Initial assessment and potential template for certification of courses

Produced as an output for Task Team 2: Online gateway and e-learning community of practice

I. OVERVIEW/ INTRODUCTION:

1.   Statistical training institutes offer a range of courses and training programmes in various modalities (online, blended, face-to-face) that are focused on strengthening national statistical capacities in data production, dissemination and use. Like other training and higher education institutions, they recognize and reward learner progress or the achievement of learning outcomes through the award of credentials. Those credentials have intrinsic value both for the learner and the national statistics office. For the learner, the credentials authenticate that the learning outcomes, skills and competences were achieved (irrespective of the level of the course - beginner, intermediate or advanced); inspire confidence; and represent an investment in training, continuous learning and upskilling. For the national statistics office, the credentials provide evidence of professional competence and institutional capacity.

2.   According to UNESCO (2021), credentials "verify, validate, confirm or corroborate a person's learning achievements, knowledge and preparedness for performing tasks". Traditionally, credentials primarily took the form of certificates, transcripts or qualifications from the organization providing the training. In the past decade, digital credentialing has become increasingly prolific with the rise in the use of digital technologies and widespread availability of e-learning/ online courses in both education and training (UNESCO 2018). The types of credentials offered have also evolved and expanded from the traditional electronic certificates to include digital badges and other micro-credentials. While the credentials themselves carry immense value to the learner and organization, the process of certifying the learning outcomes is perhaps of even greater importance. Irrespective of the nature or field of training, the certification processes should be transparent and underpinned by sound quality assurance procedures based on common and consistent standards that are well recognized across awarding institutions.

3.   This paper presents an initial assessment of types of credentials offered and the certification practices of a small selection of statistical training institutes that are members of Global Network for Institutions of Statistical Training (GIST).   It captures their practices in relation to the certification of their courses with a view to identifying good practices that can help define potential standards and set quality assurance procedures for use by other statistical training institutes. This paper highlights the approaches used by three training institutes namely, the Food and Agriculture Organization (FAO), the International Training Centre International Labour Organization (ILOITC) and the Statistical Institute for Asia and the Pacific (SIAP).

4.   This document was prepared as output for one of the priority areas identified in the workplan of GIST Task Team 2 - *Online gateway and e-learning community of practice*. More broadly, certification of statistical training courses is also included as one of the strategic

action areas of GIST (i.e. foster a global discussion on certification). The information contained herein was obtained through a desk review and supplemented by inputs from members of the task team.

II.   WHAT IS CERTIFICATION AND WHY IS IT IMPORTANT IN STATISTICAL TRAINING?

5.   UNESCO (1984) defines certification as "proof of a qualification acquired by a pupil or student after passing an examination or completion of a course of training." In the context of the International Standard Classification of Education (ISCED) 2011, the term qualification refers to "the official confirmation, usually in the form of a document certifying the successful completion of an educational programme or of a stage of a programme" (UNESCO UIS 2012). Furthermore, ISCED 2011 treats the terms "qualification" and "credential" interchangeably and identify the types of qualifications as certificates, degrees and diplomas. In this paper, the term certification refers strictly to the types of credentials offered for e-learning training programmes and courses in official statistics that are short-term (under one year).

6.   Related to concept of certification is the practice of certifying learning outcomes. According to Cedefop (2014), certification of learning outcomes refers to the "process of issuing a certificate, diploma or title formally attesting that a set of learning outcomes (knowledge, know-how, skills and/ or competences) acquired by an individual have been assessed and validated by a competent body against a predefined standard". In practice, the process of certification entails several steps that commence with assessment and culminate in the award of credentials that provide evidence of that the learner has achieved the learning outcomes. The assessment verifies that the learner has attained the knowledge, skills and competences related to the training programme.

7.   Awarding credentials to learners serve many purposes, including:
   a) Providing motivation to learners to complete the training course.
   b) Reducing undesired outcomes such as high attrition rates or low completion rates among learners.
   c) Recognizing continuous or lifelong learning and upskilling of the learner, irrespective of the level of the course – beginner, intermediate or advanced.

In some contexts, credentials are important not only as evidence of the time allocated by staff to reskilling and continuous learning, but also serve as the basis for staff promotion and mobility.

III.   CASE STUDIES: CERTIFICATION PRACTICES OF SELECTED STATISTICAL TRAINING INSTITUTES

8.   This section presents the results of a desk review of the credentials and certification processes followed by three training institutes, namely FAO, ILO and SIAP that have mandates to deliver statistical training either wholly (SIAP) or in part of their broader training programmes. The information was obtained primarily from the training institutes' portals for e-learning and other relevant documents retrieved online.

