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ABSTRACT
                Many difficult political, administrative, and
technical issues must be addressed in developing occupational
standards and certification systems in middle income and developing
countries. Political issues focus on the clear recognition within the
country, particularly by the key stakeholders (government, unions,
enterprises), of the following: the need for standards; existence of
the three key stakeholders; equality of stakeholders, including
public and private enterprises, and their ability to contribute
actively to the development process; and employers' desire for
standards and their understanding of the linkages between standards,
wages, and hiring practices and the attitude of government toward
mandatory standards. Administrative issues include the following:
establishment of a tripartite governing structure for an occupational
standard organization; linkages between training institutions
(suppliers of labor) and the standards setting institution;
staffing/hiring of a core staff to supervise development of
standards; financing of development and of ongoing operations;
international linkages to standards from other countries; and
national dissemination and updating of standards. The technical
issues are as follows: developing a common definition of
"occupation"; creating linkages between national standards and
training curricula; developing linkages between countries;
responsibility for writing standards and certification programs;
developing operating procedures; dissemination/automation of
standards; certification and testing; and curriculum development.
(YLB)

USING OCCUPATIONAL STANDARDS TO

UPDATE EDUCATION AND TRAINING PROGRAMS

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for the

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I. Introduction:

1.   The rapidly increasing international nature of production and trade as exemplified by the emergence of the European Union (EU), the North American Free Trade Agreement (NAFTA), the General Agreement on Tariffs and Trade (GATT), and adoption of ISO 9000 standards for quality documentation have strong implications for development of human capital, labor mobility, and productivity[1]. The link between human capital investment and productivity is well documented in what is an increasing technological workplace.

2.   The results of studies in developing countries indicate that, if they wish to increase efficiency, they should try to get access to best practice technology and that, irrespective of the source from which technology is acquired, firm investments in worker training, particularly for skilled workers, are very important to improving average efficiency levels.[2] A key issue is, how does one ensure that the standards for skills developed are appropriate and will make a real difference. This is the focus of this paper. What are the key political, administrative, and technical issues that must be addressed in developing and/or adapting occupational standards and certification programs in developing countries. The issues outlined in the following pages are based on a comparison of experience in OECD countries with emerging experience in middle income countries which are embarking on their own skill standards and certification programs

3.   A key concern in many developing countries, where government may be the dominating force, is identifying who are the clients for occupational standards and certification products. The way this question is answered will drive the design of any occupational standards and certification association, hereinafter referred to as the Association, and system. Employers and workers represent "demand" and are real final beneficiaries of occupational standards. Standards must be based on their input - but not in isolation from international standards. Public, private, and enterprise training programs/institutions represent "supply".Care must be taken to develop standards based on demand, not supply. The following pages summarize some of the key political, administrative, and technical issues and alternatives that may be encountered in developing occupational standards and certification systems in middle income and developing countries.

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1   Olivera, Joao (Ed.), Occupational Standards, International Perspectives. The National Center for Education and Training for Employment, The Ohio State University, Columbus, 1995, page 17

2   Tan, Hong and Geeta Batra. Firm-Level Efficiency in Developing Countries: Its Determinants and Distribution by Firms Size. Conference on Enterprise Training Strategies and Productivity. The World Bank, Washington D.C., June 1995

II.   Political Issues

4.   **Recognition of Need:** is there a clear recognition within the country, particularly by key stakeholders (government, unions, enterprises) as to the need for standards and an Association to help define the standards? Without a clear recognition of the need for occupational standards that have perceived national validity and are linked to international standards, there is little likelihood that they can be developed effectively. Or, if one stakeholder (e.g., the government) tries to unilaterally develop standards there may be resistance to development, and any standards developed may be ignored by other stakeholders (e.g., employers).

5. ·   In many developing countries the Government is the dominant institution. It may be looked at with some suspicion by other stakeholders, such as small informal employers and large multi-multi nationals, which may fear that government initiatives may be a guise to gain further control over their operations. Some government training institutions may also resist development of occupational standards that they may consider their private turf. And, if the government and training institutions take the leadership for development of standards, they will be supply driven with associated problems. In-order to generate interest among all stakeholders it is necessary to show the benefits to all concerned: (a) union members must see the advantages to job entry and mobility, (b) employers must see the potential for increases in productivity and perhaps a better return on payroll training taxes they may be paying, and (c) government training institutions must see this as a way to gain stature and improve quality and not just lose control of course content.

