

MCAST LINK

Issue 47 // Q 4 2018





ZERO TOLERANCE FOR VANDALISM AND AGGRESSION ON CAMPUS

SEE IT, REPORT IT_79464636



MCAST

Malta College of Arts, Science & Technology

MCAST LINK

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FRONT COVER

Group of MCAST students
on MCAST Campus

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Editorial

WE are proud to announce that MCASTlink, the official magazine of the Malta College of Arts, Science and Technology, is back again to keep members of staff, students and stakeholders informed about the on goings of the College.

We welcome Mr Frederick Schembri as President of the MCAST Board of Governors and Prof Joachim James Calleja as MCAST Principal and CEO. Both of them have been interviewed for this magazine whereby their extensive experience and backgrounds, their plans and vision for the College are conveyed.

An interesting read is the article by Dr Nadia Vassallo on the changing curriculum and how the College is adapting to the needs of industry, the economy and the evolving new technologies while providing an enriching learning experience for the students.

MCAST is investing in research some of which are mentioned in this magazine. One article focuses on the EU-funded research carried out by the Institute for Applied Sciences that studied green spaces. The MCAST Energy Research Department studied the field of Photovoltaic (PV) Energy while the ESMERALDA Project focused on the assessment of nature's benefits to society and on the link to environmental policy that promotes the use of nature for improved human well-being.

MCAST members of staff and students have participated in numerous Erasmus + programmes in several countries including Italy, Germany, Poland, Iceland, Uzbekistan, Serbia in different areas of study. These enriching experiences together with the benefits and outcomes of each programme are detailed in this edition.

This magazine is featuring for the first time the MCAST students that are also national athletes. This issue introduces us to Alessio Magro, a professional pool player who is also reading for a Bachelor of Science (Honours) in Sports, Exercise and Health at the Institute of Community Services.

I hope you enjoy the return of our magazine. Should you wish to contribute kindly send an email to caroline.balzan@mcast.edu.mt.

May this Christmas end the present year on a cheerful note and make way for a fresh and bright New Year. Here's wishing all readers a Merry Christmas and a Happy New Year!

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MESSAGE FROM THE PRINCIPAL AND CEO PROF. JOACHIM JAMES CALLEJA

Challenges are added value

A magazine on the activities of the Malta College of Arts, Science and Technology is one of the many bridges that we constantly maintain between the world of MCAST and the world outside the College. In vocational education and training building bridges, closing skills gaps, opening pathways for learning, inclusion and excellence and being relevant to the world of employment are expectations synonymous with vocational colleges. Society expects more from vocational colleges than it tacitly does from other sectors of education. This evidence must be seen as added value to our work and the results that we achieve during the year.

It is for this reason that management decided to relaunch MCASTlink in its new format after an interruption of almost three years. Our core business at MCAST is employability and the College is expected to be the road to employment, to re-skilling and to up-skilling of our workforce. Therefore, education and training programmes at MCAST must be both labour-market-driven as well as oriented towards the formation of responsible individuals who value democracy, respect for fundamental freedoms and active citizenship. This is a task which as evidenced from the contents of this magazine we are accomplishing although much more work needs to be done to become a centre of excellence for our country and among Colleges in Europe.

With restricted budgets, the College has and continues to accomplish its mission. However, we are determined to increase our financial and human resources at the College (we already have encouraging results for capital expenditure for 2019) to meet bigger challenges that our growing economy demands in order to sustain the high quality of life that most citizens enjoy. Furthermore, we must ensure that anyone leaving compulsory education without the necessary skills for employment or for lifelong learning finds at MCAST an attractive environment not solely in its infrastructure but also in the teaching methods and the programmes that we offer. With the development of vocational education and training in secondary education, MCAST should serve as the natural choice for hundreds of students in Malta and Gozo.

Indeed, the articles carried out in this edition illustrate that the College has huge potential for talent and value added for students and mature learners. The increasing



participation in ERASMUS + activities, the new Masters' degree programmes, the research projects spearheaded by various lecturers, the outreach programmes in Tajikistan as well as an increase in part-time courses are indicators of growth and success. However, our major challenge for the next three years remains that of attracting financial investment to finish the infrastructure of the Paola Campus. Students at MCAST deserve a physical environment which is conducive to learning. By early 2021 we would have added three new buildings which will certainly have a very positive impact on the future of the College. But this is not enough. Learning environments are instrumental in attracting young generations to lifelong learning. Society expects from MCAST to be in the forefront in the arts, in the sciences and in technology. Nothing less than high standards is suitable any more in the various spheres of governance, management and teaching. Challenges are added value.

Successive editions of this magazine will bear evidence to our efforts and accomplishments. I am indebted to our editor Caroline Balzan who has been taking care of MCASTlink since 2002 and to the many directors, lecturers, managers and staff members who regularly contribute to it.

MCAST PRESIDENT OF THE BOARD OF GOVERNORS FREDERICK SCHEMBRI

Can you tell us something about yourself and your extensive background in industry?

I started my professional career in industry as a blue-collar worker and worked my way up into management. I have a proven track record spanning thirty years in highly regulated manufacturing industries and broad management experience in leadership roles, with specialization in integrated global supply chain initiatives.

I have been involved in a number of mergers and acquisitions globally and gained valuable experience in negotiations. I was the catalyst of five pharmaceutical start-ups both locally and overseas including the establishment of operations in India and China respectively as well as the architect of an extensive restructuring programme for a pharmaceutical operation in Eastern Europe including the upgrade of company infrastructure to meet EUGMP standards.

For a number of years, I have participated in supply chain strategies pertaining to disaster relief operations including humanitarian aid programs predominantly in sub-Saharan African regions funded by institutions the likes of UNICEF, WHO, Red-Cross, Red Crescent, MSF, IDA to name a few.

I am the founder and managing director of one of Malta's leading foreign-owned pharmaceutical companies listed on the ISEX stock exchange. In addition to the local context, activities include directing the groups European supply chain operations at a Pan-European level.

How is your vast experience in industry assisting you in your new role as President of the MCAST Board of Governors?

The future of Vocational Education is Industry Based Training (IBT). The rationale behind IBT is that industry training must be relevant to industry needs and should attract a high level of employers' investment in training that is relevant to their sector. MCAST must work together with the private sector to develop skills training systems that allow existing or new employees to acquire the skills that lead to employment in higher valued semi-skilled or skilled jobs. Individual IBT projects should have an outreach beyond that of a single employer and be applicable to a wider scale within the sector.

How do you see the role of the President of the MCAST Board of Governors?

MCAST is governed by the Education Act 2006 and the President of the Board of Governance is of a non-executive nature. Board members are the fiduciaries who steer the institution towards a sustainable future by adopting sound, ethical and legal governance including financial management



policies, as well as ensuring the institution has adequate resources to execute its mission. The role of the MCAST President of the Board of Governors is of a strategic nature overseeing legislative compliance. The executive powers are granted to the Principal and CEO.

As an employer what are the real challenges that you are facing and which you feel that the College should address?

The days when a first degree is a guarantee for employment are over. The attributes employers want to see are described as "soft-skills". Soft-skills are the personal attributes and capabilities that enable an individual to interact harmoniously and effectively with other people, and is indicative of that person's degree of emotional intelligence. Some examples of soft-skills include: Teamwork, Communication, Positive Attitude, Self-discipline, Problem-solving, Resilience, Creativity, Willingness to learn, Leadership, Time-management, Enterprising, Deliverables etc. They are amongst the top qualifications employers look for in potential employees, adding more weight to these soft skills than the technical skills employees bring to the table.

What major changes/developments would you like to see at MCAST?

The relevance and continuity of MCAST depends on its responsiveness to new demands from industry and the broader community. MCAST needs to adapt in fundamental ways, across its administration, training and education. More attention is needed to manage costs effectively and to

respond to new student requirements and industry. More collaboration with other educational sectors, industry and social partners and more innovation across all aspects of the student lifecycle are also required.

Revenue uncertainty leading to cost pressure, including difficulties in forecasting future skill needs will force MCAST to think laterally with regards to infrastructure requirements. Focus must be on innovative ways to minimize investment in new infrastructure through the use of new technologies such as simulators, augmented reality or online collaboration tools to avoid expensive investment in major capital. New financing models and cost-sharing arrangements will allow for cloud-based services to reduce administrative expenses while improving focus on enhanced services. Within this context, and in synergy with drivers of change emanating from socio-political economic spheres, MCAST's main challenges are to provide high-quality work-based learning for all students following vocational education and training that meet the demands of society, economy and individual learner effectively.

What are the implications of the fourth industrial revolution on MCAST?

Industry 4.0 will bring a dynamic transformation of how all aspects of business and production are done. Future workers will need to be highly trained in emerging technologies, including in the values associated with using these technologies. Education institutions around the world must reinvent themselves or risk becoming obsolete. They need to adapt to the demands of Industry 4.0 and have the obligation to venture out of their hermetic confines and create as many opportunities possible for students to prepare for future jobs. The problem in the future will not be the lack of employment, but the shortage of skills that new jobs demand.

Students need to understand how they can correlate, use and apply different knowledge in diversified contexts. Students need to work in a framework of work-based-learning where they collaborate with their colleagues, teachers and the outside world. They need to develop new ways of communicating; they need to be exposed to complex situations, to develop critical thinking and complex problem solving and to learn how to be imaginative, creative, adaptable, flexible and to develop brain plasticity. Industry 4.0 will require the world to produce a new kind of worker - a knowledge worker. Tomorrow's industry leaders and managers must possess new skill sets to adapt, manage, and to take advantage of Industry 4.0. They must be critical thinkers, problem solvers, innovators, communicators and provide value-driven leadership.

How do you see MCAST in ten years' time?

By partnering with leading companies, MCAST has the potential to deliver something new and aspirational. An elite

vocational education college with the potential to change minds, lives and our economy.

Our industrial partners have made it clear to us that we need to develop new forms of partnerships. It is becoming increasingly clear that vocational education should not be restricted. Elite apprenticeships and the opportunity for progression through co-designed higher vocational degrees can and will challenge the negative stereo-types of technical education by offering quality and rigor in a unique context. There is no reason to think that the ablest apprentices should not be capable to progress through well-designed degrees into post-graduate study and onto PhDs or MBA or diversify into other areas where a deeper understanding of the nature of high-value manufacturing will offer a unique business advantage. Industry leaders and proficient engineers of the future will also come through vocational routes, drawing on an education which unites traditional academic strength with the latest industry practice.

Vocational education must be funded by employers who ensure that young people who graduate from such degrees would have experienced the dream of true access - a high quality relevant education leading to excellent employment whereby the student gains industrial experience. Students must be exposed to routes into higher education which blend technical skills with genuinely research-led teaching providing new forms of progression without limits to either aspiration or attainment. Apprenticeships and degree routes should grow out of existing strengths of research-intensive partnerships with key industries which are vital to a strong economy. In this progressive environment, apprentices would access training and qualifications which carry the assured quality of national accreditation supported by business that are full partners in course design and work-place based projects with direct commercial benefit.

There is a perception in this country that vocational education is for people who do not make it to university. This is wrong, and it would be met with bewilderment in other countries. Our degree courses are just as rigorous as degrees studied in the traditional way and deliver equally good career prospects. Vocational education set in the context of high-end research initiatives with industry, offers a new kind of technical education, one which our country and economy desperately needs and which is vital for the development of the kind of skills our young people need to compete with in the global market. This kind of higher vocational education redefines what a research intensive vocational college university can be. Through genuine partnership with industry, vocational education of this kind becomes research-led teaching, with innovation immediately translated into curriculum. Such vocational education is rich in teaching and research and a stimulus to economic growth and the renewal of our local industry.



Professor Joachim James Calleja elected as EfVET new President

MCAST Principal Professor Joachim James Calleja was elected as the new President of the European Forum of Technical and Vocational Education and Training (EfVET).

THE organization was set up in 1991 as a European non-governmental organization that serves a network of 1500 VET providers in 27 countries serving 750,000 teachers and over 25m learners. Its main activities are advocacy, participation in research activities and sharing of good practices in VET across Europe. EfVET is one of the leading European-wide professional associations of VET providers. Its policy and strategy is shaped, formulated

and implemented by its members. EfVET collaborates but is independent of all government and funding bodies deriving its income from membership subscriptions, grants and sponsorships.

As EfVET's new President, Prof. Joachim James Calleja, will shape and communicate the vision of EfVET whilst participating in different European fora and representing EfVET members' views and interests.

EfVET

EfVET is one of the leading European-wide professional associations which has been created by, and for, Vocational Education and Training (VET) providers. EfVET's policy and strategy is formulated by its member colleges and VET institutions. It collaborates with, but is independent of all government and funding bodies. Its income is derived from membership subscription, grants and sponsorship.



27 countries



**25,000,000
Students**



**1,500
VET providers**



**750,000
Teachers**

A New Collective Agreement for MCAST Academic Staff



◀ Mr Frederick Schembri, President of the MCAST Board of Governors and Mr Marco Bonnici, MUT President

MCAST and the Malta Union of Teachers have signed a new collective agreement for the College's grades represented by the MUT, which will see a rise in salary, resources and standards.