1.   Food and Agriculture Organization (FAO)

Overview:

9.   The FAO e-learning academy offers a range of multilingual self-paced courses, which learners can complete either online or by downloading to their personal computers. The courses target professionals working in food and nutrition security, social and economic development, and sustainable management of natural resources. They are aligned with the Sustainable Development Goals and FAO strategic programmes.

10.   The courses offered through the e-learning academy are available in several formats, including elearning courses for self-paced learning, blended learning programmes, massive open online courses (MOOCs), technical webinars, online tutored courses, mobile learning, face-to-face training workshops and university master's and postgraduate degree programmes (FAO, 2020).

Types of Credentials:

11.   FAO awards digital credentials for its e-learning courses through digital badges that are awarded through the Digital Badges system. Digital badges essentially recognize the attainment of the skills and competencies related to the specific training course. Hence, eligibility for the digital badges is linked to certification tests. Annex 1 shows samples of the digital badges that have been used by the FAO Academy for some of its e-learning courses.

Criteria for awarding credentials:

12.   FAO courses offered through the FAO e-learning Academy include both a knowledge assessment test and final evaluation. The final certification test takes the form of a scenario-based performance evaluation that verifies the attainment of the specific skills, knowledge and competences of the course. The standard passing grade is 75%.

Features of digital badges

13.   Digital badges are online visual representations of skills and competences earned through learning. They serve as motivation for learners to enroll and complete the learning activities. Digital badges have several features, that make them an increasingly popular alternative to digital certificates.

14.   The main features/ advantages of the FAO digital badges are that they are:
   1) **Visible and transparent**: they provide a means of recognizing and showcasing achievement and life-long learning in a variety of learning contexts. They are particularly useful in informal learning environments.
   2) **Verifiable** – digital badges are embedded with metadata that describe the learning activity in which they were awarded and the related competencies. They also link back to the issuing authority, hence enabling the possibility of corroborating the authenticity of the credential and associated learning activity.
   3) **Shareable and portable** – Digital badges can be displayed on social media and professional networking platforms and can also be inserted into e-mail signatures and curriculum vitae to showcase learner's relevant skills and competencies acquired as part of lifelong learning. By enabling a more granular view of learner's skills and competences, badges facilitate greater access to employment and recognition opportunities. Badges can be collected from multiple sources and are portable i.e.

they can be moved from the Learning Management System to badge wallets or passports.

4) **Stackable** – badges display the skills knowledge and competencies that learners have acquired in a more granular way, thus making it possible to clearly identify the specific competences and skills.

15.   FAO (2021) identified the following as reasons for using digital badges:
- Drivers of educational reform
- Equitable, inclusive and transparent access to education
- Motivating lifelong learning
- Greater employment opportunities
- Progress talent within organizations

16.   The digital badges comply with the Open Badges Standards that recognize and verify learning by embedding it into portable image files as digital badges. The standards also offer the possibility for authenticating the badges by including resources (external to FAO website) for web-based validation and verification. Open Badges describe who earned it, who issued it, the criteria required, and in many cases even the evidence and demonstrations of the relevant skills.

2. International Training Centre (ITC) International Labour Organization (ILO)

Overview

17.   ITC is the training arm of the ILO. The ITCILO offers a wide range of programmes that are designed to meet the needs of a diversity of professionals working in the field of employment and labour market policies. The target audience range from government officials in line ministries to representatives of workers' and employers' organizations, experts and technical staff from development partners. The duration of ITCILO courses span from one week to five weeks. The courses and programmes offered by the ITCILO therefore match the diversity of its audience, and not limited to official statistics.

18.   The courses are delivered in several modalities: online, face-to-face or blended. In parallel to the face-to-face programmes delivered at the Turin Campus, the ITCILO also offers a range of courses throught its eCampus Platform.

