

**YANGON UNIVERSITY OF ECONOMICS
MASTER OF DEVELOPMENT STUDIES PROGRAMME**

**A STUDY ON CURRENT STATUS OF NATIONAL
OCCUPATIONAL COMPETENCY STANDARDS DEVELOPMENT
AND ITS USEFULNESS:
FOCUS ON METAL AND ENGINEERING SECTOR**

**EI EI KHIN
EMDevS – 4 (15 – BATCH)**

DECEMBER, 2019

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A thesis submitted as a partial fulfilment of the requirements for the degree of
Master of Development Studies

Supervised by:

Daw Pa Pa Kyaw
Lecturer
Department of Economic
Yangon University of Economics

Submitted by:

Ei Ei Khin
Roll No.4
EMDEVS (15th Batch)

DECEMBER, 2019

YANGON UNIVERSITY OF ECONOMICS
MASTER OF DEVELOPMENT STUDIES PROGRAMME

This is to certify that this thesis entitled “**A Study on Current Status of National Occupational Competency Standards Development and its Usefulness: Focus on Metal and Engineering Sector**” submitted as a partial fulfilment towards the requirements for the degree of Master of Development Studies has been accepted by the Board of Examiners.

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Yangon University of Economics (Examiner)
5. Dr. Tha Pye Nyo
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Department of Economics
Yangon University of Economics (Examiner)

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ABSTRACT

Vocational and competency standard development and delivering national skills certification system is one of the basic vital parts for HR development for Industry growth. In this study it tried to analysis the development of the National Occupational Competency Standard, competency-based assessment and its usefulness focusing on the Metal and Engineering Sectorial Committee. The method of this study is mainly descriptive method using both secondary and primary data. It is found that there are weak of commitments of the stakeholder to collaborate with NSSA for workforce development and weakness of Communication and information networking at present. And all the certificate holders would like to upgrade their skills levels. It is suggested that sector committees and NSSA should provide proper training system and create path ways to get certificate at each skills level. The employers also need to understand about the NSSA certificate and the usefulness of it.

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Ei Ei Khin

Roll No. 4

EMDevS – 15 batch

2017-2019

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LIST OF ABBREVIATIONS

AAC	Accredited Assessment Center
AANZFTA	ASEAN Australia New Zealand Free Trade Area
ACC	Assessment and Certification Committee
AEC	ASEAN Economic Community
ASEAN	Association of Southeast Asian Nations
ASRA	ASEAN Skills Recognition Arrangement
CoC	Certificate of Competency
CoCU	Curriculum of Competency Unit
CU	Competency Unit
DoF	Department of Fisheries
DoP	Department of Planning
DSD	Department of Skills Development
DTVET	Department of Technical Vocational Education and Training
ESD	Employment and Skills Development
ESDL	Employment and Skills Development Law
Fed.MES	Federation of Myanmar Engineering Societies
HRD	Human Resources Development
ILB	Industry Lead Bodies
ILO	International Labour Organization
ISO	International Organization for Standardization
ISO	International Organization for Standardization
KAPPK	Kod Amalan Pentauliahan Program Kemahiran
LBVD	Livestock Breeding and veterinary Department
LMIS	Labour market information system
M and E	Metal and Engineering
MNQF	Myanmar National Qualification Framework
MoALI	Ministry of Agriculture, Livestock and irrigation
MOC	Ministry of Construction
MoE	Ministry of Education
MOGE	Myanmar Oil and Gas Enterprise
MOHS	Ministry of Health and Sport

MOHT	Ministry of Hotel and Tourism
MoI	Ministry of Industry
MoLIP	Ministry of Labour, Immigration and Population
MoNREC	Ministry of Natural Resources and Environmental Conservation
MOSQF	Malaysian Occupational Skills Qualifications Framework
MoSWRR	Ministry of Social welfare, Relief and Resettlement
MoTC	Ministry of Transport and Communication
MQF	Malaysian Qualification Framework
MRS	Mutual Recognition of Skills
MSCO	Myanmar Standard Classifications of Occupations
MTE	Myanmar Timber Enterprise
NC	National Certificate
NCS	National Competency Standards
NGOs	Non-Government Organizations
NOCS	National Occupational Competency Standard
NOS	National Occupational Standards
NOSS	National Occupational Skills Standards
NQF	National Qualification Framework
NSDA	National Skill Development Agency
NSDC	National Skill Development Corporation
NSDC	National Skills Development Council
NSQF	National Skills Qualification Framework
NSSA	National Skills Standards Authority
OCS	Occupational Competency Standard
PPP	Public Private Partnership
PQF	Philippine Qualifications Framework
PTCACs	Philippine TVET Competency Assessment and Certification System
QATESDF	Quality Assured Technical Education and Skills Development Framework
QMS	Quality Management System
RCC	Recognition of Current Competency
RPA	Recognition of Prior Achievement
RPL	Recognition of Prior Learning

SAG	Self-Assessment Guide
SC	Sectorial Committee
SRA	Skills Recognition Arrangement
TC	Training Committee
TR	Training Regulations
TVET	Technical Vocational Education and Training
TWG	Technical Working Group
UMFCCI	Union of Myanmar Federation of Commerce, Chamber and Industry
WIM	Written Instructional Materials

CHAPTER I

INTRODUCTION

1.1 Rationale of the Study

Nowadays, Myanmar is trying to expand the quality and skill level of workforce. Workers' competency can be increased through training by public and private sectors and also work experience. To reduce poverty and to develop human resources need to improve the skills of workers.

Vocational and competency standard development and delivering national skills certification system is one of the basic vital parts for HR development for Industry growth at national level and one of the mechanisms to facilitate the free flow of skilled labour in National as well as ASEAN context. But Myanmar skills development and legislation system are still behind from neighbouring countries within ASEAN region and being faced with challenges of upcoming ASEAN common labour market and free flow of human resources as vision of ASEAN. So, Myanmar needs to develop the current vocational training and skills development system in term of quantitative and qualitative to equip the workers with reliable productive skills to meet the demand of industry and beyond national level.

And so, Myanmar needs to take the practicable actions for skills recognition to existing workforce who are currently working in a competent manner because in some cases, Myanmar workers are facing with employment issues in FDI companies due to lack of skills recognition system.

Myanmar government launched Employment and skills development (ESD) law 2013 with the aim to improve the workforce' quality, qualifications framework and employability, compared to regional situation, to address the above concerns. For

this improvement, MOLIP had been as focal implementing agency for NSSA program. NSSA has provided the National Skills certificate to existing skilled workers, it was developed since 2007. There are 15 sectorial committees under it, led by concerned Ministries and Organizations.

This study will highlight how to improve and sustain the national occupational competency standard development in Metal and Engineering Sector of NSSA (2010-2018).

At the same time, this also – will identify ways forward and suggestions for how to strengthen the National Occupational Competency Standard (NOCS) and certification mechanism of NSSA in Metal and Engineering Sector as a part of Myanmar workforce development context and implementation of ESD law.

1.2 Objectives of the Study

The main objective of thesis are (1) to examine on current status of National Occupational Competency Standard Development and its usefulness- focus on Metal and Engineering sector, (2) to assess on perception of Skills Workers and Assessment Center Managers in order to seek the feasible ways for further development and sustainability in metal and engineering sector.

1.3 Method of Study

Descriptive method, and both secondary and primary data are used in this study. The interviews and questionnaires are conducted with responsible persons from metal and engineering sector and end users (Skills Labours and Assessment Center Managers) and structured questionnaires are prepared 320 Semi Skilled Worker level 1 and 12 Assessment centre managers by using a simple random sampling method for the primary data. The Gender scope is Male due to the most of job areas are working with male. The secondary data are gathered from various sources such as media, previous research paper, relevant books and websites.

1.4 Scope and Limitation of the Study

This study is based on National Skills Standards Authority (NSSA) in Myanmar. NSSA implement and relate with 15 Sectorial Committees. NSSA already trained 87 inspectors and 522 assessors, accredited to 145 assessment centres, certified 13,346 candidates and 57 NOCS developed for all 15 sectorial committees

bases on National Occupational Competency Standard. But Metal and Engineering Sector already have developed 23 National Occupational Competency Standard (NOCS) and nurtured total 3510 skilled workers (Semi skills workers Level 1 - 2969 and Skills workers Level 2 - 541).

The selected 4 occupations are most demanded occupational areas from Metal and Engineering Sector for the semi-skilled worker level 1 in Yangon area. There are Air-Con, Foundry, Welder (MMAW, GMAW, FCAW), Automotive Mechanic occupational skills areas. In Yangon Region, the total numbers of Level 1 (Semi-Skilled Worker) certificate holders have 1684 and 15 Assessment Center Managers. Among them, I selected 320 Semi - Skill Workers (Level 1) for survey interview whose are the demand side area and 12 Assessment centre managers whose are supply side area in Yangon Region. The time period of the survey is from 2010 January to 2018 December.

1.5 Organization of the Study

This study included five chapters. The first chapter presents about the rank of competency framework for the human resources development. The second chapter describes about the competency framework and its practices in International Context. The third chapter presents the current initiatives of NSSA in Metal and Engineering Sector (based on ESD legislation NSSA and ASEAN MRS movement) (2010-2018). The fourth chapter presents analysis on survey data. The last chapter includes conclusion and suggestion for the human resources development using national occupational competency standard framework.

CHAPTER II

LITERATURE REVIEW

2.1 Competency Standard and its Approach

A competency is the capability to apply or use a set of related knowledge, skills, and attitudes required to successfully perform "critical work functions" or tasks in a defined work setting. Competencies often serve as the basis for skill standards that specify the level of knowledge, skills, and attitudes required for success in the workplace as well as potential measurement criteria for assessing competency attainment. (Government of western Australia, Department of Mines industrial regulation and safety, n.d.). Competency is also the ability to apply knowledge and skills to produce a required outcome. Competency unit can be defined by its function or purpose. The steps that must be performed to achieve an outcome and the means of demonstrating that it has been performed satisfactorily should be described, as well as the conditions under which the function will be performed. The description will also include knowledge and skills that a person needs to perform the task and the means of assessing whether a person can perform the task. (Trinder). The NSSA formed 15 sectorial occupational standards and training committees to draw up, for over one hundred priority occupations in the various sectors, occupational competency standards for the training and certification of the skilled workforce. For the successful implementation of the occupational competency based training and certification embodied in the ESD Law, it is imperative for Employers, Workers and Interested Training/ Assessment Service to know about and understand Occupational Competency Standards based Training and Assessment as it affects them all. (National Employment & Skill Development)

In this study, the important function and framework of competency standards and certification system was highlighted for HRD and professional skill development of skilled workers at each level. This paper studied the approaches of the competency frameworks and applications in international and regional context in connection with free flow and mobility of human resources in business circumstances. It was found

that competency concepts and professional skill certification system is not based on academic approach, mainly based on competency approach required for current industry and companies. These systems have been successfully established in many developed countries for HRD purposes. In the regional context, ILO and other development partners are introducing the regional model competency standards in some skill areas such as welding services, garment manufacturing, tourism and construction occupations in order to facilitate the upcoming common labour market. In Myanmar Context, employment and skill development law has been established since 2013 and national skills standard authority (NSSA) was formed in 2007 in order to establish the national skills qualification framework for Myanmar workforce development. (National Employment & Skill Development)

Competency Standards are increasingly being used by professions and governments to define the qualifications required for professionals to practice in a discipline (Trinder). NSSA NOCS defines a range of levels of competency and the capabilities that are assumed to be achieved at these levels. Competency is the ability to apply knowledge and skills to produce a required outcome. It is the ability to perform activities within an occupation; to function as expected for employment, and the ability to do a job under a variety of conditions, including the ability to cope with contingencies. Competence is an ability that extends beyond the possession of knowledge and skills it includes: i) cognitive competence involving the use of theory and concepts, as well as informal tacit knowledge gained experientially; ii) functional competence (skills or know-how), those things that a person should be able to do when they work in a given area; iii) personal competence involving knowing how to conduct oneself in a specific situation; and iv) ethical competence involving the possession of certain personal and professional values. Competency standard refers to the knowledge, skills and/or competencies linked to practicing a job (Lisbon-to-Copenhagen-to-Maastrich Consortium Partners, 2004)

2.2 Importance of Human Resource Development

Human Resource Management (HRM) is defined as a strategic and coherent approach to the management of an organization's most valued assets – the people working there who individually and collectively contribute to the achievement of its objectives. From this definition, we can deduce that HRM or simply HR is a function

in organizations designed to maximize employee performance in service of their employer's strategic objectives (Johnason, 2009)

2.3 Competency Standards and Practices in Some Selected Asian Countries

2.3.1 ASEAN Practice

One of the most common types of certification systems related to human resource development is where a person is certified as being able to undertake specific job tasks related to an occupation. Certification is generally based on an assessment, which generally includes a test, a performance assessment and/or a portfolio. In some cases, competency certification systems fall outside the remit of an NQF or a formal qualifications system regardless of whether it has been established by government, by professional bodies or by enterprises. There may be more than one type of competency certification system (i.e. government, professional body, private enterprise) established within countries. Competency certification systems across the AMS are focused on the development and acquisition of competence. In many instances competency certification systems have preceded the development and formalisation of a NQF. In some instances, this has caused tensions between a system that has documented levels of competence and that of the proposed level descriptors of a NQF. Finding common ground or harmonising the two frameworks is often a key barrier to agreement and implementation of a NQF. Newer NQFs have often focused on integrating existing competency certification systems within the NQF (ASEAN Secretariat, 2016)

Although competency certification systems can include both training and assessment, some are purely assessment only systems. The requirements for assessors across the AMS are generally articulated in quality standards (e.g. Singapore and Indonesia) or policies and guidelines (e.g. Philippines, Malaysia). Although specific requirements may vary in their details, generally the minimum requirement is for both trainers and/or assessors to have at least the level of competence in the vocational content and skills as well as a qualification in teaching pedagogy and, in some cases, workplace experience. In some instances, assessors required a specific set of competencies related to competency-based assessment. In some country's trainer/assessor requirements are relatively new and not fully implemented. In some countries there are national registers for trainers (Philippines being an example of a national TVET register, and also in Thailand [OVEC]), and where assessment was

centrally controlled there are registers of qualified assessors (e.g. Philippines TVET and the Indonesian competency certification system) (ASEAN Secretariat, 2016).

Competence can be gained through (1) Training (2) Work experience (3) Life experience. Assessment is used to confirm competence. Assessment can occur within a training and assessment provider or with an assessment only provider. In some AMS, the separation of training provision from assessment provision is considered an essential element to a robust competency certification system. This approach is in part due to some certification bodies adhering to ISO/EC 17024:2012 Conformity assessment – General requirements for bodies operating certification of persons. Both involve the assessment of an individual's competence without the assessor being involved in individual's learning (regardless as to whether the learning was achieved through formal, non-formal or informal means) (ASEAN Secretariat, 2016).

Within any TVET system, there are multiple options for the construction of TVET achievement standards, including: (1) Competency standards are statements of knowledge, skills and/or competence linked to a job. (2) Occupational standards are statements of activities and tasks related to a specific job and its practice. (3) Assessment standards are statements of learning outcomes to be assessed and the methodology to be used. (4) Certification standards are rules for obtaining an award and the rights conferred. (5) Educational standards which are statements of learning objectives, content to be addressed, entry requirements and resources required. The approval of training and/or assessment providers is one of the key functions of competent bodies. However, approval processes could be voluntary or compulsory and limited to: (1) Private providers, especially if approval of public providers is assumed (2) Assessment providers only, with training providers being an open market.

Quality assurance of assessment can take a variety of approaches and each AMS country may implement these approaches in various ways, including:

Controlling assessment (1) Centrally developed assessment instruments and centralised administered Assessments (2) Centrally developed assessment instruments, RTO administered assessments but externally judged (3) Combination of externally developed and administered assessment with RTO developed and administered assessments

Monitoring assessment decisions:

- (1) Centralised collection of assessments and assessment decisions
- (2) Providers self-monitor and report

Managing assessors:

- (1) Criteria for suitability and professional development of assessors
- (2) Register of assessors
- (3) Re-certification of assessors.

Finally, protocols for awarding certificates or qualifications can vary:

- (1) Awarding/certifying bodies issue certificates or qualifications
- (2) Awarding/certifying body approves providers to issue on their behalf; with student outcomes retained at the provider or at the awarding body
- (3) Awarding/certifying bodies approve providers to issue certificates or qualifications (ASEAN Secretariat, 2016).

2.3.2 MALAYSIA Practices

The National Occupational Skills Standards (NOSS) is a national document of occupational skills standard established under Part IV of the National Skills Development Act, 2006. It specifies the competencies expected of a skilled worker for an occupational area, level and the pathway to achieve the competencies in Malaysia. As stated under Sections. 20, 21 and 22, Act 652, the DSD is responsible for developing the NOSS which is the basis of developing a national curriculum for skills training programmes, as a main reference for programme accreditation and a standard of competency that a candidate must achieve to be awarded a skills certificate. There are 1845 Level 1 to Level 5 NOSS developed and used in the accreditation of centres and certification of the skills trainees (Kristoffersen, 2019).

The NOSS identifies the competency units in a particular job area, which is a basis for developing a syllabus or a training curriculum. Learning outcomes are represented in the Competency Unit (CU) in the NOSS. The learning outcomes are accompanied by Curriculum of Competency Unit (CoCU) which includes appropriate assessment criteria used to evaluate whether the expected learning outcomes have been achieved. It covers the knowledge, skills, attitude, and employability skills needed by an individual in order to succeed in particular occupation. The document also reflects the occupational structure for each level of competency and the career path within the occupation. The DSD assures that the trainees produced by training providers meet the requirements of the industry (Kristoffersen, 2019).

