



## Research and Development

By Prof Dr Reza Ziarati

Research is in fact a way forward; looking at what is already being done well and should therefore be further developed or supported; and what is being done not well enough, or badly, and therefore needs to be changed, stopped, or replaced by something new.

Unfortunately in some countries there is so much emphasis on social, technical and scientific papers for publications in cited journals that universities, and their funders, often forget that a university is a universe with all sorts of small and large stars, some far, some near, some shining and some with little shine or any vigour.

A university should be a **centre of excellence in what it teaches** and to do this it must develop all staff, young and the more experienced. It must work and support industry and commerce, for which it is preparing the young people for it.

It has to be realised that the interests which business has in wishing to establish or improve links with academia are different from those of the academia, and may not always be compatible. The educationalists can aspire to be altruistic; business people can only afford to be altruistic when they have made more than enough money for the maintenance and development of their businesses. This is not a moral judgement – it is a pragmatic one.

**Academia needs the industry to support it in the development of its programmes so that they can identify and respond to the needs of industry and commerce. It needs industry to seek funds to progressively develop its laboratories, and it needs industry to develop its staff members.**

**Industry needs academia to improve the quality of its employees, present and future; it needs academia for technological progress useful to business, and to better management of business; it needs academia for the formation of its future customers, and so of demands for its products and services.**

There are three types of research, near market (short term) which is of particular interest to business; strategic: which is of interest to larger and more established businesses; and basic (or long term) which is of interest to businesses in general to secure their long term sustainability and survival. A good university should promote all three types through a well-managed process of working with industries related to the subjects it teaches.

**University research, therefore, is an effective means of making new discoveries; underpinning further and higher education programmes, developing and motivating staff, establishing working relationship with industry and commerce and, developing independent learning while preparing students for the future. It is also intended to create wealth and jobs and serve the community to become more stable and accommodating. Students should learn about self-learning early in their studies and in the latter part of their programmes introduced to research and scientific methods for seeking knowledge and judgement. They must also realise the importance of preparing themselves and take responsibility for themselves for the world of work.**



**All students should be introduced to development techniques, who products and services are developed and processes involved.**

### Maritime Education and Training at Piri Reis University

**What?** Piri Reis University (PRU) is the education and research arm of the Turkish maritime community. PRU is the continuation of the TUDEV Institute, a major European centre for maritime education and training as well as maritime research and development. PRU currently has the largest number of EU funded maritime projects anywhere in the Europe and publishes many articles on its work and over **10 major refereed papers** each year. A list of papers published can be found at [www.marifuture.org](http://www.marifuture.org).

**Why?** Today, the development of a Maritime Education and Training (MET) system is a dynamic process under the pressure of rapidly emerging maritime technology and new practices. An ideal development cannot be achieved by considering the existing practices and procedures only and needs to have a wider perspective by reviewing best practices and establish the necessary benchmark for future improvements.

Recent research has shown that the response of international bodies to address identified deficiencies on STCW content, language competence, automation, emergency situations and environment are generally slow, sluggish and/or lack resources.

TUDEV, and now PRU, as the research and education wing of the Turkish maritime community had also to look ahead and seek excellence in MET.

**Response** - To overcome these deficiencies, PRU/TUDEV established a partnership with well-known and well-respected international maritime institutions and universities in Europe and worldwide, and through working with organisations such as BTEC/Edexcel, MNTB (Merchant Navy Training Board), NVQ/SVQ (National Vocational Qualification/ Scottish Vocational Qualification) authorities and professional institutions such as IMarEST (Institute of Marine Engineering, Science and Technology) developed a set of most up-to-date programmes for Deck officers as well as Senior Deck officers and similar programmes for Marine Engineers and senior Engineer officers. These co-operations and partnerships, including staff and student exchanges, not only provided opportunities for collaboration and joint programme and unit design and developments but also initiation of a number of funded European Union projects. A sample of these European Union funded projects are listed below;

**Safety On Sea (SOS)** ([www.maredu.co.uk](http://www.maredu.co.uk)): the aim was to developed the first set of internationally recognised maritime education and training for deck and Marine Engineering cadets and officers in conjunction with major awarding bodies (such as EDEXCEL/BTEC), accrediting Professional institutions (such IMarEST) and licensing authorities (such as MCA) and leading universities in Europe;

**EGMDSS and E-GMDSS-VET** ([www.egmdss.com](http://www.egmdss.com)): the intention was to develop a novel e-learning platform for maritime communication devoted to GMDSS (SRC and LRC). The platform has been awarded several European and international prizes and currently has over



