

**“Monozukuri” (Japanese-style Manufacturing) Culture from Japan to the World**

# **“Monozukuri” Online Testing and “Monozukuri” Online Human Resource Training Initiative Proposal**

The manufacturing culture of each country in the world differs respectively, which leads to the difference in manufacturing productivity of respective country. “Japanese manufacturing culture” has created and further expanded the world top manufacturing industries of Japan. Thus, by introducing Japanese manufacturing culture, it is possible for any country in the world to effectively create and further expand its own manufacturing industries.

**Organized by: “Monozukuri” Online Human Resource Training Consortium  
Monozukuri Nihongo Kentei Kyokai (MNKK)**

**In Support: Japan International Cooperation Agency (JICA)  
Japan External Trade Organization (JETRO)**

**Cooperation: Japan Overseas Enterprises Association (JOEA)  
Japan Engineers Federation (JEF)  
Japan Researcher's Network (JRN)**



# “Monozukuri” Online Human Resource Training Consortium

## ■ Mission of “Monozukuri” Online Human Resource Training Consortium ■

Within a company’s organization, there is no other workplace like manufacturing site where quantification of daily activities is easier.

With a proper action, its result is immediately shown with numerical values in this site.

Manufacturing site is a very rewarding workplace and it is the motivation of individuals of manufacturing human resources that supports the action.

Motivating oneself takes effects immediately.

Manufacturing human resources you need cannot be developed overnight, nor can be introduced from outside without much thoughts.

It is necessary to develop them with appropriate time and opportunity.

The mission of our consortium that organizes “Monozukuri” Online Testing is to introduce now to the world the potential power of human resource development that have been cultivated by Japanese manufacturing site for the sake of improving productivity.



## ■ What is “Monozukuri” Culture? ■

It is the manufacturing philosophy, in its broad sense, that is applicable to any business work, regardless whether it is manufacturing industry or not. It is a series of activities to add such values, through the idea or the way of thinking or technologies of Japanese manufacturing, as to plan, develop and design in order to provide things and services with function, quality and price that satisfies the customers, as well as to produce, purchase and sell.

## — What abilities are measured by “Monozukuri” Online Testing? —

- ① Ability for communication and terminologies
- ② Ability of manufacturing technology
- ③ Ability to exert in well balance such skills as organizational skill or basic skill as a member of the society or basic management skill
- ④ Ability to understand foreign culture



# Outline of “Monozukuri” Online Testing

Any Time, Anywhere, Anybody Can Learn by His/ Her Own Smart-phone

## ● Assumed Trainees & Examinees

- Managers, Executives, Employees
- Students of Universities, Vocational Schools and Technical Junior Colleges, and Employees in the first through third year of employment
- Managers/ Employees of Companies/ Organizations

## ● Self-Learning (Viewing Video Lectures)

- Videos are played back by streaming
- Can be viewed by PCs/ Smart-Phones
- Free of Charge for Viewing (No Limit in Total Number of Viewing)
- Other Services Available: Collection of Manners on Manufacturing Site (Videos), Text Books, Glossary of Terminologies, etc. (Some of them are charged)

## ● Self-Testing

- Four Choice Questions
- Test Fee: Free of charges
- Fundamental Test: 50 Questions in 50 minutes  
Advanced Test: 70 Questions in 70 minutes (current plan)
- Examination can be taken by PC/ Smart Phone (can be taken at anyplace/ anytime, but requires obtaining Examinee ID, free of charge)
- Test results are given by scores (not pass/ fail)

## ● Cooperating Organizations:

- Support: Japan International Cooperation Agency (JICA) (Planned)
- Support: Japan External Trade Organization (JETRO) (Planned)
- Cooperation: Japan Overseas Enterprises Association (JOEA)
- Cooperation: Japan Engineers Federation (JEF)

In any country, the fundamental of the manufacturing site is the same: namely **how to achieve the level of QCD (Quality, Cost and Delivery) that clients require**. It is necessary to have knowledge and technology common to the manufacturing site. To acquire the knowledge and technology in order to enable handing down of “wisdom” is the role which “Monozukuri Nihongo Kentei (MOK)” or “Monozukuri” Online Testing aims at.