The Director General may authorise any person, organisation or other body of persons to develop the NOSS on his behalf. The DSD has set up Industry Lead Bodies (ILB) which represent specific industry sectors as strategic partners in determining the needs for the development of skilled workers, enhancing the acceptance of the skills-testing industry and becoming the driver of skilled worker development and training. Among ILB functions are the analysis of relevant occupations within specific industries, development of new the NOSS and periodic review of existing NOSS (Kristoffersen, 2019).

The NOSS is reviewed from time to time according to current needs of the relevant occupation. Any variation of any part of the NOSS shall be approved by the National Skills Development Council (NSDC). As a result of NOSS review, accredited centres are given ample time of 12 months for transition to fulfill requirements in the revised NOSS (Kristoffersen, 2019).

Table (2.1) NOSS Development Process

Step 1	Step 2	Step 3	Step 4
Planning NOSS Development	Conducting NOSS Development	Compilation and Validation of Findings	Validation and NSDA approval
<ul style="list-style-type: none"> • Literature Review • Identify Stakeholders • Identify panels (8-12) representing stakeholders/ Industry/ Training Institution 	<ul style="list-style-type: none"> • Utilize Workshop Method (DESCUM) • Review development Process • Decisions Based on Consensus 	<ul style="list-style-type: none"> • Compile findings and review content • Proof read developed content • Validate content 	<ul style="list-style-type: none"> • Present draft to industry panels in STEC Meeting (3-5 panels representing industry/ stakeholders) • Finalize document draft • Present validated draft for NSDC approval • Update in NOSS Registry

The DSD has developed a standard for programme accreditation, called KodAmalan Pentaauliahan Program Kemahiran (KAPPK) or Code of Practice for Skills Programme Accreditation. The objective of KAPPK is to serve as a guideline for the DSD officers, training providers, policy makers, professional bodies and stakeholders about the standard, criteria, procedures, process and requirements of programme accreditation. It outlines the DSD's standards which training providers must comply with for accreditation (Kristoffersen, 2019).

KAPPK contains nine (9) areas of evaluation which outline standards in line with national and international good practices. The standards are defined as a level of achievement for each criterion and acts as key performance indicator. The DSD uses the accreditation standard to evaluate the application for programme accreditation. The nine (9) areas of accreditation standards comprises of the following elements:

- i. Vision, mission, objectives of skills training & learning outcomes;
- ii. Curriculum design and training delivery;
- iii. Student assessment;
- iv. Student selection and support services;
- v. Staff training;
- vi. Training resources;
- vii. Monitoring and programme review;
- viii. Leadership, governance and administration; and
- ix. Continual quality improvement (Kristoffersen, 2019)

KAPPK explains the certification under skills sector which is based on the concept and structure of the Malaysian Skills Certification System consisting of five (5) levels as shown in the Malaysian Occupational Skills Qualification Framework (MOSQF). The DSD has developed the MOSQF to articulate skills competencies within the levels 1 to 5 of the MQF. A trainee equipped with required competencies as prescribed in the standards will be entitled to obtain qualifications as stipulated in the MOSQF. The MOSQF is divided into five levels with descriptors as shown in Figure. The requirements for the certification are as follows: (Kristoffersen, 2019)

- i. Level 5 - Malaysian Skills Advanced Diploma - competent in applying a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and for the allocation of substantial resources feature strongly, as do personal

accountabilities for analysis and diagnosis, design, planning, execution and evaluation. Specialised technical skills should be demonstrated (Kristoffersen, 2019).

- ii. Level 4 - Malaysian Skills Diploma - competent in performing a broad range of complex technical or professional work activities performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Higher level of technical skills should be demonstrated (Kristoffersen, 2019).
- iii. Level 3 - Malaysian Skills Certificate - competent in performing a broad range of varied work activities, performed in a variety of contexts, most of which are complex and non-routine. There is considerable responsibility and autonomy and control or guidance of others is often required (Kristoffersen, 2019)
- iv. Level 2 - Malaysian Skills Certificate - competent in performing a significant range of varied work activities, performed in a variety of contexts. Some of the activities are non-routine and require individual responsibility and autonomy (Kristoffersen, 2019).
- v. Level 1 - Malaysian Skills Certificate - competent in performing a range of varied work activities, most of which are routine and predictable (Kristoffersen, 2019).

Recognition of Prior Achievement (RPA) is a certification method under the DSD, to give recognition to an individual or employee who can demonstrate skills and knowledge outlined in the NOSS based on his/her work or life experiences, training (formal and informal) and past achievements. It is a recognition of a lifetime of learning that has been experienced by an individual. The candidate is required to demonstrate his/her prior experience and achievements by providing evidence for RPA assessment in the form of a portfolio and/or sit for a practical assessment. (Kristoffersen, 2019)

2.3.3 PHILIPPINE Practices

The Philippine Qualifications Framework was established in 2012 through Executive Order No. 83. While its governance is stipulated in the Ladderized Education Act of 2014, the passage of the PQF Act in January 2018 provided the

legal support for its full implementation. The groundwork for the establishment of PQF was laid more than a decade earlier with the implementation of reforms leading to a quality assured competency-based TVET system in 1998 and the establishment of the Philippine TVET Qualifications Framework (PTQF) in 2004 — institutionalizing National Certificates I to IV based on units of competency that were developed with industry stakeholders. The involvement of the Philippines in the Task Force on the development of the ASEAN Qualifications Reference Framework under the ASEAN Australia New Zealand Free Trade Area (AANZFTA) hastened the institutionalization of PQF and its acceptance by key stakeholders. The PQF is a quality assured national system for the development, recognition and award of qualifications based on standards of knowledge, skills and values acquired in different ways and methods by learners and workers educated/trained in the Philippines. It describes the levels of educational qualifications and sets the standards for qualification outcomes. As defined in RA 10968, qualification refers to a formal certification that a person has successfully achieved specific learning outcomes relevant to the identified academic, industry or community requirements. A qualification confers official recognition of value in the world of education and training, work and job creation (AQRF Committee, 2019)

The PQF has eight (8) Levels of qualifications differentiated by descriptors of expected learning outcomes along three domains: knowledge, skills and values; application; and degree of independence. For example, the Technical Education and Skills Development Authority (TESDA) subsystem covers National Certificates (NC) I through IV corresponding to the first four levels while the Commission on Higher Education Subsystem covers Baccalaureate, Post-Baccalaureate Diploma, Masters, and Doctorate degrees that correspond to Levels 6 to 8 (AQRF Committee, 2019).

The PQF aims to benefit various sectors and stakeholders of education and training by encouraging lifelong learning of individuals; providing employers specific training standards and qualifications that are aligned to industry standards; ensuring that training and educational institutions adhere to specific standards and are accountable for achieving the same; and providing the government with common standards, taxonomy, and typology of qualifications as bases for granting approvals to stakeholders (AQRF Committee, 2019)

Its specific objectives are as follows.

- (1) To adopt national standards and levels of learning outcomes of education (AQRF Committee, 2019)
- (2) To support the development and maintenance of pathways and equivalencies that enable access to qualifications and to assist individuals to move easily and readily between the different education and training sectors and between these sectors and between these sectors and the labour market (AQRF Committee, 2019).
- (3) To align domestic qualification standards with the international qualifications framework thereby enhancing recognition of the value and comparability of Philippine qualifications and supporting the mobility of Filipino students and workers (AQRF Committee, 2019).

The PQF considers Senior High School as the foundation of the 8 levels, and provides eligible Senior High School graduates the possibility of obtaining qualifications up to Level 5 as well as admission to degree programs in Level 6 (AQRF Committee, 2019).

The Philippine Technical Vocational Education and Training (TVET) is a competency-based education and training system strategically designed to meet labor-market demand and provide unskilled Filipinos, opportunities for decent employment and personal advancement. The system subscribes to the principles of lifelong learning and recognition of prior learning by recognizing learning outcomes achieved through formal, informal and non-formal modalities. The qualifications and the skills formation programs are designed in modular form to provide the needed flexibility that allows the packaging of programs according to present and future needs, ease of amendment and an incremental approach to volume and size while addressing the minimum requirements for a qualification. The TVET system is reflected in the Quality Assured Technical Education and Skills Development Framework or QATESDF (AQRF Committee, 2019).

As a competency-based system, Philippine TVET operates on the basis of competency standards developed by industry experts and accepted as an official document after the promulgation of the TESDA Board and subsequent publication in the Philippine Official Gazette. The Competency Standards, together with the training standards and the assessment and certification arrangements for each qualification are packaged into Training Regulations (TR) that are published in national newspapers and uploaded in the TESDA Website. As with the development of Competency

Standards, the development and deployment of TRs are governed by quality-assured procedures which are ISO 9001:2015 certified (AQRFC Committee, 2019).

TESDA serves as the Technical Secretariat of the National Coordinating Committee of the Philippine Qualifications Framework. It is responsible for ensuring that the levels of the qualifications it certifies are aligned with Levels I to V of the Philippine Qualifications Framework. Philippine TVET programs provide qualifications from Levels 1 to 4 of the PQF in the form of National Certificates—e.g. Animation NC III, Automotive Servicing NC II; Bread and Pastry Production NC II—that are issued when a candidate has demonstrated competence in all units of competency that comprise a Qualification. Standards development begins with the stakeholders, the end-users of qualified competent workers. TESDA promulgates the competency and training standards and assessment arrangements and competency assessment tools recommended by industry experts who are nominated by industry associations. These standards provide the TVET providers guidance on learning outcomes-based curriculum, tools, equipment, facilities, and trainers' qualifications necessary to develop the skills of workers, whether for wage or self-employment or entrepreneurship development (AQRFC Committee, 2019).

Recognition of prior learning (RPL) is a process of formal assessment of a learner's knowledge and skills, gained through previous non-formal or informal learning, to determine the achievement of learning outcomes for the purpose of awarding credit towards a qualification. RPL assessment is undertaken by an institution, or another approved assessment authority. While RPL is intended to assess evidence from non-formal and informal learning, previous formal learning may also be considered as part of the assessment if no credit transfer arrangement is available to the learner. RPL provides a mechanism for learners to negotiate with institutions to gain credit for the achievement of learning outcomes through prior learning. The outcome of an RPL assessment may be admission to a qualification, subject to the admission requirements of the admitting institutions, and/or credit towards components of a second qualification (AQRFC Committee, 2019).

Assessment of prior learning through an RPL process matches the prior learning against the learning outcomes for the program and takes into account the PQF level requirements and the discipline requirements for the qualification. RPL in TVET is undertaken through Philippine TVET Competency Assessment and Certification System (PTCACS) as discussed above. In higher education, RPL is

implemented through the Expanded Tertiary Education Equivalency and Accreditation Program (ETEEAP). TESDA's assessment and certification system is pursuant to the provisions of Republic Act 7796, Section 14 (b), which authorizes TESDA to develop and establish a national system of skills standardization, assessment and certification. The Philippine TVET Competency Assessment and Certification System (PTCACS) defines a national comprehensive and flexible certification system for TVET Level qualifications (AQR Committee, 2019).

The competency standards, which are contained in the Training Regulations promulgated by the TESDA Board, are the benchmarks for training, assessment and certification. The assessment process is based on gathered evidence or information to prove possession of competence. The process may be applied to an employable single unit of competency or a cluster of relevant units of competency or to all units of competency in a Full National Qualification. Evidence are gathered through a range of evidence-gathering methods (AQR Committee, 2019).

The Certificate of Competency (CoC) is issued to individuals who were assessed as competent in a single unit or cluster of related units of competency. The National Certificate (NC) is issued to individuals who have achieved all the required units of competency of a national qualification defined under the promulgated Training Regulations. The NC or CoC has a validity period of five years.

The PTCACS is anchored on the competency-based system, with the competency requirements defined in the relevant Training Regulations. Quality assurance in PTCACS spans across levels and the responsibility of various actors: the TESDA Central Office, TESDA Regional and Provincial Offices, the Accredited Assessment Centers and the Accredited Competency Assessors (AQR Committee, 2019).

The Central Office, through the Certification Office provides oversight function in the implementation of assessment and certification programs in the country; provides capability building programs for Lead Competency Assessors and regional/provincial/ sectorial implementers; formulates assessment and certification policies, guidelines and procedures and other assessment arrangements outside of what is provided in the guidelines; manages and maintains the National Registry of Certified Workers; handle complaints and appeals; and conducts external and 2nd level audits on the implementation of assessment and certification (AQR Committee, 2019).

The TESDA field offices implements accreditation and assessment activities

in accordance with the quality-assurance system; conducts compliance audits; accredits the Assessment Centers and Competency Assessors and issues the National Certificates or the Certificates of Competency. The Assessment Centers, which are not necessarily part of TESDA—i.e., they are private or public institutions/organizations—accept and process applications, manage the actual conduct of assessment and assigns competency assessors on a rotation basis; and submits reports to TESDA (AQRF Committee, 2019).

The PTCACS has been ISO 9001:2008 certified since 2012 and recertified to ISO 9001:2015. In addition to the audits undertaken by the field and central offices, the certifying body auditor conducts surveillance at least once a year. These strengthen the quality management of the TVET program registration and assessment and certification processes, as well as the standards development.

Consistent with the principles of Recognition of Prior Learning, PTCACS applies to competent individuals who acquired their competencies through formal, non-formal or informal modes of learning. A training certificate is not required for an application for assessment. The assessors' multiple methods of evidence gathering enable those assessed to prove their competencies. A Self-Assessment Guide (SAG) allows the applicants to gauge their level of competency before they undergo the actual assessment. (AQRF Committee, 2019)

2.4 Review on Previous Studies

Nunes, Martin and Duarte (2007) defined the Competency management is a more useful instrument than the old model for selection, evaluation, and training and development. It provides greater encouragement for personnel development as well as a better understanding of what is necessary to achieve high performance at work (Nunes, 1997)

Thet Han (2017) analysed that the concerning stakeholder, the skill of the Myanmar workforce will be developed step by step and become competitive to regional labor market. It is concluded that this is also a kind of nation building because in regional and international level to acquire the foreign direct investments, possessing skilled workforce is one of the critical factors for investment site selection and in-flowing in business. Accordingly, it is obvious that promoting HRD and building mechanism for nurturing skilled workforce is vibrant area for public policy makers to formulate the relevant planning and take the practicable measures in order

to generate the fruitful outcomes in future. As a developing country like Myanmar, policy makers should pay more attention to strengthen the foundational area like workforce skill development and encourage the engagement of employers in private sector. Without private sector participation, workforce skill development will not be achievable. Thus, for workforce skill development in long run, it is important that country should have relevant mechanism and legislation, paying political willingness, sound public and private partnership, national level competency framework and skills qualification comparable to regional level qualification and proper financing system.

Thiri Nandar Aung (2018) considered a success as all the certificate holders have continued to follow their respective NSSA competency standard. Therefore, the NSSA should continue with the tests and provide more training and assessments as there are many potential workers who are willing to take up the assessments for the certificate. The certificate holders have strong beliefs that the certificate can hold as a vocational document for their careers (Aung, 2018)

CHAPTER III

CURRENT INITIATIVES OF NSSA IN METAL AND ENGINEERING

3.1 Background of National Skills Standards Authority

In recent years, skills development has also played an ever-increasing role in labour market in Myanmar and promoting skills recognition system is thus vital to help address various labour market challenges and bring substantial benefits, such as better job matching and improved employee performance.

National Skills Standard Authority (NSSA) was first set up in 2007 in order to establish the National Skill Qualification Framework (NSQF) to enhance the labour productivity and to facilitate the improvement of labour market flexibility as part of the ASEAN Skills Recognition Arrangement (SRA) Project within ASEAN countries towards the implementation of the ASEAN Economic Community (AEC).

At that time, NSSA was chaired by the deputy minister of MoLIP, and the members included the directors-general from relevant departments and ministries such as the Ministry of Science and Technology (now DTVET of MoE), Ministry of Industry (MoI), Ministry of construction (MOC), Ministry of Hotel and Tourism (MOHT), Ministry of Health and Sport (MOHS) and the private sector associations such as federation of Myanmar Engineering Society (Fed.MES) and UMFCCI.

Since then, MoLIP has been acting as a focal ministry to further strengthen NSSA with the aim to establish a National Unified Skills Recognition and Certification System based on NSQF as a provision for skilled labour mobility within ASEAN, principally revolving around mutual recognition of skills (MRS).

NSSA comprised of various stakeholders (Government Ministries and private organizations) has been launched in 2007, with the aim to support the skill development of Myanmar workforce and facilitate the free flow of skilled labour within ASEAN region. As one of the key components of the German-Myanmar

project, GIZ TVET project conducted a pilot project in collaboration with Ministry of Labour Immigration and Population in 2014. Thereby, a Skills Recognition System has been tested and introduced as a workforce development tool under the Employment and Skills Development Law (enacted in 2013), focusing on the following priorities: (i) identifying relevant approaches and methods in occupational skills assessment and certification for Myanmar skilled workers, who are already in the workforce and have acquired their occupational skills through experience and learning on-the-job; (ii) developing the National Occupational Competency Standard (NOCS) in demanded trade area according to the four qualification levels recognized by the National Skills Standard Authority (NSSA); (iii) strengthening NSSA committees for their effective contribution to the system development; (iv) enhancing the quality and quantity of NOCS based skills assessment and trainings considering Social and ethical standards safety and health standards in the workplace.

