

MCAST LINK

AUTUMN ISSUE 40

➤ PROGRESS
ON NEW
MCAST
CAMPUS SITE



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Elisa Savona Ventura at Toly Products Ltd.

EDITOR'S MESSAGE



It's an exciting time for the College as construction works on the first phase of the new campus project, which includes a new Students' House, the Institute of Applied Science and the Institute of Business and Commerce, are well underway and way before schedule. More information on the laying of the foundation stone, the progress of the construction works and project milestones can be found inside.

New MCAST Principal and CEO Mr Stephen Cachia is interviewed. Read through the interview to learn more about our new Principal, his professional background as an educator, his ambitions and goals for the College's next five years and his intentions to empower staff and enrich the students' life while at College.

Major events held during the past three months featured in this edition include the MCAST Expo, the Institute of Agribusiness Open Weekend, the Institute of Art and Design Projects Exhibition, the Institute of Electrical and Electronics Engineering Annual Projects Exhibition and the NSTF Science Expo. Once again MCAST students lived up to their reputation of providing high quality projects and work. Well done to all the participants and members of staff that supported the students.

The Institute of Building and Construction Engineering submitted an interesting article on the project they are currently working on with other vocational colleges from France, Italy, Scotland and Holland entitled "Towards Better Sustainable Water Management". The main objective of this project is to increase awareness through education on the protection and sustainable use of water resources. Website links to better water efficiency are also provided in the article. Business and Commerce students also provide interesting articles on comparative studies they undertook on online prices of accommodation establishments in Corfu, Cyprus and Malta.

I hope you find this magazine useful as your link to what is happening at MCAST. Feel free to contribute to your magazine by submitting articles to caroline.balzan@mcast.edu.mt. Finally I would like to wish all readers and contributors a fruitful academic year!



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**CAROLINE BALZAN,
COMMUNICATIONS
AND PR MANAGER,
INTERVIEWS MR
STEPHEN CACHIA,
NEW MCAST
PRINCIPAL AND CEO**

INTERVIEW

Tell us about your professional life.

I started my career as a teacher in a trade school after obtaining a B. Ed (Hons.) in English from the University of Malta. Since then I have always been involved in education, holding different management positions within different educational institutions. I also read for a Diploma in Education, Administration and Management from the University of Malta followed by a Masters in Educational Management from the University of Sheffield.

My career as an educator started at the Umberto Calosso Trade School where I spent twelve years teaching English and Social Studies at various levels, ranging from Level 1 to apprentices. After this experience I occupied several roles in educational management and leadership. My first experience was during the phasing out of the trade schools due to my involvement in the transition process of the Umberto Calosso Trade School to St Francis of Assisi Boys Secondary School. Following this experience I then occupied other posts as Assistant Head of School at Zebbug Boys Secondary School, Acting Head of School at Lorenzo Gafa Boys Secondary School in Fortini, Vittoriosa and later Head of School at Verdala Junior Lyceum in Cospicua. The years spent at these schools were fruitful learning experiences.

As the college reform of the secondary schools took place, Lorenzo Gafa Boys Secondary School and Verdala Junior Lyceum merged and became St Margaret College. I was Head of School of both and later was appointed College Principal of St Margaret College, a network of seven primary and four secondary schools in the Zabbar, Xghajra and Cottonera area. The three years spent occupying the post of College Principal were very challenging yet professionally very rewarding, particularly since I worked with a strong and committed team of very dedicated Heads of Schools and school staff members.

What do you consider to be your strengths as Principal?

I really believe that an educational leader should empower others to lead and be able to provide the adequate support for them to be able to do so. An educational leader should work to make a positive difference in the lives of students and support all staff members to work towards this aim.

A key aspect at the heart of an educational institution is that students are engaged and motivated by what goes on in lecture rooms, workshops and studios. I strongly believe that fostering a climate of mutual respect between all stakeholders, the creation of stimulating, well-prepared and motivating educational sessions and the building of positive relationships between staff and students are key factors to moving ahead in any educational institution. An educational leader needs to strive to create a climate where these important aims can be achieved.

In this sense I aim to support all Institutes and Departments at MCAST in their vocation to provide this type of quality education for our students.

What are your goals for your first year at College?

MCAST has achieved a lot in the past ten years thanks to the hard work of the previous Principals and all members of staff. My first objective is to build on the strengths of MCAST, in particular the strong sense of dedication and commitment I have seen among many staff members at different levels. I also aim to get to know the College more and to start implementing and developing the way forward with different College stakeholders through their involvement in discussions.

I aim to continue implementing the excellent work that has already taken place. For example, the projects related to the redesign of the courses and curriculum are very important projects which need to be implemented hand-in-hand with staff at all levels. I believe that it is important for our staff members to take ownership of these changes in our curriculum and for us to work towards this goal together.

How do you see MCAST in five years time?

MCAST has moved forward and grown during the years. Now it needs to consolidate the changes and build on them. It has to focus on highlighting the vocational aspect of higher and further education. It is a unique educational institution that gives opportunities to a wide spectrum of learners from Foundation Level to Degree Level and provides a hands-on approach to learning with more formative types of assessment.

The continuation of the construction of the new campus, the creation of a climate whereby Institutes are empowered to work with staff members towards continuous improvement, a more active student body and the implementation of changes in the curriculum will be major objectives for the next five years.

MCAST plays an important role in providing an inclusive education. How do you see yourself supporting inclusion?

In my opinion, inclusion should be interpreted in its wider meaning. MCAST is a beacon of inclusion. It has opened many doors to all students regardless of their academic backgrounds. The support offered by the College through the Learning Support Unit and the Pathway to Independent Living Course aims to help the students successfully complete their vocational education. I hope that I will be able to help MCAST develop the support services it offers to students even further. The challenge for MCAST is to maintain these services for all our students with a diverse range of needs who attend courses at all levels ranging from Level 1 to Level 6.

I strongly believe that the College's very dedicated staff can help to further develop and strengthen MCAST's unique role as a truly inclusive College.



FOUNDATION STONE CEREMONY HELD AT THE NEW MCAST CAMPUS SITE

Prime Minister Hon Dr Lawrence Gonzi hailed the new MCAST Campus under construction in Corradino as a new chapter for vocational education in Malta, from which future generations will benefit. He made this statement on the 24 May 2012, during the ceremony marking the laying of the foundation stone of this project.

This new Campus which in total will cost €120 million is being co-financed by the European Union. It will have a capacity to accommodate 10,000 students and will house 17 buildings over an area of 60,000 square metres. Work on the first phase, which includes a new Students' House, the Institute of Applied Science and the Institute of Business and Commerce, is well underway with half of the concrete structures almost complete.

In his address the Prime Minister said that the foundation stone symbolises the government's commitment to provide job opportunities for future generations. He said that MCAST was achieving its objectives, stating that since 2008 almost 9,000 students found a job after successfully graduating from this institution.



PROGRESS ON NEW MCAST CAMPUS SITE



Works on the First Phase of the building of the new MCAST Campus, which started last year, are well ahead of schedule and students are expected to start using the first facilities during the first months of 2013.

The Minister of Education and Employment, the Hon. Dolores Cristina, gave details on this project during a visit to the new MCAST Campus site, in Paola, on Tuesday 7 August 2012. The new MCAST Campus will bring the College's 10 institutes in one location, at Corradino. It will extend over an area of 100 metres squared, or the equivalent of 20 football grounds, all the way from St. Anthony's Church in Ghajn Dwieli down to the coast at Marsa, where the new MCAST Maritime Institute will be located, with direct access to the sea. The new Campus will also incorporate the public gardens adjacent to Corradino Hill, where new sports facilities for students will be built. Once completed, the new MCAST Campus will have the required resources to provide vocational education to over 10,000 full-time students and many others on a part-time basis.

The First Phase of this extensive project started on 3 August 2011. This phase, which is being co-funded through a European Regional Development Fund (ERDF) project, includes new buildings for the Institute of Applied Science and the Institute of Business and Commerce, and a Student House with new facilities for students. A 630-car parking lot for students and staff will also be constructed

beneath these three new buildings. This parking forms part of a Green Travel Plan which MCAST is implementing to encourage more students to use environment-friendly means of transport.

The new Institute of Applied Science building has already been constructed. This building is currently undergoing the required electrical and mechanical installation works and the final finishes are expected to commence within a few weeks' time. The Institute of Business and Commerce building is also nearing completion. During the summer months, all excavation works for the completion of the parking lot, and the Student House, will be completed as well.

The project's works schedule was carefully planned to concentrate excavation works during the summer months, to decrease inconveniences to students during the academic year. Moreover, to ensure that students continue to enjoy easy and safe access to different areas of the existing MCAST facilities outside the construction site, a temporary passage linking the upper area to the lower area, and which will ultimately form part of the new underground parking lot, will not be removed.

The Hon. Minister thanked MCAST and the Ministry of Education and Employment's Foundation for Tomorrow's Schools, which is managing the construction works of the new MCAST Campus, for its continued support in the building of new educational facilities in Malta.





MCAST INAUGURATES A NEW GYM

Education and Employment Minister Dolores Cristina inaugurated a new gym, equipped with professional physical training equipment worth over €80,000, at the MCAST Main Campus in Paola, on 13 August 2012.

The gym will be offering high quality physical training facilities to all MCAST students and staff. This investment is in line with the College's efforts to promote healthier lifestyles among its students and staff. Similarly, MCAST's Sports Department organises many different events where students and staff can practise different types of sports, from football and basketball to abseiling, canoeing and mountain biking.

The College is recruiting gym instructors to assist students and staff while using the gym facilities. All works required to refurbish the building where the gym is located were carried out by MCAST's team of maintenance staff.

MCAST students enrolled in the Institute of Community Services' full-time sports courses will be particularly benefiting from the new gym,

which will provide them with another opportunity to acquire hands-on experience in different aspects related to a career in sports and physical training. The students will practise what they learn in class through placements as gym instructors and by assisting the students and staff during their training, just like they would be doing in other sports facilities once they graduate and seek employment in this sector.

During the inauguration ceremony, Minister Cristina explained that the new gym confirms the Government's commitment to promoting sports and physical activity. "While the drafting of a new national policy on sports is well underway, we have recently also launched new scholarships for students wishing to specialise their studies in sports, and in October we will be opening a new Sports School," the Minister said. MCAST Principal and CEO Prof. Maurice Grech thanked the staff who worked on this project and explained that the new gym facilities will eventually form part of a larger sports complex that is being planned in the new MCAST Campus, which is currently under construction in the same area.

MCAST DAIKIN TRAINING CENTRE LAUNCHED

MCAST and M.A. & A. Services Ltd, official seller and distributor of Daikin Products in Malta, have launched a new collaboration to set up a state-of-the-art air conditioning training centre for students and for workers in this sector.

Prof. Maurice Grech, MCAST Principal and CEO, and Mr. Marc Henry Migneco, M.A. & A. Services Ltd's Managing Director, signed a collaboration agreement on 28 June 2012, at the new Daikin offices, in Qormi. The College and the Company will be working together to set up an MCAST Daikin Training Centre, equipped with the latest air conditioning technologies, at MCAST's Main Campus in Paola. MCAST students at the Institute of Mechanical Engineering and the Institute of Building and Construction Engineering whose courses include training in the design, installation, servicing

and repair of heating, ventilation and air conditioning systems, will be utilising this new facility, which is expected to be completed in September, before the beginning of the new academic year.

The agreement also provides for the development of innovative industrial support and research projects involving the College's students and the company's employees, the availability of international Daikin specialists to deliver lectures to MCAST students and staff, study visits at Daikin centres abroad, staff exchange opportunities, and lifelong learning opportunities for workers operating in this sector.

Mr. Migneco thanked MCAST for its efforts in this collaboration, and explained that the new training centre will include equipment used in the latest air conditioning systems, including energy saving technologies. "Daikin was established in 1924, in Japan, and is today renowned as the leading developer of advanced technologies, including VRVs, chillers and heating systems. M.A. & A. Services Ltd considers training and research to be a crucial part of its organisation. This is why we have decided to invest in the new MCAST Daikin Training Centre, to provide a unique facility for the training of current and future workers in this sector."

Intensive and ongoing collaborations with industry are the cornerstone of the success of over 15,700 students who completed MCAST courses in the last 10 years, said Prof. Grech. "This is a win-win solution for our students, and for industry. MCAST involves employers in regular consultation programmes to ensure that its full-time and part-time courses continue to provide students with the relevant skills and qualifications that adequately prepare them for the latest technological and practical developments adopted at different workplaces. This helps students increase their chances of succeeding in their chosen sector. At the same time, employers assist MCAST through consultation, the provision of work placement and industrial research opportunities for students, and the sponsorship of sophisticated industrial equipment to be used during lectures. In turn, this provides employers with a highly-trained, creative, and flexible workforce that can support new investments, increased productivity and improved efficiency".





MCAST EXPO



MCAST held the first edition of the MCAST Expo, a four-day event aimed at giving visitors a taste of the MCAST learning experience. The MCAST Expo, at the MCAST Main Campus in Paola, was inaugurated by Hon. Dolores Cristina, Minister of Education and Employment.

During this Expo, the general public, particularly young students who have just completed secondary (Form 5) or post-secondary (sixth form) education, were able to collect their free copy of the new 2012/2013 Full-Time Courses Prospectus, with detailed information about MCAST's 161 full-time training opportunities beginning in October, ranging from introductory certificate courses to higher national diploma and degree programmes.

Each MCAST Institute encouraged visitors to engage in enjoyable hands-on activities to experience different career paths in several industrial sectors. The Institutes also hosted representatives of major local employers who gave details about current and upcoming career



opportunities. Visitors also met MCAST students and found out more about their projects and innovations. The College's student support staff was available to discuss career options and answer any queries about MCAST's courses. The Expo also presented interactive displays about other MCAST services, including international training opportunities and the College's wide range of sports activities.

During the inauguration ceremony, Hon. Minister Cristina insisted on the importance of Life Long Learning and the need that more students continue with their studies after completing compulsory education. This is in the students' own interest and that of their families and of the nation.

MCAST Principal Prof. Maurice Grech explained that the MCAST Expo sends out a clear message that the College's vocational education programmes are preparing thousands of individuals for successful careers in various employment sectors, while providing highly-trained qualified human resources that meet the ever-changing needs of industry. MCAST is investing in the improvement of all its training opportunities, ongoing upgrading of its facilities and equipment, and the introduction of new courses that enable learners to secure rewarding jobs in emerging sectors. These efforts ensure that after ending secondary or post-secondary education, more youths are attracted and encouraged to remain in education to acquire higher qualifications and the necessary skills, creativity and flexibility for better jobs, and to contribute to economic and social development.

HP OPENS EDUCATION CENTRE

AT MCAST

The HP Education Centre, the first one in Malta, was officially opened on 4 June 2012 at the College by Hon. Charlo' Bonnici, Parliamentary Assistant within the Ministry for Infrastructure, Transport and Communications. The new Centre will provide students with more in-depth professional expertise in a number of mainstream IT and related technologies.

The Hon. Bonnici said, "The root of our future competitiveness lies in our educational system; in our classrooms and lecture halls. We have to prepare for tomorrow's human capital needs. The scope of today's inauguration is the unveiling of a Centre that delivers the opportunity for students to build a strong foundation on which to realise their aspirations."

The unique IT education courses will focus on blade technology, networking, virtualisation and cloud, helping students to acquire practical knowledge and skills for employment, where these technologies are used. These technologies are those that power the 'infrastructure' products and services provided by the ICT industry. These products and services are extremely important, they are the drivers behind a wide range of online services, including movies-on-demand, virtual operating theatres or flexible and dynamic business tools and services through the cloud.

In order to guarantee the success of this innovative educational project, the HP Education Centre has been equipped with modern HP technologies, such as HP Blade System servers, a wide range of HP



networking hardware, HP MSA Storage and powerful HP desktop PCs. The hardware was delivered and installed by an HP Partner in Malta, System Ltd.

"HP's collaboration with MCAST allows us to share our knowledge and establish the groundwork for young professionals who in a few years time will be building Malta's IT infrastructure," said Herbert Rastbichler, HP Vice President and Managing Director Central and Eastern Europe.

The HP Education Centre at MCAST will be receiving the first group of students in Autumn 2012. Specific IT courses will start in Virtualisation, Blade and Networking technologies and are being created specifically for the Maltese students.

"Our ongoing collaborations with the industry and the Government, and the College's investment in Continued Professional Development for all staff ensure that our courses continue to provide students with the necessary qualifications and experiences to achieve successful careers in the industry within a short period of time," said Prof. Maurice Grech, MCAST Principal and CEO. "The HP Education Centre presents students with another opportunity to enhance their practical competencies using the latest industry-standard high end technologies. Through such experience, our graduates will be able to combine theory and practice to their place of work. The practical context will boost creativity and innovation – the driving forces of any forward-looking, successful economy."

Since 2006, 1,345 students graduated with Diplomas and Degrees from the MCAST Institute of Information and Communication Technology, where the HP Education Centre is being established. The number of graduates during the last academic year, 358, represents a 208% increase over the same figure five years earlier.

The HP Education Centre at MCAST is the first one to be opened in Malta within the framework of the HP Institute of Technology (HPIT) programme, which aims at improving the training of world-class IT professionals and giving both students and professors access to modern HP technologies.

The programme foresees free training for MCAST lecturers on Blade Administration, Networking Technologies, Virtualisation as well as introduction to Cloud/Storage computing by a team of HP experts.

In December 2010, HP, the Malta Information Technology Agency (MITA), the University of Malta and MCAST signed the Memoranda of Understanding to create two educational centres in Malta. The aim of this strategic collaboration is to provide students studying ICT with access to the latest information technologies and knowledge databases.

MCAST is one of the 24 leading European universities that have joined the HPIT programme. Currently there are centres operating successfully in Russia, Bulgaria, Poland and the Ukraine and now HP is further developing this programme in Western Europe, initiating with Malta.