### ■ What is MOK?

MOK is an educational system aiming at those people and students engaged in manufacturing to acquire and enhance their capability required for manufacturing.

MOK consists of the following:

- 1) Self-Learning (see Note 1)
- 2) Self-Testing (see Note 2)
- 3) Self-Appeal Video (see Note 3)

### ■ MOK test can be taken by Smart-phone!!

MOK training and testing are available on your smart-phone, tablet or PC on 24/7 basis. Video lectures can be viewed **free of charge** at anytime and anyplace and can be proceeded to MOK test online, **free of charge**. When completing the test, your obtained SCORE will be shown immediately.

### ■ Contents of MOK!!

- 1) Fundamental Test

Reading comprehension: 50 questions within 50 min  
Oral capability: 1 min Self-Appeal Video (see Note 3)

- 2) Advanced Test

Reading comprehension: 70 questions within 70 min  
Oral capability: 1 min Self-Appeal Video (see Note 3)

NB: Advanced Test is planned to start in 2019

NB: Number of questions and test time are subject to change

### ■ Learning Cycle of MOK!!

“Registration” → “Learning by video viewing”  
→ “Taking a test” → “Check test results”  
→ “Learning by video viewing again”  
→ “Taking another test”

Repeating such learning cycles will enhance your capability.

**Note 1:** Self-Learning means personal viewing of lecture videos prepared as tuition materials for taking “Monozukuri” Online Testing (MOK). These videos can be viewed on your own smart-phone or PC at anytime, anywhere free of charge without restrictions.

**Note 2** 「Self-Testing means that an examinee can take a test by using his/ her own smart-phone or PC at the time and the place of his/ her choice where the examinee is held accountable for the test results.

**Note 3** Self-Appeal Video means the following:

1) Immediately after taking a test, an examinee makes a self-introduction video, using his/ her own PC or smart-phone and orally presenting his/ her birth place, graduated school, specific field of expertise and preferred job category, that is to be posted on the website designated by MNKK. Combined with the acquired SCORE of the Fundamental Test, the posted self-appeal video is used for formal evaluation of the examinee’s capability.

2) Self-appeal videos are viewed widely by those in charge of recruiting domestically and overseas and are useful for participating in internship or job hunting.



# World Market Map of “Monozukuri” Online Testing

(Number of Japanese Companies and Locally Employed Employees of Japanese Companies in each region)

※The numbers exclude local companies and local employees



## —Organizations in support of wide spreading MOK (Planned) —

### <Examinees of Japanese Enterprises Overseas>

- Japan External Trade Organization (JETRO)
- Japan International Cooperation Agency (JICA)
- Asian Productivity Organization (APO)
- Association for Overseas Technical Cooperation and Sustainable Partnerships (AOTS) (Alumni Societies)
- Chamber of Japanese Commerce and Industry Enterprises in Each Country: Member Enterprises
- JOEA: Member Enterprises
- SME Support Japan

