



GOOD PRACTICES IN STUDENT ENGAGEMENT WITH SOCIETY

IICT STUDENT APPRENTICESHIPS

Fostering Student Engagement through AI-driven Qualitative Quality Assurance Practices

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Project: Fostering Student Engagement through AI-driven Qualitative Quality Assurance Practices

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GENERAL INFORMATION

Title: Level 6 Students Apprenticeships at MCAST IICT

Organization: *MCAST*

Country: Malta

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One liner – essence of the case study: A case study on how Apprenticeships helped stakeholders in coming closer together.

Short Summary: The main purpose of this case study is to show some insights on how Apprenticeships scheme at MCAST IICT helped the college to come close together with companies working within the IT Industry. This case study will also outline the challenges faced for such Apprenticeships to be a success.

Abstract: Students Apprenticeships allow students to gain practical understanding on the area students are studying in, in a workplace environment. It allows the students to be ready for the workplace by giving them the ability to work in related companies.

Target group: student, industry, college

INTRODUCTION AND OVERVIEW

Short description:

Established in 2001, the Malta College of Arts, Science and Technology is the country's leading vocational education and training institution. Six Institutes in Malta and the Gozo Campus, MCAST offers 180 full-time and over 300 part-time vocational courses ranging from certificates to Master's degrees (MQF Level 1 to Level 7). There are also 76 different nationalities enrolled in the courses offered across all institutions.

The six MCAST Institutes namely the Institute of Applied Sciences, the Institute for the Creative Arts, the Institute of Engineering and Transport, the Institute of Business Management and Commerce, the Institute of Community Services, the Institute of Information and Communication Technology and the Gozo Campus provide all the technical and professional expertise towards the delivery of the programmes at MCAST. They also maintain the aim of driving forward all the areas of study under their respective responsibility. This corporate structure enables focused strategies, which address the specific needs of students at each level while maintaining a healthy dialogue with all interested stakeholders in order to provide the best programmes for the needs of the local economy and society.

MCAST's relationship with industry stimulates the College's success – its programmes are flexible, relevant and responsive to the aspirations of the students and to the needs of industries which are constantly evolving to meet the challenges of a changing global economy. The College supports small and medium-sized enterprises through a multidisciplinary approach. This encompasses work-based learning through the Apprenticeships Programme, the various entrepreneurship initiatives and through MG2i (MCAST's commercial arm) services whereby it provides training courses tailor-made to their needs. The College is focusing on increasing the portfolio of MG2i by developing new programmes in Life Long Learning, accrediting new programmes at different levels, including Master's degrees, and introducing more professional development programmes. It is working on the internationalisation of MG2i through the Training and Professional Development Programmes and joint-venture opportunities in different vocational areas.

Background Information:

One of the main responsibilities of any college is to prepare students for a workplace environment. This is accentuated by the fact that MCAST as a vocational college,



needs to provide students with the necessary practical skills on the area they study in. Apprenticeships schemes, in the past used to be only available in a limited number and only at Level 4. This was creating a visibility issue, in the sense that Industry was not aware of the skills students were learning at our vocational college, especially in the Level 6 courses.

MCAST IICT Degree courses are courses which are 3 years long. The degrees which were introduced under the Apprenticeship Scheme were the underneath.

1. **Computer Systems and Networks** – In this degree students mainly focus on Networking, Routing, and similar technologies. In Academic year 2020/2021 there were 15 students enrolled in this course.
2. **Software Development** – Students focus mainly on backend development, and mainly focus on technologies such as .NET Core, Java, Python, Angular etc. They also develop Mobile and Web Applications, and also study Business Intelligence, and Artificial Intelligence. In Academic year 2020/2021 there were approximately 55 students enrolled in this course.
3. **Multimedia Software Development** – This degree is very similar to the Software Development degree but in this degree, students focus more on the Front-End development. In Academic year 2020/2021 there were approximately 36 students enrolled in this course.

The above degrees offered as degrees that are focused mainly on Applied Skills, and are degrees which are highly in demand in the IT Industry.

The problems that Apprenticeships had to address were the following.

1. Provide a better visibility to Industry of students' skills obtained through MCAST ICT Degree courses
2. Provide students a smoother transition from College to Industry
3. Ensure that Apprenticeships are linked to ECTS credits

Aims and Motivations:

Apprenticeship had to serve as an opportunity for student to gain real life workplace experience and provide a smoother transition from college to the place of work. Moreover, working on the latest cutting-edge technologies, being used in Industry. was also important. Finally, a way for the students to appreciate what they have been learning at college, was deemed important, since the students would be able to apply what they have been learning, in a real work environment.



In what regards MCAST, Apprenticeship were deemed critical because through such initiatives a closer collaboration with industry would take place.

This scheme, would also allow the country with better equipped students, with more relevant skills that are critical for the Maltese economy, since most jobs, in Malta involve IT skills, especially software, and other skills related to IT.

Stakeholders:

Several stakeholders participated in order for this scheme to be launched mainly :

1. MCAST Apprenticeship department – This department is the main department, at MCAST, which is responsibility for all Apprenticeships happening within all MCAST Institutes. This department is responsibility to issue student contracts which then need to be signed by industry whenever a student gets employed within a company. This department is also responsible to publish vacancies, which then the students apply for.
2. MCAST IICT Institute – MCAST IICT institute was another stakeholder which prepared its Level 6 courses for this Apprenticeship scheme. MCAST IICT institute delivers courses to students, which prepare them for their work placement.
3. Industry – Industry was also one of the main stakeholders since industry has the vacancies which the students can take. Industry post vacancies with MCAST Apprenticeship department, which itself will then publish such vacancies on its portal on <https://apprenticeship.mcast.edu.mt/>.
4. Students – Another important stakeholder are the students themselves since the students apply for vacancies, and then go on an apprenticeship for one and a half year. Students go **twice** a week from **February** to **June**, then for a whole Summer, and then again in their 3rd year once a week.