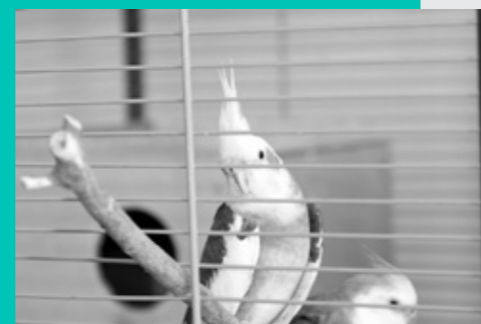
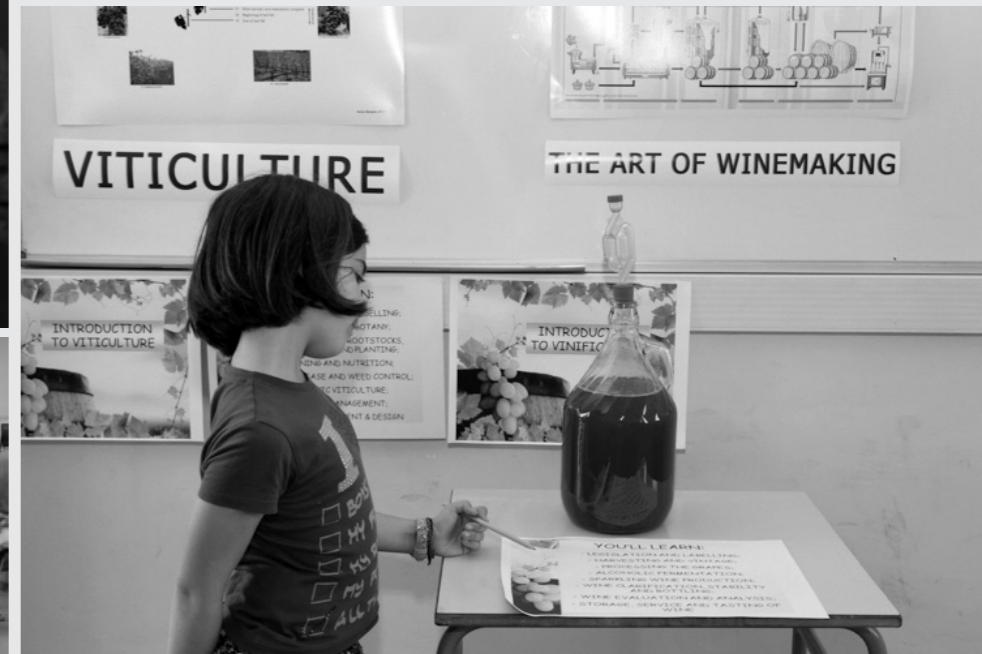
AGRIBUSINESS OPEN WEEKEND

The Agribusiness Institute held an Open Weekend between Friday 25 and Sunday 27 May 2012 at the Institute's premises, in Luqa Road, Qormi.

This event aimed to promote the different career opportunities offered by the Institute's full-time and part-time courses and to highlight the importance of agriculture in our daily lives. Visitors had the opportunity to have a look round the Institute and also bring their own pets for grooming and advice from the Institute's lecturers.

'The Farm-to-Fork Cycle' was the main theme of this year's event. The process through which food and drink products go through before reaching our tables is a crucial aspect of our daily lives which we rarely think about. Through this three-day event, the students encouraged visitors to explore this process through various enjoyable activities. These included tours of the Institute's animal husbandry units and fields, including the exotic animals room, displays of fish aquaria, interactive presentations related to animal welfare, veterinary care, beekeeping, viticulture and winemaking, organic farming, rabbit and poultry keeping, herbalism, displays of fresh products with information on their production stages, food and olive oil tasting, presentations by local NGOs, as well as talks and workshops on other agricultural issues.

The event included a sale of local food products, herbs and plants produced by the Institute throughout the year. The students also presented an exhibition of artistic photography portraying animals and local landscapes.



GREENING THE SKIES

By Antoine Gatt - Lecturer at the Agribusiness Institute



Unlike the previous building booms, the present-day boom is leaving more of a negative impact on our urban areas due to changes in construction methods and the effects of the current planning system. One can argue that, high density development has forever altered the traditional urban fabric rendering our towns and villages less sustainable. Very often the impacts are not immediately felt or perceived because they happen gradually, over a period of time. However they are there. Some claim that this building development reflects a thriving economy which will guarantee a better standard of living. However, a better standard of living does not necessarily translate into a better quality of life for everyone. Both are measured using different criteria. On close examination of the outcomes of the current building trends it is easy to conclude that our urban areas have become unsustainable and are compromising health and quality of life.

Living in a city will easily give the impression that humans are independent of nature. Nevertheless, one has to keep in mind that humans are a part of nature and depend on the interactions between species and the surroundings for a healthy life. People cannot be cut off from nature without suffering the consequences.

Garden grabbing has become a mainstream practice. Gardens' intrinsic value is not appreciated. As a consequence countless gardens are being built over to increase the number of dwellings within a plot. The result of such practice is high density urban areas with little or no green enclaves.

Although in the short term such building customs might be economically beneficial, the negative consequences will outlive most of us. The consequences are long term and will eventually back fire and impact on the national economy. Some of the ill effects caused by current practices include:

- [1] Loss of urban biodiversity
- [2] Soil sealing, flooding and lack of groundwater recharge
- [3] Increase in urban temperatures (urban heat-island phenomenon)
- [4] Increased air pollution
- [5] Increased stress

[1] Loss of Urban biodiversity

Why is biodiversity so important? Dearborn and Karkii have come up with a number of reasons why urban biodiversity should be conserved.

ETHICAL OBLIGATION: Humans have the ethical obligations to protect nature for its own sake, for its intrinsic value. We as humans have to be good stewards of the planet. Many religions and modern thinking are based on such a philosophy. Humans are the most successful species on the planet and as conscious beings we have the responsibility to protect other forms of life.

EDUCATION: With little or no contact with nature, children in particular, can never learn to appreciate and value the importance of nature and biodiversity. Nowadays, children and adults spend more time within the confines of their schools, workplaces and homes with the consequence that they become less appreciative of the elements of nature. Wilson et al. (1996) ii state that, children with little or no contact with nature express a fearful response to natural settings and elements. This is a worrying situation as it can easily translate into a vicious cycle where a community develops a phobia towards nature.

On the contrary children with regular contact with nature are more appreciative of the need to safeguard the natural environment. Research in eight European cities has found that people living close to green open spaces are more likely to have a healthier and active lifestyle and school children with access to or even in sight of natural environments show higher attention levels.

ECOLOGICAL SERVICES: Ecological services is defined as 'a way of describing and quantifying the value of things we all acknowledge to be important but taken for granted', such as air and water quality. Plants have the ability to absorb carbon dioxide thus reducing the carbon footprint of an urban area. They can also absorb solar energy mitigating the urban heat-island effect and so reducing the need for energy hungry technology. Fauna such as bees pollinate fruit trees and flowering plants whereas bats consume hundreds of mosquitos at night.

In view of the above many are still not aware of, or take for granted, or choose to ignore, the services that nature provides within an urban context. It should be within our interest to safeguard urban biodiversity.

[2] Soil sealing, flooding and lack of groundwater recharge

According to the European Commission, soil sealing is defined as 'the covering of the soil surface with impervious materials as a result of urban development and infrastructure construction'. The effects of soil sealing include increased surface water run-off leading to localised flooding, erosion and damage to the ground water due to lack of recharge. Soil has the capacity of absorbing most of the water that flows or precipitate into it. This water is directed into the underlying substrates to recharge groundwater or is extracted by plants or even evaporates into the atmosphere. With many of the gardens being built upon, any precipitation is not allowed to percolate into the ground but is directed into the roads or sewer systems. We are all aware of the inconvenience caused after a heavy downpour and the damage to property. This flooding problem is costing the country millions of euros with the construction of flood relief schemes.

[3] Increase in urban temperatures (Urban heat-island effect - UHIE)

The UHIE is a phenomenon which plagues most urban areas. It refers to the difference in temperature between the urban and rural areas due to the increase in hard surfaces in the former. Hard surfaces have the potential of absorbing large quantities of solar radiation during the day radiating it back into the atmosphere during cooler periods of the day or night making urban areas up to 6°C hotter than the surrounding rural areas. This temperature rise is of great discomfort to the

urban dweller. High temperatures in urban areas encourage the use of air conditioners with the consequence of increasing the carbon footprint of the urban area, contributing to air pollution and accelerating climate change.

[4] Increased air pollution

Air quality is one of Malta's most important environmental concerns due to its direct link with human health and the ecosystem. According to various documents the key sources of air pollution in Malta include traffic, industry and energy generation. Air pollutants are composed of gases and suspended solid and liquid particles known as particulate matter (PM). PM is associated with general ill-health, pulmonary disease, asthma, allergies and even mortality. Ill designed buildings which require high energy consumption to function and to be rendered comfortable contribute to atmospheric pollution. Similarly high urban population densities are directly proportional to high vehicular traffic and concentrated air-pollution.

[5] Increased environmental stress

Stress is a reaction to continuous threats acting on the environment around us. Air quality, traffic congestion, lack of a comfortable microclimate, deprivation of privacy, all contribute to stress. The deterioration of the quality of life in cities is also affected by the way they look and feel. So inappropriate microclimate, inefficient infrastructure and a degradation of the urban landscape all contribute to stress. Stressful environments lead to ill health and can also trigger an increase in crime.

Although our towns and cities are far from sustainable, the situation is not all doom-and-gloom. Despite the current situation, mitigation measures can be put into effect to counteract these unsustainable trends.

One of the most common mitigation measures adopted in many European countries is the installation of green roofs.

Green roofs have existed for millennia. The Hanging gardens of Babylon are an example. We find evidence of green roofs in numerous countries throughout the ages, from ancient Rome, to Saint Michael's Mount in Normandy, France, the impressive Guingi Tower in Tuscany, Italy and so on. The use of green roofs was not

Guingi Tower
Tuscany, Italy



always related to environmental issues but more to aesthetics. However in northern Europe, grass sod houses were built to insulate the building on which they were constructed from the cold Scandinavian climate.

In the 1980s Germany rediscovered green roofs as a means of mitigating climate change. Since then they have never looked back and Germany is considered as the authority on the subject. They drafted the first ever guidelines on green roof construction (Forschungsgesellschaft Landschaftsentwicklung Landschaftsbaue.V. better known as FLL). European and non-European countries have used these guidelines as a basis for drafting their own standards. Green roofs are considered crucial in town planning to reduce most of the negative symptoms mentioned above. So important is their contribution that many European governments have issued incentives and/or regulations to encourage, disseminate and facilitate roof greening projects. In countries such as Switzerland, green roofs are obligatory on all flat roofs, while government subsidies are organised to cover a percentage of the cost of constructing a green roof (very similar to the situation in Malta with PVs). These initiatives have been so successful that the city of Basel in Switzerland is estimated to have the highest concentration of green roofs per capita in the world, whereas Germany is said to be

the country with the largest area of green roofs. Increase in green roofs is generally driven by the energy-saving characteristics but in recent time environmental conservation benefits are being appreciated and acknowledged.

Green roofs provide a number of benefits. The extent of the benefits depends on the number of green roofs installed within a particular area. One green roof will benefit mostly the owner and onlookers while a number of roofs over a given area could have far reaching advantages not only to the owners but also to the community and society.

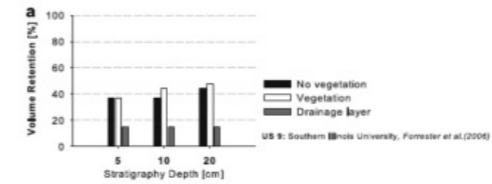
The main advantages of green roofs include:

- > Heat insulation
- > Lowering of ambient temperature
- > Flood mitigation
- > Increase in biodiversity
- > Amenity space
- > Aesthetic amenity
- > Improved air quality
- > Financial
- > Economic
- > Noise reduction
- > Reducing wear on the roofing slab
- > Increased health and well-being
- > Educational opportunity
- > Urban agriculture.

HEAT INSULATION: On a conventional rooftop, solar energy is absorbed by the roofing slab and transferred into the underlying rooms giving rise to the increased use of air conditioning thus increasing energy bills. On a greened roof, the plants absorb the sun's energy, cast shade on the growing medium and reduce heat transfer. The composition of the growing medium plays an important role in reducing heat transfer. This means that underlying rooms are cooler, resulting in a lower carbon footprint building.

LOWERING OF AMBIENT TEMPERATURE: The dew and irrigation water which evaporate from the surface of a green roof, as well as the absorption of solar radiation by plants, lower the ambient temperature above the green roof. Reducing the ambient temperature will ease the effects of the urban heat-island phenomenon rendering city life more bearable.

FLOOD MITIGATION: The growing medium used for green roofs (soil is not the ideal growing medium for green roofs due to practical, physical and mechanical issues) is capable of absorbing large quantities of water following a downpour.

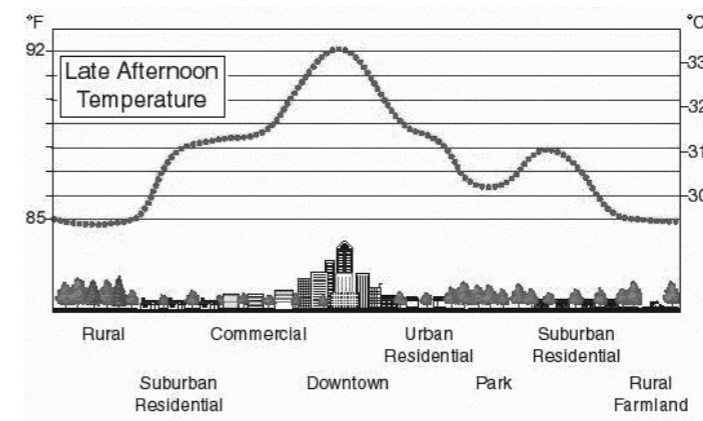


This water is either held within the system and later used up by the plants or evaporates or is released into the storm water drains over a longer period of time. In this way flooding potential is reduced.

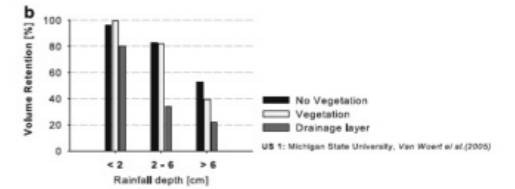
INCREASE IN BIODIVERSITY: Especially when native vegetation is used, green roofs provide habitat, shelter and food to a variety of species. This has been so successful abroad, that cases of breeding birds on roof tops have been recorded. Wildlife is important to our well-being. They provide ecological services as mentioned above. Green roofs act as ecological corridors connecting isolated communities.

Volume of water retention according to media depth (a) and rainfall depth (b).

AMENITY SPACE: Conventional roofs tend to be dull spaces. With the decrease in garden space, many people opt to utilise their rooftops and terraces for socialising and recreation. Roof top BBQs are becoming quite common and the installation of a green roof provides additional recreational space in a desirable environment. Such recreational spaces need not necessarily be located on private roof tops but also on public and commercial buildings. Studies have shown that employee performance increases when offices overlook green spaces and when amenity space is provided. Green roofs are a perfect space to practice other pursuits such as apiculture, gardening and so on.



Urban heat-island
phenomenon



AESTHETIC AMENITY: It is widely agreed that urban areas are generally unattractive. Green roofs have the potential of reversing this trend by softening views adding colour and interest. The value of properties with green roofs and/or overlooking a green roof is considerably enhanced and such properties often fetch higher market prices.

IMPROVE AIR QUALITY: Plants are known to capture suspended air particles in the atmosphere. They filter harmful gases and recycle carbon dioxide. Through insulation properties, green roofs reduce the use of energy hungry technology such as air conditioners, thus reducing the carbon footprint of buildings and other related pollutants.

FINANCIAL: Financial benefits of installing a green roof can ease the initial capital cost. Green roofs are not cheap to install however they reduce the cost of regulating the temperature within the building, and render PVs more efficient due to the lowering of the ambient temperature. In addition they increase the lifespan of the roofing slab and waterproofing membrane due to the reduction in temperature fluctuation. They also increase the value of the property.

ECONOMIC: The creation of a green roof industry generates financial wealth and education opportunities. Apart from growth in the importation and manufacturing industries, green roofs also create job opportunities for the construction industry from labourers to design professionals. Parallel to job creation is the added benefit of green education.

NOISE REDUCTION: Depending on the type of roof greening, sound absorption is another advantage especially in areas plagued with heavy vehicular and / or air traffic. The amount of sound insulation depends on the type of substrate used. There is consensus that green roofs are able to absorb considerable noise.

EXTENDING ROOF LIFE: Damp proof membranes exposed to solar radiation are subjected to movement which result in micro tears necessitating replacement and maintenance. Exposure to ultraviolet also has a damaging effect on the membrane. With the installation of a green

roof, the membrane is shielded from temperature fluctuations lengthening the life of the membrane and reducing waste directed to the landfill.

INCREASED HEALTH AND WELL-BEING: The benefits of greenery are well documented. The EEA Report 2005 'Ensuring quality of life in Europe's cities and towns' documents and makes reference to studies demonstrating the benefits of urban green spaces have on all age groups. Green spaces also proved important as they 'promote recovery from stress, are beneficial for mental health and improve behaviour and attention in children'.

EDUCATIONAL OPPORTUNITY: A sector where roofs are generally underutilised is in education. Roofs on schools are generally off limits to pupils and students. Green roofs on schools are a good opportunity to provide additional outdoor facilities for teaching and playing. They offer a good opportunity to expose pupils, students and visitors to the benefits of nature, as well as the benefits of green roofs and green design.

