

Educational Institute Management – Pragmatic Case Study

The client description

Masdar Institute of Science and Technology is the world's first graduate-level university dedicated to providing real-world solutions to issues of sustainability. The Institute's goal is to become a world-class research-driven graduate-level university, focusing on advanced energy and sustainable technologies. Located in the Masdar city in Abu Dhabi, the capital of the United Arab Emirates, Masdar Institute aims to support Abu Dhabi's economic diversification by nurturing highly-skilled human and intellectual capital and partnering with industry leaders. This will help the Emirate in its transformation to a knowledge-based economy and enhance its position as a leader in global energy.

Masdar Institute of Science and Technology opened on September 6th, 2009. The 2009 intake consisted of 89 students from an initial 1152 applications received from 79 countries. The 2010 intake saw the selection of 82 students from 1869 applications drawn from 87 countries - an increase of 46% on the previous year. A total of 70 Master's students graduated in 2011 and 54 followed in 2012. More than 90 students graduated in June 2013, the fifth intake consisted of 203 students, who joined in the Fall Term of 2013. As of September 2013, the total number of students stands at 417 with 162 UAE nationals and females representing 55% of all Emirati students. The number of students at the Institute is expected to grow to 600-800 over the next five years. The faculty members is 76 currently with PhDs from the world's leading universities.

The Problem

The institute was a success from the very start as the number as well as the quality of applicants was increasing with every year. The institute was focussed on research and innovation and had developed a strong faculty to make this one of their core competences. With the institute growing and launching new programs as well as research internships the support functions at the institute needed to operate and help facilitate this growth. The reliance on research and innovation as the core, put the support functions of the institute under constant pressure. The founders of the institute knew how to make the quality of teaching a primary attraction for new applicants but the support that this would require was not a capability in the highly distinguished faculty recruited by the board of directors. Since the institute was new not all the processes were set and often there would be loss of time and confusion because of the lack of appropriate operating procedures.

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1. **Procurement** – the institute needed to acquire new assets regularly as the main emphasis was on helping students become leaders through research and innovation. The constant interaction with suppliers and tracking of the quotations along with choosing the most optimum supplier was becoming a challenge. The Department heads and other staff of the faculty was spending too much of time in understanding supplier proposals and making supplier selections. This was causing an adverse effect on the service quality as the quality of teaching was suffering. This problem was only going to worsen the service quality as the faculty members were being asked to work on supplier selections which was not necessarily their core strength.
2. **Accounting** – the tracking of profitability had also become a major challenge as not all the heads of departments had similar patterns to maintaining their accounts. It had become an accounting nightmare as the reconciliation of all accounts was consuming more than 80% of the accounting team’s time. The top management knew that they were doing something right only because of the fact that the number of applicants was increasing, in number and country based diversity. But if the top management was asked to prove profitability based on accounting numbers it was slightly difficult because appropriate tracking was not adopted nor was a central accounting approach adopted.
3. **Human Resources & Payroll** – the management at the institute new that to attract applicants it was necessary to maintain a happy and very distinguished faculty. This was an important factor in developing the differentiation required in the market place. As new associations and programs were being launched at a very fast pace the institute needed to have a very strong and well oiled HR & Payroll department to help with hiring new faculty as well as maintain the existing faculty members happy. There was an existing HR & Payroll department but because of this unanticipated growth the manual ways of working were causing a lot of duplication of effort and loss of time in completing tasks related to human resources and payroll.

There were highly experienced people that the top management had chosen to become faculty with more than 80% having PhDs in their fields of study. The presence of such distinguished authorities in their respective professions had helped the institute to capitalise of the fact that they were adept in managing their own work excellently. It was apparent to the top management that the problem existed in synergies, the institute was not able to capitalise on synergies resulting from the efforts of all these highly talented faculty members.

As an institute that was focussed on research and innovation, it quickly realized that they would

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need to build a strong support system if they were to sustain this high growth trajectory. To manage daily tasks and intradepartmental communication it was required to institutionalise a system which would help in formalizing operating procedures. The management understood that to achieve this, they would need to have a simple yet affective software that would not only crystallize operating procedure but also help become a back bone to appropriately document and store the efforts of all the students and faculty.

The Solution Proposed

The Board of directors as well as the top management contacted many software vendors with existing products; a lot of time was spent by the faculty members evaluating software products in the educational domain. It was then that a faculty member came across the Pragmatic website and was able to understand the OpenERP based product by Pragmatic using a video prepared by the Pragmatic Team. He shared this video with some other faculty members involved in the decision making process for the procurement of the software at the Masdar Institute. This resulted in the institute approaching Pragmatic for a solution that would address their operational bottle necks.