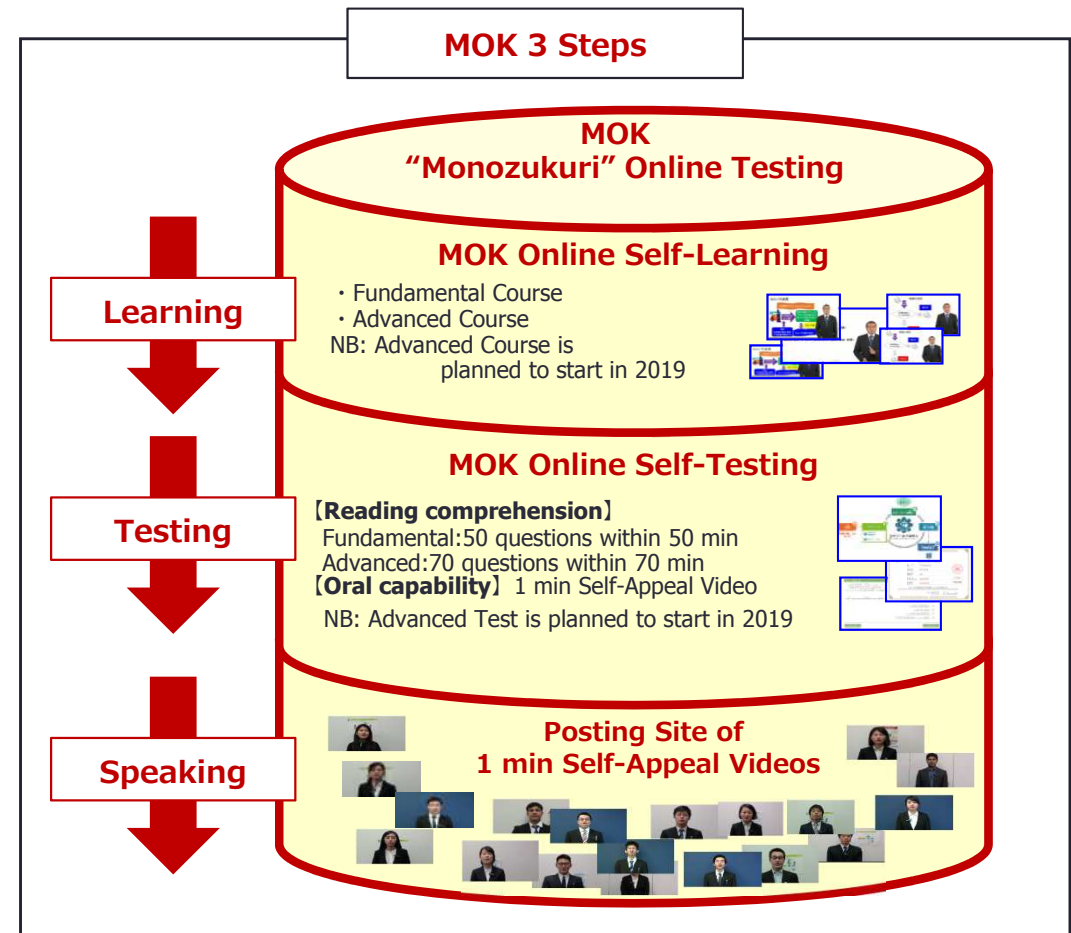
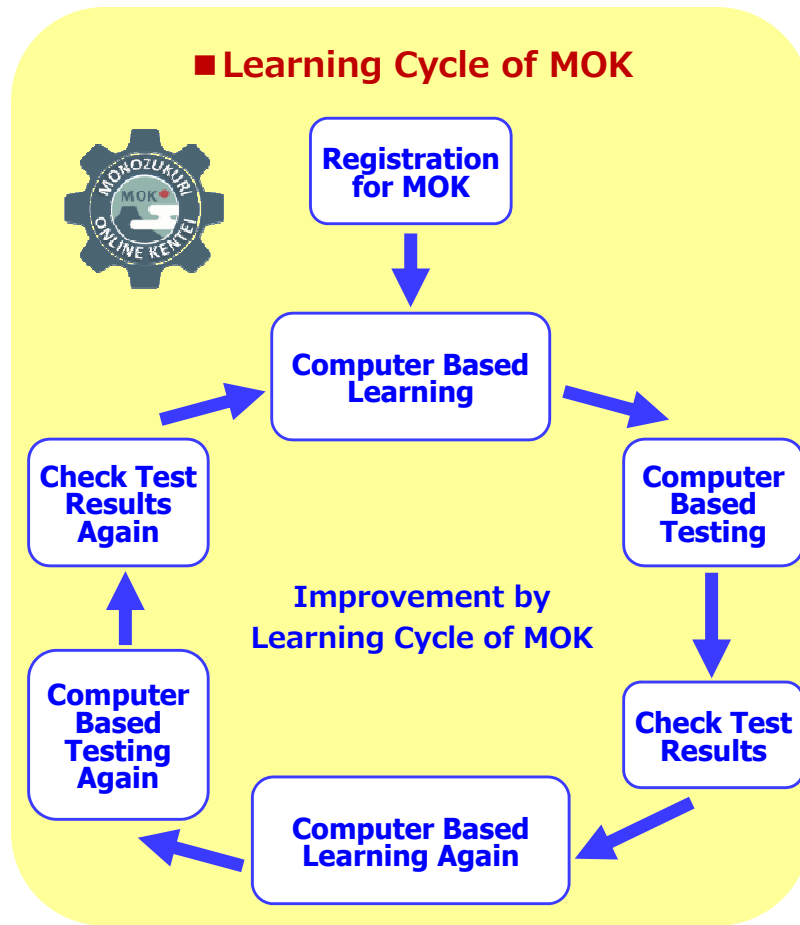
### <Examinees of Non-Japanese Enterprises Overseas>

