

Exploring the possibilities and challenges in developing the Japanese qualifications framework

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Abstract

Purpose – This study aims to examine the rationales for and obstacles to developing a national qualifications framework (NQF) in Japan. From a research perspective, it attempts to propose a model of a qualifications framework in the national context to provoke further political discussion in developing the Japanese Qualifications Framework (JQF).

Design/methodology/approach – To propose a possible model of a qualifications framework in the Japanese context, this study employs a qualitative document analysis approach to known NQFs. Next, based on documents and the literature, including government data and the United Nations Educational, Scientific and Cultural Organization's Tokyo Convention (2011a, b), this study analyzes the motives and challenges in developing the JQF.

Findings – Japanese motives to develop the JQF can be summarized in four conditions: (a) International expectations along with the Tokyo Convention and establishment of the National Information Center, (b) avoiding qualification holders' disadvantages in mobility, (c) quality assurance of qualifications with a competence-based approach and (d) lifelong learning by promoting recognition of diverse learning. The challenges in developing the JQF are (a) fitness with the traditional employment system and (b) multiple stakeholders' involvement. The current priority in developing an NQF in Japan is to make educational qualification information "visible" based on legal grounds, particularly entrance requirements, to facilitate mobility.

Originality/value – This study explores the possibility of the JQF by summarizing the background and roles of NQFs worldwide and clarifying the motives and challenges for developing the JQF. This study provides suggestions for the possible qualifications framework model in the Japanese context from academic and practical perspectives in Japan, where official discussions on establishing an NQF have not progressed. Ensuring the international compatibility of qualifications so that qualification holders can smoothly take the next step in their studies and employment is important.

Keywords Qualifications framework, Quality assurance (QA), Higher education, Japan

Paper type Research paper

Introduction

In this era of globalization, knowledge-based societies and technological innovation, multiple issues are being addressed, such as the cross-border mobility of learners and workers, confusion associated with the increase in the number of qualifications, and the absence of a common social understanding of each qualification (Lumina Foundation, 2015b; Allais, 2014; Lauder, 2013). The mismatch in competences required by education and the labor market has also been identified, and international policy discussions have focused on the transparency of qualifications, the quality assurance (QA) of education, and training institutions and



programs, and the interplay between education and the labor market (CEDEFOP, 2014; Bohlinger, 2008; OECD, 2007). Promoting proximity and revitalizing human mobility are necessary. To address these issues, governments in Europe, the Asia-Pacific and elsewhere are using “qualification” as a policy instrument and endeavoring to develop and implement national qualifications frameworks (NQFs), which could become a measure to clarify degrees and qualifications and reform education and training systems. NQFs have been developed by countries worldwide as a reference tool for organizing information on various qualifications in a centralized manner, with expected outcomes and standards for each qualification. More than 150 countries have implemented or are considering implementing the NQF, and more than 130 of these countries are at an advanced stage of development, implementation and evaluation (Keevy, 2020).

Additionally, the Tokyo Convention (2011) under the United Nations Educational, Scientific and Cultural Organization (UNESCO) substantially affected Japan as a member state. The official title, the Asia-Pacific Regional Convention on the Recognition of Qualifications in Higher Education (known as, and hereafter, the Tokyo Convention), was selected to promote the cross-border mobility of students and researchers. The Tokyo Convention proposes that each member state develop and maintain a National Information Center (NIC) to provide higher education information (Article VIII.3). The NIC is expected to play a role in fulfilling the increasing demand to establish a system to disseminate information on the education system and a qualification system, domestically and internationally, which would become a reference and source of comparison for qualifications by country. Therefore, NQFs will be an effective instrument to understand the qualifications of mutual countries and facilitate mobility.

Purpose of the study

Japan does not have an NQF, but several studies have presented policy trends and frameworks of NQFs in various countries. While the discussions of some studies have mainly adopted the perspective of employment policies, such as vocational ability assessment systems (Iwata, 2014; Japan Institute for Labor Policy and Training, 2012), others have introduced overseas frameworks focusing on QA in higher-education programs such as in France (Noda, 2017) and the ASEAN region (Hayata, 2018). An expectation is that the Japanese Qualifications Framework (JQF) will be built as one of the instruments to facilitate cross-border mobility, lifelong learning and the QA of educational programs; however, official debate and consideration at the government level have not resumed, and few researchers have attempted to substantially propose an NQF model in the Japanese context. In discussing the possibility of establishing the JQF, this study aims to clarify the conditions to motivate Japan to define the JQF and examine the challenges that Japan may experience. Finally, this paper proposes a model for a Japanese reference framework for qualifications as a research perspective to provoke political discussion on constructing the JQF.