6.   **Existence of Stakeholders:** do the tripartite members exist, are they sufficiently mature and organized to provide input? This is a serious question in some countries. If the economy is dominated by the informal sector (e.g., in some Latin American countries this approaches 70 percent of employment) there may be little chance for formal input from small employers. Large and middle sized employers may be better organized, but in many Formerly Centrally Planned Economies (FCPE) the major employers are state owned and are actually part of government, and private employers may not yet be organized. Union organizations may be fragmented and not interested in developing standards that may be viewed as a long-term issue not directly linked to immediate worker needs. Finally, government training institutions themselves may be in conflict. Ministry of Education, Ministry of Labor, and Ministry of Higher Education institutions may not want to create linkages or share turf with sister institutions let alone employer and union organizations.

7.   Creating stakeholder organizations (e.g., unions, employer organizations) is beyond the scope of what should be expected by an Association. But, occupational standards provide an opportunity for what may otherwise be "warring factions" to work together on an issue that has long-term implications for the country and all concerned. As such, while occupational standards cannot create stakeholders, there is some evidence that by entering into regular dialogue concerning development of such standards can linkages between key stakeholders can be strengthened.

8.   **Equality of Stakeholders:** are public and private enterprises and other key stakeholders considered equal, and can and will each actively contribute to the development process? This is a serious problem in FCPE where enterprise and unions were previously part of government and private employers did not exist. In developing countries unions may be weak. The danger in this scenario is that, while there may be a professed need to develop standards and stakeholder organizations may exist on paper, the entire concept may be hijacked by one member of a tripartite consortium. One member, possibly the Government, may take-over the process and entire concept will become supply driven.

9.   Again, development of Associations cannot, by themselves, develop equal stakeholders. But mechanisms can be built-in by delegating voting rights/quotas for members on Association Governing boards, staffing Associations with representatives from different stakeholders, and involving all stakeholders in developmental activities to help ensure weaker members are not over-shadowed by stronger members.

10.   **Hiring practices:** do employers really want standards, what is the understanding of the linkages between standards - wages - and hiring practices, and what is the attitude of Government toward mandatory standards? The way these questions are answered may well seal the fate of any standards development activity. Employers will, understandably, will want to maintain the utmost flexibility and control over hiring, while some government officials may want mandatory standards with direct linkage to wage rates with the expected reaction from employers. Union representatives want to inflate hiring standards to protect existing workers, restrict supply, and force up wages.

11.   Experience indicates standards are accepted best whey they are jointly developed by stakeholders and are applied voluntarily. Heavy-handed application of standards by government will lead employers to withdraw from the process with resulting damage to the products of any standards development exercise.

III.   Administrative Issues.

12.   **Governance:** what is the best way to establish a tripartite governing structure or "Association" for an occupational standard organization (e.g., protocol, law, regulation, foundation)? If stakeholders are to have ownership of the products it is essential that they are formal part of the governance and policy establishing process. In establishing this process it is critical that powers be shared equally, between what may be unequally matched partners (particularly at the outset). This means that one-third of the association votes should be allocated to government, employer, and union representatives which may be difficult with the different numbers of organizations involved. In addition, the legality and enforcement power of what may be a voluntary association, that may establish policy on the use of government and/or bilateral and multilateral funds for which the Government is ultimately responsible, may be problematic.

13.   Clearly. if one is to honor the concept of a demand driven process. the tripartite process is needed. One approach to formalizing governance issues is through the signing of a "protocol" which can states the parameters and responsibilities for each party. and emphasizes the voluntary nature of an Association of stakeholders. Such protocols can often be established and adjusted more easily than laws and may. in-fact be preferable to legislation that can come later when experience has been gained. Establishing legislation at the outset may delay implementation for years and reflect mis-understandings that can be better be corrected by the use of protocols.