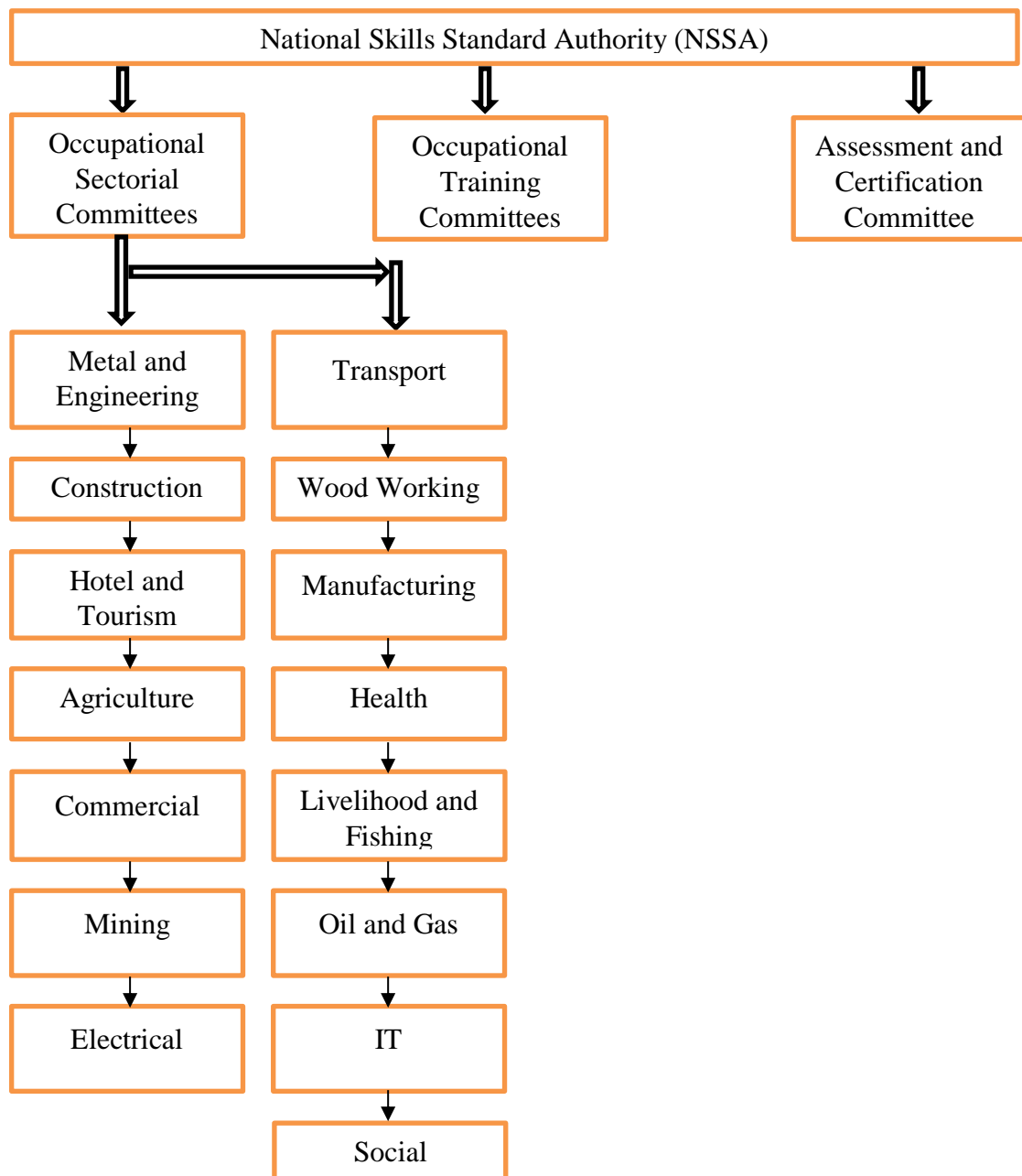
Lesson learnt from the pilot, NSSA has been taking a series of activities in order to strengthen its organizational capacity in the area of laying down policies, regulations and quality assurance programs for workers and job seekers. NSSA has already offered the skills certifications Level 1 and Level 2 for 13,346 workers in 31 occupation areas since 2014 with the approach of Recognition of Prior learning (RPL) by referencing NOCSs developed by NSSA.

In 2018-2019 FY, NSSA has planned to further carry out the skills assessment in demanded occupation areas for workers who are those in the workforce and have already acquired their occupational skills through experience and learning on-the-job. In order to be able to efficiently implement the skills assessment of workers in selected priority occupations, an effective skill assessment venues management system with a sustainable usage of the NSSA Testing/assessment facilities and a continuously quality improvement of the assessment Centers has to be strengthened. As of August 2019, there are total 145 Accredited assessment centers in demanded regions and states for RPL skills assessment. These are accredited by Assessment and Certification Committee (ACC) under NSSA.

Moreover, NSSA has recently established and implemented the Quality Management System (QMS), which is maintained and continually improved according to the requirements of the ISO 9001:2015 standard including processes needed and their interactions. NSSA has also defined the Quality Policy and is available to NSSA committee members, assessment centres and the public. This

Policy represents the framework for continually improving the QMS and ensuring customer requirements are met. Therefore, quality management of NOCS development under the respective Sectorial Committee is one of the critical tasks of GIZ-NSSA project team in order for expansion and improvement of not only RPL program activities but also for NOCS based trainings which are currently underway to implement. (Data source: NSSA)

Figure (3.1) Organization Chart of NSSA



Source: National Skills Standard Authority (NSSA)

3.2 Legal Framework and Institutional Development of NSSA

The Employment and Skills Development Law (ESDL) enacted in 2013 provides a legal framework for the NSSA as a revision of both former employment and training act and apprenticeship act. After the ESDL was established in 2013, NSSA aims to regulate the development of National Occupational Competency Standard (NOCSs), assessment and certification Programme for skilled workforce.

As a regulatory body stipulated in ESDL, NSSA focuses on policy development and quality assurance with concerted efforts of representatives of government, industry and employers, workers unions and professional organizations. Industry stakeholder participation in the organizational structure of NSSA and its function is clearly mentioned in the following sections of ESD law, which created NSSA- which consists of various stakeholders to perform the skills development functions.(Data source: NSSA)

In current situation, the NSSA is chaired by the Permanent Secretary of MOLIP and the Co-chaired by the permanent secretary of MOI. NSSA is comprised of (1) sectorial committees (SC) (2) Assessment and certification committee (ACC) (3) Training Committee (TC).

Currently, the 15 occupational sectorial committees (SC) of NSSA are chaired by concerned 14 Departments/ministries and UMFCCL. Up to now, there are 15 sectorial committees (Metal and Engineering Industry, Construction, Woodworking Industry, Agricultural, Livestock and Fishery , Transport Industry, Mining Industry, Information Technology, Health services, Social Welfare Services, Manufacturing industry, Commercial and Business services, Hotel and Tourism, Oil and Natural Gas, Electrical Engineering) that includes the experts from both private and public organizations: companies, associations and relevant Ministries to provide national occupational competency standards (NOCS) in terms of referencing levels of workforce qualification and expected Work-based skill sets.

Assessment and certification committee of NSSA is chaired by MOI and comprised of various sector representatives. The Training Committee of NSSA is chaired by DTVET of MOE and comprised of various sector representatives and TWGs. The NSSA facilitates and coordinates among those committees to be able to implement their activities.

It offers services with the following priorities: (i) introducing recognition of prior learning (RPL)-based relevant approaches and methods in occupational skills assessment and certification for Myanmar workers; (ii) promoting National Occupational Competency Standards (NOCS) in demanded trade areas according to the four qualification levels; (iii) strengthening NSSA committees for their effective contribution to the skills development in collaboration with the private sector; (iv) enhancing the quality and quantity of NOCS-based skills assessment and training, considering social and ethical standards, safety and health standards in the workplace.

NSSA has therefore piloted a Skills Recognition programme in 2014 with the support of the German development agency GIZ's TVET programme and introduced appropriate approaches and methods as workforce development tools. As of August 2019, 13,346 NSSA certifications, mainly at Levels 1 and 2 for those who are in the workforce and have acquired their occupational skills through learning and experience on the job, have been awarded in over thirty occupational areas. As of December 2018, there were 92- ninety-two accredited assessment centres in the regions and states for RPL skills assessment. As of September 2019, there are 145 assessment centres. These are accredited by the Assessment and Certification Committee (ACC) and approved by NSSA.

Moreover, NSSA has recently established and implemented a Quality Management System (QMS), and ISO 9001:2015 certification was awarded in February 2019. Along with this QMS, NSSA is currently facing challenges to increase NOCS-based short-term reskilling training as well as RPL-based assessment for workers in selected priority occupations, and a continuous quality improvement of its services through collaboration with industries and employers

Various development partners such as GIZ, Swiss Contact, JICA, ADB and Lux Development Agency, and the Aung Muint Mhu programme funded by Lift have been supporting the institutional development of NSSA and its services for better fulfilling its role as regulatory body for skilled workforce development as envisaged in the 2013 ESDL. (Data source: NSSA)

3.3 Current Structure of Skills Level by NSSA in Myanmar

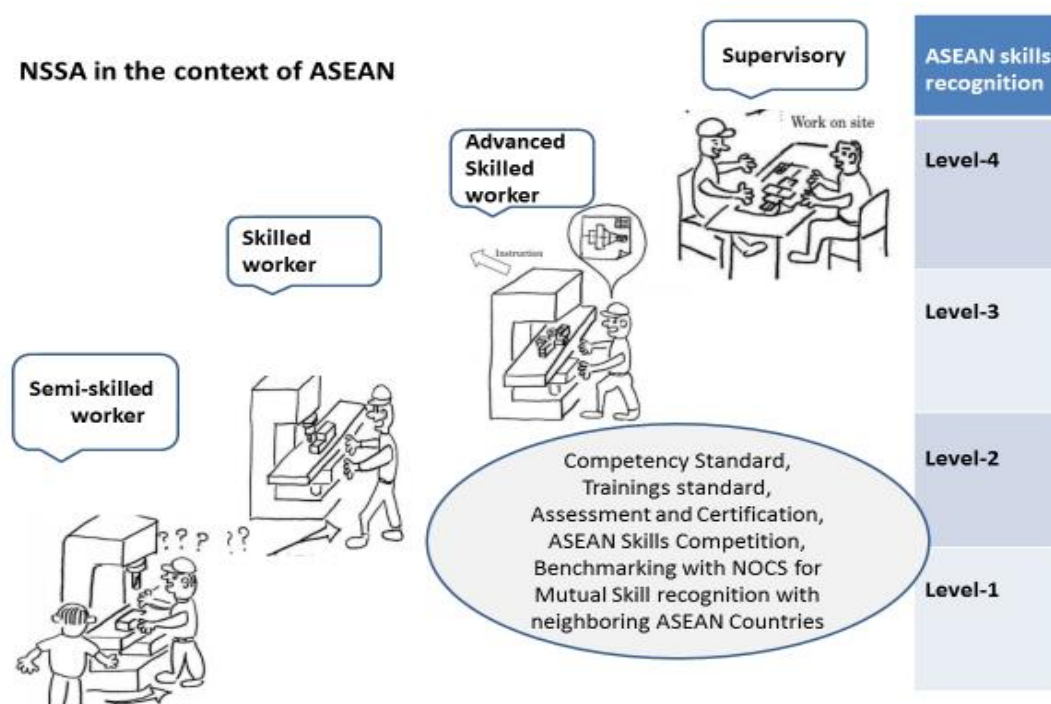
From 2004 to 2008, the Ministry for Labour, Employment and Social Security participated in the ASEAN project "Enhancing Skills Recognition Systems in ASEAN" which aimed to develop National and Regional Qualification Framework

(NQF and AQF) for recognition of skills in the semi-professional level occupations. With the upcoming ASEAN Economic Community, AQF will act as a regional reference point which will make it easier to understand, compare and recognize qualifications across the different systems of ASEAN countries during the free skilled labour flows.

The ASEAN project recommended the establishment of NSSA in line with NQF and AQF and to develop occupational competency standards for certification at (4) levels. The four levels are:

- Level 1: Semi-skilled Worker
- Level 2: Skilled Worker
- Level 3: Advanced Skilled Worker
- Level 4: Supervisor/Technical

Figure (3.2) Levels Description of NSSA Skills Assessment and Certification System



Source: National Skills Standards Authority (NSSA)

Level 1 (Semi-skilled worker) can demonstrate basic knowledge by recall in a narrow range of area, perform basic or preparatory practical skills in a defined range of tasks, carry out routine tasks given with clear direction, demonstrate understanding

of safety requirements, receive and pass on information related to the work, access and record information related to the work, and take limited responsibility for output of self.

Level 2 (Skilled worker) can demonstrate basic operational knowledge in a moderate range of area, perform practical skills in a range of varied tasks, demonstrate a prescribed range of functions involving known routines and procedures, perform tasks that involve some complex or non-routine activities autonomously or in collaboration with others as part of a group of teams, receive and pass on information related to the work, access and record information related to the work, and take some responsibility for the quality of outputs

Level 3 (Advanced Skilled Worker) can demonstrate some relevant theoretical knowledge, apply a range of well-developed skills, Apply known solutions to a variety of predictable problems, perform tasks that require a range of well-developed skills with some judgment as required, interpret available information, take responsibility for own outputs, and take limited responsibility for the work of others

Level 4 (Supervisor) can demonstrate understanding of a broad knowledge base, and apply some theoretical concepts, apply solutions to a defined range of unpredictable problems, identify and apply skills and knowledge to a wide variety of contexts, identify and evaluate information from various sources, understand and take responsibility for quality, safety and environmental issues, supervise the work of others, and take limited responsibility for the quantity and quality of the outputs of others.

NSSA Level 1 to 4 provide for occupational skill development framework and use the occupational titles in reference with Myanmar Standard classification of occupation (MSCO). With reference to the MSCO and NSQF level descriptions, Sectorial Committees are mandated to develop competency standards for prioritized occupations following to occupational map and competency map.(Data source: NSSA)

3.4 Progress of NSSA Assessment Programs and Certification Pathways

The workers, Job seekers and trainees are accessible for Skill certificates program to be awarded by the National Skills Standard Authority (NSSA) through 145 accredited assessment centres all over the country. Among that total 145 accredited canter, 37 canter were from Metal and Engineering Sectorial Committee

and the rest 108 centres were from other Sectorial Committees. In general, the candidates pursuing skills qualifications may enrol for National competency Certificate Level 1 (Semi-skill) up to National competency certificate Level 4 (Supervisory) which are still being in discussion for referencing with the MNQF. The skills assessment programmed highlight more specialized occupational knowledge and skills, are industry/occupational competency standards-oriented and have a higher practical component. The entry requirements are as generally prescribed or subjected to specific competency standards and sector via recognition of Prior work Learning (RPL) based on existing skills and knowledge.

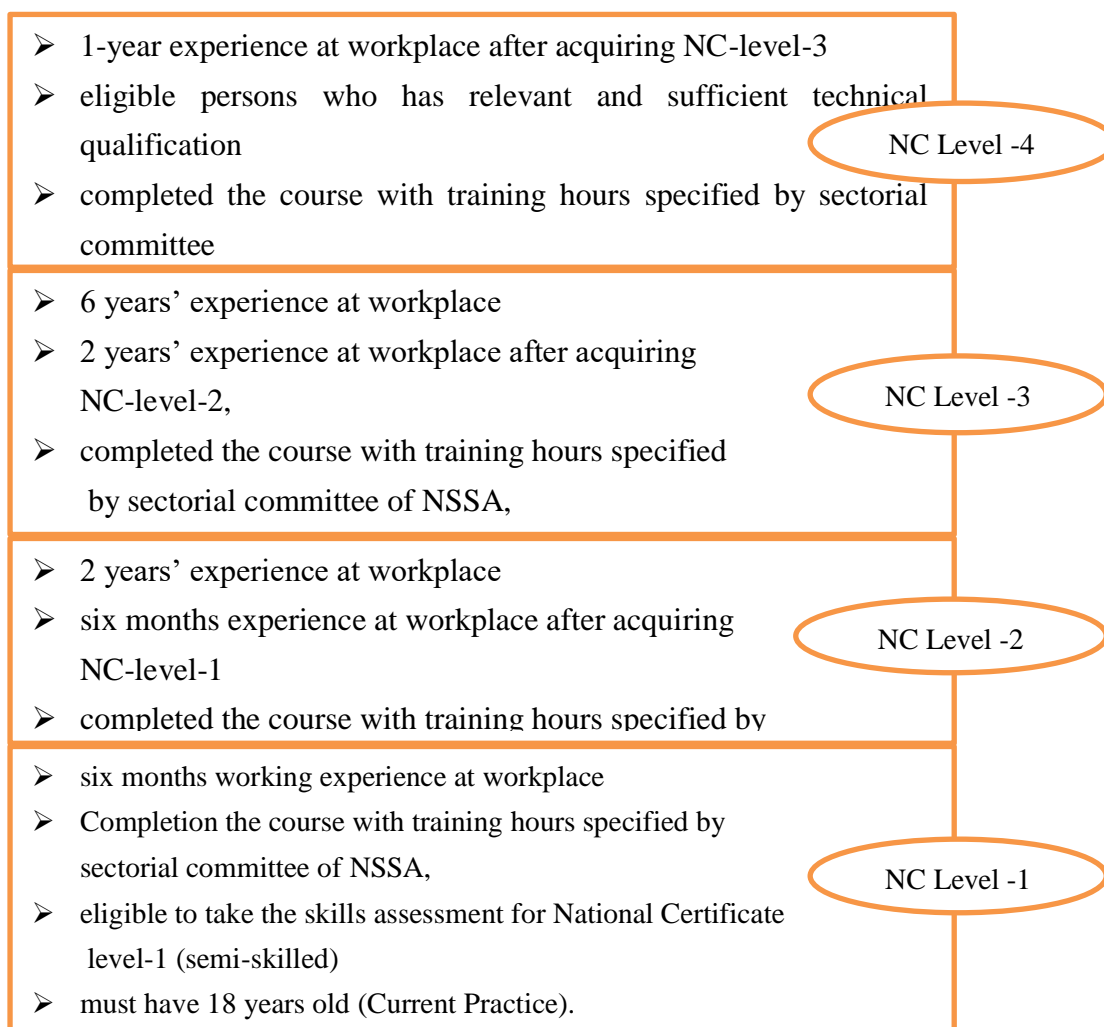
For the National competency Level -1 for occupational competencies, the candidates/workers need to have at least six months experience at workplace or they have completed the course with training hours specified by sectorial committee of NSSA, they are eligible to take the skills assessment for National Certificate level-1 (semi-skilled) and must have 18 years old (Current Practice).