Types of credentials for courses

19.   ITCILO awards three types of credentials: certificates of participation, certificates of achievement and diplomas. The type of credential awarded for each course is determined based on learning hours (hours of instruction, distance learning and self-learning) and credits (1 credit is the equivalent of 30 learning hours).

a) Certificates of participation are offered to learners who register for and complete a one-hour course. Courses of such limited duration do not lead to any credits.

b) Certificates of achievement are awarded to eligible learners who complete courses that are between 60 and 300 learning hours in duration, and which also include a

final (summative) assessment. In addition to the certificate of achievement, learners can also earn 2 to 10 credits.

c) Diplomas are the highest learning level attainable from ITC courses. They are awarded to eligible learners who complete a single or multi-track training activity that lasts a minimum of 300 learning hours and include a capstone project. Given that diplomas are much longer in duration and do not fit the focus of this paper (courses in official statistics that are short-term), this type of certification will not be explored further. In addition to the certificate of achievement, learners also earn a minimum of 10 credits.

Types of Credentials:

20.   Like the FAO, ITCILO uses digital credentials, thus allowing learners the possibilities of adding their badges or certificates to their electronic email signatures, LinkedIn profile and personal website. Annex 2 shows a sample of a digital badge along with a sample of a digital certificate.

Features of ITCILO's digital credentials

21.   Digital badges were introduced in 2020 as part of the ITCILO's move to innovate and accelerate the delivery of training, in response to the effects of the COVID-19 pandemic. Like the FAO digital badges, the ITCILO digital credentials have the following features:

a) **Accessible**: They can be obtained through a dedicated webpage.
b) **Verifiable**: The authenticity of the credentials can be verified.
c) **Shareable**: The credentials can be shared via social media or LinkedIn network.
d) **Private**: The credentials are designed with built-in privacy controls that determine if they can be discoverable on search engines or shared with selected people.
e) **Printable**: Credentials are available in formats that ensure high quality digital printing.
f) **Portable**: credentials can be embedded in electronic email signatures or personal webpage.

Criteria for awarding credentials:

22.   Like the FAO, ITCILO courses include an assessment to verify if the learners have achieved the learning outcomes. The criteria for awarding credentials vary based on the type of credential:

a) **Certificate of Participation**: To be eligible for a certificate of participation, learners must have registered and completed at least 80% of the course that is 1 hour in duration.   These criteria are applicable for both face-to-face and distance courses.

b) **Certificate of Achievement**: To be eligible for a certificate of achievement, learners must fulfill the following criteria: (i) completed at least 90% of a course that is between 60 and 300 hours in duration; and (ii) completed final assessment or project. The assessment can take the form of either a written or oral test, presentation of an action plan or the preparation of a research proposal. The standard passing grade is 60%. Learners who fail to meet the passing grade would be eligible to receive a Certificate of Participation. Courses that carry a Certificate of Achievement are open to selected participants that meet predetermined criteria including prior professional/ academic experience or personal statement.

3. Statistical Institute for Asia and the Pacific (SIAP)

Overview

23.   Like other training institutes featured in this paper, SIAP offers a range of courses in official statistics that cover all areas and domains of statistics and are intended to build national statistical capacity to produce high quality official statistics for monitoring of the Sustainable Development Goals. Prior to 2020 and the onset of the COVID-19 pandemic, the majority of SIAP's courses were delivered in face-to-face format. Those training programmes are of two types: long-term (6 weeks to 3 months) and short-term (under 6 weeks). E-learning courses are of two types: namely facilitated and self-paced.

1) **Facilitated:** These courses are facilitated and supported by an expert in the field to the participants through regular communication in the "discussion forum" and supplemented through webinar(s) during the period of course delivery.

2) **Self-paced:** These courses can be taken by participants at their convenience without any assistance and support available from an expert.

The content of the e-learning courses is packaged in the form of interactive modules that are made available through SIAP's Learning Management System (LMS).

24.   In addition, SIAP also delivers virtual trainings. Those types of courses were introduced in 2020 during the COVID-19 pandemic when face-to-face courses were not possible due to travel restrictions. Virtual courses are typically delivered over 2 – 5 days through Microsoft Teams and/or Zoom for a maximum of 3 hours each day.

Types of credentials for courses

25.   SIAP awards only one type of credential for its courses: certificates (in digital format) or hardcopy (for face-to-face trainings). Certificates are, of two types:

a) **Participation/ Attendance**: typically used for face-to-face and virtual trainings to recognize learners' attendance at the training, without any formal summative assessment of learning. Certificates of participation are most frequently used for face-to-face and virtual courses that typically do not include a final assessment.

b) **Completion**: are awarded to participants to demonstrate achievement of the learning objectives and competences. As such, they are typically associated with some form of assessment; and awarded to participants who meet the given criteria.