14.   One issue that will arise. if a protocol is used. is the legal and administrative power of an Association created using such procedures. To overcome this obstacle it may be necessary to establish the Association as a "foundation." This may be difficult. Such foundations cannot receive government financing in some countries. If so it may be necessary, for start-up purposes. to use one of the stakeholders as an administrative agent for the Association. with the agreement and consent of the stakeholders on the Association's governing board. Finally. if a government and/or bilateral/multilateral funding is being used to assist start-up of an Association it may be necessary that all concerned agree that the agency ultimately responsible for these funds (e.g., a government ministry who may be a voting member of the Association's governing board) will have a veto power over decisions the Association may make about expenditure of funds. This power would only be used if the Association took action to expend funds that were in violation of government laws/regulations. or agreements with third parties (e.g., bilateral and/or multilateral financing agencies).

15.   **Linkages between standards and training:** what is the linkage. from a governance and administrative point of view, between training institutions (suppliers of labor) and the standards setting institution? This parallels the question. addressed in the previous section. regarding the linkage between employer hiring standards/wages and Association standards. Training institutions. like employers. will guard their independence and their ability to design training programs as they see fit. A further complicating factor in some countries is that. under law. some Education Ministries may have the sole right to grant and verify education/training certificates.

16.   Again, the best approach may be a voluntary one. If training standards are well designed and accepted by employers they will, in the end, begin to affect training institutions (which will have been party their development). Another alternative, where a Ministry of Education or examination commission may have the legal right to issue syllabus and grant training certificates. is to have the Association endorse standards and certifications (completed to Association standards) with the understanding that such endorsements would not impinge on Ministry of Education prerogatives (i.e.. the Ministry would have to endorse them unilaterally before an Association endorsement of a program or certificate became valid for a Ministry operated program).

17.   **Association staffing/hiring:** there will need to be a core staff to supervise development of standards. How will they be paid. will they be civil servants and be bound by civil service hiring regulations. and where will they be housed (e.g.. at a

foundation, a government institution, or an employer or labor organization? Decisions will need to be made regarding the number of staff and their functions that may include acting as a secretariat for the Association governing board; providing overall administrative support, quality control, and record keeping for development of standards and subsequent certification; and actual development of standards and certification programs. In many developing countries the specific skills needed to develop policies and procedures for occupational analysis and knowledge/performance testing will not be available. External technical assistance and training will be needed. The selection of individual staff can become politicized (e.g., different stakeholders may each want their candidates). The housing of the staff can also be a political issue (e.g., should offices be provided by one stakeholder or in a more neutral location). The status of the staff (e.g., civil servants, foundation, contract, private sector) will affect the quality of staff selected. Finally, who do the staff (in particular the director of the staff) report to (e.g., the chairman of the governing board of the Association, the head of the host agency where the staff are located).

18.　　　　Experience indicates that a core full-time staff of about 10-15 will be needed to fulfill the functions of an Association including: acting as the secretariat to the governing board, providing administration services, training and quality control, record keeping, and dissemination. It is important that these staff provide both administrative support for standards development, as well as secretarial support to the Associations Governing Board. If these functions are split it can create unnecessary duplication of personnel resources, and cause mi-communication between the Board and the Association staff. The status and method of hiring this core group of personnel is critical to the success of the Association. In general, to help offset political pressure, all positions should be publicly advertised, and selection of key staff (e.g., the Director) should be agreed by the Association governing board. In-order to ensure well qualified individuals will apply, salaries are appropriate, and the needs of employers will be served, the positions should generally not be within the civil service. This has direct ramifications for the selection of the "host agency" and the Association staff, and essentially means the host agency should not be within government (rather at a neutral foundation, or with an employer or labor organization).

19.　　　　Finally, the hiring and payment of short-term consultants to develop standards and write related performance/knowledge tests must be addressed. There will be a need for a large number or short-term occupational specialists. Full-time Association staff can train and monitor these short term consultants, they cannot and should not attempt to actually write individual standards because the job is too big and they do not have the necessary range of occupational expertise. One general approach taken to hiring short-term occupational specialists is to ask the key stakeholders to donate the necessary personnel (this is essential to build ownership of the products) while using Association resources to pay the direct costs (e.g. travel and per diem, materials and supplies required by the writing teams). This is potentially a very expensive exercise and every effort should be made to have key stakeholders contribute personnel resources to offset costs and build ownership of products.

