

**HUMAN CAPITAL
DEVELOPMENT
& INNOVATION**

**THE ROLE OF
HIGHER
EDUCATION**

Patricia B. Licuanan, Ph.D.
Chairperson, Commission on Higher Education

“*The future,
like everything else,
is **no longer** quite
what it **used to be.**”*

Paul Valéry

technological ROBOTICS
breakthroughs ENERGY STORAGE
 BIOTECHNOLOGY autonomous vehicles 3D PRINTING
 MATERIALS SCIENCE **QUANTUM COMPUTING**
artificial intelligence
Internet of Things NANOTECHNOLOGY




QUESTIONS:

What kind of human and intellectual capital should higher education envision and develop?

What higher educational programs are needed to produce the human and intellectual capital for innovation?

What are the pillars to cultivating a culture of research and innovation in Philippine higher education?





ENVISIONING HUMAN AND INTELLECTUAL CAPITAL

HUMAN & INTELLECTUAL CAPITAL

Central to the
INNOVATION
process

Shape and
determine
prosperity,
geopolitical power,
course of history



ENVISIONING HUMAN AND INTELLECTUAL CAPITAL

HUMAN & INTELLECTUAL CAPITAL

Raise productivity

Increase economy's ability to adopt new technologies

Drivers of economic growth and social cohesion

Critical to functioning of political, social, civic institutions



ROLE OF HIGHER EDUCATION IN DEVELOPING
HUMAN AND INTELLECTUAL CAPITAL

HIGHER EDUCATION must produce FILIPINOS

with a deep love of country,
humanist values,
vocation to serve,
ethical orientation,
lifelong learners



ROLE OF HIGHER EDUCATION IN DEVELOPING
HUMAN AND INTELLECTUAL CAPITAL

HIGHER EDUCATION must produce FILIPINOS

ingenuity, agility, and skills
lead, compete, excel in global skills race

Civic literacy

Global awareness and Cross-cultural skills

Critical and Inventive Thinking

Communication, Collaboration and Information Skills



**ROLE OF HIGHER EDUCATION IN DEVELOPING
HUMAN AND INTELLECTUAL CAPITAL**

**HIGHER EDUCATION
must produce
FILIPINOS**

ability and resiliency to take risks,
curiosity, passion for learning and discovery,
entrepreneurial skills



**ROLE OF HIGHER EDUCATION IN DEVELOPING
HUMAN AND INTELLECTUAL CAPITAL**

**PHILIPPINES
ON TOP OF A
demographic gold mine**

Large, young educated population
Potential rich talent pool
Forces for social and cultural transformation
Accelerators of innovation and inclusive economic prosperity



**RE-PROGRAMMING PHILIPPINE HIGHER EDUCATION
FOR INNOVATION**

Re-programming
**PHILIPPINE HIGHER
EDUCATION**
for innovation

Program and Curricular Reforms

Building Research, Innovation, Extension Capabilities

Building a Culture of Innovation and Competitiveness



PROGRAM AND CURRICULAR REFORMS

New
**GENERAL EDUCATION
CURRICULUM**

CHED Memorandum Order No. 20, s. 2013

“General Education Curriculum: Holistic Understandings,
Intellectual and Civic Competencies”

PROGRAM AND CURRICULAR REFORMS

ACADEME-INDUSTRY linkages

Addressing **jobs-skills mismatch**

Developing and delivering programs for careers of the future



2012

BS Meteorology
(pilot run)

**Service
Management
Program Track**
(CMO 6, s. 2012)



2013

**Business
Analytics
Track**
(CMO 12, s. 2013)



2014

**BS
Entertainment
and Multimedia
Computing**
(CMO 2, s. 2014)



2015

**BS in Naval
Architecture
& Marine
Engineering**
(CMO 28, s. 2015)



2016

**Techno-
preneurship**
elective for
Engineering
students



2017

**BS Nursing
curricula with
Health
Informatics and
Geriatric Nursing**

BUILDING RESEARCH, INNOVATION, AND EXTENSION CAPABILITIES

BUILDING RESEARCH, INNOVATION, & EXTENSION CAPABILITIES

Improving research capabilities
of faculty, research staff, and graduate students

Building up capital and institutional infrastructure

Building up, retraining, and retaining new generation
of researchers



**BUILDING RESEARCH, INNOVATION,
AND EXTENSION CAPABILITIES**

BUILDING RESEARCH, INNOVATION, & EXTENSION CAPABILITIES

CMO No. 52, s. 2016

“Pathways to Equity, Relevance, and
Advancement in Research, Innovation,
and Extension in Philippine Higher Education”

Strengthening government-academe-industry partnerships

Philippine-California Advanced Research Institutes (PCARI)



**BUILDING RESEARCH, INNOVATION,
AND EXTENSION CAPABILITIES**

BUILDING RESEARCH, INNOVATION, & EXTENSION CAPABILITIES

Research Collaboration

ASEAN Citation Index

Sustainable Development Goals (SDGs)/Niche Areas

Food Production and Security Environment, Disaster Risk Reduction and Response

Climate Change and Energy

Marine Resources/Systems:
Economy, Biodiversity, and Conservation

Smart Analytics and Engineering Innovations Health Systems Education for S.T.E.A.M.



**BUILDING RESEARCH, INNOVATION,
AND EXTENSION CAPABILITIES**

BUILDING A CULTURE OF, INNOVATION, & COMPETITIVENESS in Philippine Higher Education

Addressing the **problems**

maintaining and improving quality,
increasing relevance of curriculum and instruction,
increasing and better utilizing financial resources,
balancing access, equity and quality

Moving Forward



**THANK
YOU!**

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Website: www.ched.gov.ph



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