URBAN AGRICULTURE: With the systematic eradication of urban gardens, frequent food scares and the growing concern about healthy food, green roofs can provide a location for the cultivation of crops and breeding of small animals for food or other horticultural practices. The number of roof top farms in major cities is rapidly expanding and what is cultivated varies from simple herbs to vegetables for eating places. Roof top gardens are also ideal for keeping small animals for consumption purposes and apiculture.

There are always two sides to a coin and green roofs are not an exception.

Probably the most evident drawback of installing a green roof is the initial capital cost. The need to reinforce the roof slab (not always a requirement depending on the structure and type of green roof planned) and the installation of the various components of the roof system together with high labour cost render green roofs rather expensive. However, research abroad has shown that the costs are recovered over the years through energy

efficiency, better quality of life (lower health bills, psychological respite, aesthetic amenity, etc.) and increased property value.

As in a ground level garden, green roofs require maintenance to keep them looking at their best. Plants have to be trimmed, fed and watered. Green roofs could be said to be more demanding due to the exposed nature of the location. However maintenance requirements depend on the type of green roof installed. Extensive green roofs are low maintenance gardens, normally adopted for aesthetic purposes, insulation and flood mitigation purposes. Vegetation is usually composed of ground cover plants. On the other hand, intensive green roofs are composed of higher vegetation such as trees and shrubs and are generally more labour intensive.

Many of the apartment blocks constructed lack water harvesting facilities. This could prove to be problematic as green roofs require irrigation to some extent. The amount of water needed relates to the vegetation used. Native vegetation and succulents generally require less irrigation whereas lawns and more exotic vegetation require constant watering especially during the hot, dry summer months. This factor may be prohibitive unless such green roofs incorporate water holding facilities like a household cistern or water harvesting tubs at roof top level.

Green roofs are a positive move towards sustainability especially if adopted over a broad area. The spread of this technology throughout the globe should be proof enough of their effectiveness in mitigating the ill effects of urban areas. They contribute to a better quality of life and promote health and well-being. However, they are not the solution to all the problems plaguing our urban areas. Humans have to consider the consequences of the modern lifestyle whereas planning has to be more considerate of the welfare and health of the urban areas through sensible and sustainable actions.

Antoine Gatt is a landscape architect who lectures at the MCAST Agribusiness Institute and runs AGL Design, a landscape architecture consultancy practice.

THE WORLD OF BUBBLES, MOUTH PROTECTION AND SMALL FRY

By Andrew Vella - BTEC Level 3 Diploma in Fish Husbandry

Breeding fish is not easy as many people might think. When breeding fish one has to have the appropriate water quality to mimic the conditions found when these animals breed in the wild. Well...it's not rocket science, but it's not as easy as eating a Fish and Chips on a Saturday night neither!

FISH CAN BE:

> Mouth Brooders

> Egg Layers

> Bubble Nest Builders or

> Live Bearers

Mouth brooding is an astonishing feat whereby a female catches unfertilized eggs in her mouth and subsequently goes near a male's anal fin to fertilise these eggs. After they are fertilized, they are kept in the female's mouth until they hatch and the larvae reach a certain size. This is done to protect the fragile offspring from any harmful peril that may lie in the environs.

Egg-laying is commoner and in it females stick the eggs on a flat surface such as stones, slates or terracotta pots with the male whooshing over them to release the sperm to fertilize these eggs.

But none is more spectacular, weird and somewhat fascinating than the bubble-nest builders. A male goes to the water surface to gulp in air to use for the production of small bubbles on the surface of the water. This will serve as a nest for his offspring. A female will then come his way and will have her belly rubbed and squeezed by the male to lay the eggs

residing in her. At the same time the male would release his sperm to fertilize these eggs. When this rubbing and squeezing is over, the male gently catches the eggs and places them in his foam nest.

Although many people think that all fish lay eggs, indeed a number of fish species are live bearers – fish that give birth to young fry.

Every type of fish needs to be 'conditioned' before being bred. This process involves feeding fish food such as bloodworms, black-mosquito larvae or other meaty foods 2-3 times a day as these are usually found in the fish's natural habitat during the breeding season.

To breed fish one should have a tank separate from the display tank in which the reproductive parents should be placed. This aquarium should include, at least, 60 litres of water, exceptional water quality (monitoring parameters such as pH, hardness, temperature etc. is essential), one or two sponge filters depending on the size of the aquarium, a heater and décor such as plastic plants, driftwood, terracotta pots, empty snail shells, rocks and other items depending on the requirements of the particular fish. Each and every object has its own use but a description of such uses is beyond the scope of this article.

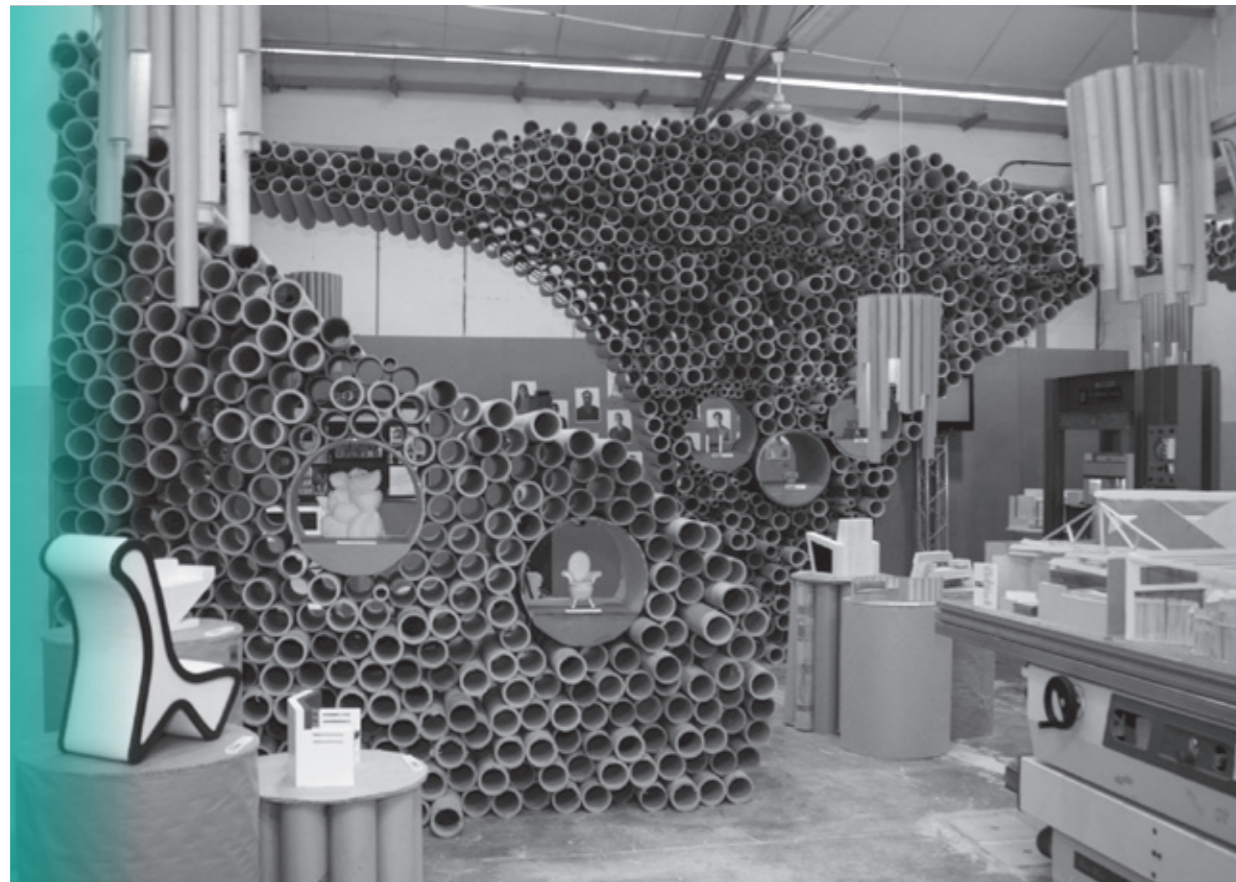
Once the fish are successfully bred, one can put the parents in the tank they were originally in, to avoid the fry being eaten. The fry have to be fed. One has to keep in mind that these tiny fish have tiny mouths and thus one must be careful not to provide food which cannot be ingested because of its inappropriate size. Thus, fry must be fed small food such as artemia (small shrimps) for the first few weeks of their lives.

This hobby gives one the opportunity and pleasure to plan, assist and watch the birth of new, young fry which, ironically, is one of the toughest things to do in the fish-keeping world.

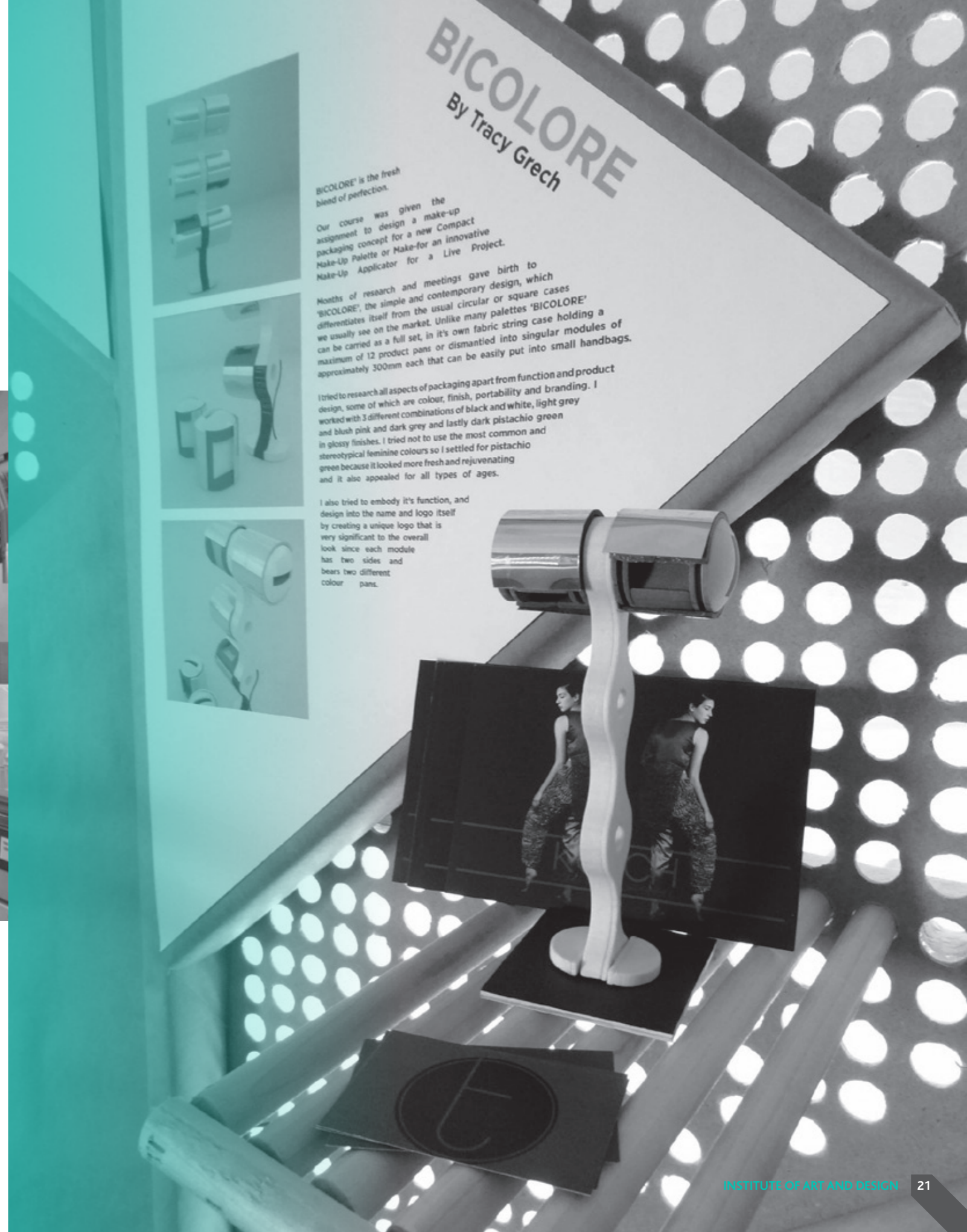
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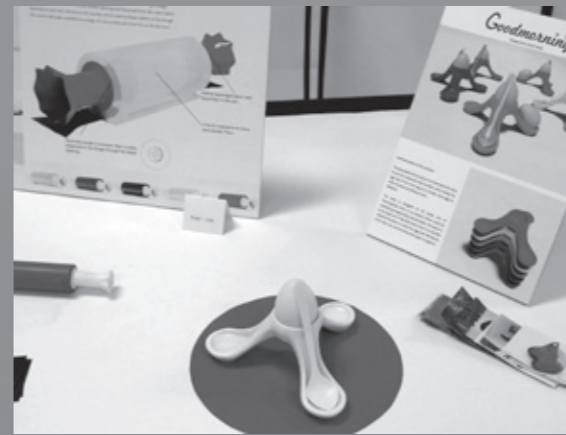


INSTITUTE OF ART AND DESIGN END-OF-YEAR STUDENTS' EXHIBITION 2012



The culmination of months of hard work and preparation finally came to an end on the evening of 3 July 2012. One could feel an atmosphere of satisfaction emanating from the students who, under the guidance of their dedicated tutors, spent long hours setting up their respective exhibition areas for the big night and the ensuing exhibition at the Institute of Art and Design.





Following last year's success, the opening ceremony of the eleventh edition of the Institute of Art and Design Students' Exhibition was again held on the Institute's campus at Mosta. Inaugurated by the Hon. Prime Minister Dr. Lawrence Gonzi, the event attracted hundreds of guests. Amongst the invitees were the Minister of Education and Employment, Ms. Dolores Christina, dignitaries, industry representatives, students, parents and MCAST staff.

The inauguration featured speeches by the Prime Minister; Principal and CEO, Prof. Maurice Grech; the President of the MCAST Board of Governors, Mr. Joseph Farrugia, and the Director of the Institute, Mr. Stephen Vella. The guests were then treated to a live performance by the folk ensemble "Nafra", and a series of promotional videos which were appositely produced by the Institute's Media students for the ceremony.

The highlight of the event was a spectacular architectural mapping projection which involved not less than three, high definition projectors overlooking the Institute's landmark clock tower and facade. The audience feasted their senses on the fantasy, animated short film that was the result of weeks of work by lecturers and

students hailing from various Art and Design disciplines. An original sound track complemented the stunning visuals.

The clever combination of a fashion event and the animation was very well received by the guests. Projected, animated versions of the models could be seen descending as if floating down the length of the clock tower, to eventually appear live on stage amidst the applauding audience. The artistic outfits in fabric and recycled materials were all created by students following 3D Design courses at the Institute.

Following the show, the guests were invited into the premises to appreciate the students' projects exhibited throughout the campus. One could not fail to note the creativity and effort reflected in all the exhibits that included three-dimensional projects in different materials and surface finishes, graphic design work, animations and interactivities, photography, fine art and a wide selection of audio-visual work.

The students went to great lengths in preparing their respective exhibition areas, transforming their assigned studios, workshops and gardens into intriguing installations and expositions with creative use of recycled materials and professional lighting. As part of their coursework, students had to come up with concepts for their exhibition area and eventually, with very limited budgets, they resourcefully put their ideas to fruition. From months in advance they searched for sponsors, obtained recyclable materials and constructed appropriate installations to market and display their work collectively to guests and prospective employers.

Mr. Stephen Vella, Director of the Institute of Art and Design, remarked that, "The Exhibition is evidence of long-term dedication and team effort. With the support of the management of the Institute and lecturing staff, the students work hard to promote and showcase their work. We are confident of the level achieved and feel the obligation to make society and industry more aware of our students' capabilities."

NSTF SCIENCE EXPO 2012

By Mark Theuma - Deputy Director, Institute of Art and Design

July 8, 2011 marked the end of an era in space exploration when Atlantis became the last Space Shuttle to blast off into orbit after a significant 30 years of service. Many recognise the overall achievements of the shuttle. Each vehicle was a fully-fledged laboratory where Zero-G or micro gravity experiments abound. Consequent discoveries found suitable application down here on Terra Firma in the fields of Science, Engineering and Medicine. The Shuttle programme was not without glitches, with the loss of Challenger and Columbia and their crew during the most critical phases of space flight, during lift off and re-entry respectively. Nevertheless, the Space Shuttle will undoubtedly be remembered for its contribution towards extending our knowledge and understanding of the universe, for the successful launch and extended operation of the Hubble Space Telescope and, most significantly, for the construction and completion of the International Space Station.

This occasion influenced our topic of choice for this year's participation in the NSTF Science Expo which took place between 23 and 27 April 2012. For the first time, the event was organised at the breath-taking location of Xrobb I-Ghagin Nature Park, a place that inspires learning and discovery and is certainly conducive to the Sciences.

Students following the Diploma in the Creative Arts course at the Institute of Art and Design were again on the forefront for promoting the benefits of creativity and fun learning. Under the coordination of Mr. Mark Theuma, Deputy Director, our students actively participated and contributed greatly to the success of the popular interactive science workshops for primary school children. Every one-hour workshop initially involved a short, fifteen-minute presentation on the Space Shuttle theme. Children had a brief lesson on how NASA's manned rockets evolved from the Mercury rocket to the Saturn V and eventually the Shuttle. High Definition videos complete with loud audio, proved sensational to the children. They attentively watched the shuttle rip through the air reaching supersonic speeds just a few seconds after lift-off, shedding off the rocket boosters and eventually the external fuel tank, on its way to orbit.

Many of the young, prospective scientists were not hesitant to voice their pre-acquired knowledge on the subject. The occasional exaggerated remark, completely pieced together out of the imagination and with the sole objective of impressing the listeners, found its way in too, much to the delight of the older audience! Nevertheless, it is

becoming ever so evident that the Internet and Educational Channels, together with books, play their influence whilst making so much information readily available to curious minds of all ages!