The National Competency Level -2 for occupational competencies that the candidates/workers have at least 2 years' experience at workplace or the candidates/workers have at least six months experience at workplace after acquiring NC-level-1 or they have completed the course with training hours specified by sectorial committee of NSSA, they are eligible to take the skills assessment for National Certificate level-2 (skilled).

The National Competency Level 3 for occupational competencies, the candidates/workers need to have at least 6 years' experience at workplace or the candidates/workers have at least 2 years' experience at workplace after acquiring NC-level-2, or they have completed the course with training hours specified by sectorial committee of NSSA, they are eligible to take the skills assessment for National Certificate level-3 (advance skilled).

And the National Competency Level 4 for occupational competencies, the candidates/workers need to have at least 8 years' experience at workplace or the candidates/workers have at least 1 year experience at workplace after acquiring NC-level-3, or the eligible persons who has relevant and sufficient technical qualification or has completed the course with training hours specified by sectorial committee they are eligible to take the skills assessment for National Certificate level-4 (supervisory).

Figure (3.3) National Skills Standards Authority (NSSA) Certification Pathways



Source: National Skills Standards Authority (NSSA)

3.5 Development of National Occupational Competency Standard (NOCS)

In order for Quality Assurance, NSSA follows the steps to develop the competency standards in close cooperation with industry experts being part of TWG assigned by respective sectorial committee.

NSSA operates on the basis of competency standards developed by and accepted as an official document after the approval of the sector committee and NSSA and subsequent publication for the training and assessment purposes. The Competency Standards, together with the assessment instruments and the assessment and certification arrangements for each level qualification are packaged including assessor manual and candidate manuals are published and uploaded in the NSSA Website. As with the development of Competency Standards, the assessment system

and certification procedure are administered by quality-assured procedures which are ISO 9001:2015 certified.

In 2007, NSSA has drafted 173 competency standards, mainly for Level 1 and 2 and some are level 3 and 4, in selected occupational areas, such as Engineering, Hospitality and Tourism. As of September 2019, 67 NOCSs have been reviewed, newly developed and published in 57 occupational areas. (Source: NSSA)

National occupational standards must be based on a thorough analysis of the characteristics of the occupational sector. This is a key part of the development process. The standards setting body needs to take a longer-term view of the sector reviewing existing qualification provision and identifying labor market and qualification needs. An analysis of the sector (sometimes called occupational mapping) provides a picture of the occupational area to be covered, its scope and boundaries. It identifies which standards and qualifications need to be developed, how these relate coherently to each other and to the National Vocational Qualification framework and should include information about the following.

This should include information on:

1. The main occupations within the sector and the numbers of people employed in these occupations;
2. The distribution of the occupation;
3. The rationale for any differences in the structure of the occupational area in terms of balance between large, medium and small firms;
4. The changes in technology, working practices and market conditions.

Gathering together and interpreting this information provides the foundation. It will provide the necessary rationale to support the development of any new national occupational standards and establish priority areas for standards development. It should also indicate the nature of any specialist technical groups needed for the development of national occupational standards. (source: NSSA)

Using competencies can improve well-being at work. If the employee has been chosen for the position based on competencies, the employer is in the right position for individual skills and capabilities. When an employee is using individual strengths and skills at work and feels confident in their own abilities, employer manages the work better. Competencies need constant updating because professional development is an on going process and employers expect more and broader competencies from their employees.

A competency-based job description helps to organize work in a company. Competencies can be used in resource planning by clarifying what competencies and how many employees the company will need. To ensure well-being at work, jobs have to be organized so that it is possible to get the duties done during working hours, and during vacations and weekends employees have to be able to rest.

Skill standards serve to evaluate the effectiveness of training providers to develop training programs and establish performance criteria for successful program completion. By ensuring training institutions use skill standards, employers can motivate to hire well-prepared graduates of these programs. Qualified job applicants' lower employers' company training costs.

Competencies provide an organization with:

1. A consistent measure of performance.
2. A structured way of describing behavior.
3. An effective tool to help managers give constructive feedback.
4. A self-assessment tool to help individuals identify development needs.
5. A mechanism to support the growth of an individual's current role and future potential.

So we can summarize the usefulness of competencies standards in major four categories of an organization.

1. Performance management
2. Training and development
3. Selection
4. Recruitment

According to the above-mentioned International practices, National competency framework and skills standards play a catalyst role to upsurge the human resource development for industrial and business companies. So, some example of the selected countries showed that National competency framework is an important tool for benchmarking and foundation for Vocational Training providers. It is clear that it is significant and vital together with related mechanism such as quality assurance of providers, accreditation and financing for long term implementation.

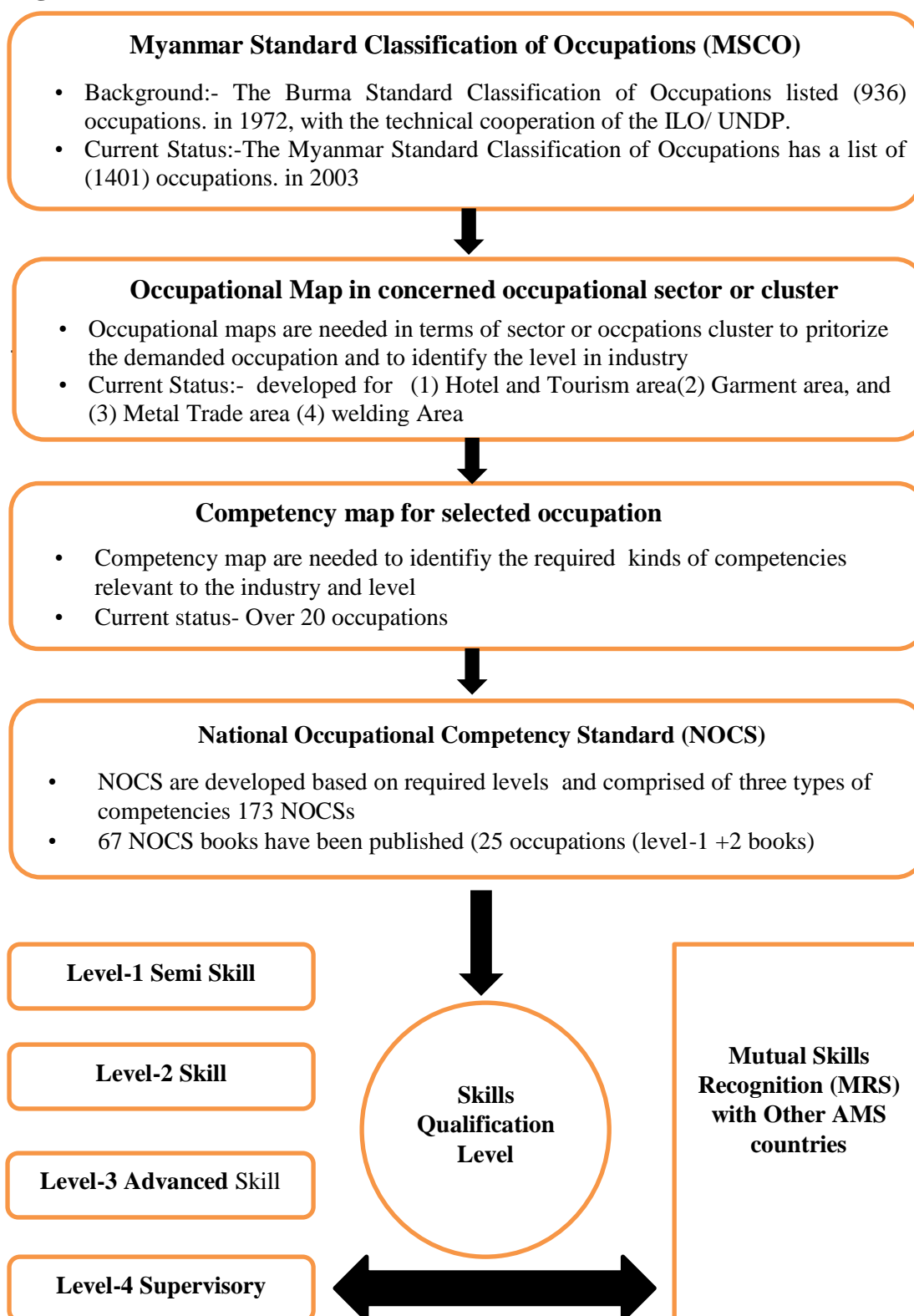
3.5.1 Development of NOCS in Relation to MSCO

According to the below figure, the Burma Standard Classification of Occupations (BSCO) listed (936) occupations was issued by Department of Labour in 1972, with the technical cooperation of the ILO/ UNDP. The Myanmar Standard Classification of Occupations (MSCO) which has a list of (1401) occupations was revised and modified by department of labour as a second version in 2003

Based on this MSCO occupational lists, NSSA and sectorial committees developed the occupational map. The occupational maps are needed in terms of sector or occupations cluster to prioritize the demanded occupation and to identify the job qualification level in industry such as semi-skill, skill, advanced skill and supervisory employees. Typically based on the occupational map, sectorial committees identify the prioritized occupations and demanded level in accordance with concerned industry sector requirements.

After this identification stage, depending upon the selection of skill areas and level, sectorial committee facilitates the process to draw up national occupational competency standards by its working group -comprised of public and private sector experts. NOCS are developed based on required levels and categorized of three types of competencies by the working group and approved by the concerned sectorial committee. 67 NOCS books have been published for 25 occupations (level-1 +2 books). These standards are used in benchmarking for mutual recognition of skills within ASEAN to facilitate the free flow of human resources.

Figure (3.4) Relation to MSCO



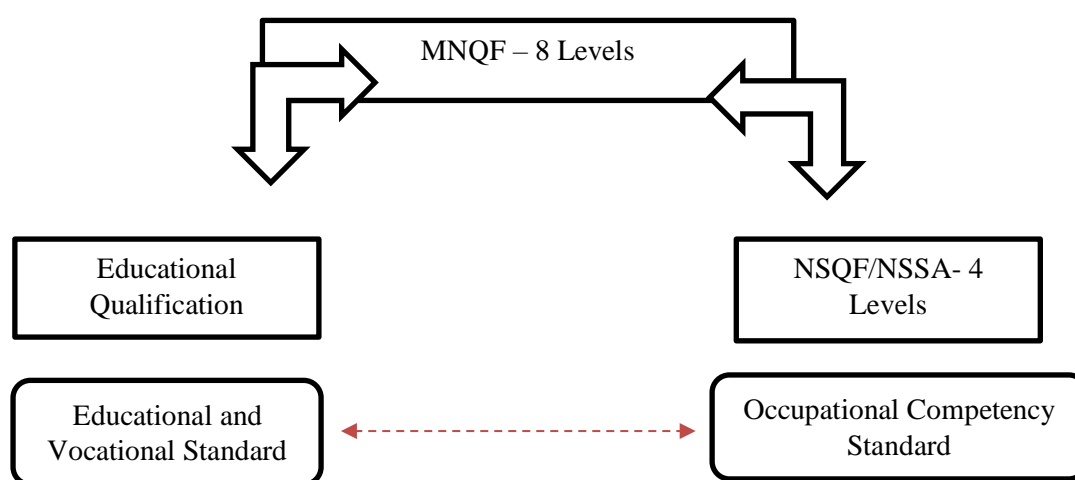
Source: National Skills Standards Authority (NSSA)

3.5.2 Development of NOCS In Relation to MNQF

NSSA is the national coordination body mandated by ESD law (2013 passed by parliament) promote and strengthen the quality of workforce in order to attain regional competitiveness and facilitate the free flow of skilled labour; and focus occupational skills development on meeting the changing demands for para-professional levels. Currently, NSSA is participating in MRS process and benchmarking the Brick layer and Sewing Machine Operator Occupations- NOCSs with Thailand Skill Level.

NSSA serves as the Coordinating Committee of the National Skills Qualification Framework for the workforce. It is responsible for ensuring that the levels of the occupational skill qualifications (Levels I to IV) are being harmonized with the MNQF. But detailed technical discussion about the linkages will be continued between NQF and NSSA-NSQF as similar to ASEAN countries.

Figure (3.5) Relation to MNQF



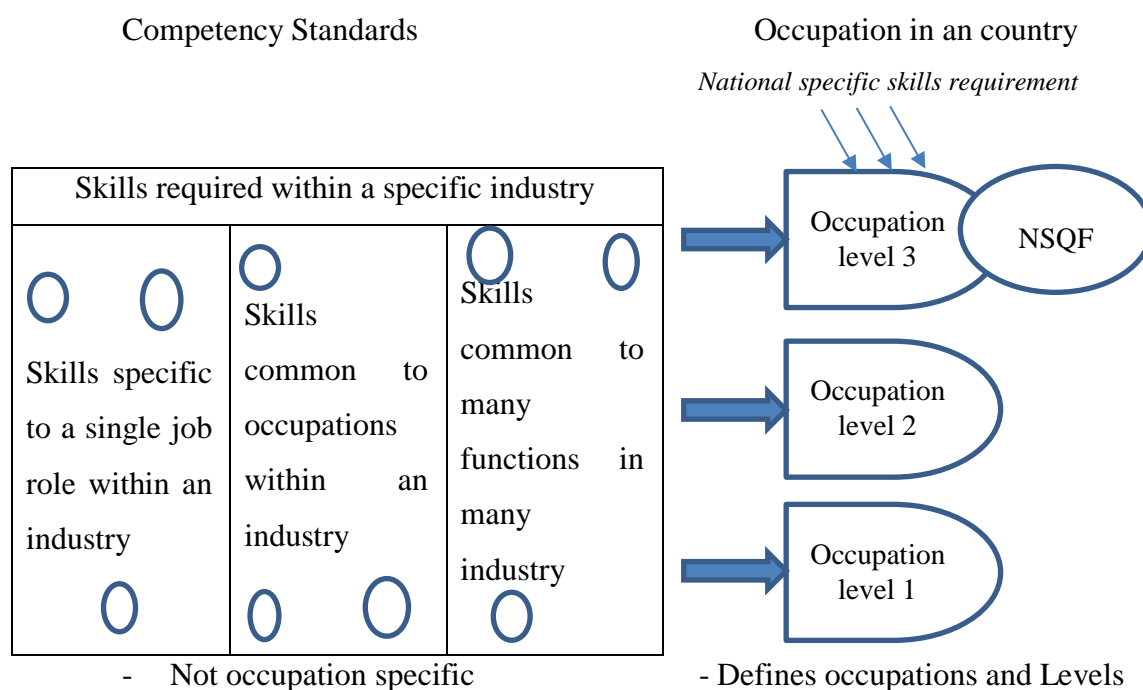
Source: National Skills Standards Authority (NSSA)

According to the above figure, NOCSs have been developed based on NSSA-NSQF will be benchmarking documents for vocational education level in future. 4 levels of NSQF will be integrated into MNQF depending on specified level descriptors. MNQF is an important instrument to compare with other countries' qualification system under the ASEAN Qualification Framework Context.

3.5.3 Development of NOCS in Relation to NSQF

As per afore-mentioned in NSQF in Myanmar (in 3.4), NOCSs are developed based upon Level descriptors of NSQF 4 levels. After selecting the demanded occupation, competency standards are typically drafted as per specified levels based on different job roles. For example- level-1 competency standards reflect on semi-skill job qualification and related work outcomes such as following the workplace rules, receive and response to workplace communication and practicing safety and health as mentioned in NSQF level-1 descriptors. Level-2 competency standards highlight on skilled level employees who perform the job functions to some degree of complexity, independency and responsibilities for quality output. Level-3 competency standards emphasize the skills and abilities of advanced skill or multi-skill employees who carry out the quality-oriented tasks and lead the work team as per job requirements and duties assigned. Level-4 competency standards cover the skills and abilities of supervisor level personnel who supervise the workers as per job requirements and tasks assigned in order to produce the requited output in terms of quality and quantity as per mentioned in NSQF. NSSA skills recognition and certification arrangement is career-oriented and work-based qualifications to prepares workers and Job seekers for careers progress by benchmarking with a defined set of occupational competencies. The National skills Qualification Framework (NSQF) focuses on practical job roles required and competencies in occupational areas currently being used by respective industries.

Figure (3.6) Relation to NSQF



Source: National Skills Standards Authority (NSSA)

Recognizing the importance of Prior Learning (RPL) and current competencies (RCC) of the existing workforce, Skill development pathways are provided with 4 levels based on NSSA Skills certification Framework stipulated in ESDL 2013.

