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Monozukuri Education **in Darma Persada University**

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Serving more than 7 (seven) years as Director at the Ministry of National Development Planning of the Republic of Indonesia (BAPPENAS), this Bachelor of Economics and Development Studies from Parahyangan Catholic University has written several books concerning to Decentralization and Regional Autonomy, Regional Development Planning, Monitoring and Development Evaluation, etc.

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Indonesian Challenges until 2030

- Leaving Middle Income Trap
 1. High, inclusive, and sustainable economic growth (6-8%/y),
 2. Economic structure transformation supported by better natural resources management, science & technology, and innovation,
 3. **Enhancing the quality of human resource,**
 4. Food, energy, and water security,
 5. Adequate infrastructure provision.



Vision

- To be the leading university in Indonesia with the advantage in the aspects of culture that is enriched with *Monozukuri* which has significantly contributed to the development of the Nation.



Mission

1. Conducting Education, Teaching and Research in the framework of the Tri Darma, that excelled in the field of culture and Monozukuri.
2. Producing graduates who have:
 - Creative culture in making goods (*Monozukuri tetsugaku*),
 - Industrial spirit (*Sangyo spirit*), and
 - Entrepreneurial spirit (*kigyoka*)so have the knowledge and ability to produce the goods / services that are highly competitive in the global market, either as individuals or as part of one system.
3. Producing graduates who are trilingual, which is in the early stages began with Indonesian, English and Japanese.
4. Producing graduates who can quickly get a job or be an entrepreneur.



Manufacturing Industry Trend

- Japanese manufacturing industry is growing rapidly in Asia, as well as in ASEAN and Indonesia.
- Global production chain.
- Requires equal standard of production.
- Requires equal human resources quality that can be transferred among the Japanese industries.



Qualification

- Japanese industry demands high qualification of human resources.
- Many industrial standard should be adopted (engineering, processing, management, finance, etc.).
- However, the essential qualification (standard) that is rooted from Japanese culture is the most important, namely *monozukuri*.



The Meaning of Monozukuri

- Monozukuri is a Japanese word, which consists of "mono" which means "things," and "zukuri" which means "create". The literally meaning of monozukuri is "creating things"
- The meaning is not as narrow as "creating things", but includes "spirit to produce excellent products and the ability to constantly improve a production system and process".
- Accordingly in monozukuri it contained the ability of "excellence", "skills", "spirit", "zest" and "pride" to create things in the best quality.



Monozukuri in Unsada

Objectives

- Encouraging students to comprehend and performing the spirit of work in order to produce an object or work perfectly, full of dedication, and continuously strive to enhance it to the most ideal state.

Target

- Encouraging students to work hard, love what they work on, and perform their work with passions and wholeheartedly.
- Resulting students with inventive, creative, and innovative thoughts.
- Persuading students to be confident with their own capabilities.



Monozukuri Learning in UNSADA

- Monozukuri subject has been determined as a compulsory subject for all students in UNSADA.
- Japanese language is a compulsory subject for all students from all faculties in UNSADA as well.
- Monozukuri learning has been started since 2003.
- Lecturers for Monozukuri subject have been provided and prepared well by many parties—one of them is HIDA.
- In Monozukuri classes, there are study tours to several numbers of factories to facilitate students to experience and directly learn the practice of Monozukuri in real life.



The Elements of Monozukuri Learning in UNSADA

- In summary, there are some essential elements in Monozukuri learning:
 - 報連相 Horenso: Houkoku, Renraku, Soudan,
 - 5 S 運動 Seiri, Seiton, Seiso, Seiketsu, Shitsuke,
 - 改善 Kaizen,
 - 現場現物 現実 3 Gen Principle: Genba, Genbutsu, Genjitsu,
 - Just-in Time,
 - Kanban,
 - Japanese Corporate Culture,
 - Etc. → depends on the faculty.



Monozukuri in Unsada

- Since the development of automotive industry is growing rapidly in Indonesia, UNSADA focuses upon the learning which sustains the automotive study such as **mold and dies**, and **automation (robotic)**.
- Within the series of **mold and dies** learning in UNSADA, Takushoku University has assisted and supported UNSADA two times by organizing special lecture for students of the Faculty of Engineering in UNSADA.
- In the field of automation, HIDA has performed special training for five lecturers from UNSADA and provided UNSADA with PLC devices.



Improvement to the Curriculum System with Monozukuri Basis

- By means of the assistance from education institutions from Japan, hence, the curriculum system is improved effectively by involving Monozukuri principles.
- The curriculum system is improved not only by considering the local interest, but also requirements of industry sectors, particularly manufacturing industries.
- Furthermore, at the very first stage of the improvement of curriculum system, it is also projected to Departments of Industrial Engineering and Mechanical Engineering.
- In 2016, the learning in Departments of Industrial Engineering and Mechanical Engineering is aimed to be performed with a new curriculum system with Monozukuri basis.



Future Strategies

- To upgrade the competencies of lectures, so that they are capable of teaching based on Monozukuri curriculum.
- To provide modern devices/laboratories which are specified for sustaining the Monozukuri learning.
- To foster excellent cooperation with industry sectors, so that the education system in UNSADA more consistently correlate with industry sectors.
- To apply Monozukuri curriculum not only to the Faculty of Engineering, but also to the Faculty of Letters, the Faculty of Economy, the Faculty of Marine Technology, and the Graduate School of Renewable Energy.



Thank You