40000 registered users. It provides a range of leaning units and online EGMDSS simulation exercises;

**MarTEL** ([www.martel.pro](http://www.martel.pro)), **MarTEL Plus**: these projects facilitated the development of standards for maritime English for all types and ranks of seafarers including for Ratings. The Each standard has its own test supported by guidelines for test takers and teachers;

**SURPASS** ([www.surpass.pro](http://www.surpass.pro)): this project contains complete programme of training for seafarers to avoid automation failures at sea and if these accidents do happen to ensure they can take the right decisions;

**M'AIDER** ([www.maider.pro](http://www.maider.pro)): the aim was to prevent emergencies and if these emergencies do occur take precautions to avoid accidents at sea;

**EBDIG** ([www.ebdig.eu](http://www.ebdig.eu)): a project to emphasise the importance of design and training the future designers and also to transfer innovation from automotive industry to boat and ship industry;

**UniMET** ([www.unimet.pro](http://www.unimet.pro)): the aim is to go beyond the minimum standards set by IMO and introduce new and improved standards and promote good practice;

**IMPACT** ([www.impact.pro](http://www.impact.pro)): to introduce to new ways of assessing project and promoting good practice in MET throughout the world,

**CAPTAINS** ([www.catptains.pro](http://www.catptains.pro)): the aim is to develop novel tools for teaching of Maritime English,

**Sail Ahead** ([www.sailahead.pro](http://www.sailahead.pro)): to encourage young people to join the seafaring profession and be able to prepare for jobs ashore;

**Leonardo TRAIN 4Cs I (2008), II (2010) and III (2012)** – Ongoing (see note below)

In all projects listed above PRU/TUDEV is either a leading partner or is a partner in the project. These projects were initiated to act as a catalyst either to address a deficiency or for MET programme and unit development. The outcomes of such projects are reflected in the programme development process which onboard training and use of advance simulators form the focal part of it. PRU/TUDEV programmes and pathways have been validated through a series of EU funded mobility programme called TRAINS 4Cs (I, II and III). Through this mobility programme many TUDEV cadets continued their degree studies in universities in the UK and USA and several registered on the UK's NVQs and SVQs sea training and obtained the UK's Maritime Coastguard Agency's (MCA) NOEs and one obtained the MCA's officer of watch certificate and MCA's Certificate of Competency (CoC). Currently there are 6 TUDEV cadets in the UK some seeking MCA's NOEs and also preparing for their MCA CoC examinations to obtain the UK's Officer-Of-Watch (OOW) certificate.

The University (PRU) has also commenced its ERASMUS mobility programme:

**ERASMUS Mobility** - 2012-1-TR1-ERA02-36736, Student and Teaching Staff Mobility & Work Placement



## Development Paper

PRU/TUDEV and its European partners have established a major partnership called MarEdu ([www.maredu.co.uk](http://www.maredu.co.uk)) supported now by a new European platform called **MariFuture** ([www.marifuture.pro](http://www.marifuture.pro)) which has initiated several new proposals which most of them have been approved by the EU (more about this on the MarFuture website). Project UniMET, which is based on an earlier TUDEV's successful EU funded project known as SOS, is introducing new and improved MET standards. One of the proposals is a 34 MEUR project aim to establish the Turkish Maritime Centre of Excellence (TMCE) in Tuzla, Istanbul.

MariFuture is expected to be similar to the EU's ManuFuture platform which supports the EU in manufacturing planning in Europe.

### New EU funded Projects

- **Creation of a Qualification Framework for Effective communications at Sea (SeaTalk)** – 52662-LLP-1-2012-1-UK-Leonardo-LMP funded by EACEA – to commence in 2013
- **Maritime network of education for the development of the maritime culture in the Black Sea basin, (MARINE)**, Joint Operational Programme “Black Sea Basin 2007-2013, IPA Financial Lead Beneficiary for CFCU Grant, TR08C1.01-02-230 – Will commence late in 2012
- **Modular Enhanced Training Programme for European Maritime Security Personnel (METPROM)**, 2012-1-TR1-LEO05-35121, LIFELONG LEARNING PROGRAMME LdV, *Multilateral Projects - Transfer of Innovation* – Will commence in late 2012.

### New Proposals

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Several new proposals are being prepared. For latest news please refer to [www.marifuture.org](http://www.marifuture.org).