others, as proposed by potential partners.

Many Thanks!