

Strategies for the Creation of Double Degree programs & Sustainable Co-operation – A U.S. perspective

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OUTLINE

- Who are we?
- Where to start
- Types of collaboration
- Types of Master degrees in the U.S.
- Implementing the collaboration & challenges
- Benefits, Maintenance & Sustainability

Who are we?

Doctoral-degree granting university

located in Chicago

Research intensive

Accredited (Higher Learning
Commission)

Close to 8,000 students

National historic landmark campus
offering degrees in Science, Technology,
Engineering, Mathematics, Law, Design,
Architecture, Business & Psychology

ILLINOIS TECH

ILLINOIS TECH

Discover. Create. Solve.

Inventions by Illinois Tech alumni

MARTY COOPER

- Graduated Illinois Tech with a bachelor's and master's degree in *electrical engineering*
- **Inventor** of the **cell phone 1972-73**
- Formulated the *Law of Spectral Efficiency*, also known as Cooper's Law.
- Awarded the prestigious *Charles Stark Draper Prize* in 2013



“The fundamentals I learned at Illinois Tech have been my guiding light in everything I have done.”

Inventions by Illinois Tech alumni

ROHIT PRASAD

- Graduated Illinois Tech with a master's degree in *electrical engineering*
- *Head Scientist* behind Amazon's Alexa
- Currently *Vice President* and Head Scientist, Alexa Artificial Intelligence (AI)
- Ranked No. *9* in Fast Company's 100 most creative people in business, 2017
- *15* on Recode's list of 100 people in tech, business and media ,2017



“The way I think about Alexa is the way AI is revolutionizing daily convenience.”

– Rohit Prasad

OTHER NOTABLE ILLINOIS TECH ALUMNI



Ed Kaplan (ME 1965)
Pioneer in
Barcode
Technology



Rajeev Chandrashekhar
(M.S. CS 1988)
Member of the
Team that
Developed the
Pentium Chip



Susan Soloman (Chem 1977)
Discovered
Manmade
Chlorofluorocarbons
were Destroying
the Earth



Victor Tsao (M.S.
CS 1980)
Co-founder of
Linksys



Gloria Ray Karlmark (Chem. Math 1965)
Part of The Little Rock Nine who Stood
Up Against Segregation in Arkansas
Schools



Anita Burke (ME 1990)
Vehicle Chief Engineer for the GMC
Canyon and Chevrolet Colorado



Andrea Berry (CS 1984)
Emmy Award-winning
Broadcast Media
Consultant

IIT's DOUBLE DEGREE PARTNERS IN EUROPE



France (14):

ENSEA, Cergy

ESEO Angers

Grenoble INP

ESIEA, Ivry

ENAC, Toulouse

EIVP, Paris

INSA Lyon, Strasbourg

IPB/ENSEIRB-MATMECA, Bordeaux

ISAE-ENSMA, Poitiers

Telecom St. Etienne

ESME Sudria

EISTI, Cergy

ESIGELEC, Rouen

IIT's DOUBLE DEGREE PARTNERS IN EUROPE

SPAIN (16):

Universidad Politecnica de Madrid

(ETSIAE, ETSIINF, ETSIAAB, ETSIT, ETSII, ETSICCP)

Universidad Politecnica de Catalunya

(ETSEIB, ETSETB, ETSCCPB)

Universidad Politecnica de Valencia

(ETSA, ETSII, ETSIT, ETSIAMN)