Research approach

This paper applies a qualitative document analysis approach to present the purpose, background, role and challenges of NQFs worldwide, including the development patterns of qualifications frameworks as well as dilemmas and solutions in mapping academic and vocational qualifications in some countries.

Focusing on the Japanese government’s official documents, this study initially examines Japan’s attempt to develop some relevant vocational qualifications frameworks in several fields under the Ministry of Health, Labor and Welfare, and the Cabinet Office. Further, it includes a qualifications framework developed by the Quality Assurance Agency for

Professional Higher Education. Next, based on academic works of literature as well as documents provided by the European Centre for the Development of Vocational Training (CEDEFOP) which internationally discuss NQFs, this study analyzes the development patterns, roles, implications and some challenges of qualifications frameworks.

This paper also explores the reasons why Japan needs an NQF and investigates potential challenges in the development of the JQF by analyzing government data and sources regarding recent trends in the Japanese employment system and labor mobility, including adult learners and foreign workers. These documents include the 2011 Tokyo Convention of the UNESCO on the enhancement of academic mobility; government proposals and data from the Japanese Cabinet Office regarding the lifelong-learning regime; resources from the Ministry of Education, Culture, Sports, Science and Technology (MEXT) about learning outcomes enhancement policy for higher education; and survey results on international perceptions of professional training colleges from the [National Association for Vocational Schools in Japan \(2022\)](#). Finally, considering the aforementioned rationales and challenges and adopting a research perspective, this study proposes a qualifications framework model in the Japanese context concerning UNESCO's International Standard Classification of Education and Diplomas (ISCED) 2011, the European Qualifications Framework and other international qualifications frameworks.

Multiple roles of an NQF

NQFs, expanding on a global scale, are a reference tool that centrally organizes and visualizes qualification information by country. An NQF's primary purpose is to organize the increasing number of qualifications (e.g. degrees, titles, certificates, diplomas, licenses and professional certifications) by country and reduce ambiguity in assessing their relative value ([Castejon et al., 2011](#)). By clarifying the competences expected to be acquired by each qualification holder, NQFs would improve the credibility and objectivity of qualifications. Studies have cited NQFs as promoting lifelong learning, connecting education and training to the labor market, or improving the status of the vocational education and training (VET) sector in some countries and regions ([UNESCO, ETF and CEDEFOP, 2015](#); [Allais, 2014](#)). An NQF is also expected to function as part of a QA system for education and training, including vocational competence assessment and higher education ([CEDEFOP, 2015](#)).

NQFs are diverse, reflecting social structures and political interests, including the education and training systems and employment systems of the countries concerned. The content and type of learning outcome indicators (descriptors), or the number of levels in the framework, also vary. For example, the European Qualifications Framework and the ASEAN Qualifications Reference Framework comprise eight levels; other countries' frameworks have various levels: Scotland, twelve levels; New Zealand and South Africa, ten; Indonesia, nine; Hong Kong, seven; and France, five (but just increased to eight levels). The steps are defined at the discretion of each country. The types of qualifications incorporated into NQFs vary by country, including vocational-oriented frameworks that do not include general education, comprehensive frameworks that encompass all qualifications, frameworks for higher education qualifications and frameworks specific to the school education system ([Noda, 2017](#)). The actors involved in the management and operation of NQFs are also diverse, including governments, QA agencies, nonprofit organizations and industries.

Academic qualifications and vocational qualifications

In Europe, "higher education frameworks" and "comprehensive frameworks" including vocational qualifications coexist in many countries. In the European context, developing an integrated framework after the initial establishment of a higher education framework was

due to the urgent need to organize information on qualifications to manage the inflation of qualifications (Allais, 2014). To determine the value of diplomas and certificates granted by different education and training systems in multiple countries, for example, the 20 European Union member countries are required to adopt national NQFs to the European Qualifications Framework, a transnational meta-framework established in 2008 as a translation device to increase the equivalence or comparability of qualifications by country (CEDEFOP, ETF, UNESCO and UIL, 2017).

A question of interest in the international debate on NQFs is how to map related sectors with each other, such as general education, higher education and VET, and manage the resistance of universities to equating qualifications from the non-higher education sector including vocational qualifications at the higher education level, a phenomenon reported in many European countries (Broek *et al.*, 2012).