After having understood some of the major problems faced by the institute it was decided that the solution would be a good fit only if the following points were addressed.

1. The management was looking for a simple yet effective solution that would not take a lot of time to be deployed. This was a requirement as the institute had to quickly institutionalise and start capitalizing on the software.
2. Since the institute was growing exponentially the solution chosen would need to be independent of licensing, this was a major factor as the institute wanted a cost effective solution that would allow them to scale up based on requirements.
3. The top management wanted a solution which included global best practices in the software, as the vision, the institute was started with was to develop a global platform to help facilitate the identification of leaders through research and innovation.

The OpenERP based institution management software was ideally suited for the Masdar Institute, the quick deployment and the absence of a lock-in for licenses was added benefits. The solution was chosen by the management as it used open source software that did not bind the institute to any of the traditional items generally associated with proprietary software.

The Pragmatic functional consultants quickly identified that it was only in the support functions that the institute needed to be fortified. The software was quickly modified by the Pragmatic development team with only the Purchase, Accounting, Human Resource and Payroll modules functioning independently as well as interlinked based on the requirements of the institute.

The Implementation of the Solution

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The Pragmatic team proposed for a five month long customization and deployment cycle, but this was altered by the top management as they needed to deploy the software only in three months. The Pragmatic team was able to achieve this as the number of developers and functional consultants working on the project was doubled.

The implementation cycle followed by the Pragmatic team differed slightly from the traditional Software Development Lifecycle. The out of the box application was ready to be deployed within a week, it was then that the Pragmatic functional consultants introduced and completed a small training for the faculty members. All the departments and faculty members were asked to use the OpenERP based institution management software for at-least 15 days.

There were detailed functional templates provided by the Pragmatic team to the faculty members using the software which made it easy for them to pen down the modifications required in the existing application. All these were collected and a coherent 'system requirement document' was prepared by the execution team at Pragmatic. The dual shore model adopted helped in the Project manager from the Pragmatic team understand the expectations of the top management well. The customization phase lasted for one and a half month, after which during the month of Ramadan the application was deployed on the servers at the institute. Since it was the month of Ramadan it allowed the faculty members to acclimatise themselves to the application.

After a trial run for about 10 days the application was declared to be live on the request of the top management. The Pragmatic team trained about 15 faculty members on the application who in-turn then trained the remaining faculty members and support staff to use the application.

The Benefits of the Solution

The application developed by the Pragmatic Team took just three and a half months to customise and deploy. The Pragmatic team named the software product developed for the Masdar Institute as 'Institute Support Central 'ISC'. The development and the deployment of ISC was one of the fastest executed projects ever by the Pragmatic team, further when the Institute was requested for feedback about the application they replied back saying they had changed the name to 'Institute Growth Central'. The use of globally accepted best practices led to process optimization which helped facilitate better control and support for the core activities the institute was undertaking.

Procurement / Purchase – The use of technology to automate a support function like purchase helped the institute in developing a methodical process to identify and work with some of their best suppliers. The quick comparison that the software complied for the purchase team helped in making the most optimum level of purchases keeping the costs of procurement to a minimum.

The software helped develop a central purchasing function for the institute that led to time savings for many faculty members which in-turn led to the improvement of the service quality as the faculty was able to devote more time in engaging with the most promising students in the institute.



HR & Payroll – The 'Institute Support Central' helped in changing the HR & Payroll function from a cost center to a strategic profit center for the institute. The organized processes of OpenERP helped the HR & Payroll team develop a department that was now contributing to the growth of the Masdar Institute.

New hiring as well as processing monthly remunerations had become simple tasks for the team as the software helped them identify relevant data required to complete these tasks in the least amount of time. The HR & Payroll team was able to keep up the pace of work that was required to support the core function of research and innovation for students at the institute.

The pragmatic team modified the payroll procedures in OpenERP as there is no tax in the UAE, this along with appropriate templates provided for the interns helped the team optimise and reduce effort spent at the institute.

Accounting – The OpenERP accounting module is one of the most flexible modules which can be localized easily to accommodate for country specific accounting. The Pragmatic functional consultants helped the institute institutionalize a central chart of accounts which helped generate an accurate picture for the top management. The management was able to quickly view cash in-flow as well as out-flow which facilitated profitable business decisions.

The accounting module tracked fee payments made by students; this information is used to optimise the OPEX of the institute. The integration of the OpenERP based accounting module with 'Pay Pal' has helped the institute accept fee payments from various countries, as now the student body at the institute is composed of students from 87 countries across the world.

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