The second part of the workshop was more interactive. Congruent to the theme, the children constructed low-polygon, cardboard models of the shuttle. MCAST students provided much support in cutting, folding and gluing not less than 250 models! The smiles on the children's faces as they proudly paraded with their finished model left a lasting impression on our students. The activity also proved to be a great team-building experience:

The highlight of every session was definitely seeing their face full of excitement and joy when the shuttle was ready! ...we did this as a whole class and through it we bonded and became closer to each other.

MARIA SCERRI, DIPLOMA IN THE CREATIVE ARTS

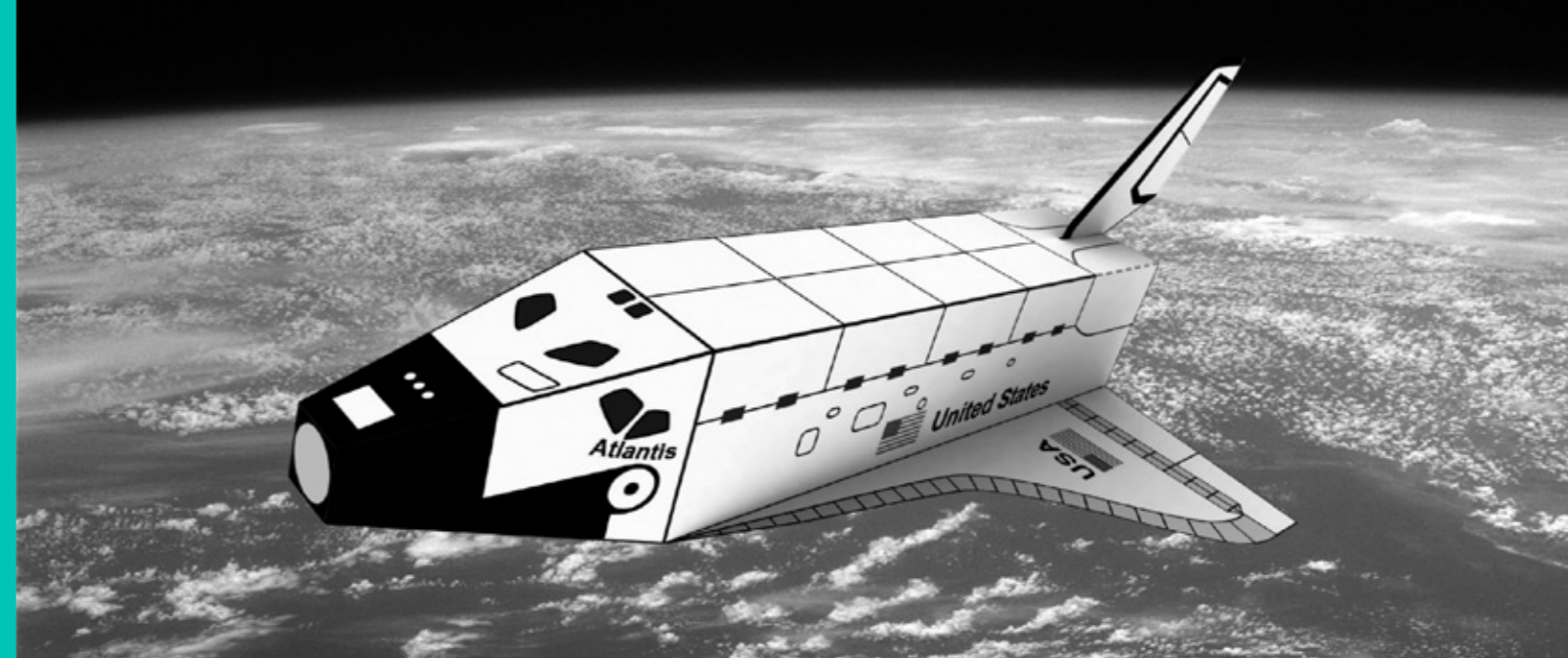
It allowed our class to do something different altogether outside school and it worked out great for all of us.

RAMONA DARMANIN, DIPLOMA IN THE CREATIVE ARTS

Mr. Mark Theuma, Deputy Director, remarked that such an activity always requires specific planning well in advance:

"Preparation is essential for successful delivery of each and every interactive lesson. Suitable simplification of facts and teaching materials is a challenging process and a requirement for this age-group especially when tackling higher-level topics. The lesson should not be a mere narrative but should also allocate enough time for the children to express themselves albeit in moderation. This not only fuels self-confidence but also enriches the lesson since it brings in their observations, experiences and general knowledge into the classroom."

On behalf of the Institute of Art and Design and NSTF, we would like to thank our Diploma in the Creative Arts students for contributing to another successful edition of the Science Expo.



GHANAFEST



Students at the Institute of Art and Design have joined the line-up of collaborators in this year's Ghanafest, through a joint-project which saw them research, draw up and produce an installation at St. Anne Square in Sliema. This was done as part of the activities preceding the actual Ghanafest music festival at the Argotti Gardens, in Floriana.

Following discussions and pre-planning sessions between Mr Stephen Vella, Director of the Institute of Art and Design, and Mr Ruben Zahra, Coordinator of the Ghanafest event, second-year Higher National Diploma in Fine Art students were entrusted with this project, as part of their unit entitled Site Specific Art.

The theme 'Gheruq' (Roots) was given to the students to spark off their creativity for the design of this site-specific installation. They were required to epitomise traditions in lifestyle, music and characteristics of Mediterranean culture. The group, consisting of nineteen students, individually worked on an idea generation exercise, which led to the presentation of their best proposals to their lecturers and peers.

"The Guitar Installation was selected because it was deemed to be the most relevant to the theme given by the commissioner," explained Ruben Zahra. Through this design, the students managed to amalgamate forms, textures and colours evoking the Mediterranean feel and atmosphere. The use of the guitar as a shape is the direct link to Ghanafest as a feast of music. Wire and metal frames in the form of guitars were covered with textured fabric, such as lace and burlap, with an array of hues displaying bright colour schemes of blues, greens, oranges and yellows, reminiscent of sunny Mediterranean landscapes.

All the students then joined forces to produce and finish the work. "The design is easily understandable, relatable and responsive to the client's brief," said Ms Ruth Ancilleri, the lecturer responsible for this unit. She explained how "students split themselves into two groups, with half of them working on building the metal frameworks, and the rest putting together the textiles, working within the relevant workshops available to them at the Institute." Multiple guitars scattered throughout the square delivered the concept over the whole space, creating an impact on the viewer through the repetition of similar, yet different imagery.

"Our students worked together to produce works of a very high level, demonstrating skill and adaptability in the production of this public art piece," said Mr Stephen Vella. "They gave evidence of the capability to work to specifically commissioned work and within set budgets and timeframes. These are just a few of the transferable skills that our students are garnering alongside the more targeted vocational proficiencies."



MEDIA STUDENTS IN TANDEM WITH INDUSTRY

A group of four second year students following an Extended Diploma in Creative Media Production at the Institute of Art and Design produced a cutting-edge TV advert featuring the new Toyota Yaris.

Led by Media Lecturer Keith Abela, students had the task to research and suggest recommendations to improve an existent media product as part of a unit called Research Techniques in Media Production.

Students Sean Aquilina, Chris Scicluna, Jake Spiteri and Chris Bajada conducted public opinion research on the new Toyota Yaris and analysed how Toyota presented the car through their adverts. After conducting the necessary qualitative and quantitative research, the students moved on to the pre-production stage where they came up with the advert concept and relative plans for their proposal.

As a result, the students filmed and produced a new Toyota Yaris audiovisual advert involving 2D animation and chroma key filming. The students designed and created two comic characters named Gringo and Pignet to be part of the same advert. The characters tease each other inside and outside the car so that different features of the car are portrayed with

a creative approach. The advert focuses on the new gadgets and technology available with the new Toyota Yaris.

During a presentation held at Michael Debono Ltd, the students had the opportunity to present their research and work. Speaking very highly about the produced advert, Debono Group Managing Director Geoffrey Debono, had praise for the students and the way they featured the new Toyota Yaris. Mr Debono was extremely satisfied with the students' work and said Toyota would start to use this advert as part of their local advertising campaign.

Also present for the presentation were Mr Michael Mallia, Board Member of the Debono Group and a MCAST Governor and Mr Jonathan Cremona, Marketing and Business Development Manager at Michael Debono Ltd.

Mr Stephen Vella, Director of the Institute of Art and Design, stated that this opportunity was fully exploited by this group of young creatives. "It is extremely positive whenever our students work is given mention outside of the College," said Mr Vella, "since both the industry and the general public may appreciate the talent and creativity being developed at MCAST."



WATER USE AND EFFICIENCY

The Trojan War is a classical, historical example of a folly (for the Trojans), whereby after nine years of heavy fighting, the Trojans brought the wooden horse, left by the Greeks, inside their city. Many Trojans raised concern before the horse was brought in, but this was to no avail – the fate of Troy is known by all. In simple terms, a folly may be defined as an event (or series of events) which may prove to be counter-productive, especially if a group of people raise the alarm before the actual event occurs.

If one had to shift his attention on the current use of our water resources, would anyone classify our current behaviour and trends as a folly? Could we use existing technologies that contribute to more efficient use, and conservation, of our water resource? Are we ready to modify our current behaviour to reduce our water consumption?

THE ISSUE

Water, like other resources, is finite. Consumption of water in households, industry and agriculture is on the increase. EU's directorate general on the environment claim that our current annual global consumption amounts to 4,500 billion cubic metres, with the potential of reaching 6,900 billion cubic metres by 2030 (EU, 2011a).

Malta, together with Cyprus and the Czech Republic, are faced with scarcity of water (EU, 2011b). Moreover, other countries within the European Union, namely France, Portugal, Hungary, Spain and UK, have experienced droughts and lower rainfall averages.

WATER EFFICIENCY

Effective water management, increased water efficiency, changes in consumption patterns, and increased public awareness are all essential 'ingredients' in tackling the issue of possible water scarcity. For instance, water leakages from pipes, apart from turning useful water into waste, also includes additional costs associated with pumping action. Reviewing agricultural practices, improving our buildings and better urban planning are essential if higher levels of water efficiency are to be met.

LIFELONG LEARNING PROJECT

The Institute of Building and Construction Engineering has formed a partnership with other vocational colleges from France, Italy, Scotland and Holland, and will be submitting a project titled "Towards better Sustainable Water Management". The main objective of this project is to increase awareness through education on protection and sustainable use of water resources. The thematic areas to be developed include:

1. Supply of good quality water for Human Consumption

- > The drinking water protection facing population growth
- > Increasing demands
- > Local trends
- > Resource use

2. Water Demand Management and sustainable use

- > Water scarcity; shortage and droughts related to climate change (occurs in many areas of Europe, particularly in the Southern and Mediterranean region)
- > Ground water abstraction (smart metering, leakage control, water saving campaign)
- > Problems with water

3. Water technology

- > Harvesting for domestic, agriculture and industrial use
- > Financial support to increase storage for rainwater run-off and restoration of existing ones

FACT BOX

4500 cubic metres = Current annual global consumption of water
6900 cubic metres = Forecasted annual global consumption of water by 2030
20-40% of available water in EU member states is being wasted
11% of EU population are affected by water scarcity
Small drip from a tap can waste up to 15 litres of water daily
Using water efficient showerheads can save up to 750 gallons a month, per person
Turning off water while washing hair can save up to 150 gallons a month

4. Protection of water

- > Productivity improvements in agriculture; better irrigation techniques
- > Reducing leakages in distribution systems
- > Protection from groundwater, freshwater and coastal waters pollution
- > Quality monitoring
- > Treated sewage

5. Construction related (Infrastructure)

- > The infrastructure related to water catchment areas
- > Building new reservoirs
- > Water rights and policies
- > Incentives for efficient water use

The project falls under the Lifelong Learning Programmes Initiative.

USEFUL ELECTRONIC RESOURCES AND LINKS

www.thewatercalculator.org.uk | An online, free to use, water calculator that allows you to measure the level of sustainability within your household, or any other building.

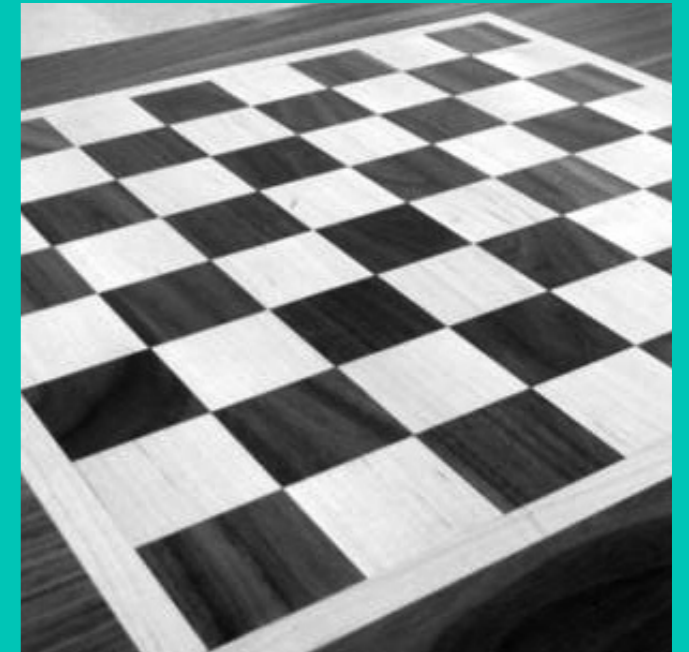
www.wateruseitwisely.com | A website containing simple valuable everyday hints and ways of how to conserve water.

www.p2pays.org/ref/01/00692.pdf | A free online manual (in pdf format) for commercial, industrial and institutional facilities.

www.environment-agency.gov.uk/business/topics/water/32040.aspx | A website suggesting ways of how one can improve water efficiency.

Chess playing & Critical Thinking

By John Vella - Director Institute of Building and Construction Engineering



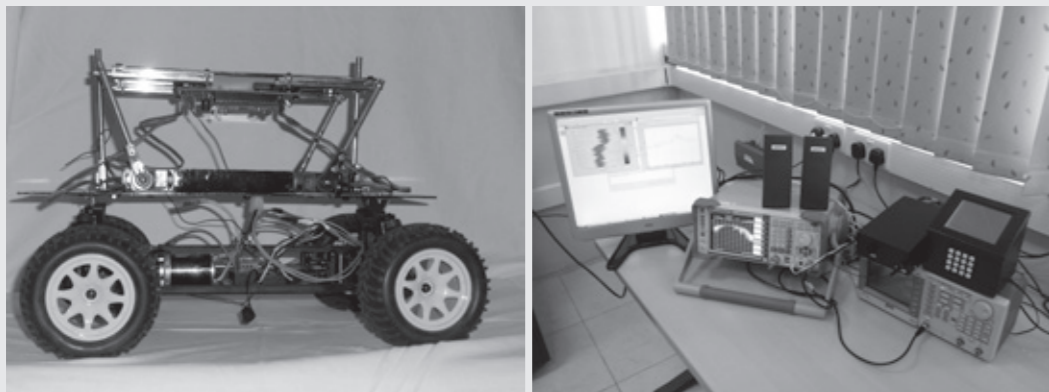
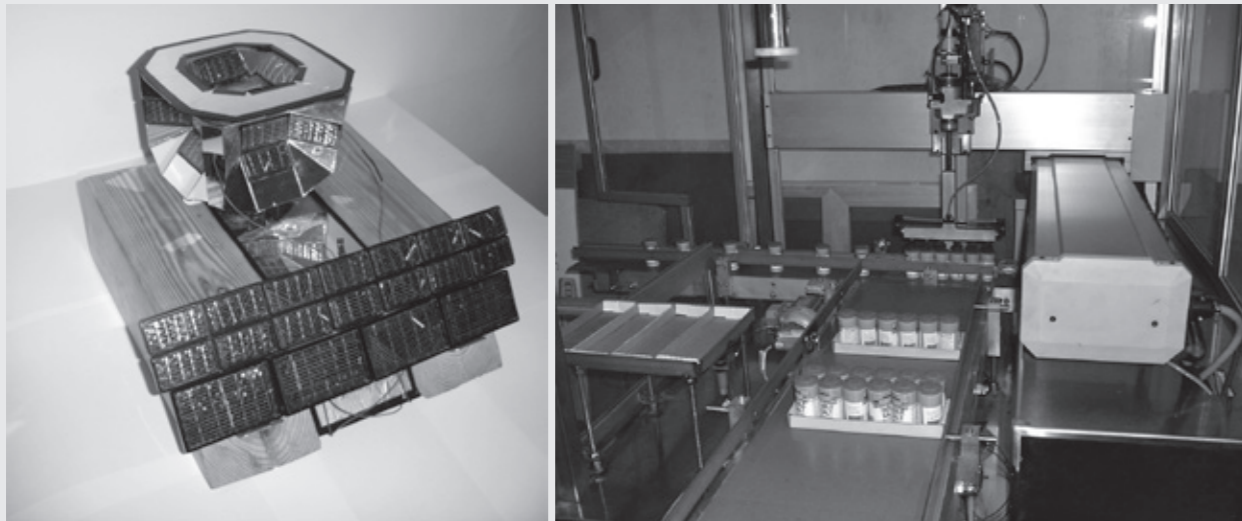
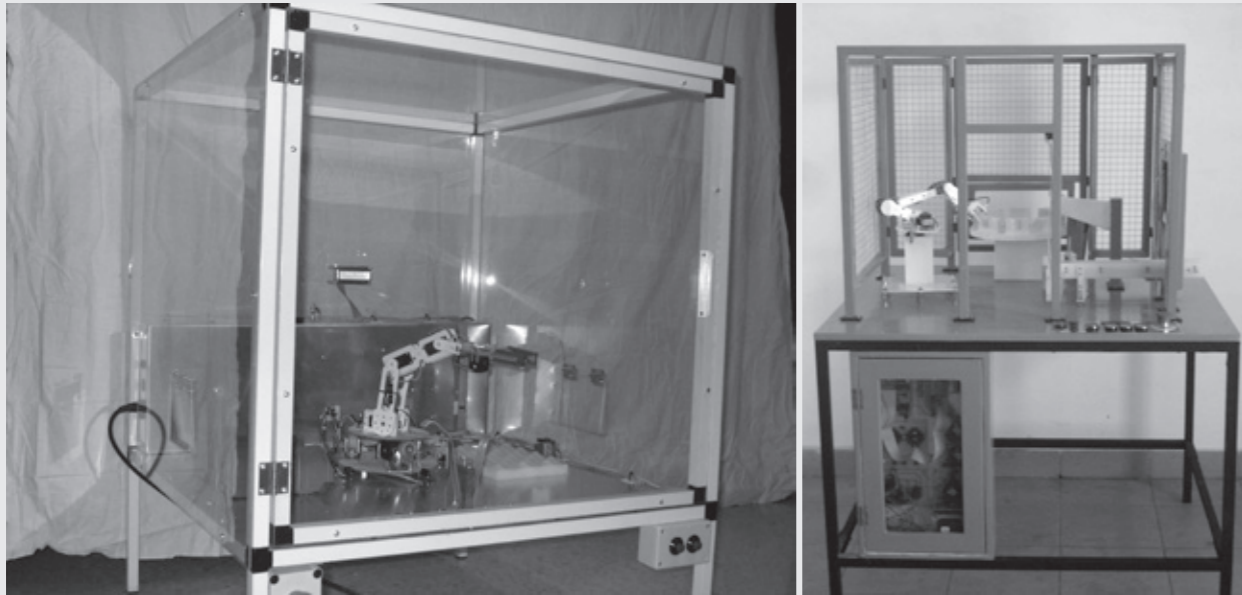
In this short article I would like to bring to the attention of the readers the importance of learning chess to improve a cocktail of mental and academic skills.