Regarding how to reconcile the separation of academic and vocational qualifications, France attempted to clarify the interrelationships between academic and vocational sector qualifications when establishing its qualifications framework in 1969, and the German National Qualifications Framework (DQR) has also attempted to clarify the position of the Abitur, which is both a university entrance qualification and a secondary school-leaving qualification, after a dispute between the two sides (Broek *et al.*, 2012; ICF GHK, 2013).

The Netherlands and Austria have supported raising the level of secondary school-leaving certificates as well, which are also university entrance qualifications. In other words, the issue is related to the interministerial coordination and stakeholder agreement of the European Qualifications Framework, but there are also issues related to improving the status of vocational education by establishing an NQF, such as conflicts between academic and industry groups. Austria, for example, legally created a Y-model to capture differences between VET and academic higher education qualifications in its NQF levels 6–8 (CEDEFOP, 2016).

Issues related to improving the status of vocational education by establishing NQFs are pointed out in the Credential Frameworks in the United States released by the Lumina Foundation for Education in 2015; qualifications frameworks are being developed in South Korea and China, and other countries are attempting to advance this discussion (Lumina Foundation, 2015a; CEDEFOP, ETF, UNESCO and UIL, 2019). In Japan, the recent establishment of professional and vocational universities/junior colleges resulted in an unclear difference between academic and vocational education degrees, and the connection between diplomas and advanced diplomas of professional training colleges to universities is difficult to understand inside and outside Japan. Thus, organizing degrees, titles and outcomes, including vocational education, which has not been sufficiently discussed, is necessary.

Possibility of developing Japanese qualifications frameworks

Vocational qualifications frameworks in Japan

Although Japan has not developed a comprehensive NQF, the government has created vocational qualifications frameworks by referring to the United Kingdom's National Vocational Qualifications (NVQ), established in 1987. The United Kingdom's NVQ is a national system for evaluating vocational qualifications that objectively assess training and job performance and serves as a link to re-employment and career advancement. The Japanese vocational qualifications frameworks include the Ministry of Health, Labor and Welfare's (MHLW) "vocational ability evaluation standards" and the Cabinet Office's "career grading system." These standards are part of the government's skills development and industry training strategy.

The MHLW's "vocational ability evaluation standards" were designed in 2002 as part of its human resource development efforts. It indicates the knowledge, techniques and skills required for a job, as well as job performance skills at four levels (person in charge to organization manager) with examples of actions taken. It covers 56 industries, including nine clerical occupations, such as accounting and human resources, electrical machinery and equipment manufacturing, the hotel industry and the home care industry (Ministry of Health and Labor and Welfare, 2020). Furthermore, in 2009, the Cabinet Office introduced a "Career Grading System" in the "New Growth Strategy: Toward a Brilliant Japan," which focused on employment and human resources. Referring to the United Kingdom's NVQ, the aim of Japan's Career Grading System was to function as a common resource regarding occupational qualifications across companies in particular fields in Japan. The purpose of this system is to provoke discussion on reforming the Japanese traditional employment system, which mainly relies on in-house education and training and promotes little labor mobility (Hamaguchi, 2017). The Career Grading System is now implemented in three vocational areas (nursing care professionals, 6th industrialization producers of food, and energy and environment managers); has seven levels; and is based on the principle that careers and abilities are evaluated, rather than titles such as department head or section manager.

In addition, the Quality Assurance Agency for Professional Higher Education, a third-party evaluation organization for professional and vocational education, has established a qualifications framework for vocational education in four fields on a trial basis for professional training programs. This initiative is based on a research study commissioned by the MEXT, with the commitment of multiple stakeholders such as academics, practitioners and international experts. The framework provides learning outcome indicators for the four fields of beauty, games and computer graphics, animals, and civil engineering and architecture, according to the level of each qualification (QAPHE, 2020).

Why is an NQF necessary in Japan?

Although some vocational qualifications frameworks in some specific fields have been established, the official discussion on a comprehensive qualifications framework has not been resumed. Thus, what problems would result without an NQF? This section presents four rationales to facilitate the development of an NQF in the Japanese context.

Rationale (a): International expectations: Tokyo Convention and establishment of NIC. First, as aforementioned, the implementation of UNESCO's Tokyo Convention in 2018 was a pivotal point for Japan as a member state. Based on the Tokyo Convention, which aims to promote international mobility, Japan's official NIC was established by the National Institution for Academic Degrees and Quality Enhancement of Higher Education (NIAD-QE) in September 2019. The NIC's mission is to provide information on higher education systems and degree and qualification systems in Japan and abroad to assist higher education institutions and others to uniformly recognize qualifications. Japanese higher education institutions under the Tokyo Convention include universities, professional and vocational universities, graduate schools, professional graduate schools, junior colleges, professional and vocational junior colleges, colleges of technology, professional training colleges (except for prefectural colleges of agriculture), as well as National College of Nursing, Japan, Polytechnic University, and National Fisheries University among educational institutions operated by government ministries and agencies.