MCAST and the Malta Union of Teachers have signed a new collective agreement for the College's grades represented by the MUT which will see a rise in salary, resources and standards.

The renewed financial package sees a substantial increase in the salaries of MCAST academic staff, together with improved working conditions, thus recognising their level of professionalism when compared to other academic institutions. MCAST is fully aware of the staff's workload associated with the teaching profession within vocational education, and this collective agreement will see that they will be given the necessary

resources and working conditions to carry out their tasks.

MCAST will ensure that staff are able to avail themselves of opportunities for further continuous professional development which will, as a result, ensure MCAST learners are also equipped with the knowledge, skills and competences needed in today's and tomorrow's workforce. MCAST's entrepreneurial imprint and close relationship with industry will see the College become a meeting place for sustainable innovation, whilst learning more on the latest developments in artificial intelligence. Work-based learning will also become a central pedagogical medium to ensure high relevance of content learnt to the real world of employment.

The collective agreement was approved by an overwhelming majority of MCAST members of the Malta Union of Teachers and shall remain in force until the 31st December 2021.

VET SKILLS WEEK ACTIVITIES AT MCAST



The European Vocational Skills Week is a European Commission initiative that aims to promote vocational education and training through events in Member States. During this week, institutions and organizations had the opportunity to share examples of excellence as well as innovative practices within the vocational education and training. This is the third year this event is being organised and this year it took place between 5 and 9 November in Vienna.

◀ *Ms Elaine Pavia, Malta's ambassador for the 2018 European Vocational Skills Week, addressing the career guidance teachers at MCAST*

MCAST organised a number of activities as part of the 2018 European Vocational Skills Week which seeks to inspire people to discover and improve their talents through vocational education and training (VET). The objective is to make vocational education the first choice for young people and adults looking to continue their learning.

ON Monday 29 October 2018, a number of career guidance teachers in secondary schools attended an event at MCAST Main Campus in Paola in order for them to experience hands-on practice in the field of VET, and as a result be able to help and support students who choose to pursue their studies through vocational education.

The teachers were addressed by MCAST Principal and CEO Prof Joachim James Calleja who emphasized that MCAST is the road to employment, as VET leads to increased employability by developing the skill-sets

necessary for a successful career in industry.

Ms Elaine Pavia, who has been selected as Malta's ambassador for the 2018 European Vocational Skills Week, also addressed the teachers and discussed how VET helped shape her career. Ms Pavia, a former MCAST student, is now running Dar Merħba Bik, a shelter for victims of domestic violence.

Ms Pavia joined the guidance teachers and career advisers at the Institute for Community Services and the Institute for Applied Science for their hands-on practice, and shared her experiences with teachers and students.

MCAST signs Memorandum of Understanding with C.V. Raman Group (India)

MCAST signed a Memorandum of Understanding with C.V. Raman Group of Institutions from Bhubaneswar, India. The objective of this agreement is to enable cooperation and exchange between the two institutions in academic areas of mutual interest whilst expanding further the educational exchange between India and Malta.



The agreement included the exchange of staff and students, coordination of academic and scientific activities, development and delivery of joint courses and the promotion of more academic cooperation.

The Maltese High Commissioner to India H.E. Mr Stephen Borg was present for the signing. MCAST President of the Board of Governors Mr Frederick Schembri was also in attendance.

MCAST celebrates Diversity Day

ON Thursday 10 May 2018 MCAST organized a series of activities to celebrate Diversity Day and Europe Day. The events were held at the MCAST Piazzetta, MCAST Main Campus, Paola.

There are presently over 60 different nationalities represented at MCAST and most participated in the activities organised to promote and celebrate this diversity. Events included music and dance, cultural presentations as well as various sports activities including a football tournament, Judo Self-Defence Practice, Ninja Demonstration and a Tug-of-War. The Malta Fire Brigade, and the Armed Forces of Malta were also present and held demonstrations. Students hailing from the Electronics Engineering programmes of study displayed a selection of electronic



engineering projects.

Several stalls were also set up in the MCAST Students' House where students presented different crafts and traditional exhibitions from around the world. Visitors had the opportunity to taste traditional food from different countries as well as view students dressed in traditional costumes.

A series of talks were also held in relation to Europe Day to promote careers and traineeships available around Europe. Speakers from the

European Representation of Malta to the EU, the European Parliament Representation in Malta and the European Asylum Office in Malta were present to share their experiences.

H.E. Marie-Louise Coleiro Preca, the President of Malta, visited the event and met up with different nationality students. Mr Noel Cachia, MCAST member of staff, presented a book entitled 'Stejjer ta' Dari u tal-Lum' to H.E. Marie-Louise Coleiro Preca during her visit to the Malta Stand.



MCAST Lecturer published Short Stories in aid of ALS Malta

MCAST Maltese lecturer Mr Noel Cachia recently published a book in Maltese entitled 'Stejjer ta' Dari u tal-Lum'. Three hundred and twenty five copies were sold and all proceeds were donated to Mr Bjorn Formosa on behalf of ALS Malta. The donation was presented to Mr Formosa during a small ceremony held at the Institute for Community Services at MCAST.

The book is a collection of short novels that reveal and portray experiences and show the emotions of childhood. These occur

and are presented in dialogues, games, feasts, places and times. These stories create and bring about a certain nostalgia of past days and childhood memories. The religious element and spirit is very strong and represented in the short stories. The protagonist ends in prayer, and trusts in God because, 'He knows everything'. Other stories relate on the love towards animals and the appreciation of talents possessed by others.

Mr Noel Cachia, BA Hons (Maltese) has been lecturing Maltese at MCAST since 2008.

GĦASFUR LI JAF KOLLOX

It-tifla kienet tibqa' mbellha hekk kif ommha kienet tgħidilha x'għamlet matul il-ġurnata. Imbagħad kienet tistaqsiha: "Kif taf ma?"

"Gie birdie u qalli."

"X'birdie hu?"

"Għandi għasfur u jgħidli kollox!"

"Fejnu?" staqsiet it-tifla.

"Ma nafx!" irrispondiet l-omm.

"Jiena qatt ma rajtu!" staghgbet iż-żgħira.

"Ma tistax tarah", wegħbitha ommha.

"Għaliex?"

"Għax lili biss jidher, jiġi u jtir fis-sema, 'il fuq, 'il fuq, u 'l bogħod", qaltilha, filwaqt li ħarset 'il barra mit-tieqa u għolliet idejha fl-arja.

Minbarra li Steff kienet teħodilha minn rasha u taralha l-pitazzi, kienet tieħu interess u tkellem lill-għalliema tal-iskola.

Darba, f'waħda mil-lezzjonijiet, meta Miss Pulis kienet qed tispjega kif taqşam il-klum f'sillabi, innutat li t-tifla ma kinitx qed issegwi. Għalhekk għidtilha l-attenzjoni: "Krista! What are you looking for 'il barra mit-tieqa?"

"Mum's birdie?" wegħbitha t-tifla.

"What!" staghgbet il-Miss.

"Il-mummy għandha birdie; jgħidilha kollox fuq!"

"Even mine! Imma tagħna ħamiema!" qabżet Gillian.

"U l-mum tiegħi, jgħidilha kollox il-farfett!" komplja Oliver.

L-għalliema indunat bil-ħrejjef li ħolqu

l-ommijiet, għalhekk qaltihom: "Dawk il-mummies biss jarawhom; you can't qalbi. Now pay attention here, ok!"

"Yes Miss, Sorry Miss!" wegħbuha t-tfal f'xulxin.

Dil-konverżazzjoni fuq l-għasfur kienet tigri wara l-lezzjonijiet tad-duttrina, kif jintemm iż-żfin tal-ballet, meta jispiċċa l-kant mal-kor, kif tirritorna mingħand nannietha jew zijietha, u l-bqija.

Iż-żmien 'il hadd qatt ma stenna, u t-tifla bdiet titfarfu u tikber. Bdiet

tagħmel l-ewwel ħarġiet ma' shabha sal-pjazza, sal-bandli, u sal-ġnien tar-raħal. L-għasfur beda jrabbi l-ġwienah u kulma jmur kien dejjem jickien u jitbiegħed, waqt li jtir liberu fil-wesgħat tal-ispażju. U jekk il-ġenituri kellhom kontroll assolut, issa ddgħajjef.

It-tifla bdiet tattendi l-iskola sekondarja b'diversi suġġetti ġodda kollha b'għalliema differenti. Kienet tistudja, brava u intelligenti. Għamlet it-testijiet u kompliet tavvanza sa ma temmet is-sitt sena. Tat l-eżamijiet, għaddiet u kompliet l-istudji tagħha fl-Università. Hemmhekk ħadet il-Kors tal-B.A. bl-Unuri fl-Ilsien Malti. Fost it-taqsimiet li kellha kien hemm dik tas-Sengħa tal-Kitba. Flimkien mat-teorija, il-kors kien jinkludi sessjonijiet prattiċi ta' kitba u kritika tagħha. Krista ħadet grazzja mal-kitba kreattiva b'mod speċjali mal-poeżija. Kienet taqra ħafna u bdiet tikteb hija wkoll.

Wara tliet snin studju gradwat u ftit xhur wara sabet xogħol bħala għalliema. Krista ħadet l-istat tagħha u l-ġenituri kienu kburi biha. Matul is-snin baqgħu jgħidli interess fiha u jistaqsuha kif inhi sejra fl-istudji, hix kuntenta bil-linja li qabdet, kif kienu l-lezzjonijiet, kif marret fit-testijiet u fl-eżamijiet, x'tip ta' studenti għandha, x'kienet qed tgħallimhom, u aktar. Darba minnhom waqt li kienu mal-mejda, Steff staqsietha: "Kif fhassejtek fuq ix-xogħol?"

"Mela ma ġiex jgħidlek l-għasfur?" wegħbitha. Fl-isfond tad-daħk ta' missierha u hutha, l-omm staghgbet: "Għadek tiftakar!" "U nibqa!" irrispondietha. Imbagħad qamet bilwieqfa u talbithom: "Tuni minuta, ġejja!" B'heffa marret f'kamritha u rritornat b'karta f'idha. Filwaqt li tatha 'l ommha, qaltilha: "Ha, ma! Ara toghgħbok! L-għasfur ma ninsieh qatt!" Steff ħaditha f'idejha u qabdet taqra b'vuci għolja:

"Għasfur li Jaf Kollox

*Għasfur żgħir li tafni sewwa
lilek jiena qatt ma rajt
kulma naħseb ngħid u nagħmel
lill-mama, int kont tmur tgħid!
U x'sar minnek għasfur ħelu?
Kemmi ili ma nisma' bik!
Għalkemm tirtli bħal tfuliti
xorta nibqa' nistenniek!"*

Krista.

MCAST goes Pink for October



◀ Ms Antonella Rogers together with MCAST staff

MCAST ended the month of October on a philanthropic note, as it joined one of Malta's largest fundraising and awareness initiatives, the Pink October campaign. All students and members of staff were invited to participate and donate towards the Pink October initiative. The aim of this activity was that of raising more awareness about breast cancer and how it can be prevented.

MCAST students and members of staff participated in a discussion held at the Student Hub in which breast cancer survivors Mrs Rita Brincat and Ms Antonella Rogers shared their experiences. Mrs Brincat and Ms Rogers delivered inspirational talks to staff and students present, and reiterated the importance of keeping a positive attitude in the face of adversity and illness.

Dr Michael Axiaq, who is also an MCAST lecturer, strongly encouraged the audience to pursue a healthy lifestyle, as this can decrease the risk of any type of cancer. Dr Axiaq advised men to become more self-aware as there have been cases of men that are diagnosed with breast cancer. Ms Mariella Bombagi, a Practice Nurse from the Malta National Health Screening Programmes showed an informational video on how self-examination can be done at home, and answered several questions from the audience. A number of useful pamphlets were also circulated.

Pink cupcakes prepared by the team at the Institute for Community Services were also on sale, and staff wore pink to support breast cancer awareness.

Proceeds from the donation boxes were given to The Marigold Foundation - Malta.

The MCAST EXPO 2018



THE MCAST EXPO, a four-day event aimed at offering visitors a taste of the MCAST learning experience, was held between Wednesday 4 July to Saturday 7 July 2018 at the Students' House, MCAST Main Campus, in Paola.

Students, lecturers, career advisers and support staff will be available under one roof to help visitors discover different aspects related to the College's full-time and part-time courses, student support services available at MCAST as well as career and employment opportunities.

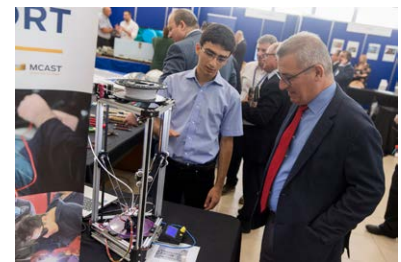
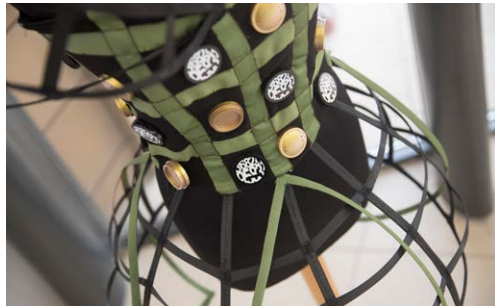
This year's EXPO hosted thirty six MCAST industry partners who provided details on career and employment opportunities within their organisations.