Chess is a game that improves problem solving, evaluation, critical thinking and intuition. Dr. Stuart Margulies, a well known researcher for IBM, recently “conclusively proved that students who learned chess enjoyed a significant increase in their reading ability”. This is quite interesting since many associated the game of chess only with mathematical skills.

Although ‘why’ chess improves reading skills is not really known, Dr. Margulies believes that since chess improves students cognitive and attention skills, it also contributes to reading skills.

Challenge yourself and play chess on computer as well as on traditional boards.

This chess board table is a Bench Joinery Project by 3rd year students at the Institute of Building and Construction Engineering.



INSTITUTE OF ELECTRICAL AND
ELECTRONICS ENGINEERING

PROJECTS EXHIBITION

This year's Projects Exhibition was organised as part of the MCAST Expo. Over 140 students' exhibits ranging from Level 4 to Level 6 were displayed at the MCAST Student House.

As has been the case for the past ten years, projects spanned a variety of areas. Students following the Electronic Communications Degree Course collaborated on two linked projects involving the Generation of the Local Oscillator for a Real Time Signal Analyser and a Real Time Spectrum Monitoring/Analysis.

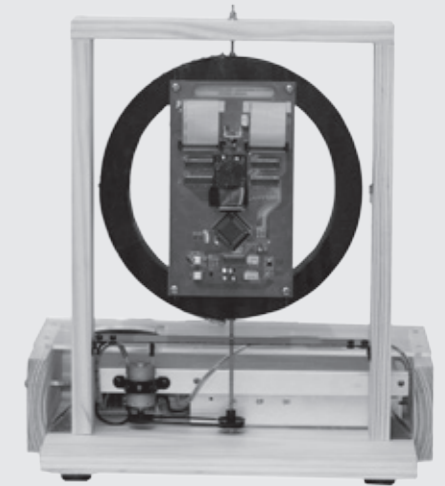
The Biomedical Engineering students presented a number of interesting theses. These included a devise that provides electronic support assistance for visually impaired people. Another interesting thesis involved studies on Human Arm Impedance and Human Knee Angle movements using digital IMU devices. Both studies came up with very interesting results.

Students following the Power Generation and Renewables Course presented the following exhibits:

- > Solar Panel with Mirror Solar Tracking using Artificial Neural Network
- > Reduction of Energy Consumption in Reverse Osmosis Plants
- > Energy Efficient Patterns at MCAST
- > Photovoltaic Cell Efficiency
- > Solar Panels on a Model Aircraft for Extended Flight

The following are some of the Level 4 and Level 5 projects;

- > Automated Keg Turner
- > Wi-Fi Controlled Home Surveillance Robot
- > Automated Laser Tracking
- > Home Automation using Distributed Control
- > Design of Circuit Burn in Tester
- > Self-levelling Platform on Moving Car
- > Automated Photovoltaic Panel Cleaner
- > Colour Ball Sorter



TRAINING SEMINAR

PROMOTING ACTIVE LEARNING

IN MATHEMATICS *By Kenny Muscat - Lecturer Institute of Electrical and Electronics Engineering*



During the last week of February 2012 I had the opportunity to attend a training seminar, in Belfast, focusing on the benefits of Active Learning in Mathematics. The event was funded by the Grundtvig Programme that aims to strengthen adult education and lifelong learning in Europe. Lecturing staff from Belgium, United Kingdom, Turkey, Ireland and Malta attended and actively participated in this seminar.

Gone are the days where students sit down and listen patiently to whatever the lecturer is saying. New methods are required to interest the students in the subject being taught. Active Learning is an approach that engages the students' thinking using real-life situations. This approach is not limited to the teaching of Mathematics but can also be used in other subjects.

In Active Learning the educator seeks to:

- > Choose suitable challenges for students
- > Use students' prior knowledge on the subject
- > Be clear on the purpose of activities in class
- > Encourage students to work together
- > Avoid rushing through the lesson and allowing students enough time to explore different ideas
- > Discuss alternative methods
- > Welcome students' mistakes and use them as learning opportunities
- > Challenge students by asking questions
- > Allow both small group and whole group discussions
- > Emphasize the important ideas after each section
- > Encourage students to make connections between their ideas

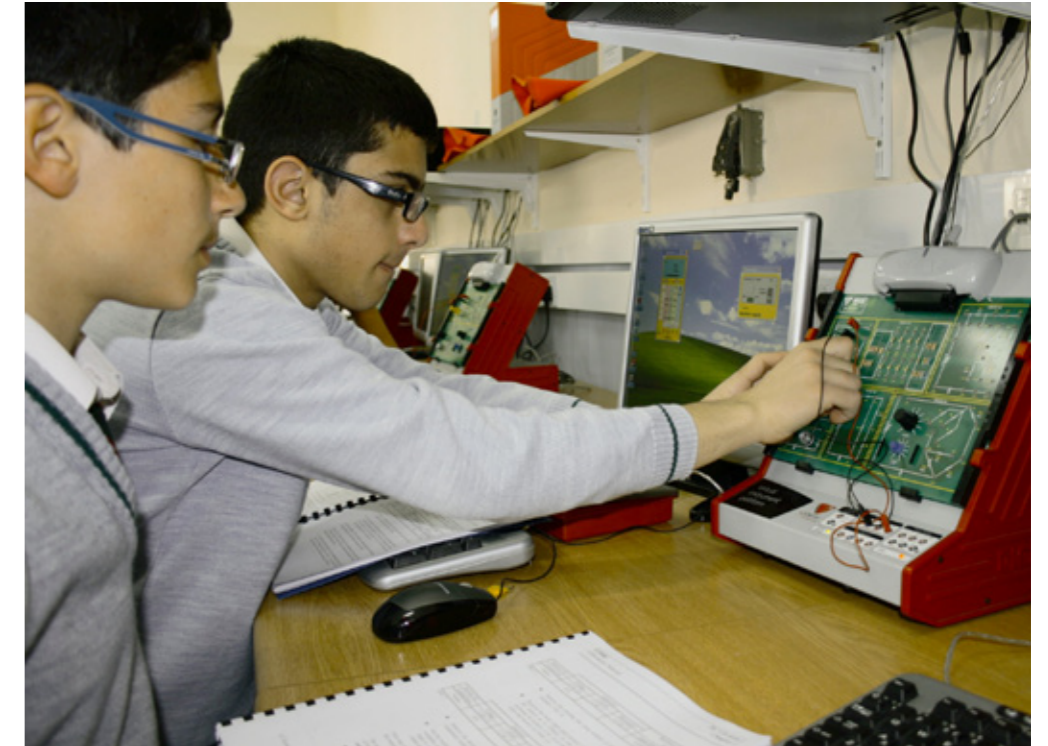
Active Learning can be challenging for educators and needs more time to prepare but it is worth trying. Educational institutions that have tried this approach have noticed that lessons became more enjoyable for students.

Besides participating in the various workshops during the one week event, we also had time to discover Belfast. During these informal activities we also had the opportunity to share teaching experiences and good practices back home.

Students change, teaching methodologies change and we also change. For effective teaching, as educators, we need to continue learning ourselves. The Grundtvig Programme offers funding for training seminars in different educational aspects and is mainly aimed at adult educators. I encourage all lecturing staff at MCAST to make use of such funds. Ultimately it is ourselves, our students and the Maltese economy that will benefit.



SECONDARY SCHOOL STUDENTS VISIT



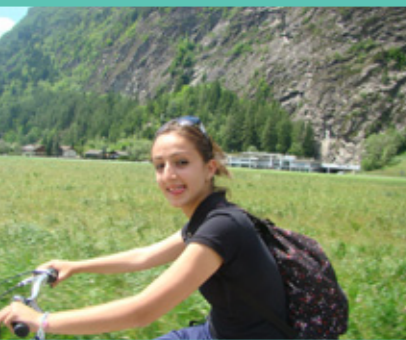
On Tuesday 3 April 2012 a group of Form 4 and 5 students from St Ignatius College Boys' Secondary School, Ħandaq, Qormi visited the MCAST Institute of Electrical and Electronics Engineering. The students were accompanied by their Design and Technology teacher Mr Michele Cassar. The aim of this visit was for the students to engage in practical work related to Electronics Practice. During this half day experience the students had the opportunity to perform practical experiments in basic electronics using the equipment available.

This event was possible following co-ordination work and discussions between Mr John Sciberras, Institute Director and the Headmaster of the Boys' Secondary School Mr Carmel Micallef. The practical experiments performed by the students were prepared and conducted by Mr Alfred Galea, Assistant Lecturer at the Institute of Electrical and Electronics Engineering.

The aim of these initiatives is for Secondary School students to get further help and assistance in the Physics, Design and Technology subjects and also to create awareness of the subjects and activities that are studied at the Institute. These visits aim to encourage students to pursue their studies at the Institute of Electrical and Electronics Engineering.

The feedback received from the students was very encouraging and positive and as a result this experience will be offered to more students. Besides the actual visit and hands-on experience the Institute also offered these students the opportunity to build small and simple electronics projects. This would enhance their experience of practical electronics, as well as provide good preparation for those students aiming to continue their studies in the field of electronics.

ADVENTURE TRIP 2012





MCAST SPORTS DEPARTMENT

MCAST Sports Department would like to wish all new MCAST students a warm welcome to MCAST and encourages all students to participate in the sport and exercise activities held on a regular basis both on campus as well as outside the college.

The MCAST Sports Department organizes a number of activities every year. These include sports leagues between teams from different institutes. Male and female students can choose from football 5-a-side, basketball, volleyball, table-tennis, darts and chess leagues. Mixed teams are welcome. Those students who may not like to compete can opt to borrow some of the sports equipment from the gyms in their free time.

Students may make use of the various gyms at MCAST. The main gyms are situated at the Corradino campus where one can make use of the indoor courts, the new gym which has a number of cardiovascular machines as well as weights, the games area as well as the football pitch. A number of classes and introductory sessions into various sports are held regularly here too.

Those students who would like to represent MCAST at the School Sports events organized regularly against other post-secondary institutions should give their name to the Sports Co-ordinator. Every year MCAST participates in football, basketball, volleyball, handball, snooker, table-tennis and athletics events.

Students may also wish to participate in other activities organized by the sports department which take place outside the College. Such activities may include canoeing, sailing, climbing, abseiling, camping, trekking, karting and beach games.

Every year MCAST Sports Department offers students the opportunity to be involved in national and international sporting events being held on the island. Any students wishing to volunteer to help out will greatly benefit from this experience. Students may also opt to do one of the regular courses organized by the MCAST Sports Department in collaboration with various sport associations. Courses may be on coaching, introduction to the sport and certificate in officiating.

Every year a number of students have the opportunity to travel abroad on a youth exchange being held in another European country. This is greatly enjoyed by all as various new sport activities are held during these exchanges. These may include floorball, ice-skating, Capoeira and Via Ferrata to mention a few.

Students are to take note of the sport notices in their respective institutes and at the gym. Anyone wishing to receive emails regarding the events being organized are to contact the Sports Co-ordinator Adele Muscat at adele.muscat@mcast.edu.mt.



International School Sport Federation Cross Country World Championships, Malta 2012



In March of this year, MCAST Sports Department was very much involved in the organisation of the World Schools Cross-Country Championships for students aged 16-18. In these championships we had around 500 participants from 24 countries including school and selected teams from countries as far afield as China, Australia and New Zealand. The Maltese team was represented by MCAST and St. Aloysius College. Adele Muscat, Sports Co-ordinator together with David Azzopardi, Sports Co-ordinator St. Aloysius College, secretary and chairperson of the Malta School Sport Federation respectively, organized this event in conjunction with the International School Sport Federation. Around 35 MCAST Sports students helped in the running of this event as part of their unit 'Organising Sports Events'.

Later on in June, Adele Muscat participated in the International School Sport Federation General Assembly which was held in Guatemala. The Maltese School Sport Federation has bid to host the Athletics World School Championships in 2015.

Adventure Trip 2012

Between the 22nd-29th of May, 13 students attending the Malta College of Arts, Science and Technology took part in an adventure programme in the Dolomites in North Italy. The students were accompanied by their sports lecturer Dorianne Bonnici and Sports Co-ordinator Adele Muscat. The activities conducted included trekking, mountain biking, via ferrata, rafting, white water rafting, canyoning, paragliding, abseiling, climbing and zipline. The MCAST students are all following studies in sport at the MCAST Institute of Community Services and thus this was a valuable experience for them. It was a thoroughly enjoyable trip for all.

NEWS

By Laurence Zerafa - Librarian, MCAST

WHAT THE LIBRARY OFFERS

The MCAST Library and Learning Resource Centre is your source of information, an essential element to improve the quality and depth of your studies, your lecturing and the performance of your duties.

The Library offers information in different formats:

- > print (books and magazines, several of which come with a CD or DVD),
- > electronic (CD, DVD and on-line),
- > film (DVD and VHS),
- > music and sound (CD and cassette).

Besides information for study (text books and reference works) and edutainment purposes (fiction books and feature films) the Library also offers for free:

- > IT equipment (for internet access, practicing MS Office and other programs, keying in and printing assignments, scanning documents, etc.),
- > Study spaces for group work and also for silent individual work,
- > Audio visual equipment to watch films and listen to music
- > Assistance by qualified library staff on how to use the library.

All Library collections can be searched through the 'Searchour Catalogue' or 'Your Course and the Library' pages found at www.mcast.edu.mt/llrc/.

If you are new to any of our six libraries (Main Library in Paola, 4 Institute Libraries in Malta and 1 Gozo Centre Library in Xaghra) and want to use our collections or services, come and register at any of these libraries and you will be able to use them all. Read all about us at our home page at www.mcast.edu.mt/llrc/ which lists all library addresses and opening hours.

WHAT IS NEW THIS YEAR?

For those of you who are returning lecturers and progressing students the main changes you will notice are at the Main Library in Paola. We have moved all our film collections (DVD and VHS) downstairs to ground floor in Hall B. We have also moved the bulk of our back issues of past periodicals into a closed store. However they can still be viewed on request. The most used past issues of periodicals can still be found and borrowed from the ground floor Hall B and from the first floor Hall A.

We look forward to seeing you make use of all our services and collections in all libraries. You stand to benefit a lot. If you have any comments or questions write to us on llrc@mcast.edu.mt.

Between the 1 February and the 31 May 2012 the Library held a competition amongst all three categories of library users (students, lecturers and staff) in order to identify those persons making most use of the Library collections and services in the following 6 Sections:

- > Biggest number of different non-fiction books borrowed
- > Biggest number of different fiction books borrowed
- > Biggest number of periodical issues borrowed
- > Biggest number of non-fiction A-V items borrowed
- > Biggest number of all items (aggregate of 1-4) borrowed
- > Biggest number of on-line renewals

An Award Ceremony took place at the Library on Tuesday 26 June 2012. The winners in each Section and Category are the following:



Competition Section	Category	Name	Institute
Audio Visual non fiction	Lecturers	Desiree Cordina	Community Services
Audio Visual non fiction	Staff	Stephen Caruana	Administration
Audio Visual non fiction	Students	Raymond Axiaq	Art and Design
Periodicals	Lecturers	Georgette Portelli	Business and Commerce
Periodicals	Staff	Emmanuel Attard	Administration
Periodicals	Students	Maria Buttigieg	Community Services
On-line Renewals	Lecturers	Mariella Grech/Joseph Bonello	Business and Commerce/ Electrical and Electronics Engineering
On-line Renewals	Staff	Fr. Marco Portelli	Administration
On-line Renewals	Students	Andre Grima	Art and Design
Non-fiction books	Lecturers	Joseph Bonello	Electrical and Electronics Engineering
Non-fiction books	Staff	Stephen Caruana	Administration
Non-fiction books	Students	Mark Azzopardi	Agribusiness
Fiction books	Lecturers	Elaine Vassallo	Information and Communication Technology
Fiction books	Staff	Oscar Borg/Matlene Ebejer	Administration/Community Services
Fiction books	Students	Kimberly Busuttill /Dinahlee Mallia	Community Services
Total all loans above	Lecturers	Joseph Bonello	Electrical and Electronics Engineering
Total all loans above	Staff	Stephen Caruana	Administration
Total all loans above	Students	Raymond Axiaq	Art and Design



INTERNATIONAL OFFICE

MCAST STUDENTS ON ERASMUS WORK PLACEMENTS

The pictures portray MCAST students that have participated in Erasmus Work Placements in different European countries.