An explanation of the mutual degrees, titles and other qualifications awarded by these higher education institutions is necessary, as are the conditions for admission eligibility, domestically and internationally, and clarifications of the comparability of these qualifications with foreign qualifications (Noda, 2019). Since the establishment of National

Information Center for Academic Recognition Japan (NIC-Japan), the most frequent inquiries from domestic and foreign parties are those to confirm which foreign degree or qualification is equivalent to which Japanese qualification. Furthermore, under the Tokyo Convention, the NICs network has expanded among and beyond the state parties in the Asia and Pacific regions. Whether Japan has an NQF or equivalent reference framework or its policy should be considered in establishing other NQFs, to promote comparability and the mutual evaluation and recognition of qualifications, is under question. Although establishing an NQF is not required by the Tokyo Convention, from a practical perspective, sharing a framework that allows comparisons of countries' degree and qualification systems and entry requirements is inevitable.

Rationale (b): Avoiding qualification holders' disadvantages for the mobility. Second, as in other countries, in Japan, the qualification system is often difficult to understand for the layperson. A survey showed that some overseas NICs did not understand some Japanese educational qualifications and their eligibility requirements for admission, other than commonly accepted qualifications, especially bachelor's, master's and doctoral degrees (NIAD-UE, 2016). Due to the recent educational reforms in Japan, the structure and title of qualifications in postsecondary education have been complicated and diversified. In addition to existing vocational and professional education such as colleges of technology, professional training colleges and professional graduate schools, new professional and vocational universities/junior colleges were established in 2019. Thus, the content and interrelationships of each of these qualifications remain unclear in Japan and – inevitably – other countries.

Based on the legal basis for admission eligibility requirements, for example, professional training college “diploma” holders who fulfill the prescribed requirements can transfer to undergraduate programs, and “advanced diploma” holders can proceed to master's degree programs. However, this phenomenon is sometimes inadequately understood outside Japan. According to another survey (2006–2013) on the actual situation of accepting foreign students, the negative opinion of the social status of “diplomas” issued by professional training colleges is as follows: “international students' reputation for professional training colleges' diploma is low,” “we would like to request measures to increase the social recognition of vocational skill acquisition in Japan due to low reputation of our diplomas” or “the status gap between bachelor degree and diploma needs to be improved in job hunting activities in their home country (overseas)” (National Association for Vocational Schools in Japan, 2022). Other examples are the difficulty in screening and certifying applicants from overseas regarding whether they have academic ability equivalent to that of a Japanese high school graduate, and there is no reference for the qualification of high school completion overseas. Understanding the comparability of qualifications obtained in Japan and abroad is difficult, particularly for those based on vocational-oriented secondary or postsecondary education.

At the very least, by enhancing the resources that provide information on Japanese degrees and qualifications, the transparency and social understanding of Japanese educational qualifications domestically and internationally would be enhanced. These enhancements would ameliorate the disadvantages for individuals aiming to pursue higher education or employment, promoting smooth mobility. The difficulties of how to explain and determine an individual's qualification, regardless of nationality, are unavoidable when sending students abroad and accepting international students or foreign workers.

Under the Tokyo Convention, Japanese higher education institutions that serve as competent recognition authorities responsible for the recognition of foreign qualifications are required to be accountable to applicants for admission, including the reasons for not recognizing qualifications, and to prepare a rationale for such a decision. NQFs, which can cross-check degrees and qualifications to determine the connection between

foreign vocational and academic education qualifications, can be a support tool for this purpose.

Rationale (c): QA of qualifications: competence-based approach. Third, internationally, there is a growing demand to demonstrate to society, including students, parents and employers, the competences that qualification holders should acquire on the basis of outcomes of degree programs or the social value of a qualification. International discussions on QA are calling for a shift from a teacher-centered to a learner-centered approach. The Tokyo Convention also reflects this idea, stating that the main focus of assessments of an application for the recognition of qualifications should be “the knowledge and skills achieved (Article III.1)”; this competence-based approach is being pursued by education and the labor market in Japan and other countries (METI, 2018; MEXT, 2008, 2018; UNESCO, 2011a, b). In other words, what is now required is to explain, assess and recognize educational backgrounds and qualifications based on competence, for example, “what the qualification holder has acquired and can do,” in addition to input elements such as length of study, the number of credits earned and subject lists, which are confirmed in the qualification information. From the perspective of QA, discussions will be necessary on how the competence required of qualification holders can be shown objectively and transparently and what reference tools should be prepared to ensure the quality of each qualification. As part of such efforts, several countries have employed an NQF for a QA of university evaluation or accreditation. For example, the French NQF, Répertoire National des Certifications Professionnelles, is used for evaluating and restructuring educational programs in higher education (Noda, 2017).