IMPLEMENTATION

Inputs:

Even though no specific tangible resources were put in the Apprenticeship scheme there were specific human resources needed to run this scheme mainly :

1. Lecturers acting as mentors – Students are visited by mentors at their workplace where such mentors fill in an Observation sheet. Whilst on their visit the mentor will speak both with the students, and the company to ensure that everything is running smoothly. This also ensures that the student is being given work which is related to his/her area of study
2. Apprenticeship Department – Since many students have been added to this scheme more people had to be recruited in this department
3. Documents – Students have to fill a log book whilst they are in their placement, whilst mentors have to also fill in a form whenever they visit students
4. A new unit called Work Based Learning unit was also developed which gives students 12 ECTS credits. This unit is an important unit since students are being given credit to the hours that work in industry

Strategies and Activities:

One of the main activities which had to be undertaken was to ensure that there were enough companies which were willing to take students. In the past there were similar schemes, called Internships which were devised to help students. Such scheme served as an important contributor since most industries, which took part in such scheme, knew the MCAST IICT Students and their abilities.

In order for this Apprenticeship scheme to be successful a series of tasks had to be planned out to ensure the smooth implementation of such scheme. Underneath a list of tasks which are planned out are listed.

1. MCAST IICT Institute had to contact several companies which were on their address book, and which had past experiences with students, to inform companies about the scheme.
2. Industry contacted Apprenticeship department and provided new vacancies when they became available.
3. MCAST Apprenticeship department provided visibility to Industry Vacancies on their own website.



4. Students applied for vacancies and then were interviewed and chosen by industries.

Coordination with the Target Groups:

MCAST IICT Instituted met several companies face to face to give them information about this new scheme, whilst also providing information on the available degrees. Such information also included information on what students cover in each degree. Such information was invaluable because the industries had to take informed choice on what students they could employ. This was also important because we had to ensure that students will be working in areas which are relevant to their area of study.

Deliverable Outputs:

The main deliverable of the Apprenticeship scheme is 12 ECTS credits, which are linked to the number of hours the student spend in Industry.

As was also pointed out in a previous section, students also need to fill in a Logbook to provide information on their work experience.

Intangible Outputs:

The scheme provides an invaluable experience, to students because they can relate what they learn, and what is available in Industry. It also serves as a good feedback mechanism to the Institute because industry can provide feedback on what the students are learning at the college. In fact, when mentors visit Industry, mentors discuss what is being taught at the college and such feedback is then reported back to administration.



EVALUATION AND IMPACT

Strategical Initiatives for Evaluation & Monitoring:

As has been outlined in previous sections, the monitoring is done by IICT Lecturers who go and visit students at their workplace. Through such activity we ensure that students and employer can provide their feedback on the apprenticeship experience. Mentors visit each student twice a year.

This monitoring process has been in place in other institute that had their Work Placement as a core process in their courses, such as the Nursing and Child Care courses.

Analysing the Impacts of the Outputs:

It was felt that stakeholders, mainly companies and students, are very positive about these Apprenticeships. Whilst visiting students it was noted that both the employers, and the students provided good feedback, in the sense that they see the Apprenticeship scheme as a very good opportunity for them to learn more, and to keep in touch with the IICT Institute. The institute also feels that this is a great opportunity to ensure that there is no detachment between what is taught at the college, and what is being done in Industry.

Lessons Learned:

Apprenticeships have only been in place for Level 6 students in Academic year 2020/2021. However, Internships schemes have been around Level 6 students from 2016/2017. The biggest challenge of all was how to find employees that are willing to take all the student as Apprentices, especially now that Work Based learning is a core unit in their course. The biggest opportunity from such scheme is the closer collaboration with Industry in student projects that will be worked out in Industry. In fact in the future it is envisaged that more students' Dissertation will be Dissertations that are work hand in hand with Industry.



SUPPORTIVE AND INFLUENCING ASPECTS

Identifying the major Strengths and Weaknesses:

The major strengths of such scheme are:

1. Closer collaboration with Industry
2. Students working on real life projects.
3. Students gaining work experiences whilst at the college.
4. Ensuring that what is being taught at the college is what is being done in Industry. Thus making sure that our courses are still valid.

Some of the weaknesses of such scheme are:

1. One has to ensure that monitoring is continuously done because there needs to be a standard on the jobs students are given.
2. For some students, having a job and studying at the same time, is overwhelming. Thus great care has to be taken in this sense.

Further Challenges:

One of the future challenges that we have is ensuring that we keep getting companies that are willing to provide a work environment to students. Without such companies the apprenticeship scheme won't be successful. Moreover, another challenge is to find employees who are willing to mentor students, since the number of students can be quite high.

Another challenge is to provide the students a balance between college life, and going to work in Industry. We feel that students, sometimes might be overwhelmed with having to both work and study at the same time.



FURTHER INFORMATION

Sustainability Factors:

We believe that the Apprenticeship scheme will in the future provide a better work force that all society will be gaining from. By having a skilled work force all society will gain, since companies working in the IT Industry will find skilled employees that know how to do their work. We encourage all other institutes to give students the opportunity to work in real life environments whilst at their colleges, because this showed to be an invaluable experience.

Transferability:

The main transferability skills are the first-hand work experience that students get from working in apprenticeships. Moreover, students will most probably manage to get full time employment immediately after their apprenticeship scheme.

Companies will benefit because they will always get new students who are up to date with new technologies.

Links:

<https://apprenticeship.mcast.edu.mt/>

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