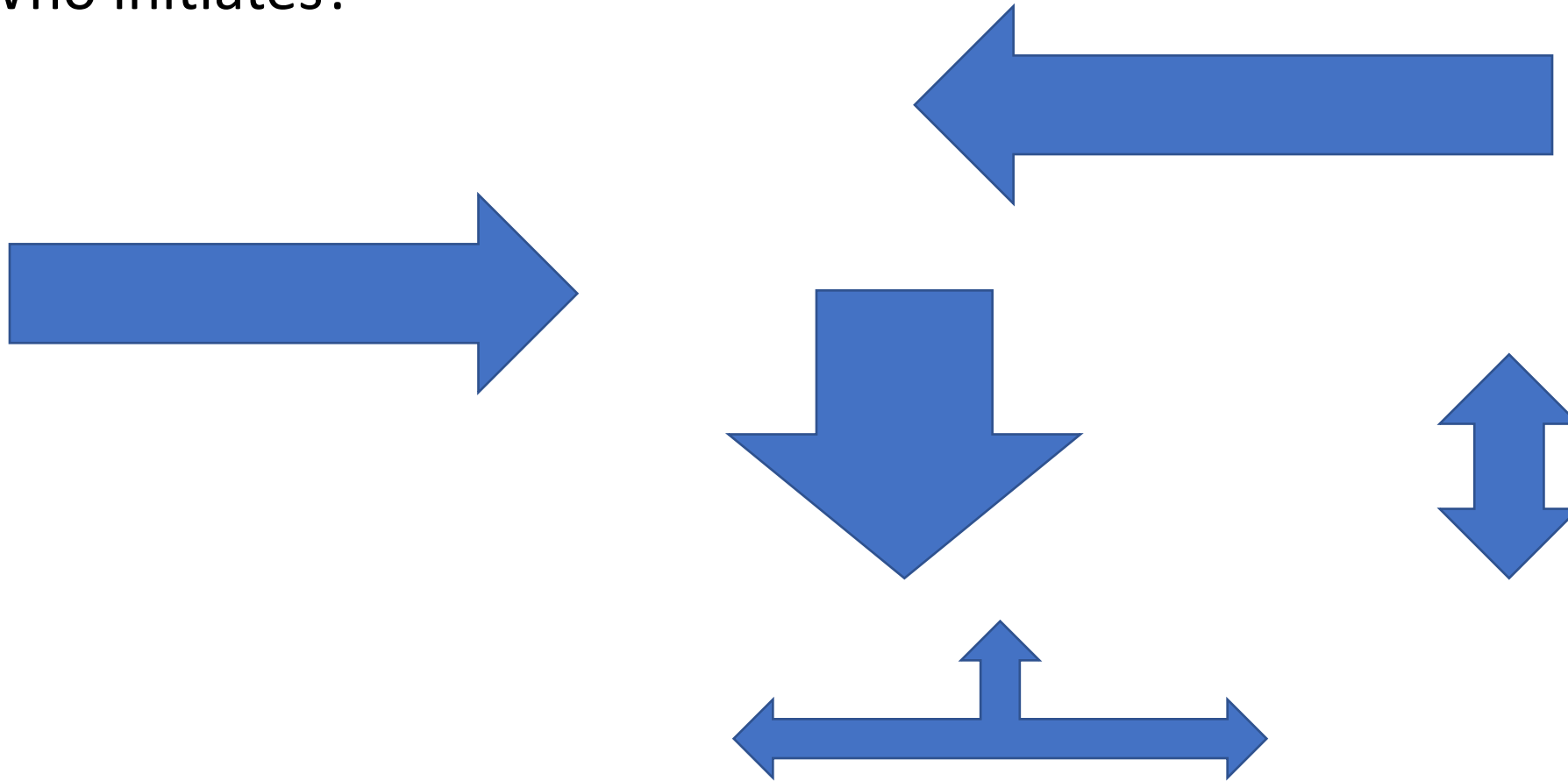
EHU Bilbao

Universidad de Seville

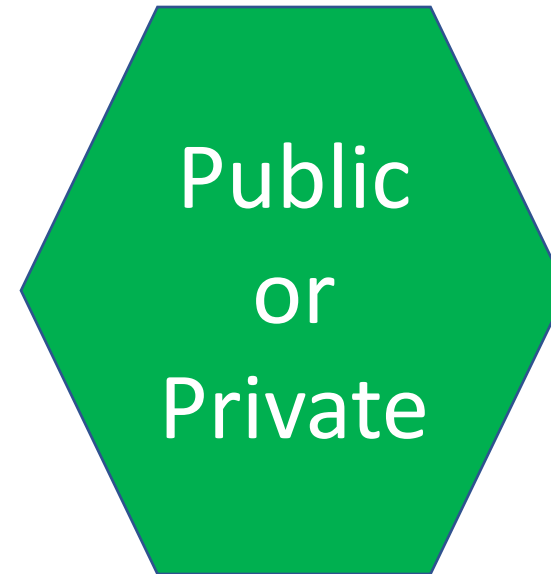
ICAI Universidad Pontificia Comillas

WHERE TO START?