- Chamber of Commerce and Industry in Each Country: Member Enterprises
- Scientific Societies/ Organizations in Each Country: Member Enterprises
- Engineering Society in Each Country: Member Enterprises
- Specialized Organization of Enterprise DB
- United Nations Industrial Development Organization (UNIDO): Overseas Offices
- Organizing Bodies of Overseas Exhibitions: Exhibiting Enterprises/ Visitors
- SME Agency of Each Country
- And Others

Map of Japanese Companies Advanced in Various Regions  
2016 Data from MOFA (Ministry of Foreign Affairs) website  
(Numbers of Employees are tallied originally by JEF)



# Operation and Flow of “Monozukuri” Online Testing (MOK)



## ■ What is MOK?

MOK is an educational system aiming at those people and students engaged in manufacturing to acquire and enhance their capability required for manufacturing.

MOK consists of the following:

- 1) Self-Learning
- 2) Self-Testing
- 3) Self-Appeal Video posting

## ■ Main Features of MOK

- 1) Testing Applicable to Manufacturing
- 2) Testing for Enhancing Productivity
- 3) Testing Useful at Manufacturing Site
- 4) Testing Promoting Technology Transfer
- 5) Testing Supporting Localization of Enterprises
- 6) Testing Essential for Education of Local Staff
- 7) Testing Spreading Globally “The Spirit of Manufacturing”

## ■ MOK test can be taken by Smart-phone!!

Computer Based Learning and Testing of MOK are available free of charge on 24 hour basis anytime and anywhere on your smart-phone, tablet or PC. After you take a test, you can get your score you have got immediately.



# “Monozukuri” Online Testing Level Guide

## MOK Advanced Test

—Capable of comprehending manufacturing spirit and manufacturing management—		
650 to 700 points	Capable of comprehending manufacturing spirit and manufacturing management	<ul style="list-style-type: none"> <li>• Knowledgeable of manufacturing management terminologies and comprehensible of manufacturing management spirit</li> <li>• Mission of enterprises, Role and responsibility, Authority, Quality management, Challenges, Targets, Workplace, Maturing human resources, R&amp;D, Education and training, Human resource development</li> <li>• Business succession of SMEs, and others</li> </ul>
—Possessing technical knowledge of manufacturing and capable of teaching specific methods—		
550 to 649 points	Administrators/ Managers	<ul style="list-style-type: none"> <li>• Spreading and continuing QC Circles and teaching QC methods</li> <li>• Plan and implement a worksite improvement plan together with staff members</li> <li>• Capable of proper judgement and instruction in QC and field of specialization</li> <li>• Knowledgeable of Japanese business customs and backgrounds, and capable of explaining the relationship with local customs/ culture/ thinking</li> </ul>
—Possessing general knowledge of manufacturing and capable of practicing at worksite—		
400 to 549 points	Section Heads/ Engineer Level	<ul style="list-style-type: none"> <li>• Knowledgeable of terminologies of manufacturing operation and management techniques and actual management of manufacturing site</li> <li>• Master techniques: Factory management, Production management, Quality control, Business improvement, Kaizen, TQM, TPM, QMS, ISO, Maintenance, Failure rate, Yield, Productivity, etc.</li> <li>• Take the initiative to practice keeping things tidy and in order</li> <li>• Comprehend and practice techniques of purchasing control and inventory control</li> <li>• Plan and implement a worksite improvement plan together with staff members</li> <li>• Take the initiative to implement QC circles and practice various techniques of quality control</li> <li>• Understand Japanese business customs and their backgrounds</li> <li>• As a manager, understand the policy of the organization and capable to explain and instruct to staff members.</li> </ul>
—Possessing basic knowledge of manufacturing site and knowledgeable of how to proceed work—		
200 to 399 points	Unit Heads/ Technicians Level	<ul style="list-style-type: none"> <li>• Factory management, Production management, Quality control, Purchasing control and Inventory control, Business improvement, Kaizen, QC circle activities, PDCA, Omotenashi, Customer satisfaction, etc</li> <li>• Understand and practice the dialogue between the boss and the staff and respectful languages</li> <li>• Understand and practice the basic idea of efficient work and procedure</li> <li>• Capable of making expressions of properties/ conditions/ changes</li> <li>• Making rigorous memoranda, and understand and practice basics of business mails</li> <li>• Nurture the capability of cooperating with variety of people towards goals</li> </ul>
0 to 199 points	Not Qualified for Any Evaluations	Not Reaching the Minimum Level for Taking the Advanced Test