From the perspective of QA in Japanese higher education, however, there is no shared framework for the competences and standards required of bachelor’s, master’s, doctoral and other qualifications holders, and on what basis the value of the degree should be explained remains unclear. The several higher education policies in Japan are more targeted toward the learning outcomes of bachelor’s programs than those of graduate programs. MEXT (2008) proposed that expected attributes be inculcated in undergraduate programs. These undergraduate competences, called “gakushi-ryoku,” are supposed to be learned as bachelor’s degree programs. Regarding the QA of graduate programs, MEXT (2015) outlined the career paths and activities of graduate program graduates by field, but these indicators do not necessarily explain learning outcomes. Subsequently, MEXT (2016) required Japanese universities to define and publish expected graduation competences in their education programs, called a “diploma policy.” All Japanese universities have now clarified their diploma policy for their undergraduate and graduate programs. However, due to a lack of a common reference framework and because learning outcomes, content and standards defined by universities and programs are diverse, the differences among bachelor’s, master’s, doctoral and other programs with an awareness of the vertical level of qualifications remain unclear.

Rationale (d): Lifelong learning: how to recognize diverse learning. In September 2017, from the perspective of social and economic policy, in today’s aging society with a declining birthrate, the Prime Minister’s Office promoted the “100-year life period” concept by using the slogan “society of continuous learning.” The meaning of this slogan is that individuals of any age can learn. Adopting this perspective requires a major shift in policy, including the expansion of education and promotion of human mobility and the QA of educational programs, degrees and qualifications.

In Japan, the number of adults enrolled in regular courses and short-term programs at higher education institutions, for example, universities and professional training colleges, has increased from approximately 460,000 in FY 2015 to approximately 510,000 in FY 2017 (Cabinet Office, 2021b). However, an environment for adult learners to be mobile and flexible between education and the labor market has not been sufficiently developed. Today,

approximately 10% of companies provide an education and training leave system for their employees. An international comparative study showed that the proportion of adults enrolled in formal courses at tertiary education institutions is low in Japan. The percentage of learners aged 25 years and over studying in bachelor's programs is 2.5% (OECD average: 16%), and that of those aged 30 years and over studying in master's programs is 13.2% (OECD average: 26%), which is lower than in any other OECD member country (Cabinet Office, 2021c).

From the perspective of promoting lifelong learning, the Tokyo Convention encourages the recognition of various types of learning, such as prior learning, partial studies and nontraditional modes of qualification acquisition, and encourages the recognition of knowledge and acquired skills (UNESCO, 2011a, b). The benefits of certification include financial and time savings, such as the ability to transfer credits to the next step efficiently by transferring them to course credits, and so forth, rather than having to take a similar course twice. Making various learning experiences, on- and off-campus, subject to evaluation, is expected to reduce barriers to transferring among educational sectors or between education and occupations and promote recurrent education.

Japan is attempting to develop and recognize informal and nonformal education. Some ministries have implemented measures to enhance recurrent education. For example, the MHLW is expanding education and training benefits for companies, introducing long-term education and training programs, and providing subsidies for e-learning education and training. The Ministry of Economy, Trade and Industry supports the development of human resources for overseas expansion in small and medium-sized enterprises and the development of capacity-building programs. MEXT works with universities and professional training colleges to provide financial support for the development of educational programs, including those of informal education (Cabinet Office, 2020). The attention to informal and nonformal education programs is expected to increase to promote recurrent education under governmental support. Including informal and nonformal learning, an NQF facilitates connecting academic and vocational qualifications and would help learners move among various sectors.

Challenges in developing the JQF

This paper has summarized the motives for establishing an NQF in the Japanese context. However, an NQF has diverse roles, and the points of discussion differ depending on the aim of its establishment. The informal opinions on how to define the purpose of developing the JQF are mixed. This section discusses possible issues regarding the introduction of the JQF and the factors that have prevented concrete progress in the discussions.