How did they benefit from Erasmus?

- > they received Erasmus funds to help them cover their costs
- > they boosted their CV
- > they developed their character and personality
- > they experienced how other companies work abroad
- > they learned how to be independent and manage their own time and budgets.

Are you interested in such an opportunity? Would you like to try your luck? Keep an eye on your MCAST inbox and Institute notice boards for updates and information about open calls.

The International Office manages the Lifelong Learning Programme (LLP) which provides members of staff and students with the opportunity to participate in stimulating learning experiences across Europe.

The programme funds a range of actions including exchanges, study visits and networking activities. Projects are intended not only for individual students and learners, but also for lecturers, trainers and all others involved in education and training. The sectoral programmes of the LLP includes four sub-programmes; Grundtvig for adult education, Comenius for schools, Leonardo da Vinci for vocational education and training and Erasmus for higher education. These programmes provide staff members with opportunities to attend short training courses and conferences, to lecture at partner colleges and universities and to job shadow and carry out training in companies or educational institutions around Europe. Students also have the opportunity to participate in work placements in Europe under the Leonardo da Vinci or the Erasmus programmes.

These opportunities are available throughout the academic year. Members of staff and students will be notified via email through the Communications Office.



KYLIE DENNIS CASSAR AND JESSICA GALEA ICS-MHA, Leeds, UK



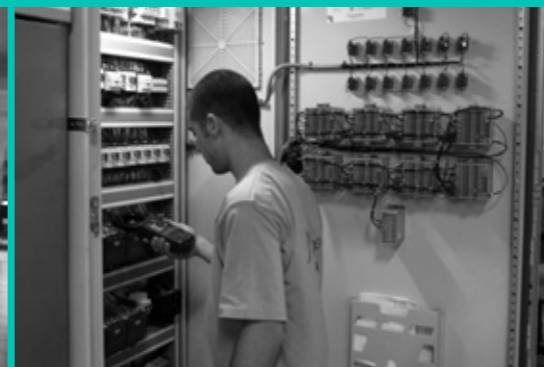
DONOVAN SAID ICT student, in Rotterdam, The Netherlands



DHIRAJ NARWANI AND DONOVAN SAID ICT student, in Rotterdam, The Netherlands



JAN ANDRÉ SCIBERRAS Business and Commerce student, at Profile Group, Brussels, Belgium



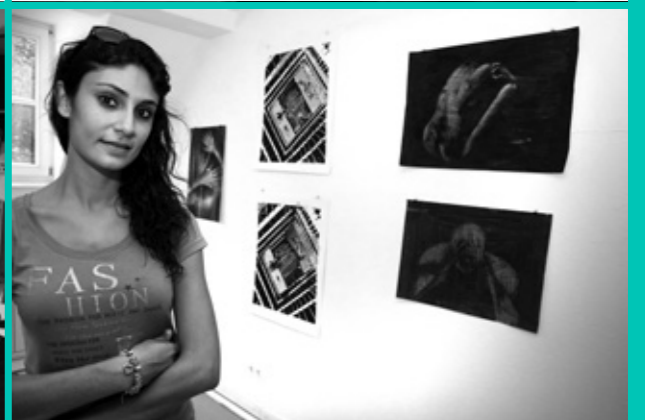
JAMES GRIMA Electrical and Electronics Engineering student, at Nexans, Brussels, Belgium



REBECCA BONACI Art and Design student, at Art and Multimedia Communication Lab, Institute of Polytechnic, Beja, Portugal



EMMA HICKEY Art and Design student, at Buttersouffire, Berlin, Germany



JENNIFER MALLIA Art and Design student, at Vestische Kuenstlerbund, Recklinghausen, Germany



RACHEL FENECH Art and Design student, at Art and Multimedia Communication Lab, Institute of Polytechnic, Beja, Portugal



CLAUDIA CHIRCOP Art and Design student at Kunstmuseum Gelsenkirchen, Germany



SIRACH VASSALLO ICT student at Service Planet, Rotterdam, The Netherlands

MARITIME INSTITUTE



3 MARITIME INSTITUTE STUDENTS RECEIVE GRIMALDI AWARD

James Sammut, Pierre Mangion, and Christian Coleiro are the winners of this year's Grimaldi Award, a prestigious prize presented to the MCAST Maritime Institute cadets who distinguish themselves with outstanding performance and results during their studies.

The award, which includes a total of €10,000 in cash prizes, is sponsored by Grimaldi Group and its company Malta Motorways of the Sea Ltd, as part of a long-established collaboration with the Maritime Institute. The Hon. Austin Gatt, Minister for Infrastructure, Transport and Communication, Dr. Emanuele Grimaldi, Grimaldi Group's Managing Director, Mr. Joseph Farrugia, MCAST President, Prof. Maurice Grech, MCAST Principal and CEO, and Capt. Ghassan Abdullah, the Maritime Institute's Deputy Director presented the award to the three young officers during a visit to the MCAST Expo, on Monday 25 June 2012.

Mr. Sammut, Mr. Mangion and Mr. Coleiro received the award for their achievements during their studies and sea training as part of the three-year Officer in Charge Navigational Watch course, which they completed during the 2010/2011 academic year. To complete this course, and to obtain the relevant international certification to work in this

industry, students are required to spend 12 months training at sea, working as cadets on board different vessels and visiting many ports across the globe.

The Maritime Institute is renowned as the most advanced maritime education and training institution in the Maltese Islands. It offers several courses for individuals aspiring for a career in the maritime industry, as well as for maritime enthusiasts, including owners and drivers of all kinds of boats and pleasure crafts. The Institute's collaboration with Grimaldi Group started when the latter launched its subsidiary Maltese company, Malta Motorways of the Sea Ltd. This collaboration provides the Institute's cadets with several opportunities to undertake their sea time training on board Grimaldi Group's vessels.

Malta Motorways of the Sea Ltd has also sponsored a modern Bridge and Communication Simulator worth €130,000, to be used by the cadets at the Maritime Institute. Simulation training is an essential part of maritime training, as it gives cadets hands-on experience in bridge and communication control situations. This is an important requirement for employment in European and international maritime sectors, as well as an International Maritime Organisation (IMO) requirement for the acquisition of international maritime certifications.

MCAST STAFF PARTICIPATES AS AN INTERNATIONAL JUDGE

IN A GENERAL MOTORS TOP DEALER SKILLS COMPETITION FOR THE MIDDLE EAST REGION

During the academic year 2011/12 General Motors, Middle East invited Mr David Bonello, Deputy Director at the Institute of Mechanical Engineering, to be one of the International GM Judges in the Top Dealer Technician Skills Competition held in Dubai, UAE.

The GM Middle East Skills Competition is part of the company's commitment to provide best after-sales and customer-care experience. The main aim of the competition is to improve technical skills, expertise and knowledge among the motor dealers spread around the Middle East including Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, United Arab Emirates and Yemen. The competition was open to all dealer technicians from across the GM dealers' network in the Middle East. All competitors had to work on various GM brands; these being Chevrolet, Cadillac and GMC.

More than 3,000 dealer technicians entered the competition. After two rounds of tough examinations, the top 36 technicians were selected to compete head-to-head and showcase their abilities at the two-day final event held at the pit-garages of the Dubai Autodrome.

The schedule for both judges and competitors was rather tough. The days were very full. Judges had to be at the autodrome of Dubai at 0700hrs till 2100hrs. This meant that wakeup was at 0500hrs, breakfast at 0600hrs and pickup from hotel was at 0630hrs. The competitors were challenged to diagnose, repair, and correct systems in Chevrolet's, Cadillac's and GMC's vehicles that were purposely outfitted with faults and operating problems. As the contestants worked away, the judges closely

observed each technician to determine capability and skills in expert product knowledge and fix-it-right-the-first-time techniques. After each competitor the judging panel collectively prepared all vehicles, engines and electrical faults on around 80 vehicles which varied from salon to SUV, 4x4s, light trucks and various chassis components like gearboxes, transfer cases for AWD, etc. All faults had to be remounted and prepared for the next contestant in a very short time. Teamwork among all judges made it viable to reset the original faults for the next contestant. Competitors had to carry out various repairs in a very restricted time. Some of them, although very experienced, did not manage to finish the entire tasks. This showed that the very best were capable to diagnose and fix the fault/s on the vehicle to the full in the stipulated time.

GM Middle East invests \$10 million annually in technical and customer-care training for the dealer technicians, showroom staff and customer-care service persons across the region. The company has got five training centres located in Dubai in the UAE, Jeddah, Riyadh and Dammam in Saudi Arabia, and Angat in the Philippines. Together, these training centres provide 2,400 training days a year from 70 experts in the field of motor vehicle and customer-care. Combined with the web-based training, GM Middle East provides 169,000 hours of training every year.

The competition was a great experience for Mr Bonello. It gave him the opportunity to share his knowledge and experience in the field of motor vehicle engineering as well as to become more familiar with the latest technologies that GM is working on and using in the new vehicles.



It is indeed essential to have MCAST staff participating in similar events since such exposure provides a general overview on the aims of the car-manufacturing companies, with regards to repair and customer-care philosophy. Although Mr Bonello's expectation was that of participating in a large event in a set-up which would meet the demands of such large competitions, he was extremely impressed by the equipment and resources, including safety gear, provided to each competitor to tackle a fault and try to fix it right. The idea after all this is to try to reduce

time on tasks and above all to give the vehicle back to the customer in the least time possible. Presently GM is the largest vehicle seller in the world.

Mr Bonello would like to thank Prof Grech, Mr Emanuel Attard and all those who made this visit possible. He would also like to thank Mr Harrie Vanderschoot (Regional Training Manager) and Mr Joseph Scicluna (Area Technical and Warranty Manager) from GM Middle East for making such a visit possible.



DONATIONS FROM GM MIDDLE EAST



During the academic year 2011/12 the Institute of Mechanical Engineering added various significant acquisitions to its Motor Vehicle Complex. It benefitted from a number of donations from the General Motors Middle East Technical Centre. Two vehicles and various engine and chassis parts that included transmission systems were among the donated items.

This initiative had started about four years ago when Mr Harrie Vanderschoot, GM Regional Training Manager for the Middle East, together with Mr Joseph Scicluna, GM Regional Warranty Manager for the Middle East, paid a visit to MCAST's Institute of Mechanical Engineering. During their visit, which was hosted by the previous Director Mr Emanuel Zahra and one of his Deputies Mr David Bonello, they were shown around the Institute, particularly the Motor Vehicle Complex. There, they saw the existing resources and observed the ongoing enhancement which was being carried out for the benefit of the engineering students. During subsequent discussions held with the Principal Prof Grech, the Chief Officer External Affairs Mr Emanuel Attard, Mr Zahra and Mr Bonello, Mr Vanderschoot had indicated that GM could help the Institute by donating vehicles and other equipment.

As one can imagine, it was a blessing for the Institute since it is rather hard to get two relatively new vehicles with the latest technology installed on them... free of charge!

In summer 2011, a delegation from MCAST led by Prof Grech visited the UAE. Mr Bonello and Mr Attard made all efforts to make sure that the Principal and his delegation visit the GM Middle East Training Centre at the Academic City, Dubai. During their visit, MCAST's representatives were shown the potential vehicles to be donated to MCAST: a 4x4 Hammer HT3 and a Chevrolet Captiva. Once again the Institute of Mechanical Engineering and MCAST administration worked hard to attain clearance of all papers so that the vehicles and other parts would be shipped to Malta. This took quite some time and in the meantime the Hammer and a Chevrolet Captiva were consigned to another college in Saudi Arabia. Also, other electric vehicles which served as taxis in the UAE for a trial test were sent to a Canadian school so that students could learn on these new concepts of transport. This did not hinder the determination and efforts of the MCAST and GM Middle East personnel. Within a month there were two other Chevrolet Captivas AWD that were

assigned to MCAST. The vehicles and other resources were cleared for shipment in November 2011 and were shipped to Malta in December 2011. They arrived at MCAST in January 2012.

These and other similar resources are valuable assets for all students who make use of the Motor Vehicle Engineering Complex. Such educational resources provide information on latest systems like cruise control, heated seats, AWD systems with diff-lock shift, winter drive control systems, climate control AC systems, automatic drive systems and many other new controlled systems found in modern vehicle engineering. Apart from MCAST students, university students benefit from these resources during their summer training at the College, where they are exposed to various practical skills of mechanical engineering.

Great appreciation goes to GM Motors representatives: Mr Vanderschoot and above all, Mr Scicluna and the staff of GM Middle East in Dubai, UAE who were instrumental in all communications between GM Motors and MCAST, and in the realisation of these prestigious donations from GM Motors.

INDUSTRIAL VISIT



TO SICILY

Throughout the academic year the Institute organises several industrial visits as part of the training programme for the Mechanical Engineering students.

Institute Lecturers Mr. Emmanuel Gatt, Mr. Joseph Galea and Ms. Vanessa Titley have taken the initiative to organise an industrial visit to Sicily for students enrolled on the Foundation Course. The students had the opportunity to visit vintage and modern farm machinery, food processing plant equipment as well as a hydroelectric dam and a typical agriturismo environment.



NEW DIRECTOR ERIC FLASK

Eric Flask is the newly appointed Director at the Institute of Information and Communication Technology. For the past seven years Mr Flask has worked as Consultant with the Malta Council for Science and Technology (MCST) within the Office of the Prime Minister. During the last two years he was the Director of the National Funding Unit within the Council where he was responsible for the National Research and Innovation (R&I) Programme.

Beyond his responsibilities as R&I Programme Manager, Eric has been actively involved in European Union projects with specific focus on ICT and represented Malta in the Programme Committee of the European Commission Framework Programme for European research, technological development and demonstration (FP) as the National Delegate for ICT. Eric was also the National Contact Point (NCP) for ICT for the same programme.

Prior to his job with MCST, Eric worked as a Consultant with the Malta Information Technology & Training Services (MITTS) Ltd (today the Malta Information Technology Agency - MITA), and later with the Central Information Management Unit (CIMU) where he was responsible for the development of various policies and standards for the public sector. He was also instrumental in the design and implementation of a number of projects including the eProcurement framework for Government and the development and introduction of the Maltese Keyboard and related standards.

Since 1995, Eric has been lecturing various Management and ICT related modules at a number of local management and training Institutes. He was also invited to give a number of presentations and training abroad.

Eric obtained a Bachelor of Science degree in Business and Computing from the University of Malta in 1998 and a Masters Degree in Business Administration from Henley Management College, UK in 2008.



INDUSTRIAL VISIT TO LEXCORP INTERNATIONAL LTD.

On the 24 April 2012 the Institute of Mechanical Engineering organised an industrial visit to Lexcorp International Ltd, a company that is a major player in the local Diesel Engine Power Generating Set market. The company, which has considerable market share abroad, is the exclusive representative for the sales and service of FG Wilson, a world renowned brand of generator sets.

Mr. Gatt, Managing Director of Lexcorp International Ltd, welcomed the students and presented a very interesting slide

show on the latest technologies and developments of these generating sets.

The students were first provided with background information about the company. They were also informed about the diesel engines and their various uses including the reasons that diesel engines are used to drive generators, their typical characteristics, fuel pumps and their control, turbo blowers, mitigating noise and vibrations, operation and routine maintenance, typical cooling problems, electric generators, types and characteristics, controls, VARs, overload protection, loading, synchronizing of generators as well as typical sensors and communication with other systems as BMSs.

The presentation was then followed by an exciting test run and loading of a 450 KVA unit.

The Institute of Mechanical Engineering would like to thank Mr. G. Gatt for the opportunity provided to the students.



WORK PLACEMENT EXPERIENCES

THE FOLLOWING ARE
COMMENTS FROM STUDENTS
WHO PARTICIPATED IN WORK
PLACEMENT EXPERIENCES
DURING JUNE / JULY 2012. THE
INSTITUTE TOGETHER WITH ITS
STUDENTS ARE THANKFUL TO
THE OVER 130 ORGANISATIONS
THAT HAVE KINDLY OFFERED
TO WELCOME STUDENTS FOR A
WORK PLACEMENT.



ANGIE POLIDANO

Higher National Diploma in Business
assigned to the Malta Chamber of Enterprise, Commerce and Industry

I was assigned to work at the Malta Chamber of Enterprise, Commerce and Industry for a five-week period. I was asked to carry out several tasks including writing articles about the collaboration between the Malta Chamber and MCAST and the seminars that I have attended. I was responsible for carrying out a survey, researching local legislation, data inputting as well as designing presentations. This experience has helped me to better understand the theory I learnt during the course including health and safety policies and ISO standards. This experience was very valuable since it made me understand better how one conducts work in a real business environment. Staff at the Malta Chamber is continuously working on new projects that are relevant to their members as well as the wellbeing of the local business community. I have also learnt the importance of teamwork and good communication with staff members.

I am very pleased that I have carried out this experience as I believe that I have increased my general employability skills which will definitely help in my future career.

Mr Kevin J Borg, Director General, Malta Chamber, commented:

Skills required for a successful career cannot be exclusively developed through coursework and exams. Work placement schemes give students an opportunity to link academic theories to real industrial practice. Moreover these experiences augment the students' skills, making them more employable."

CHRISTABELLE GAUCI

Extended Diploma in Business
assigned to Arkadia Marketing Ltd.

Quoting Donald Norman, co-founder of the Nielsen Norman Group, "To get a real work experience, you need a job, and most jobs will require you to have had either a real work experience or a graduate degree."