## MOK Fundamental Test

—Possessing the minimum knowledge required for manufacturing site—		
400 to 500 points	Level of employees in the first through third year of employment	<ul style="list-style-type: none"> <li>• Understand and practice the rules of self-introduction</li> <li>• Capable of daily greetings at manufacturing site</li> <li>• Understand the importance of persistent trial even after failure</li> <li>• Possessing questioning attitude and the power to think thoroughly</li> <li>• Process PDCA/ SDCA, Leave/Absence/Out of Office, Sense of Time, Company and Meetings, Problem Awareness, Procedure of Work, Separation of Private and Public Life, Quality Mind, Client Mind, Handling of Documents, Manners at Meetings, Strict implementation of “5 Minutes in Advance Spirit”, Keeping things tidy and in order, Taking Notes, etc.</li> </ul>
—Interested in Manufacturing Site and Capable of Simple Japanese Conversations—		
200 to 399 points	Level of Graduates from Technical Universities or Vocational Schools	<ul style="list-style-type: none"> <li>• Capable of greeting and simple conversation in Manufacturing Site</li> <li>• Able to understand the meaning of basic job manners, attire, punctuality, making the arrangements manufacturing, etc.</li> <li>• Capable of understanding simple numerical equations, figures and diagrams and expressing the site situation in simple numerical equations, figures and diagrams</li> </ul>
—Basics of Enterprise Activities Interested in Japanese and Capable to understand the basics of manufacturing—		
0 to 199 points	Level of Freshmen or Sophomores of Technical Universities or Students of Vocational Schools	<ul style="list-style-type: none"> <li>• Basics of Enterprise Activities Capable of simple “Monozukuri” conversations</li> <li>• The Basic Activities of Enterprises that Learn Manufacturing for the First Time or are Interested in Manufacturing</li> </ul>



# “Monozukuri” Online Testing Testing Criteria (Excerpts)

**Please check the following before taking lectures and tests using examinee’s own PC or smart-phone:**

## 1. The Objective of “Monozukuri” Online Testing

The objective of “Monozukuri” Online Testing is for those members of society or students engaged in “Manufacturing Society” (manufacturing industry and service industry) to learn and improve the knowledge and the technology of Japanese manufacturing they need.

## 2. Outline and Implementation Criteria of “Monozukuri” Online Testing

### (1) Test Content and Operating Environment

#### • Test Content

“Monozukuri” Online Testing can be taken at anytime and anywhere, individually or as a group, using an examinee’s own smart-phone or PC.

#### • Operating Environment of Testing System (For details, please refer to the official website of “Monozukuri” Online Testing: <http://www.monoken.org>)

**1) OS Version:** Windows 7 or above/ Mac OS 10.13 or above/ iOS 11.0 or above/ Android 7.1 or above

**2) Browser:** Internet Explorer version 11 or above/ Google Chrome version 64 or above/ iOS Safari version 604.1 or above/ Android Google Chrome version 68.0 or above

### (2) Self-Testing of “Monozukuri” Online Testing consists of 1) Fundamental Test and 2) Advanced Test

### (3) Learning Content of “Monozukuri” Online Testing

Those currently or in future engaged in manufacturing industry and service industry can learn the knowledge and the technology they need from the fundamental level to the advanced level through lectures and testing.

### (4) Types of Test Taking

There are two types of test taking as follows:

- 1) Test taking as a Group: When more than 10 people take tests, tests can be taken together as a group (prior application and approval is required).
- 2) Individual test taking: Test taking is done and the test result is managed under the responsibility of individuals.