The MCAST's three Colleges, University, Technical and

Foundation representing six Institutes and the Gozo Campus encouraged visitors to engage in enjoyable hands-on activities to experience different career paths in several industrial sectors. The College's student support staff as well as MCAST lecturers were also available to provide career guidance to prospective students and answer any queries about MCAST's courses. For the first time the Institute of Applied Science provided students with a tour of the premises as well as the opportunity to engage in different science experiments within its labs.

Students' end-of-year projects were on display throughout the event, together with a display of teaching equipment and resources.

▲ From left: Mr John Bartolo, Director Student Outreach Services, Hon. Evarist Bartolo, Minister for Education and Employment, Prof Joachim James Calleja, MCAST Principal and CEO, Mr Frederick Schembri, President of the MCAST Board of Governors and Ciaran Jones, Engineering and Transport student in front of the student project entitled 'Horlock Model Railway'.



CURRICULUM 4.0

Quality Learning for 21st Century Needs

by Dr Nadia Vassallo

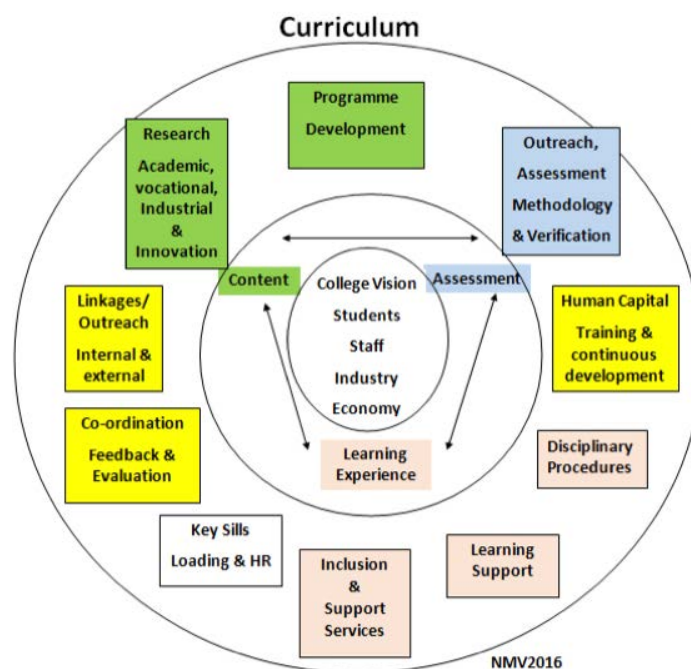


The Curriculum Department, through curriculum design and implementation, has the responsibility to respond to the individual, the economy and to society's needs and drive all MCAST stakeholders, Colleges, Institutes, departments and partners towards owning and sharing one common vision reflected in an engaging and empowering learning experience.

MCAST's Curriculum Department is divided into five areas - The Curriculum Office, the Learning Support Unit, the Inclusive Education Unit, the Key Skills Unit and Entrepreneurship. Service is given to all MCAST Institutes across all levels, and functions and processes emanating from all the five units share common objectives, namely to:

- minimise fragmentation in the services directly related to learners;
- streamline the processes for efficiency and effectiveness;
- ensure that the learners are kept at the centre throughout the major operations of programme design and implementation;
- enhance the learners' learning experience.

In the past three years, while remaining proactive and agile in responding to the needs of industry, considerable effort was put into the establishment of processes and procedures which ensure transparency and quality standards in the operations of this very young department. An online Programmes' Repository available for MCAST staff was launched and programme outlines of MCAST home-grown MQF accredited qualifications were uploaded on the website. Units and new programmes were reviewed to ensure that structures, content, level and credit value in all programmes are in line with NCFHE requirements, and a considerable number of awards and qualifications were developed in collaboration with industry, government institutions and NGOs.



Towards a Curriculum for the 21st Century

For several years Vocational Education settings have been toying with words and phrases like 'interdisciplinary', 'inquiry-based learning' and 'experiential learning'. MCAST has included these approaches in some of the units and programmes and lecturers have also taken such approaches into account in their assessment processes, through embedding, project work and through laboratory, salon or workshop practice. Through the Apprenticeship Department, we have also enhanced placements, apprenticeships and internships, giving nearly every student a direct experience in industry.

Learning to thrive in a fast changing world is where we should be going next to prepare learners for the 21st century demands. What were previously James Bond fantasies, intelligent robots, automation and self-driving cars are today's realities. This drastic speedy change surely comes with significant challenges and we must question and act upon what is needed to prepare our present and future generations. "Rapid progress in AI indicates a much broader range of jobs than previously thought could be carried out by machines" (OECD, Future of Work, 2016). Indeed anything that can be measured through formulae and rules will be automated and we cannot and should

not compete with machines. Hence, we cannot continue to propose curricula that are based on a 'knowledge in = knowledge out' approach because that is what machines do best. An education system designed for industry 4.0 requires transformation, from a facts and procedures based system to one that empowers learners to actively apply that knowledge in inquiry based learning and problem solving to come up with innovative proposals and solutions.

A problem our nation is encountering today is the retention of learners in education. The issues are not the lack of programme choices, lack of motivation or lack of good brains. On the contrary, the problem is an ever increasing industry demand that prefers to retain apprentices even though less qualified to meet their HR capacity. Obviously, in the long run industry benefits from highly qualified staff, so training is surely needed directly in industry. This is where we should be. We cannot continue to expect the learners to come to closed fixed spaces for long fixed hours but we have to reach out to them, revisit the concept of 'traditional classrooms' with ones of blended learning and flipped classrooms, and be with industry in industry. We need to be more timely and flexible in our proposals.

Curriculum Design

In view of the upcoming Programmes Cyclical Review, the point of departure ought to be an acknowledgement of the strengths within our system and an understanding of how we can make these work in our favour in this project. The NCFHE Referencing Report has long established Knowledge, Skills and Competence descriptors for each level on the Qualification Framework. MCAST, as a self-accrediting institution operating according to NCFHE standards and regular EQAs, has been using this framework as the spine of its programmes for a number of years now and many institutions, both local and international, turn to the College for support and guidance in this area.

The MCAST programmes have come a long way but now we need to go a step further. The idea that

to ensure a quality culture we need to have in place one common student experience, with one way of standardising assessment and measuring achievements, is limiting the possibilities to entice learners into further studies. Instead, working within the parameters of the overarching NCFHE descriptors, with non-prescriptive LOs and ACs, would allow for a higher degree of interpretation by learners and professional assessors (lecturers) while giving space to employers and industry partners in the negotiation of learning plans for learners.

Hence the key pedagogical components in this approach are the space and structures for student support, personalisation of the curriculum, and an innovative approach to assessment.

MCAST is proud of the support services offered to students so far. Many students have successfully completed programmes because they were embraced by caring professionals who accompanied them through their studies. In the 21st century other new structures need to be considered. Now we need to be looking at communities of learning, which do not necessarily imply geographical proximity and regular synchronous communications. Instead they promote concepts of online asynchronous conversations, which learners can engage in individually, as well as in smaller groups as part of their enquiry-based learning or research. Staff collaboration in 'team-teaching'; the involvement of expert guests to provide up-to-date professional or disciplinary subject or industry knowledge; and students' ability to own responsibility in developing their own peer support networks are all crucial for the success of such approach.

A substantial challenge for Further and Higher Education continues to be the personalisation of the learning experience in such a way that it addresses the students' needs, while remaining logistically and financially viable. This can happen if personalisation rather than at programme level is at the level of learners' inquiry, as they follow the curriculum and pedagogy intended for them to take actions to improve in the workplace. Our role is to entice industry (as a key partner) to give space and opportunity with the scope of minimising the training (costs) that would be required for

new employees. Also minimising the period (costs) new employees take to become efficient, solve problems etc. By providing space and opportunity for learners to be creative, to problem-solve and to be innovative, learners can become for industry an opportunity for research, innovation and growth.

Flexibility needs to be reflected in assessment too. We need to depart from the insecurity that for assessment to be valid it has to be written, examined and timed. The practices of recognition of prior learning, of which MCAST was a pioneer, need to be strengthened. Academic literacy cannot and should not be the only medium through which learner competence is measured across all programmes since building a vocational education and training on traditional and academic modes of assessment does not tally.

The curriculum has to respond to the needs of the individual by taking into account the ways how people learn, how they reach competence in the different subject areas at the different levels, and how they grow into responsible individuals. Learning and positive educational experiences transform individuals and their life chances. Therefore Curriculum 4.0 is not only a proposal to change what is learned, but how it is learned, so that learners are given the opportunity to take control over their learning paths and become co-creators of knowledge in networks of research and professional practice (Graham Brown, M. 2018).

Conclusion

What is being proposed here is a change in strategy and policy, culture and practice. Therefore it would be highly ambitious, unrealistic and unfair to expect that such a drastic culture change is embraced by all stakeholders immediately, because it is a moving away from the 'norm' towards a view of curriculum which may be unfamiliar and challenging. This should be a collegial effort backed by the support of an innovative institution which is MCAST. The

Curriculum Department has already proposed a first set of workshops which were very well received by staff across the College. We are committed to continue these initiatives, alongside the new Masters in Vocational Education Applied Research 4.0, and other support structures for staff, to walk the journey to transformation together as one College sharing a common vision and the common goals for present and future learners.

Curriculum Department at ERASMUS+ Project in Uzbekistan



▲ Participants during the Erasmus+ project RUECVET in Nukus, Uzbekistan

THE Curriculum Department is currently working on the Erasmus+ project RUECVET which aims to pilot the European Credit System for Vocational Education and Training (ECVET) to the national Vocational Education Training (VET) systems of Russia and Uzbekistan.

During the first week of November 2018, MCAST participated in the fifth transnational meeting of the project which was held in Nukus, Uzbekistan. The highlight of this meeting was the official opening of a training centre at the Nukus State Pedagogical Institute. This training centre is one of four centres that have been made possible through this project. The other centres are located in Kokand in Uzbekistan, Tver and Ekaterinburg in Russia. These centres will be used to train Uzbek and Russian mentors in VET to be able to apply ECVET principles and methodology in their education institutions, thus increasing mobility opportunities for their students.

Together with education institutions from Cyprus and Latvia, MCAST is sharing its experience as well as supporting Russian and Uzbek education institutions in this project.



YouNG Goes Further

THE newest Erasmus+ project that MCAST's Curriculum Department is working on, is YouNG Goes Further. Together with partners from Slovakia, United Kingdom, Bulgaria and Poland, MCAST aims to instil enterprise skills to EQF Level 1 to 3 students. The 30-month project will see the partners working together on several interesting initiatives, mainly the development of learning and teaching material, the development of programmes to provide support for vulnerable students, the development and delivery of training for staff, the training of business mentors and the planning and organisation of a summer camp for students.

The first transnational meeting for this project was held in Bratislava, Slovakia in October 2018. This served as an opportunity for all the partners to familiarise themselves with the way forward for the management of the project. Being the leader of the project's first intellectual output, MCAST is already working on the development of eight lessons which should enable students to gain enterprise skills while working on their key skills modules as part of their programmes.

JUMP2EXCEL

Joint universal activities for Mediterranean PV Integration excellence



▲ Dr Ing Brian Azzopardi, MCAST Energy Principal Investigator

MCAST is launching the EU-funded Horizon 2020 JUMP2Excel project which aims to step up and stimulate the scientific excellence and innovation capacity of MCAST Energy in the field of Photovoltaic (PV) Integration, including related technologies such as energy storage and ancillary services and electricity markets.

THIS is achieved by joint activities with a group of top world leading research centres including Centro Nacional de Energia Renovables (CENER) in Spain, Commissariat a l'Energie Atomique et aux Energies Alternatives (CEA) in France, and the University of Manchester (UNIMAN) in the United Kingdom, which will provide access to an extensive network and contacts in the field. The activities are mainly knowledge exchange, and networking through a series of workshops, winter/summer schools, training programmes, internships, exchanges, meetings and mentoring.

MCAST Energy is experiencing

growth through the energy research being carried out on campus. In addition, MCAST will be hosting the first 'living laboratories' on the island, used for real-life applications together with delivery training and research. This twinning proposal will provide a stimulus of required knowledge in an effort to become more efficient and competitive, whilst aiming for an international level of excellence.

JUMP2Excel is designed for all partners to benefit from the project beyond the three-year funding period. This will result in an enhanced profile of MCAST Energy which in turn will reflect the positive development of Malta's knowledge economy

including its ambition to become a regional energy hub, solar country and blockchain state.

A Stakeholders Information Session was held on the 25th of October, at the MCAST Main Campus in Paola. The public and interested stakeholders were invited to join in an open discussion about the project, its objectives and the development of a network of researchers, practitioners and interested members of the public.

The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 810809.