Spending five weeks working with the Human Resources Manager and Executive at Arkadia Marketing Ltd., was an experience that has helped me to broaden my knowledge. Now that the placement is over I can truly appreciate how valuable this work placement really was. I enjoyed my work placement since I could put to practice things that I have studied in theory during my first year of studies. These included handling confidentiality issues, health and safety issues, the recruitment and selection processes, filing procedures, and much more.

Having the opportunity to work with different people with different backgrounds and personalities has also helped me to improve my communication skills. I have also learnt how to work under pressure, carry out different tasks in one working day and set priorities.

It was definitely a wonderful experience, and I am sure that I will find it useful in the future. I encourage all to consider work placements as a golden step towards the real world of business and an opportunity not to be missed.



JONATHAN PACE

Diploma in Business
assigned to Malta Enterprise

As the academic year came to an end, we were given the opportunity to take up a 5-week work placement. Conscious that this experience helps students develop their skills further whilst obtaining a better understanding of the various concepts and units covered during the course, I applied and was assigned to the Incentives Unit within Malta Enterprise.

From the very outset it was clear that such an experience not only helps us to implement theoretical knowledge into practice, but also helps to develop our personality through the exposure to the work environment and the continuous contact with employees and clients of the organisation.

I was given a hands-on approach on one of the incentives provided by Malta Enterprise, namely the 'Get Qualified Scheme', which supports individuals following a course of study leading to a certification in various economic sectors. Upon successful completion of the course, beneficiaries would recover part of their expenses by means of tax credits amounting to 80% of the eligible costs.

The placement has given me further insight into how, in reality, this scheme is operated for the benefit of students who wish to further their studies. I was briefed about the whole process of the scheme and assisted in its administration through the tasks that I was assigned to, which amongst others comprised filing of applications, inputting of data and processing of applications. Together with my mentor, Ms Anne Genovese, I also communicated with individuals who applied for the scheme as well as with the various institutes offering the courses.

During the whole process I could notice that the units covered in class, during the one-year Diploma in Business, were instrumental in helping me carry out my job effectively. Interacting with other members of staff within the organisation and observing their line of work also served as an experience to enhance my general knowledge and help me in my personal development.

Ms Anne Genovese, student's mentor at Malta Enterprise, commented:

"I believe that the brief stints of work experience will be of great benefit to students since they will be able to combine what they learn in theory with practical on-the-job experience, thus giving them a greater exposure to the world of work and helping them develop their personality. During the course of his work Jonathan performed his job diligently, efficiently and showed dedication and a strong work ethic."



CHRISTOPHER JONES & NAKITA MIZZI

Certificate in Insurance
Two out of a number of students assigned to Atlas Insurance PCC Ltd.

During this work placement at Atlas Insurance PCC Ltd. a number of students were assigned to different departments including the Commercial Lines Department, the Claims Department and the Personal Lines Department. A few students were also assigned to the Atlas Healthcare Insurance Agency.

From this work experience we learnt how to deal with telephone and e-mail enquiries, deal with clients, irrespective of whether they happen to be disgruntled or else willing to cooperate with the staff members.

Students also had the opportunity to appreciate the reality of multi-tasking. Through this work experience, all students had the

MARIA MAGRIN & DINAHLEE MALLIA

Medical Secretaries Certificate
Two out of a number of students assigned to Mater Dei Hospital

As students following the Medical Secretaries Certificate we were assigned to Mater Dei Hospital.

In order to gain as much as possible from this work placement experience, we were assigned various types of secretarial work carried out in a general hospital. Through this experience we have had the opportunity to carry out many tasks and so we were given the chance to learn, practice and enhance various secretarial skills in a medical environment.

During a work placement one encounters a variety of real life working situations. This is what spices excitement during work placements and at the same time is a worthwhile challenge. Our daily tasks included answering the telephone, dealing with hospital clients and public queries, carrying out daily office tasks, setting-up appointments and much more.

During our placement we had the valuable opportunity to learn and become familiar with several medical terms. At first this turned out to be quite a difficult feat, but thanks to our mentors who were extremely kind and helpful all the way through, we managed to tackle this challenge. All of the staff colleagues we were in touch with during our placement, treated us very positively, and this surely helped us feel at ease, making it easier for us to focus and adapt ourselves to the particular work environment we are preparing ourselves for.

These work placements can be described as a unique opportunity that help one grow and develop in a professional and personal manner.

Ms Josephine Saliba, Executive Officer at Mater Dei Hospital, commented:



"It gave me personal satisfaction that I was able to guide and train a willing student through this period. I am pleased that the student assigned to me has benefited from this experience which encouraged her to proceed further with her studies."

This is a common comment amongst mentors who have ably guided the students during the work placement period.



opportunity to practice and better appreciate team work as well as have the opportunity to gain different skills such as customer service skills, job planning skills where we learnt how to plan work which we were to carry out, as well as improved computer skills by learning how to make use of specific insurance systems and other insurance related software and computer applications.

An important experience we treasured during this work placement is the collaboration from the staff members and our mentors from the departments we were assigned to. They guided and helped us tackle problems in order for us to learn from the different situations and hence gain experience and knowledge we could only garner from this valuable work placement experience

A COMPARATIVE STUDY OF

ONLINE PRICES OF ACCOMMODATION ESTABLISHMENTS

IN CORFU, CYPRUS AND MALTA

By John Baptist Gauci, Christabelle Attard, Simon Peter Camilleri, Melanie Cauchi, Annalise Gatt



THE COMPETITION AMONGST MEDITERRANEAN DESTINATIONS FOR A SHARE FROM THE TOURISM MARKET IS HIGH, ESPECIALLY DUE TO THE COMPARABLE PRODUCT THEY OFFER. MANY OF THESE DESTINATIONS HAVE RECENTLY EMBARKED IN PROJECTS TO DIVERSIFY THEIR TOURISM PORTFOLIO, BUT PRICE COMPETITIVENESS REMAINS A MAIN ISSUE IN THE TOURISTS' CHOICE OF A HOLIDAY DESTINATION. THE AIM OF THIS SURVEY WAS TO RESEARCH THE PRICES OF COLLECTIVE ACCOMMODATION ESTABLISHMENTS IN THE THREE ISLANDS OF CORFU, CYPRUS AND MALTA. THIS STUDY WAS UNDERTAKEN AS AN ASSIGNMENT WITHIN THE BA (HONS) IN BUSINESS ENTERPRISE DEGREE PROGRAMME BEING OFFERED BY THE INSTITUTE OF BUSINESS AND COMMERCE.

INTRODUCTION

The tourism sector has gone through a substantial expansion in the past fifty years and it is one of the main contributors in the economy of many countries. The market share that traditional destinations had in the tourism industry has in more recent years suffered a substantial blow from new emerging destinations and the debate on destination competitiveness has been ongoing for over fifteen years. Destinations strive to manage a sustainable tourism sector especially today that competition has gone global with the advent and widespread of the Internet. The online environment has empowered tourists to do business directly with the service providers, making the Internet an essential tool for all tourism enterprises. The rise in the online presence of suppliers has, in turn, made it possible for consumers and suppliers to be more aware of the different prices and services offered, and thus consumers can make their choices and compare suppliers deals accordingly.

Tourism products and services offered by competitive destinations are facing an even stiffer competition. Two Mediterranean destinations that are direct competitors to Malta due to their geographical location, similar climates and comparable product they present to tourists are Corfu (Greece) and Cyprus. All three destinations have for years been marketed as sun and sea

destinations, although all three are trying to move away from this concept by diversifying their tourism portfolio. A significant seasonality factor influences their respective tourists' arrivals with the majority of tourists visiting the three islands in the summer months. It might also not be a coincidence that UK and Germany are the two countries which contribute to the highest amount of tourists visiting each of the three destinations.

Another attribute common to Corfu, Cyprus and Malta is the great importance that tourism has on the employment and economies of the three islands, whereby travel and tourism are the main source of income of their inhabitants. Although the actual figures for Corfu could not be easily determined, Pappas (2008) states that the income per capita in Corfu is one of the highest in the country due to tourism, and thus the income per capita in Greece should be taken as a lower limit for that in Corfu. In fact, using the amount of tourism receipts as given by UNWTO (2011) for the year 2010 and the corresponding population figures calculated by the statistics agencies in the three countries (El.Stat. for Greece, Cystat for Cyprus and NSO for Malta), the income per capita in 2010 was of €891, €1962 and €1928 for Greece, Cyprus and Malta, respectively. It is worth noting that the income per capita in 2010 of the seventeen countries in the Eurozone

excluding Luxembourg was of €577, further witnessing the great importance of tourism for the three destinations.

Various studies have shown that travellers are very sensitive to price, and thus suppliers in the tourism industry need to give serious consideration to the prices being charged. The Travel and Tourism Competitiveness Index (TTCI) launched by the World Economic Forum in 2007 is one of the indices providing assessment of travel and tourism worldwide, and among other factors, it measures tourism price competitiveness across different countries. Although Greece, Cyprus and Malta rank well in the overall index for 2009, the three have a poor performance in what regards price competitiveness. In fact, out of a total of 133 countries worldwide, Greece ranked in the 114th position, Cyprus in the 82nd position, while Malta ranked only in the 122nd position.

The competition between Corfu, Cyprus and Malta is palpable, and given that they lack considerably in price competitiveness, one way how they could improve is by offering better prices in one of the most basic needs and one of the main single sources of expenditure for tourists, namely accommodation. This research focused on the prices of collective accommodation establishments (namely hotels, aparthotels and tourist villages) in the three destinations. In the present situation whereby the Internet has made it easier for tourists to compare the prices charged by different accommodation establishments across various destinations, this study examined the prices quoted by three online sources – one

being the direct price quoted by the establishments (either on the establishment's own website or through e-mail), and the other two being the prices quoted by two booking engines. The aims of this study are two-fold. The first one is to establish whether the price charged directly by establishments in the three destinations is cheaper than the price charged by the booking engines and whether there is a relationship between price and star-rating classification of the establishment. The second aim is to compare the prices offered by the establishments in the three competitive destinations considered.

METHODOLOGY

In order to keep the risk of having coverage errors within the research to a minimum, a number of sources were used to generate the entire list of the collective accommodation establishments being considered for this research in Corfu, Cyprus and Malta. Two samples were then chosen for each destination by using a simple random sampling technique. The research, conducted in December 2011, collected the cheapest price for a double room for seven nights between 13 and 20 June 2012, and then an average cost per night was calculated. The star-rating classification of the establishments in the first sample was also noted. In order to attain a high response rate, the booking engines were chosen following a preliminary survey with a number of such engines and then taking the two engines that generated the highest number of results for each destination. Table 1 summarises the number of establishments in the population, the sample size, and the response rate for each online source for the three destinations.

	DESTINATION		DIRECT PRICE		PRICE FROM 1ST BOOKING ENGINE BOOKING.COM		PRICE FROM 2ND BOOKING ENGINE LATEROOMS.COM	
	POPULATION SIZE	SAMPLE SIZE	NO. OF RESPONSES	RESPONSE RATE	NO. OF RESPONSES	RESPONSE RATE	NO. OF RESPONSES	RESPONSE RATE
CORFU	445	131	31	23.7%	32	24.4%	25	19.1%
CYPRUS	445	131	56	33.3%	66	39.3%	61	36.3%
MALTA	445	131	47	55.3%	52	61.2%	53	62.4%

FINDINGS

In addressing the first aim of the study, a number of tests were carried out for each of the destinations to compare the prices of establishments obtained from the three online sources. The first test in each case compared the prices of establishments obtained from both the direct source and from the first booking engine, while a second test compared the direct prices of the establishments in the first sample to those in the second sample. In the case of Corfu, neither test shows that the direct price offered by the establishment is cheaper than that offered by the two booking engines. The results for Cyprus show that while there is sufficient evidence at the 5% level of significance that the direct price is more expensive than that quoted by the first booking engine, the second test did not find significant evidence in favour of the same conclusion. The tests conducted in the case of Malta confirm results from a previous study conducted by Gauci and Micallef (2012) that the direct price offered by establishments in Malta is cheaper than that quoted by the two booking engines. A third test was conducted for each destination to compare the prices of the two booking engines, and the results for the three destinations provide evidence that these two prices cannot be assumed to be different.

The prices of the establishments in the first sample obtained from the two sources were also used to examine whether a relationship exists between the price charged by and the star-rating classification of the establishments. The results show that there is significant evidence of a strong relationship between the two variables, especially in the case of Cyprus and Malta.

The second main aim of this study relates to a comparative analysis between the three destinations. A first test taking into consideration the cheapest price for the three destinations, namely the price from www.booking.com for Cyprus, the direct price for Malta, and, in the absence of a cheapest price, the direct price for Corfu, showed that there is significant evidence at the 1% level that the prices of the establishments in the three destinations are not the same. Further analysis revealed that the price of establishments in Corfu and Malta are significantly cheaper than those in Cyprus. A second test was conducted, this time comparing the prices quoted by the first booking engine in each case; the outcome was that the three destinations offer comparable prices.

CONCLUSIONS AND IMPLICATIONS

In the case of Cyprus, the cheapest price was that offered by one of the booking engines. This situation is beneficial to the destination because consumers generally prefer using booking engines over the provider's own website to book their travel needs. However, a situation whereby booking engines do not offer comparable prices might be counterproductive. Tourists who, after securing their booking, discover that they could have obtained a cheaper price might feel disillusioned by the booking engine, by the establishment and probably by the destination, thus starting their holiday experience on the wrong foot. Comparing the mean prices charged by the two booking engines in Corfu and Cyprus for the establishments in the two samples from the same

destination, a difference of approximately 10% is noted. Although the tests conducted do not allow this to be generalised to the entire population of establishments, such a result should still create concern. In these regards, one limitation of this study is that the samples were not chosen to reflect the number of establishments in the population for each star-rating category and thus each sample could feature a different number of establishments in each star-rating classification. The relationship that exists between star-rating and price could imply that the average price found through a particular booking engine might be more expensive than the other due to having more higher-rated establishments in the former sample. However, other studies have shown that prices for airline tickets may vary by as much as 18% across booking engines, and this provides a sensible indication that the results of the current study should not present a distorted picture, even though the current study focused on accommodation prices.

Shifting the attention to Malta's situation, a direct price that is significantly cheaper than the price quoted by booking engines is also problematic due to tourists' preference in using booking engines. Malta's competitiveness is thus being undermined, either because tourists might be unaware that the establishments offer a better price if booked directly, or, even if they are aware, they might still opt for a more expensive price due to security concerns. The need for Maltese establishment owners and policy makers to address this issue cannot be underestimated.

The comparative analysis conducted needs to be adequately interpreted in view of the above discussion. When the cheapest online source for each destination was considered, the results provided sufficient evidence that Cyprus is more expensive than Malta and Corfu. However, the advantage of this price competitiveness vis-à-vis Cyprus is not being taken in full, because when the prices offered by the cheapest booking engine for establishments in each destination are considered, the results show that the difference becomes insignificant. Thus Malta should strive to play its price competitiveness card more effectively to boost its tourism product in as far as accommodation establishments are concerned. Although the main aim of hospitality establishments is profitability, their behaviour and prices should encourage new tourists to visit Malta and promote repeated visits. The analysis, conclusions and implications discussed above are meant to serve as a step towards the long term well-being of the tourism industry in regards to price competitiveness in one of the main single sources of tourists expenditure, namely accommodation.

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ONLINE PRICES OF ACCOMMODATION ESTABLISHMENTS – A SURVEY

By John Baptist Gauci and Sue Micallef

INTRODUCTION

The ever-increasing use of the Internet has made online shopping more popular with users, although trust and experience are still issues that keep recurring in the online retail market. Travel products are one of the most popular categories for online shopping, and nowadays users have the opportunity to book practically all their travel needs through the Internet. Travel-related websites should thus offer detailed and interesting information to catch the attention of potential tourists given that they are an essential source of travel information and an important channel for the promotion of tourism.

There are no doubts that the impact of tourism on the Maltese economy is very significant and of utmost importance to the large number of businesses in the service sector and to the Maltese population in general. Even though the average length of stay of tourists in Malta has been on the decrease since 2003 (from 10.2 nights down to 8.3 nights), the expenditure per capita has gone through a significant increase from €782 in 2009 to €872 in 2011 (data collected from NSO News Releases on Departing Tourists). This suggests that although tourists are spending less time in Malta and probably decreased their total holiday budget, they have still increased

their daily budget, with a positive overall result on the Maltese economy. It is widely researched and acknowledged that price competitiveness is an essential component that influences tourists when making their choice of destination. It is thus of utmost importance that tourists visiting our shores receive value for the money they pay, and that Malta remains price competitive particularly with our direct competitors.

The travel and tourism industry has since 2007 been assessed by the World Economic Forum through the compilation of the Travel and Tourism Competitiveness Index (TTCI). This index is divided into fourteen pillars which measure a number of variables having a pivotal role in improving tourism competitiveness. The tenth pillar in this TTCI is 'Price competitiveness in the travel and tourism industry', reflecting the importance that price competitiveness has with respect to the attractiveness of a particular country. In 2009, Malta was ranked in the 29th position out of a total of 133 countries worldwide, and in the 19th position out of the twenty-seven EU countries. However, Malta's rank in Pillar 10 was put in the 122nd position worldwide and in the 20th place within the EU, indicating that Malta is drastically lacking in one of the main factors that influence destination choice, namely price competitiveness.

METHODOLOGY

This study focuses on the online prices charged by the most common types of collective accommodation establishments in Malta, namely hotels (including aparthotels and tourist villages as these share many common characteristics with hotels). An updated list of all these establishments was generated through the Hotels Directory 2011, the MHRA Members List, and the Hotels Section in the Malta Yellow Pages. Three sources were used in order to limit the possibility of having a coverage error within this research as a result of including inexistent establishments or omitting any existing ones. A total of 159 establishments were listed and grouped by their respective star-rating classification. Given that generally tourists take into consideration the type of accommodation and the star-rating classification when affecting their choice for accommodation, a stratified sample of 87 establishments was randomly chosen to take part in this survey to reflect the proportion of establishments in the population.