### (5) Specifications of Test

#### 1) Fundamental Test

**【Reading comprehension】** 50 questions within 50 min.

**【Oral capability】** 1 min. Self-Appeal Video

NB: The number of questions and the test time are subject to change.  
Four Choice Questions

#### 2) Advanced Test

**【Reading comprehension】** 70 questions within 70 min.

**【Oral capability】** 1 min. Self-Appeal Video

NB: Advanced Test is planned to start in 2019  
Four Choice Questions



Full texts of Self-Testing  
criteria are given on the  
following website:  
<http://www.monoken.org>



# Frequently Asked Questions (FAQs) 1

## **Q1 What is the goal of Monozukuri Online Kentei (MOK in abbreviation)?**

**A1** It is the manufacturing philosophy, in its broad sense, that is applicable to any business work, regardless whether it is manufacturing industry or not. It is a series of activities to add such values, through the idea or the way of thinking or technologies of Japanese manufacturing, as to plan, develop and design in order to provide things and services with function, quality and price that satisfies the customers, as well as to produce, purchase and sell.

## **Q2 Who is the organizer of MOK?**

**A2** The organizer of MOK is the Monozukuri Nihongo Kentei Kyokai (MNKK) and the general secretariat is the Monozukuri Kentei Center Co. Ltd. For details of MOK, please refer to the following URL:[http://www.monoken.org/monozukuri\\_e.html](http://www.monoken.org/monozukuri_e.html) (under construction)

## **Q3 Are there any conditions set for taking MOK?**

**A3** There are no special conditions set for taking MOK. Both domestic and overseas students as well as any adult can take MOK.

## **Q4 Are there any levels of MOK? How are they evaluated?**

**A4** MOK consists of two levels, namely Fundamental Level and Advanced Level. Test results are given in points (scores). The perfect score for Fundamental Level is 500 points and for Advanced Level 700 points. (However, the perfect point is subject to change )

## **Q5 How many numbers of questions are given and what is the testing time of MOK?**

**A5** They are as follows for Fundamental Level and Advanced Level

[Reading Comprehension] Fundamental Level: 50 questions in 50 min testing time

Advanced Level: 70 questions in 70 min testing time

[Listening Comprehension] Fundamental Level: 10 questions in 20 min testing time

Advanced Level: 10 questions in 20 min testing time

**NB1:** After taking a test, an examinee makes a 1 min self-appeal speech video and posts it on the specified website in order to secure the obtained score.

**NB2:** Applied Level and Listening Comprehension is planned to commence sometime in 2019.

**NB3:** The above may be changed without prior notification.



# Frequently Asked Questions (FAQs) 2

## **Q6 What is the scope of possible questions for Fundamental Level and Advanced Level of MOK?**

**A6** The scope of possible questions of MOK covers the items directly or indirectly related to QCDS (quality, cost, delivery and service) that forms the basics of manufacturing. As for Fundamental Level, a preparatory learning is possible by viewing e-learning video lectures.

## **Q7 We are planning to make a group application within our school. Is it possible to make a trial, free of charge, prior to the actual testing?**

**A7** Yes, it is possible. First make ID registration and send an e-mail of requesting free trial to the following address: [info@monoken.org](mailto:info@monoken.org)

## **Q8 In what form the assessment of ability is conducted by MOK?**

**A8** It is possible for MOK to evaluate “speaking” ability in addition to “reading” and “listening” capabilities by means of evaluating three capabilities of “reading comprehension”, “listening comprehension” and “1 min self-appeal speech”.

## **Q9 After taking a MOK test, is a certificate of obtained score issued?**

**A9** Yes, after taking a test, the “Certificate of Score” is issued with the obtained score recorded on it. Each MOK examinee, after taking a test, can view the result on respective My Page that shows his/ her own Certificate of Score. (It can be printed out by downloading it to a PC.)

## **Q10 After the test, a self-appealing video of less than 1 min long is to be posted. What kind of effects it would have on the examinee?**

**A10** MOK is designed that, in addition to Group Testing, an individual can take a test. In order to enhance the reliability of MOK testing and fulfill the requirement of possessing readiness for immediate contribution to work, oral testing (speaking) has been introduced.