MCAST Energy paper on Photovoltaics Grid Impacts selected as Best Conference Paper on Distribution Systems, Microgrids, and Renewables at the 2018 IEEE PES General Meeting, Portland

THE paper entitled "Solar Photovoltaics Penetration Impact on a Low Voltage Network: A Case Study for the Island of Gozo, Malta" was selected as Best Conference Paper on Distribution Systems, Microgrids, and Renewables. The paper was presented at a special session during The Institution of Electrical and Electronics Engineering (IEEE) Power and Energy Society (PES) General Meeting in Portland USA.

The research work was a collaboration between the MCAST Energy Research Group (MCAST Energy)

and Enemalta plc. The study was the result of Yesbol Gabdullin, lead author, Bachelor of Engineering (Hons.) 2017 dissertation, now a Masters of Research (MRes) candidate at MCAST Energy.

The paper was co-authored by Dr Ing. Brian Azzopardi, MCAST Energy Principal Investigator, Ing. Carmel Xerri, Enemalta's Executive Director Distribution Systems, Karl Cilia, Divisional Manager Systems, and Ing. George Portelli, Distribution Manager.

MCAST Energy presents three papers at the 7th World Conference on Photovoltaic Energy Conversion (WCPEC-7), Hawaii

MCAST Energy Research Group (MCAST Energy) Principal Investigator Dr Ing. Brian Azzopardi and two Master of Research (MRes) candidates, Mr Yesbol Gadullin and Mr Artem Sadula, presented three papers at the 7th World Conference on Photovoltaic Energy Conversion (WCPEC-7), Hawaii. MCAST Energy contributions ranged from innovation updates on emerging solar cells technology, impacts of photovoltaics (PVs) and electric vehicles' potential natural mitigation of PV impacts on the electricity grid, and system-based study at MCAST Campus on the data analysis of MCAST micro-grid, the latter as part of 3DMGrid Project.

3DMGrid project: Design, Development and Demonstration of a future-proof active Smart MicroGrid system is partly funded by the Malta Council for Science and Technology (MCST) and locally partnered with ESDL Ltd. and GEOSYS Ltd. among a consortium of 10 partners from Jordan, Spain, Germany, Greece and Cyprus. Additional modelling work was also recently presented at the 5th IEEE International Energy Conference ENERGYCON 2018 in Cyprus.



MCAST Erasmus+ Academics' Mobility at University of Niš, Serbia

RECENTLY Dr Ing. Brian Azzopardi, MCAST Senior Lecturer II, participated in a staff mobility ERASMUS+ programme at the University of Niš Serbia. The mobility included detailed meetings of research and training activities as well as collaboration in the field of power electronics, electrical drives, power systems, energy harvesting and sensing.

We are here for YOU



▲ MCAST Student Support Services members of staff

AT MCAST Student Support Services, we are a team of professionals consisting of the Director, one Senior Counsellor, three full-time Counsellors, one part-time Psychotherapist, a Student Support Services Administrator, the Institute Student Support Services Coordinators and the Administrative Officer, who contributes to the smooth running of this department. We all share a common belief that everyone has a right to achieve their optimal goals and be supported and respected throughout their life. We are here to assist you in this process if you think you are going through any difficulty.

Why speak to a counsellor/therapist?

Talking to friends and family is very important. However, sometimes having someone who is trained to listen in a non-judgemental manner, can support you further in dealing with your difficulties. We do our best to provide you with a safe environment in which you may feel comfortable enough to explore different options for problems which are causing you distress.

What does seeing a counsellor/therapist involve?

Your first appointment is generally held with the Student Support Services Administrator so that we can learn more about you and your presenting difficulties. You will also be guided through procedures and to the most appropriate service at MCAST, but this may also be an opportunity for you to ask questions. After this initial intake session, you will be assigned to a counsellor/therapist. Counselling/therapy sessions last between 50 and 60 minutes and the frequency of these sessions is agreed upon with your counsellor/therapist according to your needs. As a staff member, you can contact directly the Director Student Support Services or the Senior Counsellor.

Why come for counselling/therapy?

In counselling/therapy you can deal with personal problems that are negatively affecting you. Whatever life has offered you, you have the power to manage your own life positively and to take your own decisions. Through Talking Therapies, we aim to help people challenge the way they think, feel and behave. There are many different approaches that the counsellor/therapist can use in order to help you bring about your desired changes/improvements.

Confidentiality

If you feel that you require support, contact us by sending an email on the email address found below or call us on any of our telephone lines. If you decide to send us an email, it would be very helpful if you could include your mobile number and a copy of your time-table so that we would be able to give you an appointment at our earliest. If you feel that your situation is urgent, you can also drop in at our offices at the Student House. Staff members can send an email directly to the Director Student Support Services or the Senior Counsellor.

MCAST Student House, Level 3, Main Campus, Paola

2398 7115/7129/7133/7165/7186/7187/7189

counsellors@mcast.edu.mt



Gozo Campus

2398 7665/7666/7667

studentsupport-gozocampus@mcast.edu.mt

STUDENT OUTREACH SERVICES

New Integration Unit at MCAST

Since its foundation MCAST has always embraced a philosophy of openness, inclusion and integration. Along the years the College student population maintained a constant increase in numbers and a steady rise in the population of international students.

INTEGRATION is a two-way process of openness and acceptance by the College and local students with a sense of willingness to changes in modes of behaviour and thinking and openness to the local context by international students. Mutual adaptation is the key through which a sense of belonging in every student is created. This sense of belonging will in turn strengthen the participation of international and local College members in the design of integration and implementation policies (e.g. language support, integration courses, cultural mediation, promotion of dialogue, activities and projects celebrating diversity etc). Genuine integration through effective education measures rebuts

cultural distance and potential discrimination.

In September 2018 an Integration Unit within the Students' Outreach was set up. Its aim is to enhance practices already in place and to formalise strategies and innovative mechanisms in order to truly celebrate diversity and solidify the integration of all College students. The Unit will look to accompany international students on their journey at MCAST while at the same time affirming the already welcoming environment on Campus. The aim is to encourage MCAST students to become aware of this new reality, grasp it and consequently benefit from the founts of knowledge that international students bring with them on campus and beyond.



James Camilleri

MANAGER (INTEGRATION UNIT)
STUDENT OUTREACH SERVICES

*Level 3 Room 307
Students' House
Main Campus
Corradino Hill
Paola PLA9032
Malta*

t. 239 87329

The Integration Unit will also be supporting members of staff through professional development. It will be functioning within the context of the National Migrant Integration Strategy and Action Plan Vision 2020: Integration - Belonging and Liaising with the Inter Ministerial committee on integration. Contacts with NGOs working in the field of integration will be maintained and broadened for the benefit of MCAST students.

MCAST Gateway to Industry

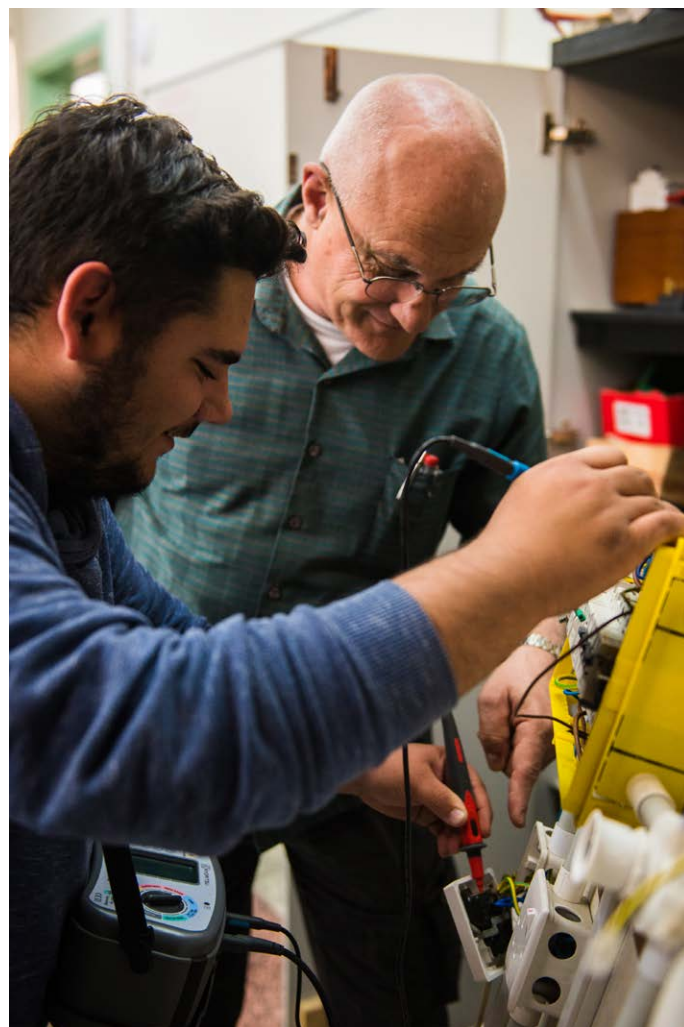
MCAST Gateway to Industry, or MG2I, is the commercial arm of MCAST. Set up in 2008, MG2i was conceived with the aim of supporting, enhancing and complementing the College's operations from a financial as well as operational perspective. The core business of MG2i consists of training provision to a broad target audience. This includes the general public particularly through the set up and delivery of a varied portfolio of part-time courses, which services around 4000 students per year. These courses range in duration as well as in level, and offer a selection that caters for all tastes and ambitions.

PART-TIME COURSES

MCAST Gateway to Industry (MG2i) recently launched the new prospectus with over 300 part-time courses ranging from short to accredited courses up to Degree and Master Degree Programmes.

This year the part-time courses 2018-2019 were accessible through the website, which has been redesigned to have a fresher look and a more user-friendly interface, and also through a printed version which was distributed to every household in Malta and Gozo. The prospectus has been redesigned and reorganised, with existing courses grouped by category. A number of new and interesting courses have been incorporated with our current programmes. As of this year, a bundle system is being implemented which enables candidates who wish to apply for multiple courses to do so at an advantageous rate. This is separate to the normal rates applicable to candidates applying for single courses.

The courses on offer in the part-time courses prospectus range from hobby courses up to fully accredited courses including degrees at Master level. Adults and young learners over the age of 16 may apply for these part-time courses to acquire new skills and qualifications in order to progress in their careers. Most of the courses are fully accredited as per the Malta Qualifications Framework.





The part-time courses were designed to be attractive and convenient to adults whose work or family commitments make it difficult for them to follow full-time education, but who would still like to acquire skills and qualifications to secure new jobs, seek career advancement, or learn more about subjects that interest them. Young students aged 16 and over can enrol in these courses in an effort to support their full-time education with additional knowledge, skills and experiences.

Bespoke courses for industry, currently offered by MCAST, are also created according to current trends and needs. Accredited courses at various MQF (Malta Qualifications

Framework) levels are very popular since they all help to improve and influence employment possibilities. All tutors are qualified experts in their field, and the relevant resources and facilities are provided to complement the courses.

The part-time courses prospectus has also been designed to address teenagers wishing to get a glimpse in the world of vocational education through the promotion of the MCASTeens Discovery Summer Camp, which was successfully launched this summer, giving youngsters the opportunity to enjoy a fun-filled, educational summer on the premises at MCAST Paola. Eight different themes in as many weeks inspired a variety of activities and hands-on projects.

TRAINING FOR INDUSTRY

ANOTHER important pillar of MG2i is what is known as T4I – Training for Industry. By working closely with and for industry through the provision of tailor-made training programmes, MG2i offers flexible solutions and timely response to individual clients' needs. This also allows industry to work in close contact and thus learn about MCAST and its offerings, hence creating space for potential synergies which may also benefit MCAST full-time students and staff members.

Recently, MG2i has invested heavily in attracting foreign paying students to courses that are both part of its full-time

prospectus as well as others that are custom designed to the exigencies of the respective market. To date, MG2i has garnered a healthy number of students from India, and is currently fostering relationships in Vietnam, China and other countries from outside the EU. Moreover, MG2i is also working towards the export of MCAST grown qualifications, and is indeed currently offering training to Engineering students by an MCAST team of lecturers in Kazakhstan.

MG2i is undoubtedly going through exciting times, as it explores new possible avenues for growth and expansion in all aspects of its business.



MCAST signs agreement with Transcargo International

THE Malta College of Arts, Science and Technology (MCAST) signed an agreement with Transcargo International, a company that deals with the transshipment of oil and gas. Transcargo International is also a training hub offering courses in electrical and mechanical engineering.

This agreement will see MCAST lecturers travelling to Kazakhstan for a period of six months in order to run a study programme for thirty students which will provide them with necessary skills to work in one of Transcargo's companies based overseas, particularly in Kazakhstan. The training will take place at Apec PetroTechnic Higher College in Atyrau and students will be studying Electrical Engineering Systems (MQF Level 4).

Cooperation between MCAST and Transcargo International has been taking place for circa four years in which the company was sending students from Ukraine and Kazakhstan to conduct their training and study programmes in Malta.

This is a first for MCAST's internationalization strategy, as the College continues to explore similar arrangements with other countries in other areas of study including business and administration and care services.

At present, there are over seventy students from India studying at MCAST with possibilities of students from Japan, Vietnam and China following their studies at the College, including at MQF Level 6 and Level 7.