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20.   Financing: how will development be financed (internal government resources, levies from enterprises, international resources) and how will ongoing operations be financed (e.g., ongoing grant and levies to members, sale of services, government budget)? Costs include the payment of the core staff (10-15), infrastructure costs (equipment, material, rent, utilities, travel); payment of direct costs (e.g., travel and per diem) for writing teams; and usually some external technical assistance, training, and materials to support initial development. Initially this requires a blend of cash an in-kind support from all stakeholders, plus some external resources from bilateral and multilateral sources. As products are developed the Association can generate revenue from sale of services and products. This can include sale of standards, test item data banks, training stake-holders to use standards and tests, and perhaps actual administration of certificate/testing programs for some stakeholders who may not want to do this themselves.

21.   New government cash resources are normally in short supply, but in-kind resources including office space for Association staff, utilities, support infrastructure can often be provided. But, this may complicate matters if other stakeholders view this as a "take over". Government may also be able to utilize "vocational training" funds to support Association activities. Employer and Labor organizations may be able to offer in-kind resources. If Government provides the core staff this may have negative implications for who can be hired and salary levels. Additional cash resources, from employers, may be available by using ":training levy funds" which are available in many countries. As previously mentioned. Strong consideration should be given to having all stakeholders provide in-kind short term staff resources to write individual standards. Finally, external resources from bilateral and multi-lateral (either as grants or loans) can be obtained to support development. Such funds can fiance international technical assistance, infrastructure, local core staff (normally not including civil servants), and local short term consultant costs to write standards. Experience shows that between US$2-3 million dollars is necessary, over a 3-5 year period to get a national Occupational Standards Association fully operating and produce an initial set of 2-300 standards and related certification.

22.   International linkages: how will the association ensure that they have access to standards from other countries? May countries have already invested a great deal of time and money in developing standards. And, while each country is unique, care needs to be taken that work is not unnecessarily duplicated and, as noted at the outset of this paper, the international trade picture and need for efficiency increases pressure to develop common skill standards between countries. It is imperative that a new Association devote specific resources to visit other standards associations, both to review procedures and actually obtain standards, with the objective of later adapting these to local conditions.

23.   Such linkages can be build through professional channels, this conference being an excellent example, but some cash resources should be allocated to finance visits by members of the Association governing board and core staff to several other countries. and to purchase related software (e.g. ,standards and test item data banks for selected

occupations). Again, government/local resources for such activities will be limited and efforts should be made to obtain bilateral grants and/or multilateral loans to help finance these activities.

24.　　　National dissemination and updating of standards: how will the Association maintain and continually update their standards, and disseminate material throughout the countries to key stakeholders? This issues needs to be addressed at the outset. If the key stakeholders are fully involved general dissemination will be greatly enhanced, but this will need to be furthered by specially developed training programs (run by the core staff) to ensure each stakeholder knows what standards and certification products are becoming available, and how they can use them directly to improve their efficiency and effectiveness (e.g., schools improve training programs, employers improve training and staffing activities, labor and individual workers improve their mobility). Finally, a schedule for revision and updating of standards needs to be planned and implemented, in parallel with the initial development program.

25.　　　To support these activities the Association core staff will need to maintain: a) a hard copy an automated repository of international and locally produced standards and certification programs; (b) a general publicity programs, including an initial awareness campaign for stakeholders and more specific publicity programs to use once initial standards become available; (c) on-site training programs developed for stakeholders; and (d) a central registry for institutional and worker certification. These activities will require the allocation of several full-time core staff, plus support hardware and infrastructure.

III.　　　Technical Issues

26.　　　Occupation: what is an occupation? This seemingly minor question causes untold technical problems. Different countries have different occupational classification systems. Some of these are badly out-of-date and as such, if used as the starting point, would essentially put an Occupational Standards Association out of business before it even started. In addition, these systems are organized using different parameters (e.g., some are based on socio-economic parameters, others on common skills), there is often confusion between occupational and industry classifications, and the level of detail varies widely. For example, the US Dictionary of Occupational Titles (DOT) contains about 17,500 job titles, while the International Classification of Occupations (ISOC) contains about 1,500 occupational titles. The Association will need to grapple with this issue and come to some agreement as to what base will be used.