The Myanmar NSSA certification program is a competency-based system designed to meet labor-market demand and provide Myanmar school-dropout youths and workers opportunities for decent employment and continuous personal development. The system is based on the principles of lifelong learning and recognition of prior learning (RPL) or current competencies (RCC) by recognizing their performance outcomes achieved through any formal, informal and non-formal modalities in terms of learning and work experience. (Data source: NSSA)

3.6 Quality Assurance Approach of NSSA

Following the ISO 9001-2015 QMS guiding principles, NSSA's Practices generally include the following elements for quality assuring Skills Qualification and certification system:

1. The NSSA/Skills development product through the approval of standards (such as educational and/or competency standards as well as for certification of a qualification)
2. The training and/or assessment providers through approval processes based upon provider infrastructure, staff qualifications and experience, management systems, delivery and assessment systems, and candidates support systems
3. The NSSA/Skills development processes through the auditing of provider processes and outcomes, including candidates learning and employment outcomes and candidate and user satisfaction levels
4. The NSSA/Skills development outcomes through control, supervision or monitoring of assessment and certification procedures and outcomes
5. Provider or system-wide evaluations of NSSA/Skills development quality, including evaluations by external agencies
6. Provision of public information on the performance of provider, such as program and unit completions, candidates and employer satisfaction. It is not always the case that all these aspects fall to the responsibility of one committee under NSSA; these will be the responsibilities of each Committees. (Data source: NSSA)

3.7 National Occupational Competency Standard Development Process

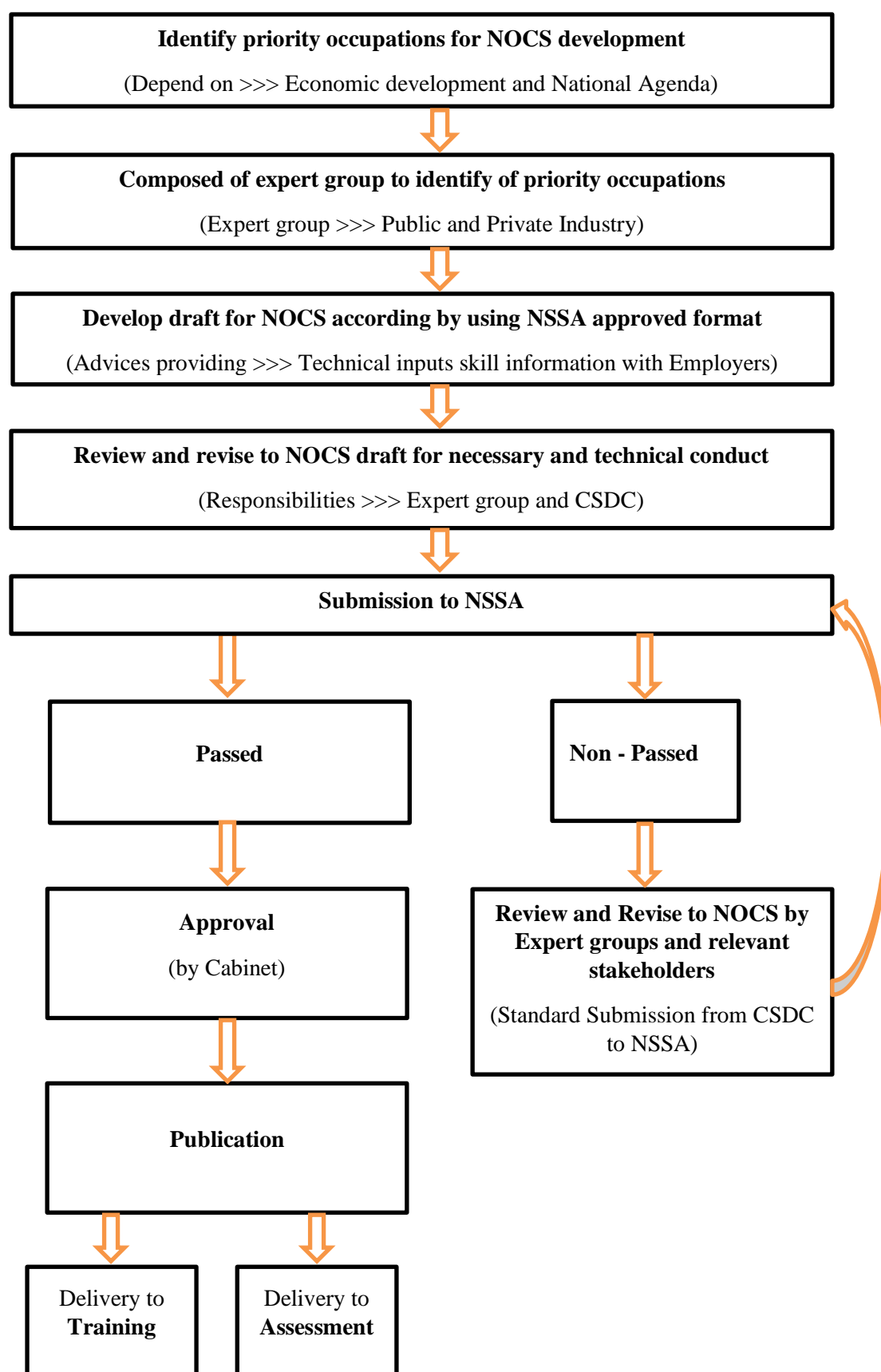
The standards must be developed based on the outcomes of a consultation process that comprised of industry representatives, occupational experts and any other key stakeholders. They are identified by the NSSA and Sectorial Committees beforehand.

A range of methodologies may be involved to develop Competency Standards but referencing method is mainly used. Below are some examples:

1. Interviews
2. Surveys
3. Group processes
4. Functional analysis/task analysis
5. Referencing

Regarding OCS development, NSSA project team in consultation with national experts with the support of GIZ and Swiss contact has developed one guideline manual for drawing up OCS, and its process is presented in the diagram of next page.

Figure (3.7) Flow Chart of NOCS Development



Source: National Skills Standards Authority (NSSA)

3.8 Occupational Sectorial Committees

The NSSA formed 15 Sectorial Committees, comprised of representatives of the concerned Ministries as well as the private sector, with the objective to draw up competency standards for a variety of priority occupations in 15 economic sectors. The Sectorial Committees drew up Occupational Skills Standards at four levels for 179 occupations with the help of local and international consultants and organizations.

As of 2012, NSSA has completed the four-level National Competency Framework, and the Sectorial Committees have drawn up Occupational Competency Standards at four levels for (179) occupations, among which 93 occupational competency standards are approved by the Cabinet.

The official names of all 15 sectorial committees can be prescribed as below:

1. Metal and Engineering Occupational Competency Standard Committee
2. Construction Occupational Competency Standard Committee
3. Wood-based Industry Occupational Competency Standard Committee
4. Agricultural Occupational Competency Standard Committee
5. Livestock and Fishery Occupational Competency Standard Committee
6. Transport Occupational Competency Standard Committee
7. Mining Occupational Competency Standard Committee
8. Information Technology Occupational Competency Standard Committee
9. Health Services Occupational Competency Standard Committee
10. Social Welfare Services Occupational Competency Standard Committee
11. Manufacturing Occupational Competency Standard Committee
12. Commercial & Business Services Occupational Competency Standard Committee
13. Hotel and Tourism Occupational Competency Standard Committee
14. Oil and Natural Gases Occupational Competency Standard Committee
15. Electrical Occupational Competency Standard Committee Duties and Functions of Sectorial Committees

3.8.1 Duties and Functions of Sectorial Committees

In details, there are 13 duties and functions that all sectorial committees are supposed to fulfill as mentioned below:

1. Setting relevant 'occupational standards' according to specific occupation;
2. Stating the framework, specific designs and procedures of the standard uniformly;
3. Collaborating with other occupational competency standard committees;
4. Reviewing the consistency of the current occupational standards with the requirements of the occupation/workplace, and editing and updating the current occupational standards to match with the accepted national, regional and international level;
5. Taking ideas from the discussions and advices of the provincial personals, entrepreneurs and experts from the relevant sectors in addition to committee members while editing and updating this particular occupational standard;
6. Designing the occupational standard according to the previous work plan;
7. Stating the specific duties and the functions to the sector of expansion for the committee structure for better management including the government and private sector in developing the Occupational Competency Standard;
8. Reporting the accomplished services and future aims of the competency standard once every three or four months to the NSSA;
9. Researching and implementing the occupational competency standards once or twice a year, and editing the standard to match and to be up-to-date with the changes within the market;
10. Recording the history of the competency standard, and constructing a website for Competency Bank consisting the assembling of standards that are set together or within sectors;
11. Working for the business events through constructing sub-committees or functional units when necessary;
12. Advising and negotiating with the training committee and the assessment committee for setting the occupational competency standard;
13. Disseminating the news concerning with the occupational competency standards within the government and private business sector, and connecting and working with these sectors. (Data source: NSSA)

3.9 Role and Responsibilities of Metal and Engineering Sectorial Committee

Drawing up, based on international standards, skills standards according to occupations and levels of skills

- a) Developing, in line with the skills standards, curricula and standards of training
- b) Prescribing the qualification of instructors
- c) Prescribing the standards of equipment and training aids of the training Centres
- d) Registering of training centers and training programs
- e) Coordinating for the enhancing of the level of technology

Checking the application for registration of training centers and submitting The applications to the Skills Development Committee (Data source: M and E sectorial committee, NSSA)

3.9.1 Status Overview of NOCS developed by NSSA for Metal and Engineering Sectorial Committee

NSSA including Metal and Engineering Sectorial Committee for skill development in our country since 2014. For Metal and Engineering Sectorial Committee developed the following 23 National Occupational Competency Standards (NoCS);

Table (3.1) Status Overview of NOCS Developed by NSSA for Metal and Engineering Sectorial Committee

No	Occupations	Skills Level	Drafting process		
			Draft	Approved	Publication
1	Welding (Manual Metal Arc Welder - MMAW)	1			√
		2			√
		3	√		
2	Welding (Gas Metal Arc Welder – GMAW)	1			√
		2	√		
3	Welding (FCAW)	1			√
		2	√		
4	Welding Supervisor	4	√		
5	Air – Con Installer	1			√
		2			√
6	Automotive Mechanic	1			√
	Automotive Mechanic (Power Train of Passenger Car)	2	√		
	Automotive Mechanic (Chassis of Passenger Car)	2	√		
	Automotive Mechanic (Electrical of Passenger)	2	√		
	Automotive Mechanic	3	√		
		4	√		
7	Machinist	1			√
8	Pneumatic Technician	2			√
9	Small Engine Mechanic	1			√
10	Foundry	1			√
		2			√
11	General Mechanic	1			√
12	Machinery Fitter	2			√
		3			√
13	Technical Designer/ Mechanical Draughtsman	2		√	
		3		√	
14	Tool and Die Maker	2		√	
		3		√	
15	Machine Tool Operator	2		√	
		3		√	
16	Building Automation	3		√	
17	Mechatronic	3		√	
18	Electrical Filter	2	√		

Source: National Skills Standard Authority (NSSA)

And Currently, M & E sectorial committee is developing Strategic Action Plan for sustainable development, capacity building and need analysis for changing process. It is trying to develop Level 4 Competency Standards for some demanded occupations and is ongoing process. (Data source: M and E sectorial committee, NSSA)

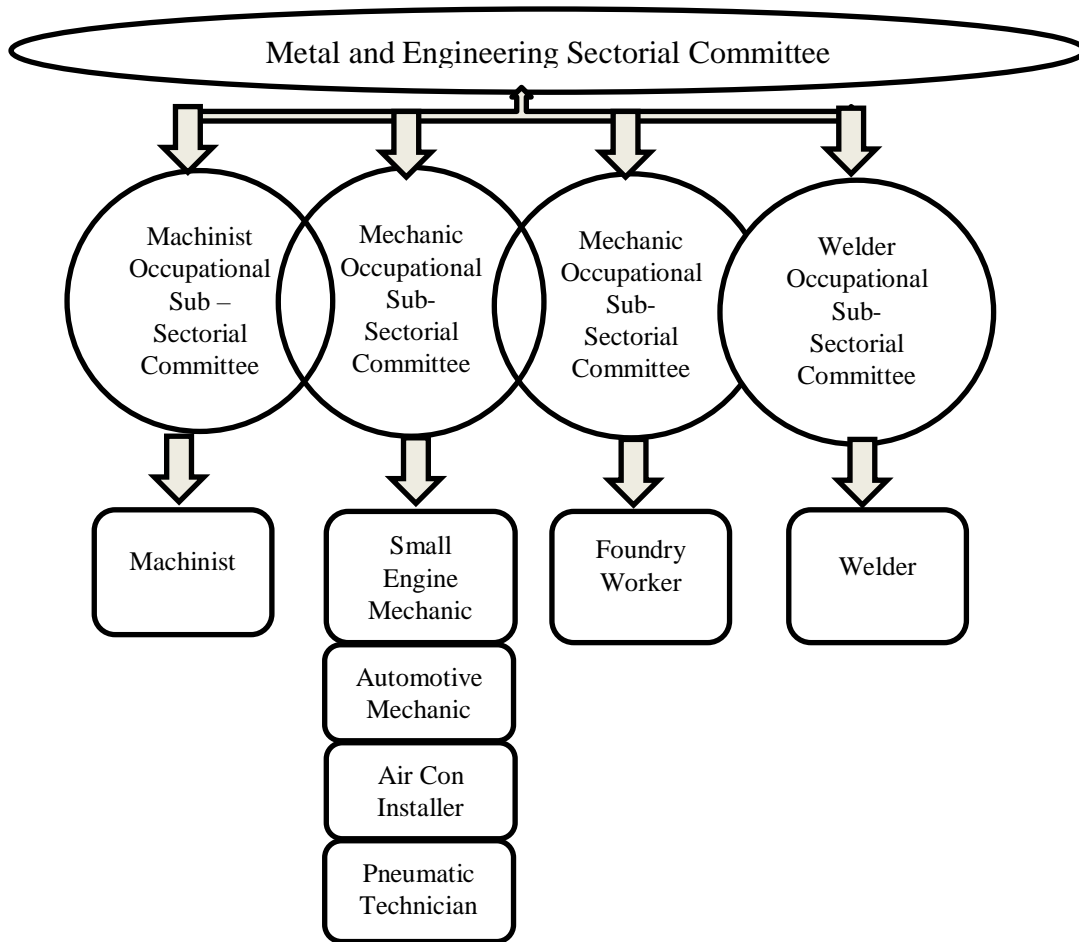
3.9.2 Past and Present of Metal and Engineering Industry Sectorial Committee

The committee is composed of 52 members, including those from four sub-committees. Out of the total members, around 30% members represent the private sector. In order to ensure the quality of the standards, 5 experts are also included in the committee. Although there are no written criteria in recruiting experts, special care is given to determine, if the candidates' professional experience and background education comply with the requirements of the committee.

As of February 2016, M&E SC has completed 9 standards which were all for Level 1. Currently, they have been working on Level 2 for Pneumatic Technician, Welder and Air Con Installer Occupations. Occupational Competency Standard (OCS) technical peer review was conducted by the national and international experts with the support of GIZ. The duration taken for developing OCS varies from one occupation to another. One of the factors impacting the duration is the adequacy of human and financial resources.

The challenges facing the M&E SC in developing OCS are the constraints in finance, human resources and time availability. All members are contributing their effort and time voluntarily, therefore they already have other main tasks and priorities apart from OCS development. As a result, it causes some difficulties in organizing the internal meetings and keeping them informed with updated information. Language barrier is also another obstacle imposed on the sectorial committee members. Last but not least, the poor relationship between the associations of employees and employers is an important issue to be addressed.

Figure (3.8) Organization Chart of Metal and Engineering Sectorial Committee



Source: Metal and Engineering Sector, NSSA

The Metal and Engineering Sectorial Committee have 4 Sub Sectorial Committee. There are Machinist Occupational Sub-Sectorial Committee, Mechanic Occupational Sub- Sectorial Committee, Foundry Occupational Sub- Sectorial Committee and Welder Occupational Sub- Sectorial Committee. That Occupational Sub Committees have 7 Occupations like that Machinist, Pneumatic Technician, Aircon Installer, Automotive Mechanic, Small Engine Mechanic, Foundry Worker and Welder Occupations. The assessments to the semi-skilled workers for Metal and Engineering Sectorial Committee was conducted during 2014 -2019 and assessed 157 individuals from 51 organizations. A total of 2,969 have been issued Level-1 National Competency Standard Certificates and 541 have been issued Level-2 National Competency Certificates. Some required survey and follow up are being done by NSSA and MNE committee.

Table (3.2) Current Progress of NSSA Certificate Holders in Metal and Engineering Sectorial Committee

No	Occupation	Pilot Project		5000 Project		1500 Project		3000 Project		Total		Grand Total Passed Candidates
		L-1	L-2	L-1	L-2	L-1	L-2	L-1	L-2	L-1	L-2	
1	Air-Con Installer	28	15	432	44	78	30	256	196	794	285	1079
2	Welding (MMAW)	67	8	545		173	3	443	4	1228	15	1243
3	Welding (GMAW)											
4	Welding (FCAW)											
5	Foundry Worker	14				19	8			33	8	41
6	Pneumatic Technician		14		55		57		107		233	233
7	Automotive Mechanic	22		286		80		189		577		577
8	Small Engine Mechanic	12		53		30		68		163		163
9	Machinist	10		62		38		64		174		174
Total		153	37	1378	99	418	98	1020	307	2969	541	3510

Source: Metal and Engineering Sector, NSSA

According to the above figures which is related to Metal and Engineering Sectorial Committee, it is found that the coverage and programs of the Competency Standard Development and Certification Scheme are generally developing up to now. But it can be concluded that according to the current growth of demands in industrial sector, those implementation schemes are more required to suit to the Myanmar context. As mentioned in the above paragraph, Myanmar is significantly needed to set up proper mechanism to recognize the current competency of workers and produce the well-trained manpower to be competitive one within ASEAN. At the same time, as a developing country like Myanmar, concerned authority and stakeholders are responsible to formulate the sustainable plan to pave way for further development.

Regarding this, it is still required to get the supports from the various corners such as government, development partners and employers.

3.9.3 Metal and Engineering Sectorial Committee in Yangon Area

Table (3.3) Overview of Certificate Holders (Semi Skilled Worker) and Assessment Centers in Yangon Area (Survey focus Area)

No	Type of Occupations	Number of Accredited Assessment Centers (AAC) (in Yangon)	Number of Certification Holders (in Yangon)
1	Air-con Installer	2	410
2	Welding (MMAW, GMAW, FCAW)	11	1047
3	Foundry Worker	1	33
4	Automobile mechanic	1	194
Total		15	1684

Source: Assessment and certification Committee (ACC) of NSSA

Above table is the Metal and Engineering Sectorial Committee implements the Recognition of Prior learning (RPL) scheme, which certifies individuals based on work and learning experiences. It was introduced since 2013 and as of August 2019, 1684 certificates have been awarded through RPL at levels 1 of NSSA certification and 15 Assessment Centers in Yangon Area. The competency assessment for this certification is based on the National Occupational Competency Standards (NOCS) based on ESD Law. In 2020-21, Metal and Engineering Sectorial Committee has a plan to certify for level-3 and level-4.