Criteria for awarding credentials:

26.   For facilitated e-learning courses, done through the Learning Management System (LMS) SIAP awards certificates of completion to participants who successfully meet the pre-established course requirements.   Typically, these requirements include:

(i)   *Activity completion*:   Learners are required to study the materials presented in the form of interactive modules and complete the embedded activities and knowledge checks through the LMS.

(ii)   *Learning outcomes*: Achievement of the learning outcomes is assessed through a final test or assessment administered through the LMS. Learners can only unlock the assessment upon completion of all the interactive

modules. The assessments are timed (usually 30 – 60 minutes) and the duration is dependent on the structure and number items. Learners are allowed up to 3 – 5 attempts and required the attainment of a minimum grade of 70%.

(iii) *Feedback*: This entails completion and submission of an electronic feedback/ evaluation form, through the LMS.

27. The criteria above are applied uniformly across all e-learning courses. There are only variations in the duration of the final assessment or test. In addition to those core criteria, in some cases, a fourth criterion (participation) is also applied and used to evaluate learner achievement. When applied, this criterion is limited solely to attendance in the weekly course webinars. In such instances, participants earn minimal points that are credited towards the total course grade, which is a decisive factor for awarding certificates.

Certificates of participation or completion
28. As the name implies, certificates of participation recognize participation or attendance in the training sessions. Hence, they are awarded solely based on that criterion, which is verified through recorded attendance. They are most often used for face-to-face or virtual courses. Certificates of completion, on the other hand, recognize that the learner has achieved the specific or defined outcomes (skills, knowledge or competences) based on the pre-established conditions for the course; one of which is attainment of a minimum pass grade for the course. Completion certificates recognize more than just participation and focus more on learners' performance and the achievement of the learning outcomes. While SIAP's general practice is to award certificates of completion upon successful completion of a course or training programme, it is not unusual to also award completion certificates for completion of modules within a broader course. This approach is rarely used but was the case for the course on Environmental SDG Indicators course, which catered for a range of learners (statisticians, policymakers and public). This specific course included several standalone modules and gave learners the flexibility of completing specific modules within the course.

Features of the certificate:
29. A sample of a typical SIAP-issued certificate is attached in Annex 3. The certificate features both text and graphic elements. The main text elements are: (i) the presentation line ("this certifies that…"); (ii) full name of recipient (first name and surname); (iii) the dates of the training (start date and end date); (iv) full name of the course or training programme; and (v) signature (SIAP's director and / or other heads of agencies when courses are done jointly with other development partners).

30. The institute's logo is one of the key graphic elements of the certificate. The SIAP logo is maintained on all certificates and in cases when the courses are done in partnership with other agencies, the agency logos are also included on the top panel of the certificate. Other graphic elements such as borders and background colours are optional and can vary by course.

IV.   CONCLUSIONS AND RECOMMENDATIONS

31.   The assessment confirmed that credentials are widely used among the international and regional institutes offering statistical training to recognize and reward learner progress or achievement of the learning outcomes. The types of credentials vary across institutions. The FAO and ITCILO both offer digital credentials in the form of digital badges that demonstrate mastery/ certify that the learner has mastered course competencies. The digital badges have many distinguishing features, such as being shareable, verifiable, stackable and printable.

32.   Digital certificates are offered by ITCILO and SIAP. Both training institutes use different types of digital certificates, namely Certificates of Achievement / Participation, Certificates of Completion. On the one hand, for ITCILO, the types of certificates awarded is also linked to the duration of the courses. On the other hand, for SIAP, the determining factor is whether an assessment was included as part of the course.

33.   Irrespective of the format of the credentials, the approaches and practices for certifying learning followed the typical format for certification – commencing with an assessment and concluding with the award of credential once the success criteria were attained. A defining characteristic was the use of a final assessment or certification test and the application of a minimum passing grade, which differed across institution and by the type of credential.

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Annex 1
Samples of FAO Digital Certificates

Source:
Samples extracted from FAO (2021). *E-learning methodologies and good practices: A guide for designing and delivering e-learning solutions form the FAO eLearning Academy.*

Annex 2
Samples of ITC ILO Certificate of Achievement and Digital Badge

(a) Digital Certificate of achievement   **(b) Digital badge**

Source:
Samples extracted from the course page for ITCILO (2020). E-learning course on Management of Vocational Training Centres and **Leo Long Credentials Wallet**
https://credentials.itcilo.org/profile/leolong757048/wallet.

Annex 3
Sample of SIAP Certificate

Source:
Sample obtained from SIAP.