27.　　　The difference between the DOT and ISCO approaches is perhaps exemplified by Wesbter's definitions that state an occupation is "the principle business of one's life" while a job is "hire for a given service or period." While the definition of an occupation is a little outdated, in the current changing economy and labor market, the point is still valid. Occupational standards need to be developed around "occupations" not "jobs".Occupational Standards Associations will have to: (a) adopt a pragmatic

approach to defining occupations based on real international and local practice as agreed with the stakeholders, and not force the use of inappropriate and outdated classification systems; (b) recognize the clear difference between an occupational description (which is a very brief statement of an occupation) with an occupational standard (which is a detailed listing of all major duties and minor performance and knowledge tasks that a worker must perform in the occupation); (c) not confuse general occupational standards, which usually cut across industries (e.g. accountant and bookkeepers work in all industries), with industrial classifications (e.g., mining, construction) and industry specific jobs e.g.,a bookkeeper in a mine vs. a bookkeeper in a construction company). The objective should be to define occupational standards and certification programs for general bookkeepers, to promote general training and enhance labor mobility and efficiency, and not to define job standards in individual industries (e,g. for bookkeepers in mines or bookkeepers in construction). This latter detail can and should be added by employers. However, it is recognized that some occupations are unique to some industries (e.g.,miner).

28.   **Linkages between national standards and training curricula:** how do standards relate to training in secondary vocational training, adult post secondary pre-university training, university training, industrial training. This issue causes considerable consternation and concern, particularly in countries where secondary vocational training is making a transition from specialization to generalization. It is also of concern in industrial on-job-training.

29.   In OECD, and increasingly in middle income counties, the objective of secondary vocational training is not to prepare youth for a specialized "lifetime occupation" but rather provide youth with broad competencies for a general field of work (e.g.,commerce, communications/electronics). As such, if the Association develops standards for specialized long-term "occupations" secondary vocational training curriculum developers would need to identify a common core of tasks from multiple but similar occupations (e.g.,those in commerce) to establish a general curriculum. Conversely, adult training is by nature preparing individuals for specialized occupations, therefore adult training institutions could use Association standards directly in curriculum development. Finally, if the Association produces occupation, but not job specific standards, industry on-job-trainers will need to add their industry and job specific skills (e.g.,what special skills to bookkeepers in a mine need in addition to the general occupational standard) when developing their curriculum.

30.   **Linkages between countries:** what are the linkages with standards in other countries, should one adapt existing standards or develop new ones? This is somewhat of a dilemma, On one-hand developing counties need to upgrade their human capital to make use of new international technology and improve quality and efficiency, but on the other-hand workers need to be prepared to work in the existing enterprise environment. If an Association adopts an international standard, perhaps to save time and development resources, it may not be relevant to the local conditions. But if an Association develops it's own standard, based on existing enterprise practice, it may perpetuate poor labor practice and not facilitate use of new technology.

31.   The answer may be to combine both approaches. In short adapt, not adopt.
Associations should obtain standards and certification program samples from other
sources, then carefully review and adapt them to local practice taking into account
current and anticipated local conditions.

32.   **Responsibility for writing standards and certification programs:** who will
actually write the standards (employers, trainers, both) and how are the direct and
indirect costs to be financed. This has already been alluded to in the previous discussion
of administrative issues. In most developing countries there will be a propensity to: (a)
have existing trainers and educators write the standards, which may just perpetuate a
supply response; and (b) hire full-time Association staff to write standards which would
be very costly and not provide the needed flexibility to bring in occupational specialists
from industry on a short term-basis to develop individual standards.