CHAPTER IV

SURVEY ANALYSIS

This Chapter presents survey design, the profile of National Skills Standards Authority (NSSA) and analysis on the effect of National Occupational Competency Standard (NOCS) based on NSSA certificates on Labor in Myanmar.

4.1 Survey Design

This study explores the effects of NOCS based on National Skills Standards Authority certificate on labor and Owner in Myanmar. In order to carry out this objective, both secondary and primary data are used in this study. Secondary data are obtained from the workforce development in Myanmar. Primary data are collected from the responsible person of skills worker; who are NSSA semi skills level 1 certificates holder by conduction personal interview and owner of company who are occupied the skills workers. To analyze the skills workers and owners perception towards NSSA certificate (Semi-skilled level 1), the questionnaire method is applied. A Sample was selected out of trainees who completed.

The survey is based on National Skills Standards Authority (NSSA) in Myanmar. NSSA already trained 87 inspectors, 522 assessors, developed 145 assessment centers and certified 13,346 candidates in 31 occupations (2014-2019). The selected 4 occupations from the most demanded Occupational areas for the Semi-Skilled worker Level 1, and related Assessment Center managers focus on the Metal and Engineering Sectorial Committee in Yangon area. The samples were collected with convenience sampling consisting of 320 candidates (Semi- Skilled worker), who completed semi-skills level only the assessing of NSSA certificate for skills labours, and 12 Assessment center managers from Yangon Region.

4.2 Profile of Respondents

According to survey questionnaires for semi-skilled worker regard to the NSSA program is analyzed based on three components. They are (i) Candidates Profile (ii) Assessment Process of NSSA (iii) Advantages of NSSA Certificate.

4.3 Determination of Sample Size

The following formula, the certified candidates (1684) was used for sample size determination. Therefore, the required total sample at the survey area is 320 certified certificate holders were selected for this study. The total 320 certified certificate holders were selected 80 certificate holders per occupation from 4 occupations of Metal and Engineering Sectorial Committee from Yangon area. And then, the total 12 Assessment Center Managers from Yangon Area.

4.4 Data Analysis on the Respondents of Semi- Skills Workers (Certified Candidates)

4.4.1 Socio-Demographic Characteristics of Certified candidates

Out of the total 320 study respondents (Semi-skilled worker) participated in the survey, questionnaires from all respondents were considered for analysis making the response rate 100%. Table (4.1) represents the socio-demographic characteristics of the respondents.

Table (4.1) Socio-Demographic Characteristics of Certified Candidates

Variable	Respondents (worker)	Percent (worker)
Sex		
Male	320	100 %
Female	0	0 %
Total	320	100
Age (years)		
18-20	160	50
20-25	96	30
25-30	53	16
30-35	11	4
Total		100

Table (4.1) Socio-Demographic Characteristics of Certified Candidates**(Continued)**

Education		
Primary school level	16	5
Middle school level	123	38.6
High school level	144	45
Graduate	37	11.4
Total	320	100
Occupation		
Self Employed	101	31.5
Company	199	62.1
Civil Service	18	5.7
Others	2	0.7
Total	320	100
Ethnicity		
Burma	258	80.7
Rakkhine	11	3.6
Chin	9	2.9
Kayin	42	12.8
Total	320	100

Source: Field Survey, 2019

4.4.2 Work Experience of Certified Candidates**Table (4.2) Years of Work Experience on Field Service**

Years of Work Experience	Respondents	Percent
Under 1 years	27	8.5
Between 2 and 3 years	39	12.1
Above 3 years	254	79.4
No	0	0
Total	320	100

Source: Field Survey, 2019

This survey questionnaire was handed out to the participants. Table (4.2) shows the years of work experience in their work field. The years of work experience have been categorized into under 1 years, between 2 and 3 years, above 3 years and no experience.

As presented table 4.2, 27 (8.5 %) of respondents, who worked under 1 years work experience, 39 (12.1%) worked between 2 and 3 years, 254 (79.4%) worked above 3 years and while 0% no worked experience respectively. Therefore, it can conclude that most of the clients in the survey, the clients are over 3 years work experience in the field service.

Table (4.3) Qualification of Certified Candidates

Qualification Level	Respondents	Percent
Primary	16	5
Middle	108	38.6
High	144	45
Graduate	52	11.4
Total	320	100

Source: Field Survey, 2019

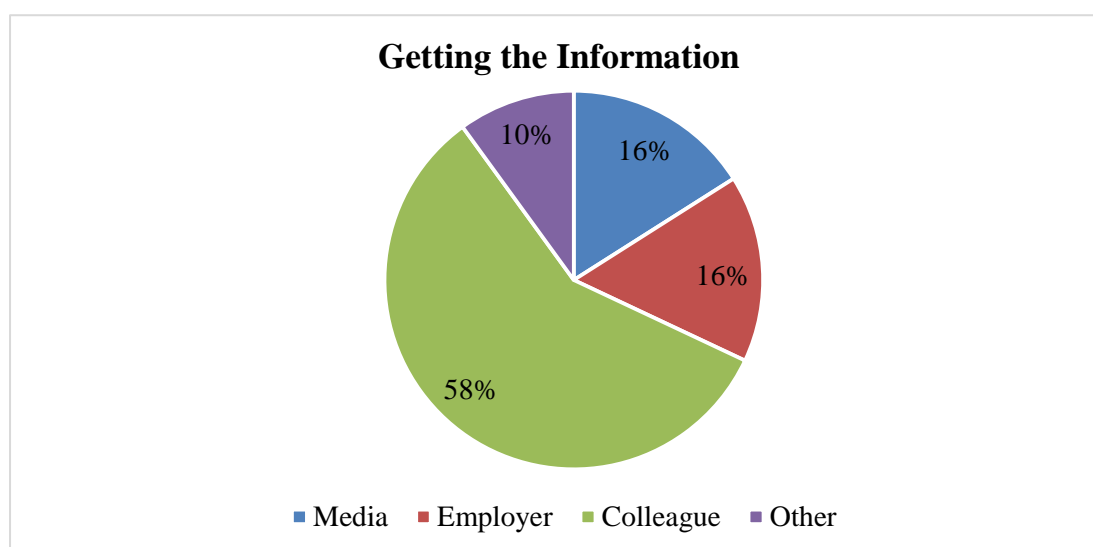
Table (4.3) As per the table above that most of the respondents 16 (5%) are primary school level, 108 (38.6 %) are Middle school level , 144 (45 %) are High school level and 52 (11.4%) are Graduate Level respectively. Therefore, it can conclude the clients in the survey, the most of the client's qualification are High school level.

And as of the survey question to clients, most of the clients are not getting the Certificates of Diplomas and the most are occupied the Skills training certificates.

4.4.3 Assessment Process of NSSA

The study figures out the sources for the skilled labor, who want to take the NSSA assessment. There are varieties of ways the information to promote the awareness of the NSSA Certificates.

Figure (4.1) Categories of Sources for Getting NSSA Information



Source: Field Survey, 2019

As shown figure (4.1), most of respondents got information from their colleague. With the information provided by colleagues, potential numbers of candidates are increase.

The above figure (4.1) that most of the respondents 185 (58 %) got NSSA information from their colleagues, followed by 52 (16%) got from Media, other 52 (16%) from employers and the smallest number of respondents 31 (10%) got information from another channel respectively. By words of mouth, the information is received for the candidates. The survey suggests that advertisement with media platform will increase the awareness of the NSSA certificate. And the other suggest is the employers also should provide information and pay leaves to their skill workers for their testing.

Table (4.4) Reasons to Take NOCS Based NSSA Assessment

Variable	Respondents	Percent
In line with skills standard assessment	73	22.9
Promotion	78	24.3
Increasing salary	149	46.5
work on aboard	20	6.3
Total	320	100

Source: Field Survey, 2019

Candidates have many reasons to take the NSSA Exam for their career development and personality. There are reasons to take NSSA Exam result, shown below Table (4.4).

According to Table (4.4), most of the candidates want to increase their salary. As per the table below that most of the candidate's respondents 149 (46.5%) want to increase their salary, followed by 78 (24.3%) to get the promotion and 73 (22.9%) of candidates want to get the NSSA Certificate in line with skills standard assessment and the smallest number of respondents 20 (6.3%) to work abroad.

Table (4.5) Analysing on the Assessment Process of NSSA

No	Variable	Yes		No	
		Respondents	Percent	Respondents	Percent
1	Before assessment, have you joined Job oriented courses?	134	41.6	186	58.4
2	Do you satisfy the courses by the Assessment Centre? (Refresher, Familiarization)	285	89.2	35	10.8
3	Do you prefer Candidates Manual Booklets in Refreshment day?	320	100		
4	Do you prefer the Facilities at the assessment centre? (for Practical Test)	320	100		
5	Do you take and use standard materials and tools in the Assessment Centre?	260	81.2	60	18.8
6	Do you think that enough time for the Practical Test?	284	88.8	36	11.2
7	Do you see positively on the evaluation procedure and exam in assessment center?	320	100		
8	Do you think all right on your feedback of the exam after practical test?	320	100		
9	Do you satisfy the conducting of all assessors on the assessment?	320	100		

Source: Field Survey, 2019

Figure (4.2) describes the respondent's qualification of assessment attitudes toward the NOCS based on NSSA program in study area. These are seven components in exploring the community qualification of assessment. They are: (1) Job oriented courses before, (2) satisfy the course of Refresher, Familiarization by the Assessment center, (3) Prefer candidates manual books in the day of refresher, (4) Satisfy the facilities for practical test at the assessment center, (5) tools: in the assessment center are standard, (6) enough time for the Practical Test (7) Satisfy the evaluation procedures and exam in assessment center, (8) satisfy feedback of the exam after your practical test (9) assessor are doing Job fairly or not,

According to above Figure4.2 described about the qualification of assessment during the assessing in the assessment center. Among the respondents, some 134 (41.6%) were attending job-oriented courses and some 186 (58.4%) were not attending before the NOCS based on NSSA test. Most of 285 (89.2%) respondents satisfy the course of Refresher, Familiarization by the Assessment center and all of respondents 320 (100%) prefer candidate manual books in the day of refresher. According to survey results, there are more productive answers because of assessors explained on the day of refresher. Figure 4.2, described the Facilities for Practical Test at the assessment center. Full percent of candidates' respondents got the greatest facilities for practical test in the assessment center. Survey results show that there are enough good conditions of room, good ventilation, notices of safety and tools of First Aid. Most of candidates 260 (81.2%) respondents used to materials during the assessing time in the assessment center. Candidates are comfortable in the exam since tools and materials are welled-support in the assessment centre. Fully 320 (100%) of respondent's assessors are doing job fairly and satisfied the evaluation procedure and exam in assessment center. Full percent of candidates' respondents satisfy feedback of the exam after practical test. The results show that the most of candidates are satisfy the evaluation procedures and exam in assessment center.

4.4.4 Challenges for NOCS Based NSSA Test

Two key points to ask to the respondents: one is the permission of the employer. The second is the difficulty to access the assessment center. The finding of the survey suggests are following.

Table (4.6) The Fact of Challenges for Certified Candidates

Sr. No	Variable	Respondents	Percent
1	Any challenges for the test		
	Employer not permit to take leave	25	7.8
	Employer said that they will keep the certificate.	30	9.3
	Cutting the salary	-	-
	Other	-	-
	No difficulties	265	82.9
Total		320	100
2	Any Challenges for the assessment center	Respondents	Percent
	Assessment venue is difficult to arrive in time	0	0
	Difficult to take leave for applying the form	34	10.7
	Information got from center for assessment day very late.	69	21.4
	Out of information the center. (Phone number etc..)	0	0
	Other	0	0
	No difficulties	217	67.9
Total		320	100

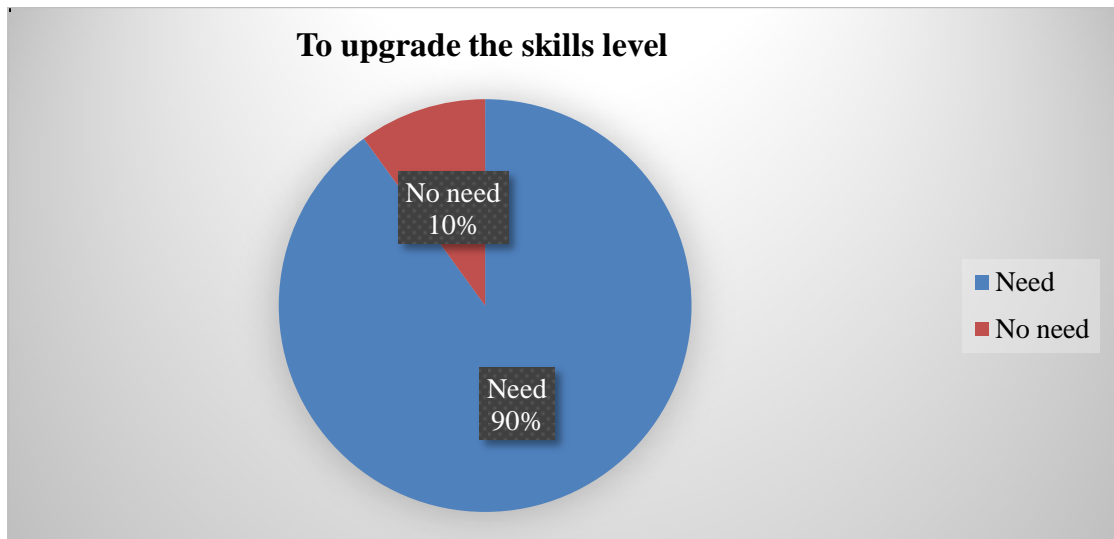
Source: Field Survey, 2019

According to above table (4.6), candidates have any difficulties and challenges for the text. The most of 265 (82.9 %) respondent's no difficulties for the test. The more 25(7.8%) respondent's employer met challenges to take leave. The respondents 30 (9.3%) answered the the employers will keep the certificate. The need for employers to fully understand the NOCS based NSSA certificate and the usefulness of it are also very difficult as some of the employers have limited awareness over the NOCS based on NSSA certificate. The candidates met difficulties to contacts the assessment center. The most group 217(67.9%) respondents no difficulties to contact the assessment center. The second group of 30(21.4%) respondents got the information from center for assessment day very late. 15(10.7%) respondents was very difficult to take leave for applying the form. But another two

groups of respondents no difficult to arrive the assessment center and no difficult to contact directly to the assessment center.

4.4.5 Evaluation on the Advantages of NSSA Certificate

Figure (4.2) Requirement of NOCS Based on NSSA Certificate Level



Source: Field Survey, 2019

According to the above figure (4.2) data analysis, most of the respondents 126 (90 %) want to upgrade of their NOCS based on NSSA certificate level. But a few point14 (10%) only no need to upgrade.

Table (4.7) Information from the Certified Candidates

Sr. No.	Variable	Respondents	Percent
1	NSSA test to meet the job specifications.		
	Yes	229	72
	No	91	28
Total		320	100
2	Feeling more confidence level after you get certificate	Respondents	Percent
	I have more confidence	229	72
	I have been assigned with my supervisor	43	13
	None	48	15
Total		320	100
3	After you know exam result, how long you should wait you think to receive your certificates.	Respondents	Percent
	Within 2 weeks	142	44
	Within 3 weeks	135	42
	Within 1 months	43	14
	Others	-	-
Total		320	100

Source: Field Survey, 2019

The Responds of certificate holders with regards to the NSSA programs of the survey, analysed based on four sectors, they are (1) NSSA test to meet the job Specifications (2) Confidence level after passed candidates result (3) Time Period (4) Apply new Job after got certificate. As presented table 4.6, NSSA test to meet the job Specifications. 229 (72%) of respondents the certificate meet the job specifications and 91 (28%) respondents the certificate are not meet the job specifications. The confidence level of candidates after passed candidates result 229 (72%) respondents have more confidence after got certificates. 43 (13%) respondents have been assigned with supervisor. And least of 48 (15%) respondents no different feeling and changes after got certificates. The certificate holders have strong beliefs that the certificate can hold as a vocational document for their careers. Most of candidates 142 (44%) of the respondents want to receive 2 weeks after exam result.

135 (42%) respondents want to receive 3 weeks after exam result. At least 43 (14 %) respondents want to receive 1 month after exam result. 178 (55.7%) respondents want to apply new job after got certificate and 142 (44.3 %) respondents don't want to apply new job.

Table (4.8) New Job, Promotion and Salary Changes of Certified Candidates

Daily wages before NSSA certificate	Respondents	Percent
Within 5000 Ks	170	53.1
5000 Ks ~10000 Ks	145	45.3
10000 Ks ~15000 Ks	4	1.25
Above 15000 Ks	1	0.35
Total	320	100
Applying for new Job after getting certificate	Respondents	Percent
Yes	25	7.8
No	295	92.2
Total	320	100
Daily wages after got NSSA certificate	Respondents	Percent
Within 5000Ks	150	46.87
Between 5000Ks and 10000Ks	160	50
Between 10000Ks and 15000 Ks	9	2.78
15000Ks above	1	0.35
Total	320	100

Source: Field Survey, 2019

Table (4.8) show that the respondent's average Daily wages of the job after certified the certificate. The income categories are classified to four groups. There is 1 (0.35%) of respondents are received above 15000 ks income level in the survey results. 9 (2.78 %) are received the income between 10000 ks and 15000 ks and between 5000 and 10000 ks income level is stand point at the present of 160 (50%). And the least portion group of within 5000 ks income level is stand point of 150 (46.87%) respectively. Candidates respond salary increases after hold the certificates. 249 (77.8%) Certificate holders respondents' salary is not increase after got the certificates. Certificate holders' respondent salary is increase after got the certificates, income categories are classified to four groups. There is no found the respondents

over 20000 Ks income level and 5 (1.5 %) of respondents are increased the salary between 10000Ks and 20000Ks in the survey results. The increased salary between 5000Ks and 10000Ks income level is more participated that 25 (7.8%) in this survey. The least portion group of between 3000 and 5000 ks income level is stand point at the present of 41 (12.9%) respectively.