Challenge (a): Fitness with traditional employment system. From the aspect of vocational ability assessment, there has been skepticism regarding whether the NQF, which covers multiple vocational qualifications, would be compatible with the traditional employment system in Japan. Except for regulated jobs such as those in healthcare, law, and accounting, or mid-career hiring, Japanese society, especially in the case of the lump-sum hiring of new graduates, is dominated by an internal labor market employment system in which hiring is often based on applicants' university rankings in terms of admission difficulty, with the expectation that their potential abilities and work skills should be developed after hiring (Hamaguchi, 2021). The general hiring system for full-time workers is not based on the job opening and does not offer clear job descriptions or fixed positions whose specific tasks are fixed. The employment structure in Japan, however, has recently been transformed. For example, while the Japanese traditional lifetime employment system remains, workers do not necessarily stay in the same workplace until they retire, changing their workplaces a few times (Cabinet Office, 2018). Therefore, companies' education and training for new college graduates have recently been viewed as a burden in terms of costs and human resources.

Corporate spending on education and training per worker peaked in 2015 and has trended downward since then, with companies reducing their investment in education and training for their employees (Cabinet Office, 2021a). Another issue is that the number of part-time workers or employees with fixed-term employment has increased (Hamaguchi, 2017). Honda (2016) demonstrated that one of the reasons for the increase in unemployment is a lack of occupational relevance in the Japanese school system. She suggested that secondary education emphasizing a more vocational-oriented curriculum than that currently used would help the youth acquire vocational skills to survive the competitive labor market.

Although job-based hiring of new graduates remains limited, the number of companies adopting a more job-based hiring strategy will increase in some occupational and professional fields, or within a company (METI, 2020). Furthermore, the number of workers with foreign occupational qualifications migrating to Japan will probably increase in the coming decades. The number of foreign workers in Japan increased from 486,000 in 2008 to 1,659,000 in 2019 (0.9% of total employment). In 2020, the number was 1,724,000, accounting for 2.9% of total employment, although the increase was slowed due to the travel restrictions imposed by the efforts to control the COVID-19 pandemic (Cabinet Office, 2021b).

Much of the traditional employment system will remain, but labor mobility in some sectors beyond companies and even countries will increase. Therefore, considering frameworks and tools that can determine what level of foreign qualifications correspond to Japanese qualifications is inevitable. Thus, incorporating the necessary occupations and fields into a qualifications framework is necessary.

Challenge (b): Multiple stakeholder involvement. The political aspect of developing an NQF will be greatly affected by the collaboration and coordination achieved among ministries with jurisdiction over different sectors, such as general education, higher education, VET and lifelong learning. In many NQFs, several relevant ministries are involved in developing the framework, including the education and labor ministries (CEDEFOP, 2015). In addition, many countries are attempting to enlist the cooperation of diverse stakeholders, including industry, employers and trade unions, in the formulation of NQF competences, to strengthen the relationship between education and training and the labor market. The challenge is that stakeholder involvement, although increasing in general, has not reached a sufficient level (Broek *et al.*, 2012). In some cases, the labor market side perceives the framework as being institution-driven and shows no interest, and in other cases, the educational institutions tend to view the framework as a demand from the labor market; in other cases, both sides disagree. In other cases, competences are established without a consensus on the competences demanded by employers, for example, by various levels of HR personnel who are not experts in the field or by subcontractors such as consultants (Allais, 2014).

In addition, the labor market's involvement in the development of NQFs varies widely by country. For example, in Austria, Germany and Switzerland, the labor market involvement in the mapping of qualifications in the framework is stronger than that in Bulgaria, Greece and Poland, and social partners are relatively less involved (CEDEFOP, ETF, UNESCO and UIL, 2017). The Scottish Credit and Qualifications Framework, established through collaboration among the stakeholders (e.g. government, colleges, higher education and vocational qualification awarding bodies), is often referred to as a good example, but how each party is involved depends on the size and social structure of each country.

In Japan, related to its aforementioned employment system, the formation of occupational categories and labor markets is weaker than that in Western countries, and it is difficult to build a qualifications framework that covers multiple occupational categories for comparison, as is the case in other countries. Nevertheless, the current results demonstrated that at least the educational qualification within the School Education Law of MEXT should be disseminated to enhance the transparency and social understanding of Japanese educational qualifications both domestically and internationally. Specifically,

accurate information will be crucial to ensuring qualification holders seeking further study or employment are not disadvantaged. In addition, it is important to consider step by step, starting from job-based areas of necessity regarding occupational fields and qualifications with frequent personnel mobility related to the MHLW; the Ministry of Land, Infrastructure, Transport and Tourism; and other government entities. Close participation and cooperation among key stakeholders, including the above-mentioned relevant ministries, education and training institutions, and labor and management, will be important.