33.   There would appear to be two principles that are critical to success. First,
the demand side employer and labor representatives must have the primary input to
development of standards, Second, because of the "ownership" and "cost" issues involved
it is critical that employers and labor provide in-kind short-term occupational specialists
to actually write the standards (or at least identify how sample occupational standards
from other counties should be adjusted). It is recognized that supply-side staff, from
training institutions, may be more attuned to such writing tasks therefore small working
groups composed of representatives from employers, labor, and government might be
established to accomplish the writing/adaptation task for each occupational standard.

34.   **Operating Procedures:** what procedures will be developed to ensure the
standards and certification programs are accurate and will be accepted and used by
stakeholders? By virtue of the fact that many people may be involved in writing
standards and certification programs for different occupations will be critical that
standard procedures are developed, agreed, and adopted by the Association to ensure
the products will be of a standard quality and be accepted and used by key stakeholders.

35.   The job of developing, field testing, and training writing teams will
undoubtedly fall on the core Association staff, which will need to include professionals in
occupational task analysis and testing. The key will be to develop procedures to ensue
quality and consistency, without overburdening writing teams with detail that they will
not assimilate. Many of these procedures have already been developed in various
countries and can be adapted to local conditions.

36.   **Dissemination/automation:** how will standards be stored, processed, and
disseminated? Given the format of materials that may be obtained from other countries,
the voluminous nature of the materials (e.g., number of individual standards and related
test items), the number of individuals that may be certified and recertified, and the need
to continually update materials, it will be critical that the process be automated.

37.   Occupational Standards Associations will need to ensure that at least one
core staff member is an expert in automation, and that necessary hardware and software

be provided to facilitate the work of individual writing teams as well as the central administrative unit. This support should include computers and offset printing facilities.

38.   **Certification and Testing:** how should testing and certification be approached? There are two broad points of view on this issue. The first is for the Association to develop standardized performance and knowledge tests and either organize testing centers directly run by, or administered by, the Association. The second is for the Association to develop and provide test item data banks from which stakeholders (e.g., training institutions) may develop their own tests based on data from the Association.

39.   The first approach may ensure more standardized quality in testing and provide for direct comparison between the performance of trainees from different training institutions. But, experience shows that this approach entails development of a large bureaucracy to develop and operate the testing program, which can stifle local initiative and slow adaption to changing occupational standards. Such approaches also encounter considerable test security problems. The second approach involves developing test items for all tasks in an occupational standard, and then each institution develops its own tests by randomly selecting items from this data bank. This approach greatly reduces security concerns, since the test item data bank can be public because it covers all tasks in a given occupation. Flexibility is enhanced since, if there is modification in an occupational standard, a change can be made quickly in the related test item data bank without changing a standard test. This approach has much merit, but it does involve training and certifying institutions to develop tests from a data bank if the Association is to endorse the results of their locally developed and applied tests.

40.   **Curriculum development:** should Occupational Standards Associations also develop curriculum materials? Some Associations do, others do not. There is a natural transition between standards, certification, and curriculum therefore Association will need to determine if they wish to undertake work. On the negative side, developing curriculum tends to mix the "supply" side of the occupational standards equation (training delivery) with "demand" side (standards development). Given this potential conflict, and the large amount of work that will need to be done in standards setting and certification, curriculum development should be a second priority.

IV.   Conclusions

41.   There are many difficult political, administrative, and technical issues to be addressed in developing occupational standards to improve worker productivity and mobility. There is a need to examine a range of alternatives before making final decisions. This can be greatly facilitated by visiting Associations in several countries. Members of the governing body of the Association, and staff, should both participate in such visits. There is clearly a need for government involvement and financing (particularly at the outset) but formal government involvement in policy and program development must be balanced with the needs of employers. This balance can be

facilitated by: (a) having a tripartite governing body where government has only one-third of the votes, and (b) locating the Association staff at a non-government host association. There are advantages of starting Associations with a rather loose framework (e.g., a general tripartite protocol) then later adjusting regulations and formalize the structure through legislation as experience is gained. Finally, there will be a need for a special allocation of local funds to develop initial procedures and products, and a possible need for outside bilateral/multilateral assistance. However, ti. long-term objective should be to make the Association self-sustaining through direct and indirect contributions from stakeholders and sale of goods and services. If Associations cannot be become self-sustaining based on contributions from stakeholders they should probably be abolished.