Who initiates?



Main difference between U.S. universities and many other countries



Where to start

- Ask these questions????

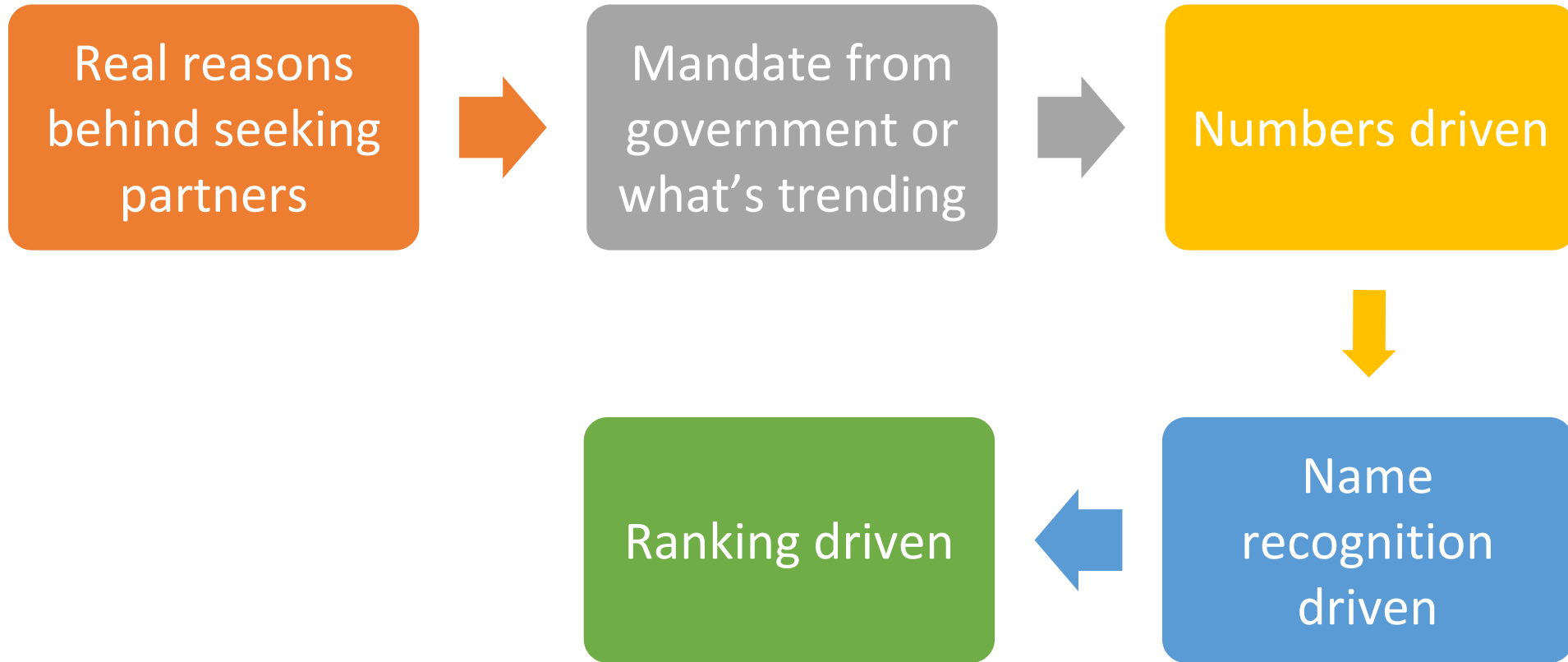


International
strategy of your
institution



Leadership favorable to
partnerships & what
types

Where to start



TYPES OF COLLABORATION

One-way or 2-
way

Fee-Paying or
non-fee-paying

Multi-level

Use of 3rd party
providers

Degree or non-
degree

Types of Collaborations at Illinois Tech

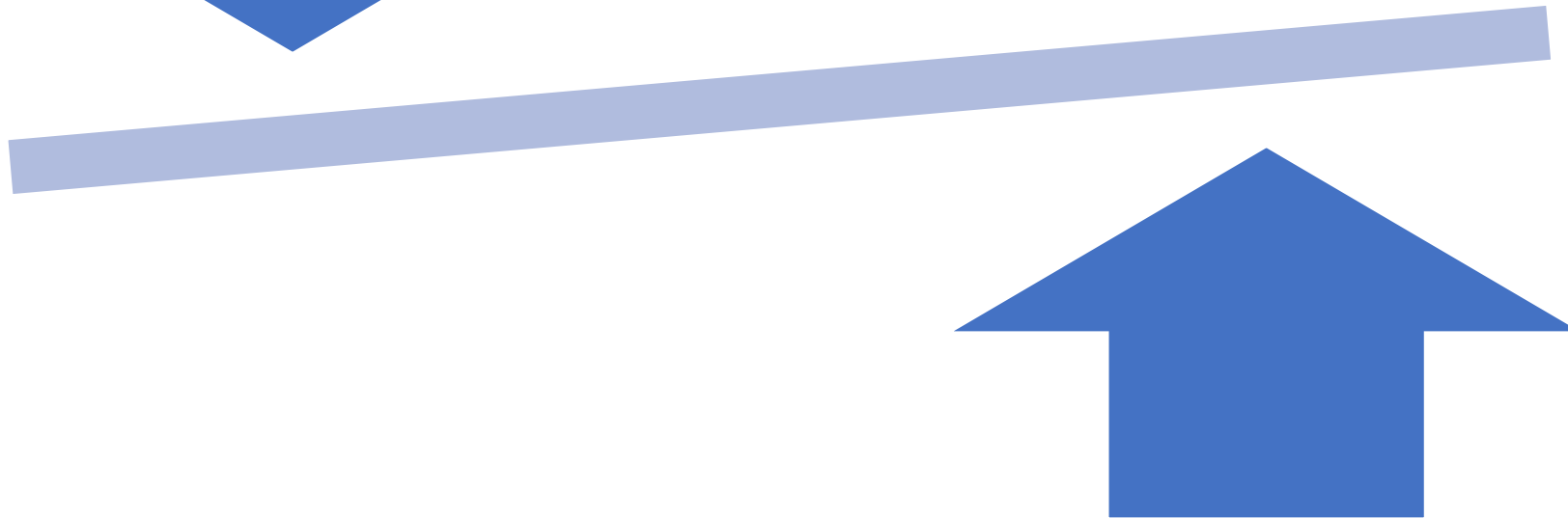
- Exchanges (semester/summer/year/few weeks)
 - 2+2 (Undergraduate double degree)
- 3+1 or 3+2 (Master Double degree)
 - 4+1 or 4+2 (Master Double degree)
- 1+1 (Master Double degree)
 - Consortia collaboration – GE3
- Master's/Phd Track after Bachelor's
 - Co-terminal (Bachelor/Master's combined)
- Research –multi-level, 4 – 8 weeks
 - Intensive English – short-term or for a semester

Collaborations that are not sustainable

Imbalance



Exchanges based
on 1 :1
reciprocity



Types of Master degrees in the U.S.