MCAST welcomes International Students

MCAST organized an interactive working lunch with 16 students from India who were in Malta following the Undergraduate Certificate in Health Care (Psychology) at MCAST.

The event, organized by the MCAST Gateway to Industry, provided a platform for the students to discuss the course they are undertaking, and more broadly, their experience in Malta.

The number of foreign students studying at MCAST is continuously increasing as the College intensifies its internationalization efforts.

Following the lunch, MG2i General Manager Stephen Vella commented, "It is our belief that the presence of international students will enrich life on campus. Diversity is the key to greater understanding of different cultures.

This multicultural vibe is already being felt on campus, and will continue to flourish during the coming months with the arrival of more international students who choose MCAST as their study destination to further their studies."

The group of students also met with MCAST Principal Prof Joachim James Calleja who welcomed the students to the College and wished them well in their studies. Prof Calleja said MCAST will provide them with specialized training and robust qualifications thanks to MCAST's excellent infrastructure and teaching staff. This experience at MCAST will equip the students with the necessary skills and expertise in order to take care of others in their highly important profession.

IN TOUCH WITH MCAST ALUMNI

I Graduated in Horticulture. What Next?

BY DAMIAN VELLA

AFTER five years of hard work and studying at the MCAST Centre of Agriculture, Aquatics and Animal Sciences, I successfully completed a Bachelors Degree in Horticulture. I then got the opportunity to start working as a Vocational Subject Officer at the Maria Regina College Żokrija Secondary School in Mosta. My general duties included the preparation of all activities related to the delivery of Vocational Agribusiness study units at this secondary school including the practical and class work sessions. Apart from all the land preparation carried out before each lesson, I also had the great opportunity to explain and demonstrate agricultural techniques to students following these units. Thanks to the practical sessions during my five years I spent studying at MCAST's Centre of Agriculture, Aquatics and Animal Sciences, I was able to carry out such tasks and pass my experience to other students eager to learn this fascinating science.

Being able to work with students was immensely satisfying. Although it was challenging at first, it was great to meet and cater for so many different needs and characters. Passing on my experience to others and seeing the students understanding and enjoying the subject was very rewarding and gratifying especially when I witnessed students talking about the agricultural sector with such



passion. My daily duties included the supervision and maintenance of rabbits, poultry, fish and various other animal husbandry tasks. This included the cleaning of rabbit cages, water changes, amendments of fish aquaria and the cleaning of chicken coops, amongst others. Another important duty was to keep records related to mating, birth, hatching, weight progress, deaths, fertilizers and sales on the farm. Record-keeping was an essential focus in my studies at MCAST and one that helped significantly in this work.

Recently, it was time for me to move on. I am currently employed as an Agricultural Officer with the Agricultural and Rural Paying Agency (ARPA) at the Front Offices in 'Ta' Qali'. My work here is to receive and

assist farmers in subsidy applications, including subsidies for tomato and grape producers, rubble walls maintenance grants and others. In addition, I also have the duty to meet the farmers at the front office to verify any doubts or questions which they may have on various matters. It was definitely not an easy decision to switch jobs. I am still in my early days at my current work but so far I am doing well and every day I wake up looking forward to learn new things. My journey has just started and I realize that the courses at MCAST helped me to be prepared for every job opportunity that arises in this sector. The combination of practice and theory that MCAST offers facilitates the transition from study to work.

€1 million project for collaborative research on green spaces and nature-based solutions



▲ Dr Mario Balzan

Recent EU-funded research carried out by the Institute for Applied Sciences has mapped green spaces, and assessed the actual use of these, and the arising social, economic and environmental benefits. This study found a strong gradient in terms of green spaces availability from rural to urban areas and, as a consequence, lower capacity of urban centres to provide key benefits to the well-being of society.

BENEFITS provided by urban green spaces include the reduction of ambient temperatures, opportunities for recreation, and the reduction of flooding by limiting storm water runoff, removal of air pollutants and noise buffering by vegetation.

The accessibility of green spaces is also critical as these provide opportunities for recreation. This is demonstrated by another recent study using the outdoor game Geocaching, described as the world's largest treasure hunt. This research was led by one of the undergraduate students reading for a B.Sc.(Hons) in Environmental Engineering, and results obtained from this study indicate that this recreational activity is strongly associated with the presence and accessibility of urban green spaces and the value of the surrounding landscape.

These results demonstrate a strong need for land use planning to promote the use of 'nature-based solutions', which create spaces for people, and by doing so, bring back biodiversity to cities and landscapes. The need for improved use of nature-based solutions also appears to be strongly felt by Maltese citizens, who were the most likely in the EU to be in favour of the promotion and use of nature-based solutions. Also in a recent Eurobarometer Malta Survey was the EU member state with the highest fraction of citizens favouring urban greening (81%) measures.

Our research team at the Institute of Applied Sciences

has seen this as an opportunity to launch a project which, by working closely with policy-makers, businesses and stakeholders, will develop a strategy to build a research and innovation network to advance the development and uptake of nature-based solutions. These are some of the goals of the recently funded project ReNature (Promoting research excellence in nature-based solutions for innovation, sustainable economic growth and human well-being in Malta).

The ReNature project has been funded by the Horizon 2020 programme Twinning call and has a budget of around €1 million. During ReNature, the Institute of Applied Sciences will collaborate with renowned Universities from Ireland, Italy, and the United Kingdom with a long experience in this sector. This collaboration is expected to offer an opportunity to increase the institutional and national research capacity within this sector, develop a national research community with strong international collaborations, and develop new practical solutions for sustainability. The ReNature researchers aim to foster a culture of evidence-based environmental decision-making and planning for human well-being and during this study an open-source data repository will be developed to openly share the outcomes of the project with practitioners and the general public. This open repository will include protocols, maps and other spatial data that may be used in environmental decision-making and landscape and urban planning.

Wastewater Treatment Course at MCAST



A unique ad hoc one-week wastewater treatment course focusing on biological micro systems was held at the MCAST Water Research and Training Centre. This event was organized by Leo Groendijk, an external expert from Van Hall Larenstein University of Applied Sciences (Leeuwarden, Netherlands) as part of the Erasmus + KA2 project entitled 'Connect 2018'.

The latter aims to connect professionals and students from the two European Capital of Culture cities for 2018. This training programme is a first for MCAST and aims to support the College's interest in water by providing four micro-wastewater treatment systems and training material to be used by MCAST lecturers during the course of their work.



As part of the training course, a competitive challenge was organized during which participants were asked to develop different micro-wastewater systems. A small token was awarded to the winners.

Mr. Groendijk apart from working as a lecturer, is the founding member for the Dutch NGO 'waterforeveryone' (<http://waterforeveryone.nl/>). This NGO works on providing technological solutions and education to ensure that people in poor countries would have access to drinking water.

MCAST presents paper at the European Congress of the Society for Ecological Restoration, Iceland

MCAST has recently presented the outcome of a research project on Ecological Restoration and Ecosystem Recovery, at the Society for Ecological Restoration's European congress held in Reykjavik, Iceland, between the 9-13 September 2018. The research work was carried out by an MCAST graduate student in the BSc Environmental Engineering programme, Mr Timothy Micallef, in collaboration with an MCAST resident academic, Dr Eman Calleja.

The research paper entitled 'Bird diversity as an indicator of ecosystem recovery in an urban Mediterranean woodland' looked at the effect of ecological restoration in the Tree Reserve of Wied Għolliqqa on resident, migratory, and wintering species of birds visiting the reserve.



The research found that over 70 different species of birds visit or reside in the valley at different times of the year, some spending longer periods of time there. Differences in bird diversity were also observed between different habitats found in the valley. The valley was found to be an important ecological corridor in an area which is heavily urbanized, providing refuge and food to many different species.

In the presentation, Dr Calleja reiterated the importance of green urban spaces within the urban fabric and the advantages brought about by restoring such places to sustain viable ecosystems that will then be used by many species of birds and other fauna.

This research is just one of many different applied research projects undertaken in Environmental Sciences at the Institute of Applied Sciences at MCAST.

MCAST Environmental Engineering students on two-day visit to Gozo



Students reading for a BSc (Hons.) in Environmental Engineering at MCAST embarked on a two-day study visit to Gozo where they were exposed to the professional skills and problem-solving tools that enable them to tackle complex environmental and sustainability problems.

THE two-day visit included intensive environmental sampling sessions which allowed the students to collect, analyse and evaluate data to deduce the state of different habitats and the environment, in relation to a wide array of anthropogenic activities (human activities). Different habitats that characterise Gozo were also considered, ranging from valley systems to the sea shore, and from fresh water bodies to coastal waters. The activities included measuring and comparing the water quality by using in situ (on-site) and ex situ (off-site) techniques, as well as habitat mapping of both aquatic and terrestrial environments.

Besides learning and applying different sampling techniques to different real-life case studies, the students were also encouraged to suggest mitigation measures to reduce the negative impacts related to human activities. This helped students appreciate the importance of sustainable measures on a wide array of crucial ecosystem services (the direct and indirect contributions of ecosystems to human wellbeing).

The study visit offered the cohort an opportunity to apply theoretical concepts discussed in class, allowing them to develop and strengthen real-life skills that go beyond the lecture room which are also important for day-to-day professional activities in their field.

According to Cedefop (the European Centre for the Development of Vocational Training), 'Vocational Education and Training (VET) can play a strategic role in providing the EU with a workforce ready for the challenges laying ahead' (Cedefop, 2017). A combination of theory and practice applied to the real world makes the delivery of fundamental concepts related to the students' chosen profession more effective. MCAST, the



country's leading vocational and training institution, strives to wed theory to practice and to relate learning to real world contexts. This helps students become active inquirers, tackle complex issues, critique alternative solutions from both technical and ethical perspectives, and participate with others to solve problems.

The students were accompanied by MCAST Institute of Applied Sciences lecturers Mr Juan José Bonello, Dr Eman Calleja and Ms Stephanie Camilleri Jones.

In the presentation, Dr Calleja reiterated the importance of green urban spaces within the urban fabric and the advantages brought about by restoring such places to sustain viable ecosystems that will then be used by many species of birds and other fauna.

This research is just one of many different applied research projects undertaken in Environmental Sciences at the Institute of Applied Sciences, MCAST is offering environmental programmes at levels 4, 5 and 6. The latter programme leads to a Bachelor of Science Degree in Environmental Engineering.

Centre for Agriculture, Aquatics and Animal Sciences

The Centre for Agriculture, Aquatics and Animal Sciences within the Institute of Applied Sciences delivers training and undertakes research in three major areas of study, namely Horticulture, Animal Management and Fish Management.



HORTICULTURE courses provide students with the opportunity to learn about various aspects of Plant Production including Greenhouse Production, Floral Design, Viticulture and Wine Production.

The Centre is also involved in the coordination of a Horizon 2020 project (FOWARIM) which seeks to increase the research capacity of staff in the use of water in agriculture and through which essential research is being undertaken with the help of foreign experts in this important field of study.

Results of this research are essential for the better management of water resources on a national level and for farmers to make more efficient use of their on-farm water sources.

Animal Management courses have students following a pedagogical journey that will take them on an exploration of the sciences related to Livestock Production, Veterinary Medicine, Equine Husbandry, and Apiculture. Students will get the opportunity to work with on-campus animals together with those they come across in their work placements on farms and

in veterinary clinics. Research undertaken by degree students is varied and can range from topics related to animal-assisted therapy to those through which results can benefit livestock farmers and related stakeholders. Whenever possible students will be given the chance to disseminate these results to the industry partners who are usually more than delighted to learn about the research conclusions reached by the Centre's students.

The Centre also offers courses in Fish Management which are made up of the study of sciences related to Aquaculture, Fisheries and Aquariology. Students get to learn about fish hatchery production, fisheries stock management and aqua-scaping. The Centre also launched the Malta Small-Scale Fisheries Network to assist industry in its needs for research and science-based policy advice.

The Centre strives to remain a point of reference for players in the industry in terms of training, expertise, research, policy advice and lobbying. It gives priority to networking and awareness-raising in areas related to the sectors it provides training in.

IS-SAJDA U T-TISJIRA

MCAST holds Fish Event 'Food from the Sea'



ON Friday 22 June 2018 the Centre for Agriculture, Aquatics and Animal Sciences within the MCAST Institute of Applied Sciences organized an evening event entitled 'Food from the Sea – Is-Sajda u t-Tisjira'. The event took place at the Centre's premises at Luqa Road, Qormi.

This celebration, also referred to as a 'free fish party for all the family' formed part of the European Maritime Day, and showcased the work of local fishermen, students and lecturing staff within the Centre for Agriculture, Aquatics and Animal Sciences. Persons that attended the event had the opportunity to taste different types of local fish and learn more about the importance of a balanced diet and the cooking of under-utilized fish species. Information on small-scale fishing and its social importance in the Maltese Islands was also disseminated. Live cooking and tasting sessions were carried out in collaboration with the Mediterranean Culinary Academy's chefs cooking on site and sharing recipes with attendees. A talk on 'Fish for a Healthy Lifestyle' was also delivered.

During this event the Centre also launched the Malta Small-Scale Fisheries Network.