Table (4.9) Employer Participation

No	Variable	Yes		No	
		Respondents	Percent	Respondents	Percent
1	NSSA certificate recognize in another organization / employer	214	66.8	106	33.2
2	Employers support you to get this NOCS based NSSA certificate	240	75	80	25
3	The employers say NSSA certificates are sort of requirements.	137	42.8	183	57.2

Source: Field Survey, 2019

According to the above Table (4.9) survey data analysis show that most of the certificate holders are above 3 years- experience while level 1 criteria mentions that the candidates should have at least 6 months experience. This survey revelation that NSSA assessment program are not enough and needed to more extend and expand for demanded areas.

Table (4.10) Acknowledgement to NOCS Based NSSA Certificate

No	Variable	Yes		No	
		Respondents	Percent	Respondents	Percent
1	Do you think that the certificate is valid for the whole ASEAN region to seek for jobs?	20	6.25	300	93.75
2	Would you recommend the NSSA tests to other?	250	78.1	70	21.9
3	Do you want to upgrade the skilled worker Level 2	300	93.75	20	6.25
4	Regarding job opportunities, how would you say your impression for the NSSA exam?	Respondent		Percent	
	More opportunities	280		87.5	
	Less opportunities	40		12.5	

Source: Field Survey, 2019

The survey results show that sources for getting NSSA Information are from Colleague in general and it is concluded that NSSA need to development the information networking system for public. And the result shows that the reasons of taking the NOCS based NSSA assessment are to increase their salary. So, most of the workers has intention upon work income and desire to enhance the social status more than now. Evaluation analysis on NSSA Test are giving positive answers. Most of the responses are satisfy the evaluation procedure and exam in assessment centre, the assessors are doing job fairly, satisfy the facilities for practical test at the assessment centre and prefer the candidate's Manual books in the day of Refresher training.

Regarding Challenges for Candidates about skills assessment, there are answers shown that most of the candidates have not difficulties to contact the assessment centre. And the evaluation on the certificate holders are answering that most of the respondents need NOCS based on NSSA certificate level because of recognition the NSSA test meet the job specifications and requirement of the market

and think that NSSA test give more Confidence level after passed. And the answers show that most of the respondents occupied the new Job and some are promotion after received certificate. A few of the respondents got salary increase after holding the certificates.

Therefore, the suggestions that the employers should support to workers to get more NOCS based on NSSA certificate and to pay high salary increase and more getting the promotion after received the NOCS based NSSA certificate. And NSSA need to develop the information networking system for public and to do the awareness workshop the whole country. And I found during the survey time that some employers kept the NOCS based NSSA certificates because they are afraid of resignation of the employees. The employees have not afforded to apply the new job and they met many challenges for that.

4.5 Data Analysis on the Respondents of Assessment Center Managers (Key Informant Interview)

The purpose of the Key informant Interview is to collect information from a wide range of people. Face to face interview was used so that can collect more information from the people with the diverse knowledge, backgrounds, opinions, perceptions on issues.

There are 27 questions in KII and made interview in 12 Assessment Center Managers from Yangon area. A simple questionnaire was used for the study, which explored the Acknowledgement to NOCS of Assessment center Manager, Requirement of NOCS in Industry, Necessary Units of NOCS for the workplace, Usefulness of the Units of NOCS for real workplace, Collaboration with Employer for NOCS development and Quality Assurance of NOCS development.

Table (4.11) Acknowledgement to NOCS of Assessment Center Manager

Sr. No	Variable	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean Score
		No	%	No	%	No	%	No	%	No	%	No
1	NOCS based level (1) will cover the skills that should be needed in workplace					2	16.6	6	50	4	33.4	4.17
2	NOCS based level (1) is useful and fundamental for the process of certification for workers' skillfulness					3	25	6	50	3	25	4
3	Technical, Basic and Industry of NOCS Level (1) fundamentally needs for the development of curriculum					4	33.3	8	66.7			3.37
4	The technical competency of NOCS level (1) cover when we conduct the practical skills assessment of workers					3	25	9	75			3.75
5	4 levels of NOCS is appropriate for the position of real workplace					9	75	3	25			3.25
	Total											3.7

Source: Field Survey, 2019

The Respondents of Assessment Center Manager with regards to the NSSA programs of the survey, analysed based on five sectors, they are (1) NOCS based level 1 cover the skills that might be needed in workplace(2) NOCS based level (1) be useful and fundamental for the process of certification for workers' skilfulness(3) Technical, Basic and Industry of NOCS based Level (1) fundamental for the development of curriculum(4) The technical competency of NOCS level (1) cover when we do the practical skills assessment of workers (5) 4 levels of NOCS appropriate for the position of real workplace.

At the table (4.11), among 12 respondents of assessment center manager, 6 (50%) of respondents are agreed, 4 (33.4 %) are strongly agreed and the mean score is 4.1 for NOCS based level 1 cover the skills that should be needed in workplace questions. Therefore, the survey analysis showed that NOCS based level (1) need in workplace. 6 (50%) of respondents are agreed, 3 (25%) of respondents are strongly agreed and 3 (25%) are neutral answered for NOCS based level (1) be useful and fundamental for the process of certification for worker's skilfulness. The mean score got 4 and that showed NOCS based level (1) is useful and fundamental for the process of certification for workers' skilfulness. For the Technical, Basic and Industry of NOCS Level (1) fundamental for the development of curriculum, 4(33.3%) are neutral and 8 (66.7%) are agreed. The mean score got 3.7 and that showed the technical, basic and industry needs for the development of curriculum. At the technical competency of NOCS level (1) cover when we do the practical skills assessment of workers question, 3 (25%) of respondents are answered neutral and 9 (75%) are agreed. The mean score also 3.75. Therefore, that mentioned the technical competency need the practical skills assessment of workers. For the 4 levels of NOCS appropriate for the position of real workplace, 9 (75%) of respondents are answered neutral and 3 (25%) are agreed. The mean score is 3.25 and the answers showed about 4 levels of NOCS need for the position of real workplace. The overall conclusion on the acknowledgement of assessment center managers about NOCS, the average mean score is 3.7 and all of respondents were satisfied on the development of NOCS.

Table (4.12) Requirement of NOCS in Industry

Sr. No	Variable	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean Score
		No	%	No	%	No	%	No	%	No	%	
1	Industrial competency of NOCS level (1) provides the workers in accordance with Industry requirement?					4	33.3	8	66.7			3.67
2	Basic competency of NOCS level (1) provides the workers in accordance with Industry requirement?					8	66.7	4	33.3			3.6
3	Technical competency of NOCS level (1) provides the workers in accordance with Industry requirement?							4	33.3	8	66.7	4.6
	Total											3.95

Source: Field Survey, 2019

Table (4.12) shows 8 (66.7%) are agreed, 4 (33.3%) are neutral and the mean score got 3.67 on the question about assessment center managers thought that industrial competency of NOCS level (1) provide the workers in Industry. Therefore, the answer of respondents showed Industrial competency of NOCS in line with the requirement of industry. 4 (33.3 %) are agree, 8 (66.7%) are neutral and got 3.6 mean score. Therefore, that mentioned basic competency of NOCS also need for industry requirement. 4 (33.4%) are agreed and 8(66.6%) are answered strongly agreed and mean score got 4.6. Thus, the technical competency also need for industry requirement. Overall finding, the industrial competency, basic competency and technical competency were in line with industry needed as average mean score was 3.95.

Table (4.13) Necessary Units of NOCS for the Workplace

Sr. No	Variable	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean Score
		No	%	No	%	No	%	No	%	No	%	
1	Housekeeping Procedure unit of NOCS require for the worker to store and maintain the equipment and matters at the workplace systematically							5	41.7	7	58.3	4.58
2	Workplace Communication unit of NOCS require for the worker to participate in the workplace communication systematically			2	16.7	2	16.7	8	66.6			3.5
3	Use the Hand Tool unit of NOCS requires for the worker to apply and manage the instruments and required tools at the workplace systematically and efficiently					3	25	5	41.6	4	33.4	4.08
4	Apply Workplace Safety and Health unit of NOCS require for the workers in accordance with their workplace safety and environmental procedures to create safe works					2	16.7	6	50	4	33.3	5
Total												4

Source: Field Survey, 2019

Table (4.13) shows the respondents of Assessment Center Managers needed the Units of NOCS for the workplace with regards to the NSSA programs of the survey, analyzed based on four sectors, they are (1) Housekeeping Procedure unit of NOCS require for the worker to store and work the equipment systematically at the workplace (2) Workplace Communication unit of NOCS require for the worker to communicate systematically at the workplace (3) Use the Hand Tool unit of NOCS require for the worker to deal the instruments systematically and the wastage infinitesimally at the workplace (4) Apply Workplace Safety and Health unit of NOCS require for the workers in accordance with their safety and environmentally safe works. Therefore, above table (4.10), most of the assessment center managers agreed and completely agreed for those NOCS units. The mean score is 4.58 for Housekeeping Procedure unit of NOCS required at the workplace. 3.5 mean score got for Workplace Communication unit of NOCS required in the workplace communication systematically. And 4.08 mean score got for the question about Use the Hand Tool unit of NOCS requires for the worker to apply and manage the instruments and required tools at the workplace systematically and efficiently. 5 mean score got about the question of Apply Workplace Safety and Health unit of NOCS require for the workers in accordance with their workplace safety and environmental procedures to create safe works. The average mean score was 4 for above 4 questions and the overall conclusion was above unit of NOCS needed for the real work place.

Table (4.14) Usefulness of the Units of NOCS for Real Workplace

Sr. No	Variable	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean Score
		No	%	No	%	No	%	No	%	No	%	
1	The rules and procedures for all units of NOCS is appropriate for the workers especially when they are assigned in detail at the workplace					5	41.6	7	58.4			3.58
2	The rules and procedures of all units of NOCS reinforce the ability of the workers					8	66.6	4	33.4			3.3
3	The rules and procedures of all units of NOCS is useful when we calculate the ability of workers for their pay scale							12	100			4
4	The theories and practical of all units of NOCS referenced for the workers in “daily route”							10	83	2	17	4.17
5	The company more getting the benefits as you have the skills workers.?									12	100	5
Total												4.01

Source: Field Survey, 2019

According to above table (4.14), 5 (41.6%) of respondents were answered neutral, 7 (58.4%) were agreed and mean score got 3.58 for the question the rules and procedures for all units of NOCS is appropriate for the workers especially when they are assigned in detail at the workplace. 8 (66.6%) were answered neutral, 4 (33.4 %) were answered agree and the mean score was 3.3 for the question the rules and procedures of all units of NOCS reinforce the ability of the workers. 12 (100%) were answered agreed on the question The rules and procedures of all units of NOCS is useful when we calculate the ability of workers for their pay scale. 10 (83 %) were

agreed, 2 (17%) were strongly agree, the mean score got 4.17 about the question The theories and practical of all units of NOCS referenced for the workers in “daily route”. All of the respondents were answered strongly agree about The company more getting the benefits as you have the skills workers. The average mean score was 4.01 and the overall conclusion was the above OCS unit’s usefulness for real work place.

Table (4.15) Collaboration with Employer for NOCS Development

Sr. No	Variable	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean Score
		No	%	No	%	No	%	No	%	No	%	
1	While the development of NOCS, do we need to interview to employers									12	100	5
2	The employers need to participate the development of NOCS							8	67	4	33	4.3
3	Do you think that the employer should support the budget to the employee when the employee apply the NSSA skills assessment?							6	50	6	50	4.5
4	The employer should support the budget to the employee when the employee apply the NSSA skills assessment							4	33.3	8	66.7	4.7
												4.6

Source: Field Survey, 2019

Above table (4.15), all of respondents answered strongly agree about While the development of NOCS, they need to interview to employers. Therefore, the mean score is 5. 8 (67%) were agreed , 4(33%) were strongly agreed, and the mean score got 4.3 for the question The employers need to participate the development of NOCS. 6 (50%) agreed, 6 (50%) strongly agreed, and the mean score got 4.5 for the question the employer should support the budget to the employee when the employee apply the

NSSA skills assessment. For the question about the employer should support the budget to the employee when the employee apply the NSSA skills assessment, 4 (33.3%) agreed, 8 (66.7) strongly agreed, and the mean score got 4.7. The average mean score was 4.6. Therefore, the result showed that the employers should collaboration on the development of NOCS.

Table (4.16) Quality Assurance of NOCS Development

Sr. No	Variable	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean Score
		No	%	No	%	No	%	No	%	No	%	
1	NOCS should be in line with ASEAN Competency standard practices									12	100	5
2	Do you think that the level of NOCS needed more to extend? (eg: Level 1 to 2,3,4)							1	9	11	91	4.9
Total												4.95

Source: Field Survey, 2019

Table (4.16) shows all the respondents of Assessment Center Managers believed NOCS should in line with ASEAN Competency standards and 11 (91 %) showed the level of NOCS more needed and 1 (9%) was agreed, 11 (91%) were strongly agreed about the level of NOCS needed more to extend. The average mean scores also got 4.95. Therefore, the overall conclusion was the quality of NOCS was strongly perfect.

The analysis on survey result of NOCS acknowledgement of Assessment center Managers that the most unit of National occupational competency standard cover in real workplace. Technical, Basic and Industry of NOCS Level (1) also fundamental need for the development of curriculum. The rules and procedures for all units of NOCS modulate for the workers especially when they are assigned in detail at the workplace, and calculation the ability of workers for their pay scale. Housekeeping Procedure unit of NOCS match up the workers to store and work the

equipment systematically at the workplace, Workplace Communication unit of NOCS bested for the worker to communicate systematically at the workplace. Use the Hand Tool unit of NOCS modulate for the worker to deal the instruments systematically and the wastage infinitesimally at the workplace and Apply Workplace Safety and Health unit of NOCS also match up with their safety and environmentally safe works. The respondents answered the companies will get the benefits as they have the skills workers. Therefore, the employers need to answer during the development of NOCS, to participate for developing process and to support the budget to the employee when the employee apply the NSSA skills assessment.

CHAPTER V

CONCLUSION

5.1 Findings

Vocational Education and training (VET) and skill development are paramount to enhance overall competence level of the workforce in Myanmar. To Create better job opportunities for Myanmar workers as well as to facilitate the mobility of Myanmar employee in ASEAN labor Market, Myanmar is necessary to establish its own National skills recognition and Qualification Framework (QF) in order to link Regional skill recognition context of ASEAN. Myanmar has already launched National Skills Standards Authority (NSSA) and has actively carried out the required tasks needed to recognize skills of Labor, including developing the competency framework and issuing the national recognition certificate with benchmarking of ASEAN. All the 320 respondents of certificate holders are positively participated in the survey regarding NSSA skill assessment. The survey shows that, the passion of acquiring new jobs on the 55.71 percentages of the NSSA certificates holder. On the other hand, the real indication is that there are 75 percentage of the employer have a positive view on the certificate. There are 91 percentages of the candidate holder who want to become expert to participate in job markets in ASEAN. Moreover, the survey comments that, 77.8 percentages of the certificate holders didn't get recognition to increase their salary and the remaining part of 22.2 percentages of certificates holders are merely paid between 3000 Ks and 5000Ks. Information of the study shows that there are 90 percentages of certificates holders, who want to apply Level 2 and higher level and most of the NSSA certificate holders are high school level school- leavers.

The survey results show that to get the sources of NSSA information are from Colleague in general and it is concluded that NSSA need to make awareness in public. And the reasons of taking the NOCS based NSSA assessment that they hope to increase their salary. So, most of the workers has intention upon work income and desire to enhance the social status more than now. Evaluation analysis on NSSA Test

are giving positive answers. Most of the respondents are satisfy the evaluation procedure and exam in assessment centre, the assessors are doing job fairly, satisfy the facilities for practical test at the assessment centre and prefer the candidate's Manual books on the day of Refresher training. Regarding Challenges for Candidates about skills assessment, the answers shown that most of the candidates have not difficulties to contact the assessment centre. And the evaluation on the certificate holders are answering that most of the respondents need NOCS based on NSSA certificate level because of recognition the NSSA test meet the job specifications and requirement of the market and think that NSSA test give more Confidence level after passed. And the answers show that most of the respondents occupied the new Job and some are promotion after received certificate. A few of the respondents got salary increase after holding the certificates.

According to the result of assessment center managers' survey showed that the respondents satisfied to NOCS development because most of the answers are agreed and strongly agreed on NOCS based Level 1 will cover the skills that might be needed in workplace, and useful and fundamental for the process of certification for workers' skilfulness. The technical competency of NOCS level 1 covered when they make the practical skills assessment of workers. they answered the four level of NOCS are appropriated for the position of real workplace.

All of the units of NOCS also require for the real workplaces such as Housekeeping Procedure unit, workplace communication unit, Use the hand tool unit, Apply workplace safety and health unit. But some are believed neutrally about the rules and procedures of all units of NOCS reinforce the ability of the workers. Full percentage of respondents are believed that is useful to calculate the ability of workers for pay scale. 100 % of respondents thought what the employers need to answer the interview questions for developing the NOCS, and to participate the development of NOCS. And, the employers should support the budget to the employee when they apply the NSSA's skills assessment. The level of NOCS also needed to develop more and need to in line with ASEAN standards.

In this study, Assessment Center Managers answered that 85 % believed the NOCS level (1) be useful and fundamental for the process of certification for workers skilfulness, and Technical, Basic and Industry of NOCS Level (1) fundamental for the development of curriculum. 60% of respondents survey result showed the four levels of NOCS appropriate for the position of real workplace. 85 % respondents said the

technical competency of NOCS level (1) cover when we do the practical skills assessment of workers. 85 % and 72 % of respondent answered Industrial and Basic competency of NOCS level (1) provide the workers in Industry. For the usefulness of the Units of NOCS 55 % of respondents believed the rules and procedures for all units of NOCS useful for the workers especially when they are assigned in detail at the workplace and the result showed 65% reinforce the ability of the workers, and all 100% believed it is useful when the calculation of the ability of workers for their pay scale. Housekeeping Procedure unit of NOCS, Workplace Communication unit, Use the Hand Tool, and Apply Workplace Safety and Health unit of NOCS are match up for the workers at the workplace. The survey result mentioned the companies more getting the benefits as they have the skills workers. The assessment center managers said that during the development of NOCS, the employers need to answer the interview questions and the employers need to participate the development of NOCS. The respondents believed the employer should support the budget to the employee when the employee apply the NSSA skills assessment.