- **Professional Master's degree** – 1 year in duration – can be course only or course with a research project – Referred to as M.Eng. or Professional Master's
- **2-year Master's degree** – referred to as M.S. with thesis

IMPLEMENTING THE COLLABORATION

**FRUSTRATION AHEAD!!
BUT NOT FOR LONG!!**

Misperceptions about U.S. universities

- All U.S. Universities are rich
- All U.S. Universities only want students who can pay
- All U.S. students do not pay tuition – they get “financial aid”
- All U.S. Public institutions are cheaper than U.S private institutions
- All U.S. Public institutions are more prestigious than U.S. private institutions in general

Implementing the Double degree- Graduate Level

When is an attempt at implementation not going to work :

First impression

- Contact person – **CLUELESS/UNINTERESTED/UNKNOWLEDGEABLE** does not do the follow-up
- **ARROGANCE & MINDLESS OBSESSION WITH RANKING** – Rub shoulders with the 'BEST' where there are sufficient Noble Laureates !! Faculty not interested
- **SELF-INTEREST** – at the expense of the institution –
« If I cannot get something out of this, I will not promote the idea or possibility to my colleagues »

Understand the partner –Implementing the collaboration

- EDUCATION SYSTEM
- ACADEMIC CALENDAR
- PERCEPTIONS
- AREAS FOR DEVELOPMENT
- MISSION/GOAL OF THE UNIVERSITY

Why is it difficult for some U.S. institutions to develop double degree programs?