Science in the City

DURING the Science in the City event held in Valletta, the Institute of Applied Science showcased its further and higher education courses in the fields of applied sciences and chemical technology, environmental engineering and nursing. A number of educational activities were carried out. These include the examination of different rock types under the microscope to study the constituent minerals and textural properties. These are considered as being important steps in establishing a rock's identity. In addition, it was possible to discuss the uses of different minerals and rocks in different cultures and throughout history. Molecular models were used in an educational quiz carried out with children, who were asked simple questions in order to identify molecules of water, methane, caffeine, paracetamol and others. The Institute also showcased other chemistry equipment which is used in industry and on which students train throughout the academic year. During this event the Centre also launched the Malta Small-Scale Fisheries Network.

MCAST in Beijing

Dr Damian Spiteri, Senior Lecturer in Health and Social Care at the Institute of Community Services, was invited to deliver a presentation at the Forum of Frontier Development at Minxu University in Beijing, China.

DR Spiteri, who was in China in October, was invited to present at Minxu University in virtue of his wide lecturing experience in the field of education and more specifically in the field of promoting intercultural sensitivity, a topic which he incorporates into the courses he delivers at MCAST. Dr Spiteri is the author of the book 'Multiculturalism, Higher Education and Intercultural Communication' and is in the process of completing a second book on Refugee Education. He has lectured at MCAST for around ten years.

China is one of the most populated countries and has a history that spans back to ancient times. It is probably the only civilization that has existed for 5,000 years in the same land. Its unique written language also makes it stand out, as does its cuisine and its traditional Oriental architecture which is well-known worldwide and has often been used to illustrate story books as well as in advertising campaigns for products that are manufactured in the Far East. The Chinese people are mostly Han but there are also 55 ethnic minority groups within China. Much of the conference was dedicated to exploring China's status as a country with so many different ethnic communities present and how to foster greater understanding between them.

In his presentation, Dr Spiteri compared the different ethnic groups in China to the different nationalities in Europe, explaining that while the Maltese mostly form part of the same ethnic group, Maltese people also identify with Europe. In Europe there are people of many different nationalities, each country having its own set of traditions, cultures, and people with different world-views. Dr Spiteri



▲ Dr Damian Spiteri

observed how – in both China and Malta - there is a need for education to enable students to generate intercultural communication skills. By opening its doors to students from abroad, both from EU countries and from other parts of the world, MCAST is serving as an institution that enables students to acquire intercultural skills while they are training to become a part of tomorrow's labour force.

Dr Spiteri was also asked to deliver two lectures at the Beijing Normal University. He gave these lectures to post-graduate teacher educators following an international course of studies in China. In one of his lectures, he explored how schools would become more engaging if they adapt themselves to the cultural background of students. In the other lecture, he explained the importance that students do not simply see their way of doing things as the only way of doing things. In this way they would adopt an ethnocentric positioning where they would put themselves at the centre of the world and not let anyone else in. Rather, they need to understand that there may be more than one way of doing things. This would enable them to consider the perspective of students from other cultures when thinking through matters. Consequently, they would be more empathic to other people.

Empowering our Service-users



by Analise Livori Bonici Mompalao and Daniel Borg, students following a degree in Health and Social Care Management at the MCAST Institute of Community Services

WE have chosen to follow a degree in Health and Social Care Management at the Institute of Community Services as we believe that the skills, knowledge and experience that we acquire from this course will provide us with the tools necessary to work with service-users in a range of settings, including settings that attend to the needs of the elderly, children in care, unaccompanied minor asylum seekers, the mentally ill, people with special needs and substance-abusers among others. There are

many reasons why people may need the services of care workers. These are likely to include complex familial, social, economic and or political reasons.

When Dr Damian Spiteri, one of our lecturers, approached us and asked us if we would like to participate in a musical activity with service-users from Aġenzija Sapport, we immediately, agreed. Aġenzija Sapport is specialised in offering services for people with special needs in Malta and Gozo. The musical activity formed part of the Valletta 2018 activities and took place in Valletta on 27th October. It included musicians from local band clubs, dance companies with more than 360 dancers, and the cast of 'Min Imissu' and 'Klassi Ghalina'. Dr Spiteri was one of 22 raconteurs who were responsible for putting up a play, dance or other community-based activity with children,

elderly and persons with special needs. All the raconteurs, together with their respective groups, had worked on this project for several months.

This activity helped us engage service-users in participating in community activities that have the potential to empower them to foster greater social communication skills.

The course we are reading at MCAST helps us explore different ways in which service-users can be empowered to express themselves, their needs and to ensure that those needs are met. The training we receive at MCAST, the feedback that we receive from our lecturers, the learning that we derive from our research and the insights that we elicit from our placements have provided us with the necessary skills that can help us better understand service-users and their requirements.

MCAST Lecturer published Short Stories in aid of ALS Malta

MCAST Maltese lecturer Mr Noel Cachia recently published a book in Maltese entitled 'Stejjer ta' Dari u tal-Lum'. Three hundred and twenty five copies were sold and all proceeds were donated to Mr Bjorn Formosa on behalf of ALS Malta. The donation was presented to Mr Formosa during a small ceremony held at the Institute of Community Services at MCAST.

The book is a collection of short novels that reveal and portray experiences and show the emotions of childhood. These occur and are presented in dialogues, games, feasts, places and times. These stories create and bring about a certain nostalgia of past days and childhood memories. The religious element and spirit is very strong and represented in the short stories. The protagonist ends in prayer, and trusts in God because, 'He knows everything'. Other stories relate



on the love towards animals and the appreciation of talents possessed by others.

Mr Noel Cachia, BA Hons (Maltese) has been lecturing Maltese at MCAST since 2008.

Performing Artisans of Tales



Herrera 2018
Transnational Staff
Meeting ▶

The new Advanced Diploma in Performing Arts cohort at the MCAST Institute for the Creative Arts is participating in the ERASMUS + KA2 project, Artisans of Tales. Involving educational institutions from Italy, Malta, Poland, and Spain, the project draws upon local heritage to train young learners in the art of story-telling, allowing them to explore innovative paths for cultural learning and exchange. The scope of the project is broad indeed, as it seeks to foster innovative and cross-sectorial education, connect generations in the preservation and transmission of local identities, favour intercultural dialogue, and ultimately present young people with the opportunity to engage with civic society as active European citizens.



▲ Institute for the Creative Arts cohort at the Junior College

THIS November the Institute for the Creative Arts will be hosted an educators' meeting in which four institutions took stock of the inspiring road covered so far and planned ahead for the March 2019 event at the Istituto Magistrale Statale Santa Rosa da Viterbo (Italy), where we shall also encounter students from the Wieliszewie Gminne Gimnazjum im. Jana Pawła II (Poland), and the IES Benazaire School in Herrera del Duque (Spain). At Viterbo the project will in fact reach its culmination with what promises to be a rich story-telling festival, an occasion for students and teachers to celebrate tradition as a medium for innovative educational pathways.



In preparation for this meeting, our Performing Arts students have been taking short smartphone videos to present themselves and their favourite local landmarks, in order to share with their peers from abroad. Through these videos, our students have indeed managed to capture salient snippets of Maltese history and landscape – a perfect introduction also for our international guests in advance of their upcoming visit. In the meantime, together with Music lecturer Ms. Christine Dimech, and Dance lecturer Ms. Valentina Cauchi, we are also setting out on our creative journey, selecting one among the many instances of local folklore to transform it into a spectacular narrative using theatre as our story-telling medium. Following the encounter planned for early March 2019, with the same performance our students will then also participate in the international student arts festival Holqa, organised by the University of Malta Junior College, thus extending the dissemination of our ERASMUS + project further within the European dimension.

As educators, we retain ourselves truly fortunate to be able to count on opportunities such as those offered by ERASMUS + programmes to enhance our students' as well as our own development as professionals and active citizens. Artisans of Tales is surely providing us with such a wealthy learning experience.



NEW DIRECTOR

Martina Caruana Ph.D. (Sorb.)

MARTINA Caruana's studies led her to obtain her PhD in history of art with the highest possible award from the Sorbonne, Paris IV aged 28. She has since published in her area of specialization including a book recently co-authored with a German specialist - Burkard Wehner. Martina Caruana has served on numerous boards, including that of the Malta Philharmonic Orchestra and the Malta Council for Culture and the Arts. Her time and energy have also been channelled to doing voluntary work, the most significant of which was with Voices where, after being a choir member, she ended up directing the choir for 12 years. Within the field of education Martina Caruana has been recognized European expert in conservation education while responsible for Malta's Institute for Conservation and Management of Cultrual Heritage. She has been an educator for 25 years and has contributed at all levels except kinder. After being engaged as Senior Lecturer in Contextual Studies at MCAST's Mosta campus and having performed coordination duties in various vocational areas, she was recently appointed Director of MCAST's Institute for the Creative Arts.

Becoming a Designer in Europe



Between 2016 and 2018, MCAST's Institute for the Creative Arts collaborated with a number of other European educational institutions as part of an Erasmus+ project entitled Becoming a Designer in Europe.



▲ 'Becoming a Designer in Europe' participants during the Erasmus+ mobility at MCAST's Institute for the Creative Arts in Mosta

George Lewis, Scott Schembri, Sarah Schembri Warr and Mattie De Bono, accompanied by Mr Darren Duncan and Mr Matthew Mamo, both MCAST ICA Graphic Design lecturers. ►

PARTNERS from Italy, Germany, Poland, Malta and the United Kingdom explored various aspects of each country's creative industries over the course of multiple mobilities.

BA (Hons) in Graphic Design students George Lewis, Matthea DeBono, Scott Schembri and Sarah Schembri Warr represented the Institute throughout this project, accompanied by their lecturers Darren Duncan, Matthew Mamo and Stephanie Scicluna.

The project's ultimate goals were to broaden students' professional horizons and promote movement amongst aspiring designers from diverse fields across Europe.

Each mobility focused on a specific theme and required that the participating students research a variety of topics within the context of their own country. These ranged from education and employment opportunities to local

influences and design trends.

By sharing their findings, students helped their international peers understand the demands of different creative professions within each of the participating countries.

A number of guest speakers and industry stakeholders, including designer Stephanie Borg and creative agency BRDN WGN locally, also shared their knowledge on these topics via seminars organized by host institutions.

Students collected and ordered these findings into a blog, whose aim is to propagate this knowledge further and prepare additional students for a career in design. The blog (accessible via <https://badieeu.wixsite.com/badie>) contains helpful information on the application processes and necessary documentation required to apply for further education or employment in any of the participating countries, alongside



relevant cultural differences.

Several visits to heritage institutions and museums during each mobility, including the prestigious Red Dot museum in Essen, have helped to provide travelling students with some valuable additional context throughout this learning experience.

These mobilities also featured various workshops and hands-on learning experiences. Both students and accompanying lecturers had the opportunity to learn skills such as silkscreen and letterpress printing while producing tangible outcomes for the project.

Thanks to these activities, the project has left everybody involved with a better understanding of what becoming a designer in Europe involves.

MCAST students in cultural heritage following their apprenticeship with Heritage Malta



MCAST and Heritage Malta are giving students attending the College's Advanced Diploma in Cultural Heritage Skills the opportunity of a job experience as part of their apprenticeship.

This agreement is part of a memorandum of understanding between the two entities aiming at strengthening the two organisations' collaborative relationship in order to enhance student knowledge about cultural heritage.

MCAST's Advanced Diploma in Cultural Heritage Skills, offered at the Institute for the Creative Arts, is designed to address skills shortages in the heritage sector and to form

◀ MCAST and Heritage Malta are giving students attending the College's Advanced Diploma in Cultural Heritage Skills the opportunity of a job experience as part of their apprenticeship.

skilled persons who support the conservation and preservation of cultural heritage. Depending on the chosen option, students will have knowledge, skills and competences to ethically collaborate with the curator, librarian, archivist, collections and sites manager, documentation specialist, conservation scientist and/or conservator restorer, and would normally work under the supervision of one of these. The graduate could find employment in cultural heritage as a key person supporting conservation and preservation.

All MCAST students enrolled in the Advanced Diploma in Cultural Heritage Skills are following their apprenticeship with Heritage Malta and are gaining relevant work experience to complement their studies at MCAST. This collaboration is leading to the formation of these students who can support the cultural heritage professionals, a role which has long been felt by the sector.

Assessing Nature's benefits to Society

THE MCAST Institute for the Creative Arts hosted an event at the Main Campus in Paola to share outcomes of research activities from the ESMERALDA project, undertaken by the MCAST Applied Environmental Sciences Research Group (AESReG), and to develop collaboration through dialogue between key stakeholders.

The project is focused on the assessment of nature's benefits to society and on the link to environmental policy



▲ ESMERALDA Project participants

that promotes the use of nature for improved human well-being. After showcasing research results, a roundtable discussion was held to encourage interaction and dialogue between the stakeholders present at the event.

MCAST Principal Dr Joachim James Calleja delivered the welcome address.

MCAST lecturer receives Gold Leaf Award at PRIME 2018 Conference in Prague



◀ From left- Prof Joachim James Calleja, MCAST Principal, Ing Jeremy Scerri, Lecturer and Mr Frederick Schembri, MCAST President of the Board of Governors.

