

UNECE

Bringing Standardization in University Curricula: Making the case



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ABBREVIATIONS

ANSI	American National Standards Institute (USA)
APEC	Asia-Pacific Economic Cooperation
ASCM	Academy for Standardization, Certification and Metrology (Russia)
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardization
CEO	Chief executive officer
CERN	European Organization for Nuclear Research
CJLU	China Jiliang (Metrology) University
EC	European Commission
ETSI	European Telecommunications Standards Institute
EU	European Union
EURAS	European Academy for Standardization
Gosstandart	State Committee for Standards and Product Quality Management Standardization (USSR)
G7	Group of Seven
ICES	International Cooperation for Education and Standardization
ICT	Information and communication technology
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
MSRU	Moscow State Regional University (Russia)
NIST	National Institute of Standards and Technology (US)
OECD	Organisation for Economic Co-operation and Development
PASC	Pacific Area Standards Congress
R&D	Research and Development
SCC	Standards Council of Canada
SIep	Standards in Education program (Canada)
START	UNECE Team of Experts on Standardization and Regulatory Techniques
START-Ed	Informal Group of Experts on Education on Standardization
UN	United Nations
UNECE	United Nations Economic Commission for Europe
WP.6	UNECE Working Party on Regulatory Cooperation & Standardization Policies
WTO	World Trade Organization

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ABSTRACT

This paper advocates for integrating education about standardization into the curricula of educational establishments. It presents evidence of the relevance of standards for policymakers and business executives as well as professionals. It then reviews the efforts of UNECE since 2012 to date to improve education about standardization, as well as activities underway by universities, standards bodies and independent associations. The conclusions present priorities and directions for future work.

1 Introduction

Standards shape our everyday lives. There are standards behind almost every product and, increasingly, behind most traded services as well. From the stoves we use to cook, to the equipment we use at work, to the buildings we live in, standards help ensure quality, safety and reliability. They drive economic efficiency, facilitate trade and are key to tackling the challenge of moving towards a more sustainable and resilient model of development.

The importance of teaching standards to students majoring in technical disciplines, especially engineering, has long been recognized. Most of those students will receive at least some education on standards and related issues during their university years. Yet this topic has not gained sufficient attention in the area of non-technical disciplines.

This paper shows why education about standardization is useful for professionals of non-technical disciplines as well. Future managers, lawyers, policy makers would all benefit from at least a basic awareness of what standards are, how they are developed, and how they can be used in different contexts.

The paper offers insight on why education on standards and standards-related issues matters, especially at present time. It then describes the activities of UNECE to improve education about standardization, and features a comprehensive overview of activities of other organizations. The conclusions discuss priorities for future work.

2 The importance of education about standardization

2.1. FOR PUBLIC SECTOR PROFESSIONALS

Many areas of policy-making are informed by standards of different kinds. Standards for example, facilitate international trade, as they help establish trust that specifications and quality requirements will be met. Standards also support innovation in a number of ways; and help achieve many other public policy goals, in particular by helping transition to sustainable patterns of production and consumption. Future policy makers will then need a better understanding of standards and standards-related issues; and relevant training provided by universities and vocational trainings can help them gain such knowledge.

The 2017 G7 leaders' meeting renewed policymakers' commitment to the implementation of international standards as a policy instrument of choice for the global economy and supply chains. Policymakers already actively use standards in a wide variety of ways and across all jurisdictions.

Relying on standards developed in broad consultation with all societal stakeholders, and with a consistent and transparent process, allows policy-makers, confronted with shrinking public budgets, the possibility of lowering the costs of developing and enforcing regulations, without compromising on the safe management of their country's resources and the well-being of their populations.

As one example, the European Union (EU) has broadly used international standards to improve energy efficiency. Recognizing that electric motors consume a large part of the electricity used in industry, the EU based its latest regulation on the International Electrotechnical Commission (IEC) standard on efficiency classes for low voltage AC motors. More

We commit to striving for better application and promotion of internationally recognized social, labor, safety, tax cooperation and environmental standards throughout the global economy and its supply chains

G7 2017 Taormina - Leaders' Communiqué

EFFICIENCY LEVELS 3-phase induction motors (Low Voltage < 1000 V)	EFFICIENCY CLASSES
	IEC 60034-30-1, 2014
	Global classes IE-Code
Super Premium Efficiency	IE4
Premium Efficiency	IE3
High Efficiency	IE2
Standard Efficiency	IE1
Below Standard	

Source: Presentation at the IEC-ISO-UNECE Conference on "Using and referencing International Standards to support public policy", <https://www.unece.org/index.php?id=39452>

in detail: the IEC standards classify four classes with different levels of efficiency: the European Commission (EC) regulation stipulates the second highest class as mandatory for all new motors from 1 January 2015.¹ In this way, the EC made eco-design mandatory and promoted energy savings through incorporating international standards into regional regulation.

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_1335