And the respondents of Assessment Center Managers did the comments that NOCS should in line with ASEAN Competency standards because drafting Myanmar NOCS levels to be in compatible with those in the ASEAN countries will facilitate the free flow of skill labour within ASEAN region and will also increase the employability for Myanmar workers in the other overseas countries beyond ASEAN boundary. NOCS levels need to develop more because the higher NOCS levels will enhance the existing competency of the workers, motivate the workers to achieve better benefits out of their competency, create opportunities for the workers and the employers, guarantee quality compliance and quality assurance in the business, and satisfy the customer. They also searched and hired the Skilled workers through media advertisements, employment agencies, and the connections within the business community. On the other hand, they have some challenges that are some workers sign out after built the skills ability, very difficult to get the skills worker. Therefore, they comment what need to develop the Vocational Training and institution system in Myanmar, promotion on job and awareness about the important layer of certificate. The field survey reveals that there are weak of commitments of the stakeholder to collaborate with the NSSA for workforce development. Therefore, the it is recommended that all the stakeholder should have awareness to improve the better living standard of the certificate holder.

The certification of competencies in an occupation at four levels by the National Skills Standards Authority (NSSA) makes it possible for job seekers to undergo entry level training for securing employment and while in employment progressing up the career ladder by acquiring further competencies at their own pace. It also provides opportunities for primary school dropouts and other unemployed youths to enter into an occupation that may provide employment and be a means of livelihood. Skilled workers who possess such documents from reliable or accredited sources or National Bodies for recognition of skills may get employment with wages/salaries commensurate with their levels of skills and have a high probability of progressing in and retaining employment. Certification also increases the lateral mobility of skilled workers. Introducing certification commensurate with levels of skills in an occupation, also makes it easier for employers to hire skilled workers for work requiring the level of skill that would be adequate for performance of a task or job.

NSSA Occupational Competency Standards are referenced to international standards and hence are comparable to such standards particularly in the ASEAN Qualification Framework, which is expected to be aligned to the ASEAN Qualification Reference Framework, the certificates awarded by the NSSA will be recognized within the country as well as in the ASEAN Economic Community. With the increase in investment in Myanmar by local as well as foreign investors, in special economic zones to be expanded or created as well as in the Agriculture, Fishery, Livestock Breeding and other green investment area, there will emerge a growing demand for skilled workers which can be met, among other means, by Occupational Competency Based Training and Certification of jobseekers and also by certifying the competencies of existing skilled workers who acquired their skills through on-job training and experience.

With the increase in Foreign Direct Investment envisaged, the investing Companies and Establishments will be more attuned to hiring competent workers certified by a National Body and at the same time be willing to pay wages commensurate with their levels of competence. Also there may be occupations in the various economic sectors for which a National Competency Certificate may be a requirement. Need to have the limited numbers of expert and occupational assessors to fill in sectorial committees. And need to grow the demand from employers and company sites.

5.2 Suggestion for Workforce Development in Myanmar

According to the findings in the literature review, current practices of international context, regional context and background situation of Myanmar landscape, National Skills or Competency qualification framework is very critical for human resources development in every countries and industries. At the same time, upcoming ASEAN common labor market becomes a driving force for all. This can bring about opportunities and challenges together with free flow of human resources.

To meet the forthcoming requirements for Human resources development and workforce competitiveness in Myanmar, some suggestions that can be made as followings,

- (a) To give efforts to promote the public awareness and political awareness among businesses and stakeholders regarding this matter and related legislation.
- (b) To formulate the short-term, medium-term and long-term policy and planning in order to set up national mechanism for competency framework and certification system on career and professional development of workers like other countries.
- (c) To develop the social status, productivity, labor mobility and motivation of workers through the professional skills certification system at national level and beyond.
- (d) To formulate the sound HRD policy and system through not only formal TVET and education mechanism but also work-based qualification mechanism in order to fulfill the actual demand of current industries.
- (e) To promote the engagement of employers in the matter of workforce development.
- (f) To establish the national level skill levy funding system based on the law in order to strengthen the industry HRD system contributed by employers.
- (g) To pave the way and lay down the foundations to use the competency standards in other HR purposes of companies such as apprenticeships, employment interview, job placement, and in-house training.
- (h) To strengthen the sectorial committees to develop the competency frameworks and lead the training and certification system for HRD in each sector.

5.3 Conclusion

As conclusion, it can be viewed that fulfilling above mentioned facts by the concerning stakeholder, the skill of the Myanmar workforce will be developed step by step and become competitive to regional labor market. It is concluded that this is also a kind of nation building because in regional and international level to acquire the foreign direct investments, possessing skilled workforce is one of the critical factors for investment site selection and in-flowing in business.

It cannot be said that vocational competences of workforce is solely main factor and drive for business development in long run in a country. But it can be said that this is one of main pillars for economic development because key factors for country economic development can be included such as political stability, sound financial management system, sound infrastructure, competent leadership and competent workforce.

Accordingly, it is obvious that promoting HRD and building mechanism for nurturing skilled workforce is vibrant area for public policy makers to formulate the relevant planning and take the practicable measures in order to generate the fruitful outcomes in future.

As a developing country like Myanmar, policy makers should pay more attention to strengthen the foundational area like workforce skill development and encourage the engagement of employers in private sector. Without private sector participation, workforce skill development will not be achievable.

Thus, for workforce skill development in long run, it is important that country should have relevant mechanism and legislation, paying political willingness, sound public and private partnership, national level competency framework and skills qualification comparable to regional level qualification and proper financing system. Through these above factors, it is significant that country human resources development will bring about the opportunities for future business and social growth for all citizens.

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Appendix (1)

Accredited Skills Workers of National Skills Standard Authority

		Q're. No.	<div></div>
Name	.....	
Position	.....	
Ages	.....	
Occupation	.....	
Division/State/City	.....	
Race	.....	
Address	.....	
		
Phone	.....	
E-mail Address	.....	
Signature	.....	

Questionnaire Form

I. Candidates Profile	
No	Questionnaire
1	How long have you been in your services?
<input type="checkbox"/> Three years	<input type="checkbox"/> within four and six years
<input type="checkbox"/> within seven and nine years	<input type="checkbox"/> above ten years
2	How long you worked for the present Job?
<input type="checkbox"/> One year	<input type="checkbox"/> between two and three years
<input type="checkbox"/> Three years above	<input type="checkbox"/> Nil
3	What is your educational back ground?
<input type="checkbox"/> Primary	<input type="checkbox"/> Middle
<input type="checkbox"/> High	<input type="checkbox"/> Graduate
4	Any another qualification?
<input type="checkbox"/> Government issued Diploma	<input type="checkbox"/> Skills Training Certificate
5	Before NSSA certificate, how much pay per day you enjoyed ?
<input type="checkbox"/> Within 5000 Ks	<input type="checkbox"/> 5000 Ks ~10000 Ks
<input type="checkbox"/> 10000 Ks ~15000 Ks	<input type="checkbox"/> Above 15000 Ks
II. Assessment Process of NSSA	
6	How do you know about the NSSA Certificate Exam?
<input type="checkbox"/> Media	<input type="checkbox"/> Employer
<input type="checkbox"/> Collage	<input type="checkbox"/> Others

7	What is your objective to sit for (National Skills Standards Authority NSSA Certificate) Exam?
<input type="checkbox"/> In line with skills standard assessment <input type="checkbox"/> promotion <input type="checkbox"/> increasing salary <input type="checkbox"/> work on aboard <input type="checkbox"/> Others	
8	Before assessment, have you joined Job oriented courses?
<input type="checkbox"/> Yes <input type="checkbox"/> No	
9	Do you satisfy the courses by the Assessment Centre? (Refresher, Familiarization)
<input type="checkbox"/> Yes <input type="checkbox"/> No	
10	Do you prefer Candidates Manual Books in Refreshment day?
<input type="checkbox"/> Yes <input type="checkbox"/> No	
11	Do you prefer the Facilities at the assessment centre? (for Practical Test)
<input type="checkbox"/> Yes <input type="checkbox"/> No	
Do you have any comment? ----- -----	
12	Do you take and use standard materials and tools in the Assessment Centre?
<input type="checkbox"/> Yes <input type="checkbox"/> No	
13	Do you think that enough time for the Practical Test?
<input type="checkbox"/> Yes <input type="checkbox"/> No	
14	Do you see positively on the evaluation procedure and exam in assessment center?
<input type="checkbox"/> Yes <input type="checkbox"/> No	

15	Do you think all right on your feedback of the exam after practical test?
<input type="checkbox"/> Yes	<input type="checkbox"/> No
16	Do you satisfy the conducting of all assessors on the assessment?
III. Advantages of NSSA Certificate	
16	The integrity of certificate
<div> <input type="checkbox"/> Signatures of the Organizations/Assessors <div> <input type="radio"/> Perfect <input type="radio"/> Good <input type="radio"/> Bad </div> </div> <div> <input type="checkbox"/> Certificate Design <div> <input type="radio"/> Perfect <input type="radio"/> Good <input type="radio"/> Bad </div> </div> <div> <input type="checkbox"/> Technical Terms <div> <input type="radio"/> Perfect <input type="radio"/> Good <input type="radio"/> Bad </div> </div> <div> <input type="checkbox"/> Text Design <div> <input type="radio"/> Perfect <input type="radio"/> Good <input type="radio"/> Bad </div> </div> <div> <input type="checkbox"/> Seals of organizations <div> <input type="radio"/> Perfect <input type="radio"/> Good <input type="radio"/> Bad </div> </div>	
17	Does the NSSA test to meet the job specifications?
<input type="checkbox"/> Yes	<input type="checkbox"/> No
18	Do you feel more confidence level after you get certificate?
<input type="checkbox"/> more confidence <input type="checkbox"/> None	
<input type="checkbox"/> I have been assigned with my supervisor	
19	After you know exam result, how long you should wait you think to receive your certificates?
<input type="checkbox"/> Within 2 weeks <input type="checkbox"/> Within 3 weeks	
<input type="checkbox"/> Within 1 month <input type="checkbox"/> Others	
20	Will you apply for new Job after getting certificate?
<input type="checkbox"/> Yes	<input type="checkbox"/> No

21	For renewing the NSSA Certificate, how do you think the time period? If you think it is necessary
<input type="checkbox"/>	1 year period
<input type="checkbox"/>	2 years period
<input type="checkbox"/>	3 years period
<input type="checkbox"/>	Others
22	Could you mention your daily wages before NSSA certificate?
<input type="checkbox"/>	Within 5000 Ks
<input type="checkbox"/>	Between 5000 Ks and 10000 Ks
<input type="checkbox"/>	Between 10000 Ks and 15000 Ks
<input type="checkbox"/>	15000 Ks above
23	Could you mention your daily wages after NSSA got certificate?
<input type="checkbox"/>	Within 5000 Ks
<input type="checkbox"/>	Between 5000 Ks and 10000 Ks
<input type="checkbox"/>	Between 10000 Ks and 15000 Ks
<input type="checkbox"/>	15000 Ks above
IV . Employer Participation	
24	Is the NSSA certificate recognize in another organization / employer?
<input type="checkbox"/>	Yes
<input type="checkbox"/>	No
25	Do the employers support you to get this NOCS based NSSA certificate?
<input type="checkbox"/>	Yes
<input type="checkbox"/>	No
26	Do the employers say NSSA certificates are sort of requirements?
<input type="checkbox"/>	Yes
<input type="checkbox"/>	No
v. Acknowledgement to NOCS based NSSA certificate	
27	Do you think that the certificate is valid for the whole ASEAN region to seek for jobs?
<input type="checkbox"/>	Yes
<input type="checkbox"/>	No

Why?	
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	
28	Regarding job opportunities, how would you say your impression for the NSSA exam?
<input type="checkbox"/> More opportunities <input type="checkbox"/> Less opportunities	
29	Would you recommend the NSSA tests to other?
<input type="checkbox"/> Yes <input type="checkbox"/> No	
30	Do you want to upgrade the skilled worker Level 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No	

Appendix (2)

Survey for Assessment Center Managers of National Skills Standard Authority

Q're. No.

Name

Ages

Assessment Center Name

Division/State/City

Address

.....

Phone

E-mail Address

Signature

Key Informant Interview questions

(1) Acknowledgement to NOCS of Assessment center Manager	
No	Questionnaire
1	Do you think the National Occupational Competency Standard (NOCS) level (1) will cover the skills that might be needed in workplace?
<input type="checkbox"/> Strongly disagree	
<input type="checkbox"/> Disagree <input type="checkbox"/> Neutral	
<input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	
2	Do you think NOCS level (1) be useful and fundamental for the process of certification for workers' skillfulness?
<input type="checkbox"/> Strongly disagree	
<input type="checkbox"/> Disagree <input type="checkbox"/> Neutral	
<input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	
3	Do you think three standards: Technical, Basic and Industry of NOCS Level (1) fundamental need for the development of curriculum?
<input type="checkbox"/> Strongly disagree	
<input type="checkbox"/> Disagree <input type="checkbox"/> Neutral	
<input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	
4	Do you think the technical competency of NOCS level (1) will cover when we do the practical skills assessment of workers?
<input type="checkbox"/> Strongly disagree	
<input type="checkbox"/> Disagree <input type="checkbox"/> Neutral	
<input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	

5	Do you think 4 levels of NOCS appropriate for the position of real workplace?	
<input type="checkbox"/>	Strongly disagree	
<input type="checkbox"/>	A little	<input type="checkbox"/> Fair
<input type="checkbox"/>	Agree	<input type="checkbox"/> Completely agree
(2) Requirement of NOCS in Industry		
6	Do the elements of industrial competency of NOCS level (1) provide the workers in Industry? (For example: Safety and Health in workplace,)	
<input type="checkbox"/>	Strongly disagree	
<input type="checkbox"/>	Disagree	<input type="checkbox"/> Neutral
<input type="checkbox"/>	Agree	<input type="checkbox"/> Strongly agree
7	Do the elements of basic competency of NOCS level (1) provide the workers in Industry? (For example: Team work,)	
<input type="checkbox"/>	Strongly disagree	
<input type="checkbox"/>	Disagree	<input type="checkbox"/> Neutral
<input type="checkbox"/>	Agree	<input type="checkbox"/> Strongly agree
(3) Necessary Units of NOCS for the workplace		
8	Do you think <u>Housekeeping Procedure</u> unit of NOCS require for the worker to store and work the equipment at the workplace systematically?	

<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	
9	Do you think <u>Workplace Communication</u> unit of NOCS require for the worker to communicate at the workplace systematically?
<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	
10	Do you think <u>Use the Hand Tool</u> unit of NOCS require for the worker to deal the instruments and the wastage infinitesimally at the workplace systematically?
<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	
11	Do you think “Apply Workplace Safety and Health” unit of NOCS necessary for the workers in accordance with their safety and environmentally safe works?
<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	
(4) Usefulness of the Units of NOCS for real workplace	
12	Do you think the rules and procedures for all units of NOCS modulate for the workers especially when they are assigned in detail at the workplace?

<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	
13	Do you think the rules and procedures of all units of NOCS reinforce the ability of the workers ?
<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	
14	Do you think the rules and procedures of all units of NOCS modulate when we calculate the ability of workers for their pay scale?
<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	
15	Are the theories and practical of all units of NOCS referenced for the workers 'daily route?
<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree	

16	Do you think that your company more getting the benefits as you have the skills workers.?	
<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree		
(5) Collaboration with Employer for NOCS development		
17	Do you think that while the development of NOCS, do we need to interview to employers ?	
<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree		
18	Do you think that the employers need to participate the development of NOCS ?	
<input type="checkbox"/> Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly agree		

19	Do you think that the employer should support the budget to the employee when the employee apply the NSSA skills assessment?	
<input type="checkbox"/>	Strongly disagree	
<input type="checkbox"/>	Disagree	<input type="checkbox"/> Neutral
<input type="checkbox"/>	Agree	<input type="checkbox"/> Strongly agree
20	Do you think that the employer should train “workplace safety practices” at the real work place ?	
<input type="checkbox"/>	Strongly disagree	
<input type="checkbox"/>	Disagree	<input type="checkbox"/> Neutral
<input type="checkbox"/>	Agree	<input type="checkbox"/> Strongly agree
(6) Quality Assurance of NOCS development		
21	Do you think that NOCS should in line with ASEAN Competency standards?	
<input type="checkbox"/>	Strongly disagree	
<input type="checkbox"/>	Disagree	<input type="checkbox"/> Neutral
<input type="checkbox"/>	Agree	<input type="checkbox"/> Strongly agree
22	Do you think that the level of NOCS needed more? (eg: Level 1 to 2,3,4)	
<input type="checkbox"/>	Strongly disagree	
<input type="checkbox"/>	Disagree	<input type="checkbox"/> Neutral
<input type="checkbox"/>	Agree	<input type="checkbox"/> Strongly agree

Why?	
<hr/> <hr/> <hr/> <hr/> <hr/>	
23	Do you have any challenges to get the skills workers or to rent the skill worker?
<hr/> <hr/> <hr/>	
24	How do you find and where do you find the skills worker?
<hr/> <hr/> <hr/>	
25	For getting the skills workers or developing the skills workers
(a) Please provide your suggestion:	(b)Currently, any challenges:
26	. How do you think that what kind of occupation do you select the priority?
<hr/> <hr/> <hr/> <hr/>	
27	Are you interest the skills assessment and certification program as the employer/ employee? How should we do?
<hr/> <hr/> <hr/>	