THE conference was held between the 2nd and the 5th of July 2018 in Prague, Czech Republic. The paper he presented is entitled 'Exploiting nonlinearities to improve the linear region in an electrostatic MEMS demodulator'. The Gold Leaf Award is given to the top 10 per cent papers, based on the reviewer's and the awards-committee's evaluation. The top ranked papers will be invited to submit extended versions for a Special Issue of Integration, the VLSI Journal (Elsevier).

The research topic studies digital communications with a special focus on a module present in all electronic communication devices like modems, mobile phones, GSM modules, bluetooth devices and wifi routers. The paper discusses an alternative approach to what is currently found in these devices and looks at how to optimize the performance of this alternative solution.

MCAST lecturer Ing. Jeremy Scerri, who is following his Ph.D. studies at the University of Malta, received the Gold Leaf Award for a paper he presented at the 14th Conference on Ph.D. Research in Microelectronics and Electronics (PRIME 2018).

Safety4EI Project

‘Improved Safety for Electricians’ (Safety4EI) under the Erasmus+ Programme Key Action 2 is a project delving into major European health and safety issues.

THE numbers of work-related accidents in EU countries differ a lot. Standards of work on-site vary from country to country. These different standards coupled with regulations for electricians’ safety training/tests present barriers to mobility. All this and more gave rise to the Safety4EI Project. This project is seeking to remove such barriers by developing eLearning materials (versions for online and face-to-face courses) to support the teaching of safety in relation to working with live electrical installations and repairs as well as initial tests and post-tests as part of the teaching about work environments and safety for electricians.

The project consortium comprises five vocational colleges namely Syddansk Erhvervsskole, POLITEKNIKA IKASTEGIA TXORIERRI S. COOP, Bridgwater and Taunton College, MCAST and Intercollege. These represent Denmark, Spain, Great Britain, Malta and Cyprus respectively, and a European NGO (European Forum of Technical and Vocational Education and Training) with a direct access to Europe-wide networks and policy-makers.

The project work has mapped the differences in regulations governing the safety training and/or tests for electricians as well as differences between electrical installations in the partner countries. The college teams are developing a web-based

OER (Open Educational Resource) containing multimedia rich interactive materials. There are also cases for training Risk Assessment reinforced with corresponding videos and a large volume of multiple choice questions on safety for electricians and other workers in the construction industry. All training materials are available in Danish, English, Greek, Maltese and Spanish.

The content of the course modules is being prepared so it may be used as part of CLIL (Content and Language Integrated Learning). The CLIL scaffolding will mainly be based on online units with all words linked to dictionaries in 118 languages. This will help prepare craftsmen and apprentices for mobility.

MATS donates €30,000 to MCAST



▲ From left: Mr Ronald Cumi, MCAST Registrar, Ing. Raymond Vassallo, Director Institute of Engineering & Transport, Ing. Stephen Sammut, Director Designate, Institute of Engineering and Transport, Dr Ing. Kenneth Chircop, MATS CEO, Mr Anthony Abela, MATS Chairman, Dr Ing. Patrick Attard, Deputy Director, University College, Institute of Engineering and Transport and Mr Alun Weaving, Senior Lecturer, Institute of Engineering and Transport.

MALTA Air Traffic Services (MATS) Ltd donated a total of €30,000 to MCAST to set up a state of the art network lab at the Institute for Engineering and Transport. The sum of €10,000 has already been donated by cheque during an event held at the Institute.

The lab will be used by students who will be reading for the Advanced Diploma in Industrial Electronics, a new course being offered by MCAST. This is replacing the other 7 advanced diplomas formerly offered by the department.

In return, MCAST has donated vintage electronic equipment to MATS, to be used at exhibits related to the history of communications engineering in Malta.

NEW ICT Institute Building Approved

THE development application related to the building of the new MCAST Institute of Information and Communication Technology was presented to the Planning Authority Board and approved. This project is part of the ERDF 9.036 – MCAST Master-plan Project and falls under the Operational Programme I – European Structural and Investment Funds 2014-2020 – ‘Fostering a competitive and sustainable economy to meet our challenges’. This project is part-financed by the European Regional Development Fund.

The new Institute of Information and Communication Technology (IICT) will be located next to the proposed MCAST Resource Centre building on the southern side of MCAST's perimeter. It shall have an overall footprint of approximately 3,420 square metres and a gross floor area of about 11,900 square metres. At basement level, the building shall house the Data Management Information Department, the Archives and part of IICT. The Data Management Information Systems Department shall comprise IT Technicians and User Support Area, IT Manager Office,



College Management Information Systems (CMIS) Support Area, CMIS Manager Office, training rooms including one study room and 2 network laboratories. The overlying floors shall be used by the Institute for administration and teaching purposes housing in total 53 IT laboratories/classrooms, 4 offices, 1 boardroom, meeting rooms, staffrooms and a plant room.

The shape of the building complements the MCAST Resource Centre and the main plaza. Attention has been given to the design, focusing on the ease of mobility of the students and campus users through the creation of paths. At the rear side of this building, an outdoor garden and a recessed plaza have been included in the design, providing natural light and ventilation to the rooms located at basement level whilst creating a semi-private study zone for students. The building has been designed to be compartmentalised in two separate blocks in order to allow for better security within the building whilst providing flexibility of its resources.





MCAST Student develops CRBP Website



MCAST Institute of Information and Communication Technology student Mac Patrick Gauci designed, developed and published a new website for the 'Children Right to Both Parents' (CRBP). This NGO's objectives are to promote the principle that it is in the best interest of the child to have adequate access to both parents. It is the Child's right to be given the opportunity to build a strong and meaningful relationship with both parents. The Children's Rights to Both Parents aims to encourage parents to actively engage in shared parenting.

ICT students participate in the First Global Robotics Challenge in Mexico City



MCAST students Monique Micallef, Aaron Josef Farrugia and Darren Farrugia reading for an Advanced Diploma at the MCAST ICT Institute, have represented Malta for the second edition of the First Global Robotics Challenge in Mexico City that was held between the 16th and 19th August, 2018. The students were under the supervision of lecturer Ms Lucienne Bonnici and the Institute Director Mr Conrad Vassallo.

THE First Global Robotics

Challenge is an annual international robotics challenge to ignite a passion for Science, Technology, Engineering, and Mathematics (STEM) among the more than two billion youths across the world. Participating teams are composed of students, aged 14 - 18 years, who share the common goal of becoming the next generation of scientific leaders who will work together to solve some of the world's most pressing problems, from food security and access to clean water, to finding better medicines and securing cyberspace.

MCAST would like to sincerely thank BOV, Altaro and MCA for sponsoring the students to be able to participate in the robotics challenge.

Research studies at the Institute of Information and Communication Technology



◀ From left - Irisann-Maria Agius and Axel Curmi, MCAST students

THE MCAST Institute for Information and Communication Technology is increasing its focus on academic research. The Institute is proud to announce that this year six academic publications have been presented at an international level and various have been showcased at a number of national events. All students are showing great creativity and dedication in their research projects, with industries recognizing the value that the MCAST vocational approach is giving. This year Axel Curmi, Darren Cilia, Jerome Mizzi, Luke Benjamin Cassar and Ricardo Sciberras have had an opportunity to present and have their research published in Romania, Germany and Malta.

Darren Cilia has presented two papers on the use of smartphone typing patterns as a form of biometric user authentication. Luke Benjamin Cassar is the first Multi-Media Software Development student to have presented his research in Augmented Reality within Catering. Axel Curmi and Jerome Mizzi are amongst the second-year students to have focused their research on Blockchain. Axel presented his Blockchain base Certificate authentication platform in

a Springer workshop at Berlin, and Jerome published his Blockchain based e-Voting System in a DLine journal from Romania. Ricardo Sciberras has presented his second-year research in traffic flow estimation in Berlin.

MCAST would also like to recognize the support it found from the Government and various Industry partners for the various opportunities given to showcase the students' research. At the Delta Summit, four Blockchain research projects by Axel Curmi, Eman Sammut, Jerome Mizzi and Nigel Cumbo, were exhibited. During the Science in the City event Michael Joe Cini had the opportunity to showcase his Augmented Reality project that reconstructed lost heritage such as the fallen Azure Window. These projects and others have stirred up a lot of interest which led to the creation of new business links.

Recognition also goes to the academic staff at MCAST who motivate and guide these students. All research projects mentioned in this article have been mentored by Frankie Inganez, a senior lecturer at IICT, specializing in Artificial Intelligence and Emerging Technologies.

MCAST Gozo Campus celebrates International Day of the Girl Child



On Friday 12 October 2018 the MCAST Gozo Campus celebrated the International Day of the Girl Child under the patronage of H.E. Marie-Louise Coleiro Preca, The President of Malta.

FOR this event, a number of women leaders formed part of a discussion panel which delivered a strong message for young women to aspire for leadership positions of various forms. The panel included women leaders in politics and public administration, private enterprise and Engineering. The speakers included the Hon Minister for Gozo, Dr Justyne Caruana, Ms Kristel Bishop, Accounts Manager at Keen Ltd, Ing Josianne Vella, Northern District and Gozo Distribution Manager, Enemalta Corporation and Ms Marina Sceberas, MCAST Student Liaison Manager.

The speakers shared their own personal experiences as female students and employees/professionals, gave

a personal account of any gender-related challenges that they faced in their career development up to the attainment of the senior positions that they currently occupy. All the speakers delivered a strong message that gender should represent no hurdle whatsoever in the full development of one's potential and aspirations.

This was the President Coleiro Preca's first visit to the Gozo Campus. Her Excellency addressed the students and members of staff who were present for this event and emphasized the importance of involvement of women in leadership positions.

As a follow up activity to this event, a group of students from the Gozo Campus were invited to participate in the Girl2leader workshop held at the Verdala Palace on Saturday 27 October 2018, together with other student groups from other post-secondary institutions in Malta. The students were addressed by Her Excellency and by Silvana Koch-Mehrin, a German politician and former Member of the European Parliament.

President Coleiro Preca expressed the struggles women face when they are involved in political and governmental institutions dominated by the male gender while highlighting the importance of gender equality and equity. She emphasised that legislation on its own, was not enough and stressed the importance of working together, in synergy, particularly to change attitudes. Her Excellency emphasized her belief and conviction that girls and young women are essential stakeholders in our global journey, towards positive change. She also highlighted the need to actively include the voices and experiences of young girls for long term change to materialise.

Silvana Koch Mehrin encouraged the students to pursue their dreams and to be prepared to face hurdles, insisting that they should always seize any opportunity that comes their way and to never doubt their potential.

ERASMUS+ mobility in Iceland – the experience of four Gozo Campus lecturers



IN September 2018 four MCAST Gozo Campus lecturers, Sammy Mifsud, Kevin Vella, Liliana Xuereb and Charlie Portelli had the opportunity to visit Tækniskólinn College, a privately-owned government-funded vocational college based in Reykjavik, Iceland.

The Tækniskólinn approach to teaching and training is quite different from our own. The college embraces project-based learning whereby a student is given a number of projects throughout the academic year and these must be completed along the year at the student's own pace. Projects do have stipulated deadlines but a student can essentially finish a given

project in three weeks' time or much longer, as long as this is completed within the allocated timeframe. This project-based learning is facilitated by the possibility for students to be able to attend the college after normal college hours. Students are allowed to work on their projects at the college workshops unattended and the lecturers' main role is that of a mentor.

The college has an online system providing students with access to lecture notes and learning material anytime. This ensures that students have access to standardised updated material, irrespective of which college department they are attending. A similar system is used at the MCAST

Institute of ICT. Tækniskólinn has a college-wide system/repository for each and every department and the material is regularly updated.

The participants visited the Hellisheidi Power Station and were given an in-depth tour and a detailed explanation of the use of geothermal energy in Iceland. Icelandic households are provided with hot water heated with geothermal energy and all electricity generated in Iceland originates in hydroelectric plants or geothermal power stations.

Apart from visiting the college, the lecturers had the opportunity to visit the Perlan and Jokulsarlon glaciers. At Perlan, visitors can experience Iceland's many natural wonders all in one place - volcanoes, glaciers and geothermal marvels. On the fourth floor of Perlan, a large observation deck lies on the top of the hot water tanks and encircles the entire dome to give an amazing 360° view of Reykjavík and the surrounding area. The Jokulsarlon glaciers are one of Earth's most mysterious natural wonders and are even visible from space.

First MCAST degree programme running at the Gozo Campus

THIS academic year 2018-19 marks another first for the MCAST Gozo Campus. In October 2018 the College launched the first MCAST degree programme ever running on a full-time basis at the Gozo Campus – the Bachelor of Arts (Hons) in Inclusive Education.

MCAST has also launched the Level 6 Top Up Degree - Bachelor of Arts (Hons) in Inclusive Education, on a part-time basis, for Learning Support Educators already in employment. 81 LSEs are currently enrolled in this degree programme.

Mental Health Awareness Seminar at the MCAST Gozo Campus



World Mental Health Day is observed on the 10th of October of each year, with the overall objective of raising the awareness of mental health issues which affect people of all ages and from all social strata.