## **Q11 In what manner can MOK be taken?**

**A11** MOK is conducted by utilizing online testing system (based on CBT: Computer Based Testing) and an examinee can take a test at any time and from anywhere via internet by the use of his/ her smart phone, tablet or PC.

## **Q12 MOK’s learning materials or test questions are provided in English. Do you plan to translate them into other languages, for instance French, German, Spanish, Chinese and other languages?**

**A12** For other languages, they will be added gradually when enough needs are confirmed.

# Frequently Asked Questions (FAQs) 3

## **Q13 Is there a way for prior learning/ training before taking a MOK test?**

**A13** The organizer of MOK, Monozukuri Nihongo Kentei Kyokai (MNKK), provides e-learning video lectures for the sake of the examinees' prior learning. Currently, 12 lecture videos for the Fundamental Level are available and those who have completed ID registration can view them at any time and anywhere, free of charge.

## **Q14 Do you provide any other prior learning materials in addition to lecture videos?**

**A14** We also provide other materials such as videos for learning good manners and the technical glossary.

## **Q15 Is there a reference text book for examinees?**

**A15** There is a lecture text book for Fundamental Level. The lecture text book for Advanced Level is planned to be completed in October 2019.

## **Q16 In what modes can MOK be taken?**

**A16** It is appropriate to take Group Testing when letting students in a university/ an educational institution, or an applicable employee in a company/ a factory, or all the applicable staff members take a MOK test. Individual Testing is also possible. Please refer to Q17 for Group Testing.

## **Q17 When wishing to let all the applicable employees in the company take a test, can we take Group Testing?**

**A17** MOK has the mechanism of Group Testing in order to accommodate such cases where multiple persons wish to take a test as a group, like a company or a department as a whole. Please make an application in accordance with the following steps:

1) The person representing the group is requested to make ID registration of himself/ herself at the following website.

URL: <http://monoken.monoken.org/systemAdmin/register>

2) After registration, an e-mail concerning registration is sent to the representative person from the Secretariat.

3) When receiving the e-mail, please log in by using the registered ID and the password.

4) After logging in, please register required data of each examinee.

NB: Examinees' data can be registered collectively with a csv file.

5) After registration and taking a MOK test, the representative person can check the test results of registered examinees.

## **Q18 When will the Advanced Level MOK start? And what is planned thereafter?**

**A18** The Advanced Level MOK is planned to start in October 2019. After that, it is planned to add a testing with higher expertise in accordance with a job type.

# “Monozukuri” Online Human Resource Training Consortium

## Monozukuri Nihongo Kentei Kyokai

### Organizational structure and Board of Directors

#### **Chair :**

Takashi Nonouchi

Former President, Research Institute of Economy, Trade and Industry  
Former Director General, Agency of Natural Resources and Energy METI

#### **Vice-Chair :**

Kenzo Oshima

President, The Africa Society of Japan/ Former United Nations Ambassador/  
Former Vice President, The Japan International Cooperation Agency; JICA

#### **Director :**

Kaoru Naito

Former President, Nuclear Material Control Center/ Director, Japan Engineers Federation

Nobuo Saito, Dr. Eng.

Professor Emeritus of Keio University

Kunihiko Ukifune, Ph.D.

Chairperson of Board of Directors, CEO, The Jikei Group of Colleges

Yutaka Kajiwara, Ph.D.

Emeritus Professor of Takachiho University

Katsumi Hoshino

Emeritus Professor of Tama University

Shogo Nakamura, Dr. Eng.

President, Riken Foundation Mathematics & Science Certification. Co., Ltd/  
Professor Emeritus, Tokyo Denki University

Tashiyoshi Takada

Suken Founder, Science & Mathematics Certification Laboratory

Mamoru Saito

Former Auditor, Japan Executive Search, and Recruitment Association (JESRA)

Isao Idota

Executive Director, Monozukuri Nihongo Kentei kyokai (MNKK)

#### **Auditor :**

Kosuke Teramura

Auditor, Asia Technology Transfer Organization, Inc.



# Inquiries and Document Requests, etc.

## ■ Point of Contact

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