The price of the chosen establishments offered directly by the establishment (obtained either through its website, by email, or by means of a telephone call) and the price from the booking engine www.booking.com were collected. For the same establishments,



the number of rooms was determined and the rating given by customers on www.tripadvisor.com was noted. For verification and comparison purposes, a second sample composed of 87 establishments was generated without taking into consideration the type of establishment or its star-rating classification. Only the price from the booking engine www.expedia.com was obtained for the establishments in the second sample.

The survey was conducted in December 2011 and the prices were collected for the cheapest double-room for seven nights between 13 and 20 June 2012. The average cost per night was then calculated to remove any possible fluctuation in fees that might be charged on particular days of the week (such as on weekends).

FINDINGS

From the results obtained, it can be claimed with 95% confidence that the true mean price direct from the establishment lies between €64 and €88, the price through the first booking engine is between €72 and €101, while the price from the second booking engine is within the range €74 and €124. Two tests were carried out: the first one compared the accommodation establishments whose prices were found both from the direct source and from www.booking.com (63 establishments qualified for this test), while the second one compared all the accommodation establishments whose prices were found from the direct source and all those whose prices were found from www.expedia.com. Both tests provide sufficient evidence at the 5% level



of significance in support of the hypothesis that the price of rooms booked directly from an accommodation establishment in Malta is cheaper than the price of rooms booked through a booking engine. Another test carried out to compare the price of rooms booked through different booking engines gave no evidence that there is a difference between the two prices charged.

The direct price offered by establishments and their respective star-rating classification was also examined for a possible relationship between the two. It was noted that the sample mean price offered by the establishments of a low star-rating is cheaper than that of a higher star-rating. To confirm that this can also be generalised to the whole population of establishments, another test was conducted which resulted that a strong relationship exists between star-rating and direct price offered by establishments in Malta.

One might tend to expect that an establishment having a greater number of rooms could potentially split its fixed costs among more rooms and thus the price

of a room in an establishment having a large capacity will be less than that in an establishment within the same star-rating classification having a smaller capacity. However, tests conducted for each star-category provided no significant evidence of this claim. The reason might well be that other attributes carry a greater importance when fixing a price for a room in an accommodation establishment, such as the cleanliness, the service offered and the quality of the hotel in general. Prospective customers could get to know about these characteristics prior to choosing the hotel for their stay mainly through customers' reviews on travel advice websites such as www.tripadvisor.com. However, other tests conducted to determine whether there is significant evidence of a relationship between the price of a room and the rating given by customers resulted in the negative.

CONCLUSIONS AND IMPLICATIONS

The results evidenced that the direct prices offered by establishments in Malta are significantly cheaper than those shown on booking engines. This carries an important

implication to policy makers in Malta and to the managers of the accommodation establishments for two main reasons. First-time visitors would most probably be unaware of the hotels available in Malta and would therefore seek accommodation through a booking engine, and various studies have shown that consumers prefer to use booking engines over the provider's own website. This consequently undermines Malta's competitiveness even further, and decisive action should be taken in these regards. Establishments should make more effort to promote their own websites with customers to encourage repeat tourists to book future accommodation directly through the establishment's website, and direct links to the establishments' websites could be posted on Malta's official tourism site (www.visitmalta.com). It would also be beneficial if accommodation establishments offer better deals to the booking engines so that these can in turn offer better prices to their users.

The study also discovered a positive relationship between the star-rating classification and the direct price charged by establishments. Table 1 presents the results obtained for each star-rating category and the associated 95% confidence intervals for the population mean, although the figures for 2-star and 5-star establishments should be treated with caution since the sample size is particularly small. Hoteliers could make use of these results by checking whether the price they are charging is lower or higher than the

price charged by other establishments in the same star-category, and possibly adjust their price accordingly. It is to be noted, however, that although the cheapest price of a double room was collected, one of the limitations of this research is that it did not take into consideration whether any meals or other facilities were included in the room rate.

The lack of a relationship between the direct price offered by Maltese establishments and the capacity of the establishment and between the direct price and the customers' rating given on a leading travel advice website indicate that future studies concentrating on other variables that could have a relationship with the price charged should be conducted. For instance, the existence of any relationship between price and the tourists' perceptions of the establishment's accessibility, quality of service and value for money could be investigated. Data about these variables (and possibly others) could be easily collected by adding a few more questions to the Tourstat Questionnaire currently conducted by the NSO with tourists departing from Malta.

Tourism in the Mediterranean region has relatively high price elasticity mainly due to competitive destinations offering comparable products. Apart from investigating the prices offered by public accommodation establishments in Malta, it is hoped that this research serves also as a basis for future comparative studies between Mediterranean countries.

SOURCE OF PRICE	STAR RATING	POPULATION SIZE	SAMPLE SIZE	SAMPLE MEAN (€)	SAMPLE STANDARD DEVIATION (€)	STAND. ERROR OF MEAN (€)	95% CONF. INTERV. FOR MEAN (€)	
							LOWER BOUND	LOWER BOUND
DIRECT FROM ESTABLISHMENT	2	26	9	44.99	12.29	4.10	35.54	54.44
	3	62	25	53.20	23.75	4.75	43.40	63.00
	4	55	26	75.94	28.23	5.54	64.54	87.34
	5	16	9	172.93	62.45	20.82	124.93	220.93
TOTAL		159	69	76.31	50.30	6.06	64.23	88.40

Hi Guys, hope you've had a great summer! We will be getting to know one of Europe's up and coming voices of the moment... Ladies and Gentlemen, your attention please! Introducing to stage... Susana!

A SNEAK PEAK AT SUSANA

By Jurgen Borg



Susana is synonymous with the highest quality in vocal trance. She has an enviable back-catalogue of truly great chart topping collaborations including DJ Armin van Buuren (Desiderium 207, Shivers, If You Should Go), Ernesto vs Bastian (Dark Side of the Moon), Omnia and The Blizzard (Closer) and Rex Mundi (Nothing at All) to name a few. Due to the success of these releases it was inevitable that 'Armin Only' wanted to use her incredible vocal talents on no less than two separate tours in 2009 and 2011. Many other global tours including Holland, Poland, Romania, Russia, Australia, the US, Lebanon and Jordan have followed and have established Susana at the pinnacle of vocalists in the genre. Her follow-up album Brave was released in May of this year.

Can you recall the time when you first felt that music was going to be an important part of your life?

Music has been an important part of my life ever since I was a little girl. I think that even before I knew how to speak properly music was my outlet, my way of communicating so to speak. According to my parents I was only three years old when I first made up a song; my brother was just born and I expressed my happiness through singing about it. Therefore I would say my passion for music is something I was born with rather than something I discovered along the way.

Since 2003 you have had the opportunity of collaborating with some of the world's finest artists within the clubbing scene. Can you tell us a bit about that?

My entry onto the Electronic Dance Music (EDM) scene happened in 2003 through my collaboration with Ernesto vs Bastian - a Dutch producer/DJ duo. This resulted in 'Dark Side of the Moon'. This track soon became a club hit. Its success led me to work on 'Shivers' with Armin van Buuren in 2004 for his new artist album. Obviously, collaborating with him pushed my career even further and gave me the opportunity to work with other talented producers and DJs. I enjoyed working with EDM but it was touring with the Armin Only 'Imagine' show in 2008 and creating 'Nothing at All' with producer Rex Mundi - still one of my dearest tracks - that made me realise I wanted to put all other things aside to build my career in EDM. This resulted in the release of my debut album 'Closer' on Armada Music.

What inspires you when writing a lyric for a piece of music?

Sometimes it's the music or melody itself that inspires me as it sets a certain mood. Or if I am feeling less inspired I go over lyrics or even just sentences that I have written before but did not use, to see if anything appeals to me or fits the song I am working on. Most things I write about have something to do with myself or my experiences.

Q: Besides the release of your new album Brave, what more is in store for you this year?

I've got a few more shows coming up in Israel, Budapest and Indonesia later on this year! Besides that I am part of V2V, a project initiated by my booking agency JAM DJ Management, vocalists Betsie Larkin, Audrey Gallagher and myself. V2V aims at expanding and consolidating the platform for vocalists in the EDM scene. We participate in a monthly radio show on AfterhoursFM which is compiled and hosted in turns by Audrey, Betsie and myself. Through this show we are focusing on vocal trance and progressive and the listener will get some inside information from us about what it's like to be a vocalist. For those interested: it airs every 2nd Sunday of the month at 7pm on AfterhoursFM. For links on how to follow V2V please visit www.V2Vonline.com. Besides all of this the release of my new single 'Brave', which is the title track of my new album!

Music unites us all in a common attitude of joy and happiness... how much of this statement would you consider to be true in relation to the different countries you have visited?

I think you put it into words very well! Music has the same effect on people everywhere I go, no matter their background, age, religion, gender, ethnicity etc. And to me this shows that, despite our differences, we are all equal.

What can you tell us about your experience on the Armin Only tour?

I could write a book about my experiences! Not only did it mean a lot to my career, but to me personally as well. It is amazing to have been part of this phenomenon within the EDM scene. It was very inspiring to work together with many talented, colourful, professional yet fun-loving artists and crewmembers. Plus, the tour brought me in the position to combine my two passions: music and travelling. Another thing I will carry with me forever is the energy of the crowds I performed for. To be able to share your songs with the crowd and notice them sing along to each and every word is magical! Besides all this I truly believe that both Armin Only tours have contributed to the growing popularity of vocalists as EDM artists in general. A development that I applaud very much! When the tour ended a few months ago it was bittersweet, but I once read a quote that I believe rings very true: "how fortunate we are to have something that makes saying goodbye so hard."

You have performed both here in Malta and also on the island of Gozo... how would you describe these experiences?

I always enjoy performing in Malta! Beautiful island, colourful party people, nice clubs, good food. What else could one ask for?

Future plans?

Make more music! Keep developing myself as a singer, artist, live performer and songwriter. Continue travelling the world. Meeting people. Exploring cultures. And hopefully one day settle down and have kids and then maybe assist other singers with their career.

Anything you would like to impart to aspiring artists?

Be dedicated to your talent! Keep developing it. Make yourself heard. Stay true to who you are, but also ask yourself sometimes, "do I want to be right or do I want to be happy?" Value your (professional) relationships and do not get caught up in things that do not really matter. Fame is nothing. Passion and music are everything!

My friends, I hope that this issue has brought you closer to the vocal sensation – Susana. May I remind you to send us your suggestions... we will be doing our best to provide you with informative interviews with your favourite artists! Party hard but party safe! Until next time!



**NEW MEMBERS
OF STAFF**



VERONICA ATTARD
PROJECT ADMINISTRATOR
[ESF 1.130]

Veronica Attard was born on the 24 August 1978. She attended the Convent of the Sacred Heart School and Gian Frangisk Abela Junior College Sixth Form. In 2000 she attained a Bachelor in Communications (Hons) degree and in 2007 the Master of Arts in Integrated Marketing Communications from the University of Malta.

Her previous job experience includes work at the British Council, the University of Malta, BPC International Ltd, the University of Technology Sydney, and the Community Child Care Cooperative in New South Wales, Australia. In her most recent post she worked as Public Relations Officer at the Malta Council for Culture and the Arts. Her duties included implementing marketing strategies, handling publicity campaigns, administering the marketing budget, liaising with the media, writing press releases, updating the website and preparing the cultural calendar.

She followed a course in theatre at the Mikelang Borg Drama School. She attended a photography course at the Malta Photographic Society and was also a member of the Malta Institute of Professional Photographers and the UTS Photographic Society, Exposure in Sydney. She had her photography and paintings displayed in collective exhibitions. She has also participated in the Voices choir in 2002 and joined the New Choral Singers choir in 2009. At present she is attending Voice and Music Theory classes at the Johann Strauss School of Music. Her interests are travelling, art and photography.



ALBERT AGIUS
QUALITY ASSURANCE
OFFICER

Albert Agius was born on the 5th August 1986. He is the second of three siblings. He received his formal education at Dun Gorg Preca Primary School and later at the Liceo Dun Guzepp Zammit - Brighella. He obtained his post secondary education at the Gian Frangisk Abela Junior College. He graduated in Bachelor of Arts (Hons) Italian from the University of Malta in 2008. He also read for a Post Graduate Certificate in Education in Italian.

During his studies, Albert worked as a part-time Group Leader and Teacher at a School of English for Foreigners, where he gained valuable experience on how to communicate and interact with people from different cultures. These posts helped him to embrace diversity, while enhancing his leadership and communication skills.

He joined the dynamic administrative team within MCAST Institute of Business and Commerce in November 2009, where he was entrusted with various tasks including customer care, collecting data, drawing up reports, compiling students' results, as well as general office duties. This experience further boosted his confidence and encouraged him to seek a more challenging role within MCAST. He was promoted to Quality Assurance Officer in May 2012.

Albert is an artist who expresses his love for the art in drawing, miniature painting and putty sculpting. To indulge this passion, he joined Forbidden Power – a hobby center at Msida in 2010 as Events Organiser, where he exchanged artistic tips, increased his knowledge about his pastime as well as mastered the game. He is currently still in charge of Wargaming.

He also has a special place in his heart for fowl, having been brought up caring and breeding various species, which he claims never cease to amaze him.

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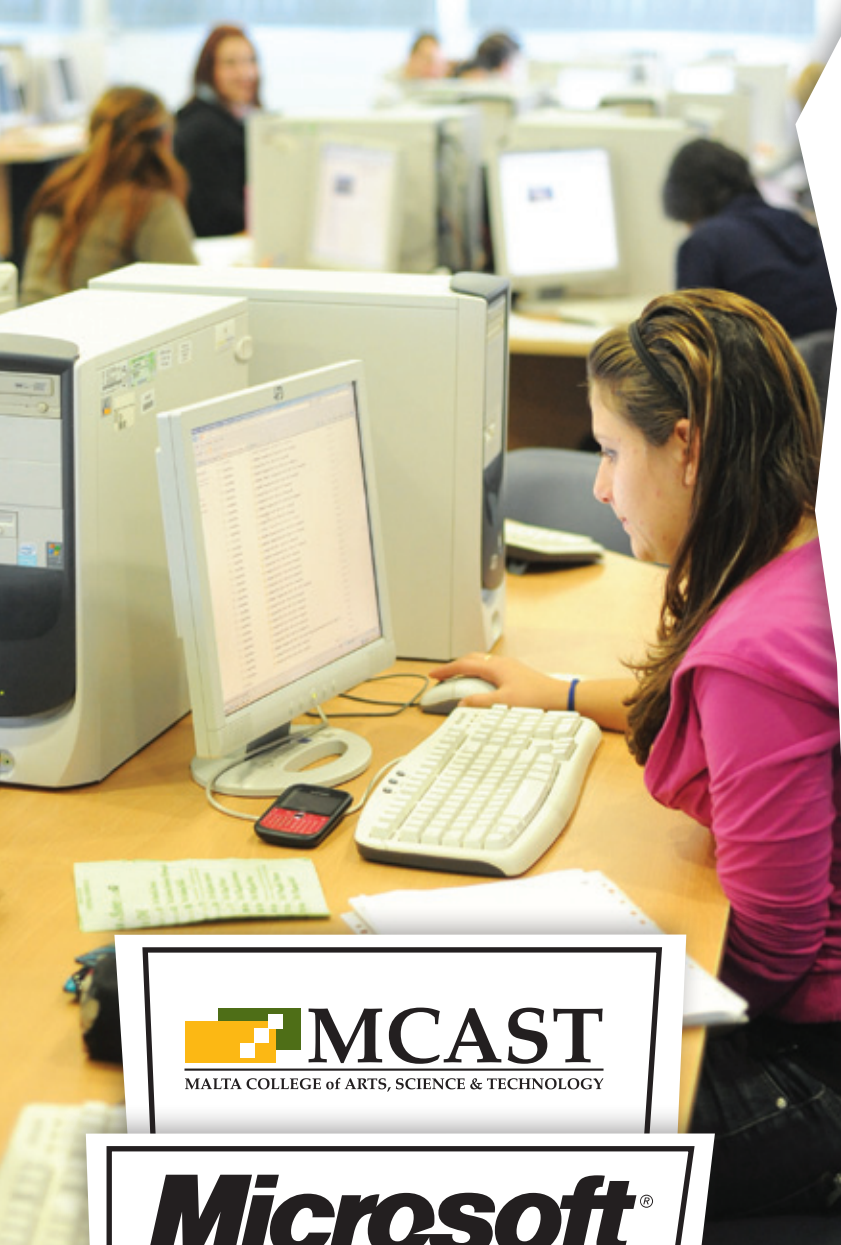


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SKYDRIVE: Have you ever wished you had a file with you that had been saved on your PC at home? Or wanted to share a set of photos with your friends? Windows Live SkyDrive is a secure online storage, reserved only for you as an MCAST student or employee, and which you can access from any PC. Use your email account username and password to log on to this service at <http://skydrive.live.com>.

OFFICE LIVE WORKSPACE: Ever found yourself using a PC on which no word processing, spreadsheet, or other basic software is installed? Have you lost track of

which is the latest version of the in-progress documents which you and your colleagues are collectively working on? Office Live WorkSpace is an online workspace, equipped with a wide range of Microsoft tools – Word, Excel, PowerPoint, and more - that makes it really simple to work on documents from any computer, or work in groups on the same document, without having to send email updates after each change. Use your email account username and password to log on to this service at www.officeliveworkspace.com.

MICROSOFT DREAMSPARK: This tool gives you access to professional Microsoft tools at no charge. With Dreamspark you may use software like Visual Studio 2010, XNA Game Studio, Microsoft Robotics Developer Studio, Expression Studio 4 Ultimate for professionally designing websites, SQL Server and more. DreamSpark also gives you access to online training, videos and hands on labs to practice your skills. Use your email account username and password to log on to this service at www.dreamspark.com.