- LACK OF KNOWLEDGE/INTEREST
- ISSUE OF DOUBLE COUNTING
- PERCEPTIONS
- COST
- FOCUS OF THE OTHER ON EXCHANGE

Obstacles when establishing the partnership

- OVER EAGERNESS
- UNREALISTIC TIME LINE
- UNAWARENESS OF AGREEMENT POLICIES

The Process

- TAKE SMALL STEPS
- BE AWARE OF LANGUAGE BARRIERS
- BE AWARE OF CULTURAL DIFFERENCES & CONCEPT OF TIME
- BE PATIENT

Example - Double degree -Master

1st Year

Grande Ecole

2nd Year

Grande Ecole

3rd Year

Illinois Tech



2 Degrees
IIT Master's degree &
Diplôme d'Ingenieur

Example - Double degree - Master

5th Year

Bachelor

6th Year

Master

7th Year

Illinois Tech

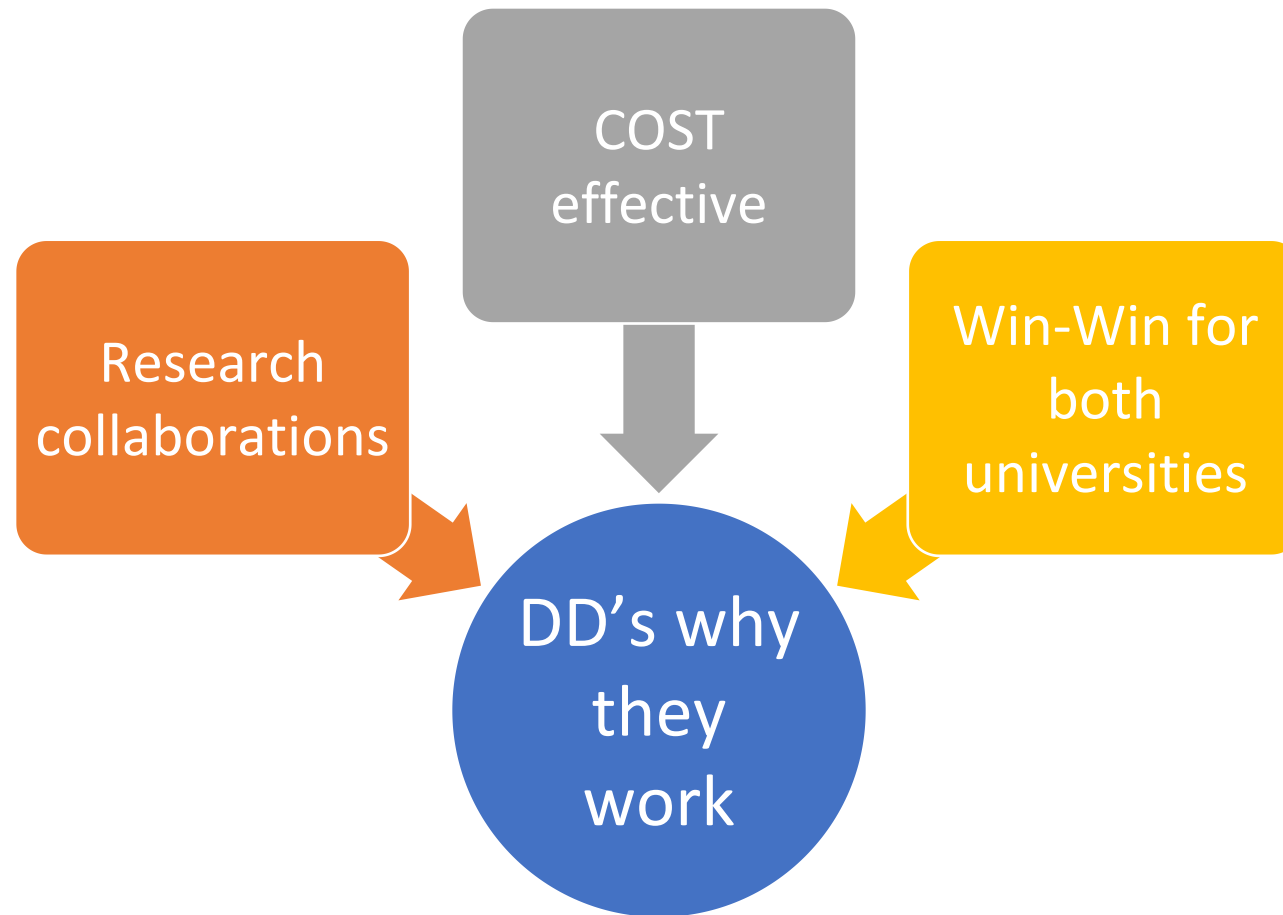


2 Degrees
IIT Master's degree &
Master (Brazil)

Double Degrees (Master's level)

BENEFITS

Why Double degrees (Master's level) work (U.S. perspective)



Results/Accomplishments at IIT Chicago

- 30 DOUBLE DEGREES
- EGO MELTDOWN
- OPENNESS
- MUTUAL SATISFACTION

BENEFITS

INSTITUTION (Creative & Open)

- Attracts better qualified professors & staff
- Forges dynamism and creative thinking within the community
- Forges increasing collaborations with other universities

BENEFITS

STUDENT (Dynamic, High-Achieving)

- Attracts an unusual student profile – dynamic, creative, competitive, with higher academic credentials
- Provides meaningful opportunities for training abroad