Proposal for “Japanese educational qualifications framework” as a research view

Based on the aforementioned discussion, the priority should be to organize the types of educational institutions and conferred qualifications in the formal education system under MEXT. As the first step, this study proposes, from a research perspective, a “Japanese Educational Qualifications Framework (JEQF)” focusing on qualifications such as degrees and titles after graduation from educational courses based on the Japanese School Education Act and the University Establishment Standards under the MEXT (Table 1). This JEQF aims to increase the transparency and social understanding of Japanese educational qualifications inside and outside Japan and ensure that the qualification holders who want to pursue higher education or find employment will not be disadvantaged due to a lack of information. It was also formulated through mapping based on legal grounds, including course completion requirements (e.g. years, hours of study and credit hours) and admission eligibility. Borrowing the DQR’s principle, qualifications mapped at the same level are “equivalent” or “comparable” rather than “homogeneous” (CEDEFOP, ETF, UNESCO and UIL, 2019, p. 223).

This proposed JEQF was developed concerning the European Qualifications Framework, UNESCO’s ISCED 2011 and the qualifications frameworks of other countries. As a similar framework on educational qualifications, this JEQF referred to ISCED 2011 in terms of educational level, standard and category and updated the qualification information to confirm the connectivity of entrance requirements; necessary was to add educational qualifications associated with newly established school systems and certificates of

Level	Qualifications
8	• Doctoral degree [Hakushi] / 博士
7	• Master's degree [Shushi] / 修士 • Master of xxx (Professional) [Shushi (Senmonshoku)] / 修士 (専門職) • J.D. (Juris Doctor) [Homu hakushi (Senmonshoku)] / 法務博士 (専門職) • Master of Education (Professional) [Kyoshoku shushi] / 教職修士 (専門職) • Bachelor's degree (Medical, Dentistry, Pharmaceutical Sciences (Clinical), and Veterinary Medical Science) [Gakushi (Igak, Shigaku, Yakugaku (Rinsho Mokuteki), Jugaku)] / 学士<医学/歯学/薬学 (臨床目的) 獣医学>
6	• Bachelor's degree [Gakushi] / 学士 (学士<医学/歯学/薬学 (臨床目的) 獣医学>は除く) • Bachelor's degree (Professional) [Gakushi (Senmonshoku)] / 学士 (専門職) • Advanced diploma [Kodosenmonshi] / 高度専門士
5	• Associate degree [Tankidaigakushi] / 短期大学士 • Associate degree (Professional) [Tankidaigakushi (Senmonshoku)] / 短期大学士 (専門職) • Associate [Jungakushi] / 準学士 • Diploma [Semmonshi] / 専門士
4	• Certificate of Completion (Advanced course, upper secondary school) / 修了証書(高等学校専攻科) • Certificate of Completion (Advanced course, secondary education school, second term) / 修了証書(中等教育学校後期課程専攻科) • Certificate of Completion (Advanced course, upper secondary department, school for special needs education) / 修了証書(特別支援学校高等部専攻科)
3	• Certificate of Graduation (Upper secondary school) / 卒業証書(高等学校) • Certificate of Graduation (Secondary education school) / 卒業証書(中等教育学校) • Certificate of Graduation (Upper secondary department, school for special needs education) / 卒業証書(特別支援学校高等部) • Certificate of Completion (Regular course, completion of 3rd grade, college of technology) / 修了証書(高等専門学校本科3年次修了) • Certificate of Graduation (Upper secondary course, specialized training college) / 卒業証書(専修学校高等課程) • Certificate (Upper Secondary School Equivalency Examination) / 高等学校卒業程度認定試験合格証書
2	• Certificate of Graduation (Lower secondary school) / 卒業証書(中学校) • Certificate of Graduation (Compulsory education school) / 修了証書(義務教育学校) • Certificate of Graduation (Lower secondary department, school for special needs education) / 卒業証書(特別支援学校中学校部) • Certificate (Lower Secondary School Equivalency Examination) / 中学校卒業程度認定試験合格証書
1	• Certificate of Graduation (Elementary school) / 卒業証書(小学校) • Certificate of Graduation (Elementary department, school for special needs education) / 卒業証書(特別支援学校小学校部)