A number of activities were held across several educational institutions in Gozo. MCAST Gozo Campus participated in this initiative by organising a short seminar for students.

MCAST Gozo Campus Director Mr Godwin Grech delivered a brief address and introduced the panel of speakers which included the Minister for Gozo, the Hon Dr Justyne Caruana, the Commissioner for Mental Health, Dr John M Cachia and Psychiatrist Dr Anton Grech. Dr Cachia explained that mental health problems can affect persons of all ages and remarked that we are witnessing an increase of mental health problems among young people, mainly attributable to various forms of addiction. He spoke about the importance of breaking the silence and stopping the stigma. Dr Anton Grech spoke about



mental preparation for independent living, a theme which is particularly relevant to the Gozitan youth community. At some point in their lives, many young Gozitan people need to move to Malta to pursue higher level studies or for employment purposes. Flying the nest at a tender age brings in itself certain challenges and one

must be mentally prepared to face them.

Dr Rose Falzon, Director Student Support Services and Ms Marthese Vassallo, Senior Counsellor, represented the MCAST Student Support Services Department and gave a brief presentation to the students about the support structures provided by the College.

The seminar concluded with an address from the Hon Minister for Gozo, Dr Justyne Caruana who explained the Ministry's initiatives in relation to mental health. The Minister also shared some personal experiences and delivered a powerful message that there is nothing wrong with asking for help when in need.

Students and staff members who attended the seminar had been encouraged to wear green – the colour associated with mental health awareness – for this special occasion.

Mental health: a state of well-being

What is mental health and well-being?

"Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community" (WHO, 2014). Our mental well-being fluctuates from moment to moment, day to day, month to month and year to year. If you are in a state of positive mental well-being, you will be able to do the following:

- Be confident about yourself and foster positive self-esteem
- Feel and express a range of emotions
- Build and maintain good and healthy relationships
- Feel part of the community and world
- Live and work productively
- Cope with everyday stress
- Adapt and move with the changes and uncertainties that crop up.

What affects mental well-being?

What affects one person does not necessarily affect another in the same way. However, we experience low mental well-being when we cannot cope with the situations we are facing at a particular time. At other times we might not know what is affecting our mental health and well-being and cannot pinpoint experiences that are affecting us. Common life events that might affect our mental well-being are:

- Loneliness, social isolation or discrimination
- Relationship difficulties
- Issues at school or work
- Financial difficulties
- Chronic physical health conditions
- Overwhelming responsibility of taking care of a dependent other
- Trauma
- Anxiety.

What helps build and maintain healthy mental well-being?

- Connecting with others. Being surrounded by supportive family members and/or friends can foster a greater sense of belonging.
- Talking about your feelings. Acknowledging and expressing your emotions can help you connect to what you are feeling. When you express these emotions with other supportive people you feel listened to and validated.
- Seeking professional help from a therapist when you feel you cannot cope with the situation experienced.
- Keeping a journal in which you can write about your feelings and thoughts helps you in keeping record of your emotions and identifying patterns being created in your life.
- Allowing yourself to rest and spending time doing activities you like. This helps you to unwind, treat yourself positively and channel negative feelings into a positive healthy activity.

MCAST's National Athletes

Alessio Magro, a professional pool player is an MCAST student reading for a Bachelor of Science (Honours) in Sports, Exercise and Health at the Institute of Community Services. He has progressed all the way up all from the MCAST Sport Foundation.



▲ Alessio Magro

ALESSIO's passion and dedication to pool started at the age of 11, in a snack bar close to his house. A place where he could practice on a regular basis, so much that at the age of 13 he was already playing pool on a professional basis and representing Malta abroad.

As a national athlete, Alessio has proudly and successfully participated in all the organized and competitive events that the European Blackball Association offers. These include the World Championships, the European Championships and the Nations Cup.

In November 2017, the Nations Cup was held in Malta. Here Alessio Magro together with other Maltese athletes participated and won the U/23 team category. Furthermore, last April 2018, Alessio was awarded with 'The Best Player in the U/23 Section' national award.

On the 20-26th of November 2018, Alessio formed part of 2018 World championships, and represented Malta in Bridlington, UK.

Alessio is a promising and dedicated athlete aspiring to become a professional pool player. He feels that training, competition experiences and his degree play an important part in his skill development and hopes to eventually upgrade to the over 23s category.

MCAST Campus Days

MCAST kicked off its academic year 2018/19 with the annual Campus Days held at the Student Hub, Main Campus, Paola between 9-12 October 2018.

STAFF and students were welcomed and addressed by Mr Frederick Schembri, President of the Board of Governors and Prof James Calleja, Principal and CEO. This was followed by Holy Mass celebrated by Archbishop Emeritus Paul Cremona.

The Campus Days were highlighted by a variety of events ranging from sports and fun activities as well as team building sessions. One of these sessions entitled This Time I'm Voting was held in collaboration with the European Parliament Office in Malta. On the 11 October 2018 an event to mark the International Day of the Girl was held under the patronage of HE Marie Louise Coleiro Preca, President of Malta.

A large number of Industry partners and other exhibitors took part with various stands put up in the Student Hub. Throughout Campus Days, the College hosted a number of dignitaries amongst whom the Hon Prime Minister, the Leader of the Opposition, the Minister of Education, Parliamentary Secretaries, the University Ombudsman and MEPs.



MCAST Principal & CEO

Prof Joachim James Calleja

Prof. Joachim James Calleja, MCAST Principal, has been involved in education since 1986. He shares his vast experience in education and training, and his high hopes for the future of the College and its students, as revealed in the interview below.

Who is Prof Calleja and how is your vast experience in education, namely your position as Director of the European Centre for the Development of Vocational Training (Cedefop) helping you in your new role as MCAST Principal?

I have been working in the public sector and mostly in education and training since 1986 when I had joined the Foundation for International Studies at the Old University Building in Valletta. Since then I have changed jobs nine times throughout my career with one common denominator namely that of education and training whether at our own Alma Mater the University of Malta or in other institutions in Malta and abroad. Every work experience in Malta and overseas have been invaluable but if I were to mention three jobs that have truly given me huge job satisfaction these are the setting up of MCAST in 2001, creating the Malta Qualifications Council (now NCFHE) in 2005 and recently my five-year mandate at CEDEFOP in Thessaloniki. Experiencing VET at the European level has ignited a strong desire to come back and wrap up my career at MCAST hopefully to give the College a bright future and VET in Malta a reputation of excellence at all levels of learning and work experience.

You helped set up the College way back in 2001 as MCAST's first Administrative Director... now that you are back what major changes have you seen at MCAST?

MCAST has grown beyond expectation. I still recall way back in 2001 that the number of full-time students were close to 980;

today we are close to 7000 full-time students and an additional 3500 part-time learners. Most of the infrastructure then was still that dating back to the Sixties and Seventies. Today I am proud to belong to an institution which has seen growth in terms of infrastructure, quality and numbers of students and staff members. There is still a long way to go to claim that the College has the adequate structures and resources necessary to educate and train Malta's future workforce but the willingness of government and social partners especially employers is there. We need to transform this willingness into sustainable resources be it new buildings, better equipment, new programmes of study, new partnerships with industry and foreign institutions as well as well-resourced staff members particularly in the teaching and research sectors. The College is ready to embark on its next frontier, that of becoming a reputable National and Euro-Mediterranean College of Higher Education. Having said this, our inclusive vocation remains at the heart of our learning processes. The College has given a future to many lost learners and I am resolved in consolidating this very important aspect of MCAST.

What are your plans for MCAST from an academic and extra-curricular perspective?

As soon as I was given the mandate to lead MCAST, the President of the College and the Board of Governors have been supportive in launching a dialogue with all members of staff to agree on a strategy for the College 2019-2021. The consultation



process will end towards the end of quarter one of 2019 when the College will adopt this new strategy. My vision for MCAST is that all programmes of education and training will be based on two overarching principles, namely qualifications which are industry-driven and curricula which are community-oriented. What I aspire to achieve is quality education that enables our learners to be active citizens and employable for the rest of their working lives. In a labour market which is in constant flux, preparing human capital for jobs that might become obsolete and others that can emerge is an ambitious but realistic task. I am confident that the College will rise to this challenge as we aspire to be the best choice for learners at the end of compulsory education or after they finish their post-

compulsory studies. The teaching staff at the College is of high quality, committed and hard working. The same can be said of the managerial, administrative and support staff.

What do you consider to be your major strengths as MCAST Principal?

A difficult question to answer as I never think about myself as having strengths but rather a strong commitment towards helping young generations achieve employability and be perseverant in their working lives. Running MCAST today is like running a medium-sized town in Malta or a huge enterprise. The task requires vision, stamina and proven experience in senior management. It also requires faith and trust in your colleagues and in decision-makers. For thousands of students and their families, MCAST represents the road to employment. For employers the institution that will develop human capital flexible enough to challenge the new frontiers of innovation and change in work places. Hence a good relationship with enterprise is vital for its existence. Today's technology has made it possible for many firms and businesses to build and manage their own academies and schools for training. The so-called traditional educational institutions will run the risk of becoming obsolete if their programmes are not fully aligned to what industry requires. By industry I mean all work places. This is a challenge for all post-secondary education institutions. Young people's mind frames have changed over the last two decades. Young people today want to learn in a different way; they consider and rightly so, work-based learning as a good combination of theory and practice; learning is faster and hence short courses will become more attractive. Teachers are constantly challenged by the knowledge and the skills that their own students acquire outside the classrooms especially through work-based learning. These are among the few challenges that, if ignored, might spell the end of post-secondary formal education. Our strengths must lie in our ability to change.

What do you see as the first steps in initiating successful change at the College?

In my view an open door policy has always worked well in my career. People need to be listened to, acknowledged for their work and encouraged to go the second mile. They must see that the College is their future, that the opportunities are there to be explored and exploited. This has always been my philosophy and I think it is now too

late to change a winning formula. At MCAST in particular successful change will largely depend on our ability to share our vision and to work towards accomplishing it together. We need to be team players. By sitting on the bench you will never score goals. You need to be on the field and kicking a ball! We need to score change.

MCAST is engaging in research activity – in which fields of study? What has been done so far and how do you plan to develop this area more?

Today, a vocational education institution cannot do away without investing in research. In my view it must be impact-oriented research that we should embark upon and preferably that research which our country and industry requires. Research for research sake is not an option for a College like MCAST. A vocational college is not entrusted with publications that may easily end up on book shelves and libraries or with producing reports that you literally throw away after a few years. Our research programme should be industry-driven and relevant not only to the labour market but also to the community that we live in. The College has already embarked on a large number of research projects such as on renewable energy and landscape quality (RELY), marine gas hydrate, sustainable and productive EU organic greenhouse horticulture, agriculture water use and trade under climate change. A small group of highly proficient researchers have done miracles with the resources they possess to attract European funding for a large number of research projects. The next step is to coordinate MCAST's research community and direct all efforts towards research that matters for employment and a better quality of life of our citizens.

What are your plans for the international market and MCAST?

The internationalization of MCAST is high on our priority list. The College's company MG2i (MCAST Gateway to Industry) has already embarked on a number of initiatives in the Far East to attract students. In fact, currently at the College we have over eighty students from India studying nursing and others will follow from Vietnam and China. However, attracting international students requires an adequate infrastructure which MCAST does not possess as yet. Students need special culinary arrangements, housing, social activities and, in some cases, education and training programmes designed to provide study and work

experiences. This approach presents challenges which with the level of resources at the College is not possible to achieve in the short-term but only in the mid and long term perspective. It is in MCAST strategic plan 2019-2021 to build the infrastructure to attract more international students and lecturing staff. Over the years several lecturers have embarked on ERASMUS mobility programmes attracting projects from all over Europe. The list of projects is impressive for the size and resources of the College. Many overseas Colleges and Universities are also eager to join MCAST-led projects or invite MCAST to be an active partner. In September I have also been elected President of the largest European Association of training providers (EfVET) giving the College wider visibility. This too augurs well for our College.

The MCAST Main Campus – where are we now and what are the plans?

The MasterPlan has been revised to accommodate new buildings and in particular accommodation for international students and faculty as well as commercial outlets to generate income for the College and provide a community centre for the area surrounding the College. Construction on two new buildings which will house the ICT Institute and the Resource Centre will start in January 2019 and should be completed by the first quarter of 2021. Meanwhile, no efforts are being spared to attract investment and complete the campus. Estimates show that a complete MCAST campus requires an investment of around EUR200m which includes construction and equipment. Our ambition is to complete the campus in the shortest time possible after attracting both local and foreign investment. We strongly believe that Malta's future labour market will largely depend on the skills and competences that the College is able to generate in young and older learners and workers. Signs are clearly showing that qualifications from MCAST attract immediate employment and career progression. MCAST's strong links with industry put the College in pole position to attract learners, workers and stakeholders who regard vocational education and training as the platform for skilling, upskilling and reskilling of their human capital. Financial resources will certainly support our vision to transform vocational education and training into the new generation of learning in an age dominated by artificial intelligence, robotics, technology and the use of augmented reality. It is time to upgrade the image of VET by establishing MCAST as a key self-governing autonomous institution.



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