- Encourages better international collaborative research

BENEFITS

PROFESSORS (Dynamic, Creative & High-Achieving)

- Involvement in **creation of programs** – *incentive for tenure (U.S.)*
- **Less costly research** via collaborative efforts (publishing opportunities)
- **Better calibre of students** to teach
- **Healthy environment** for growth and innovation

Maintenance - CHALLENGES

- ❖ CHANGES IN ADMINISTRATION
- ❖ LACK OF INTEREST
- ❖ LACK OF COMMUNICATION
- ❖ AGREEMENT FORGOTTEN
- ❖ DIFFICULTY IN KEEPING UP WITH AGREEMENT EXPIRATION DATES

Illinois Tech – Challenges encountered on both sides in the creation of the partnership

- Finding the “CHAMPIONS”
- NO PERFECT MATCH
- GRADING SYSTEM & TRANSFER OF CREDIT
- UPPER ADMINISTRATOR BUY-IN
- COST
- TARGET DATE FOR IMPLEMENTATION
- FLEXIBILITY
- TESTS REQUIRED BY U.S. INSTITUTIONS

Implementing ALTERNATIVE & SUSTAINABLE PROGRAMS – THE DANCE

- **Getting the right person/partner involved – knowledgeable, dynamic, sincere, and with a vision**

The right music that both are comfortable with

- **Detailed and fair discussion of areas of mutual interest**

Type of Dance – tango, rock ‘n roll or samba?

- **3-yr Bachelor’s or 4 yrs to pursue an M.S. in the U.S.**

admission/selection – WHO ADJUSTS OR ADAPTS MORE TO THE STEPS?

- **Regular follow-up – STICKTUITIVENESS**

How often is the dance taken up?