Table 1.
Proposed Japanese Educational Qualifications Framework

completion of upper secondary education and high school equivalency examinations, which are not included in ISCED 2011, and to revise and update the position of some educational qualifications in ISCED. Although this research-based JEQF has yet to be governmentally authorized, several experts from the MEXT and the NIC-Japan at the NIAD-QE subjected its educational qualifications, mapped at each level, to thorough scrutiny in terms of course completion requirements, such as years of study, credit hours and admission eligibility based on the School Education Act and the University Establishment Standards. The general framework of the level structure will be eight levels based on the ISCED 2011 classification of educational stages (UNESCO, 2011b), which is also consistent with the stages of international standards of NQFs, such as the European Qualifications Framework and the ASEAN Qualifications Reference Framework.

The current priority in developing a QF in Japan is to make educational qualifications or degree information “visible” based on legal grounds, particularly on entrance requirements, to facilitate mobility. Defining (1) which qualifications are comparable inside and outside a country and (2) what outcomes are expected for qualifications to have will be necessary. Notably, the purpose of the framework in the Japanese context is not to indicate that vocational and academic education qualifications are of the same type and quality. Vocational education and academic education have different goals, missions, curricula and expected outcomes. Instead, the purpose of developing a QF in Japan is to avoid the disadvantages that applicants have in higher education and employment who legally fulfill requirements for admission or transfer to higher education because of an insufficient understanding of the requirements. Some vocational education qualifications under the MEXT School Education Act are at the same level as academic qualifications as far as their meeting higher-education entrance or transfer requirements is concerned. As mentioned before, the Japanese government has reformed the education system and emphasized the articulation, particularly between postsecondary vocational education and universities, such as that observed in professional training college’s “diplomas” being allowed to transfer to undergraduate programs, and that individuals with “advanced diplomas” are eligible to apply to master’s program when they fulfill the requirements. Students who have completed their third year at the College of Technology (KOSEN), a five-year program starting after lower secondary education, are eligible for higher education admission. The MEXT categorized these vocational-oriented qualifications as part of the higher-education sector in the Japanese context under the Tokyo Convention. Additionally, a certificate for Upper Secondary School Equivalency Examination ensures the eligibility to apply for university admission.

Conclusion and discussion

NQFs are expected to play various roles, including the development of nationally shared outcomes, promoting inter-sectoral mobility of learners such as enrollment and transfer, connecting education and training to the labor market, promoting continuing and lifelong education, and improving the status of the VET sector (Allais, 2014; CEDEFOP, ETF, UNESCO and UIL, 2017). They also function as part of the QA system for education and training because some countries use an NQF for the accreditation of higher education institutions and programs. One limitation of NQFs, a topic in international discussions, is how to position different sectors, such as general education, higher education and VET, with respect to each other. The resistance of universities to the juxtaposition of qualifications from the non-higher education sector, including vocational qualifications, at the higher education level, has been reported in many European countries (Broek *et al.*, 2012); thus, a challenge remains: the construction of the NQF could significantly affect society’s interpretation of the status or value of the higher education and VET sectors.

Establishing a comprehensive framework covering many vocational qualifications beyond the formal education system requires careful discussion from the points of necessity and urgency in Japan. Today, however, visualizing at least the educational qualification system, including the connection among secondary, postsecondary education and higher education, to facilitate mobility is necessary. Competent recognition authorities conduct admission decisions (i.e. higher education institutions, MEXT and other ministries in Japan), and what primarily needs to be avoided is applicants for admission (transfer) or employment being disadvantaged due to a misunderstanding of Japanese qualifications or entrance eligibility requirements. This proposed educational qualifications framework could hopefully be part of an initial stage that would lead to political discussions involving multiple ministries, the labor market and other related stakeholders to establish a unitary framework.

The proposed JEQF includes VET qualifications under the School Education Act and the University Establishment Standards of MEXT. And the framework would possibly incorporate a widening range of qualifications beyond MEXT's School Education Act, such as the VET qualifications of polytech colleges under the MHLW Human Resources Development Law. Eventually, the framework would need to overcome further challenges, such as involving the recognition of nonformal and informal learning or micro-credentials, to respond to international trends.

What is important is to promote careful, step-by-step consideration of where qualifications beyond the formal educational system should be located. Starting discussions would be possible in some vocational and professional fields where human mobility is active or in some fields where attempts are made to establish a QA system for educational programs. Further, in explaining the QA of higher education institutions to society, not only academics but also stakeholders' involvement is necessary for developing reference standards and frameworks that indicate the competences expected of each qualification.

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