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Case Study: Institute of Technology and Polytechnics

E-learning and higher education: understanding and supporting organisational change

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Summary of Case Findings

This case illustrates the length of time and resilience needed for an institution to make substantial changes in learning and teaching. It provides an example of how an institution's leaders can recover from unsuccessful strategies, engage with and re-energise their staff and generate a new sense of collegial involvement in the future of the institution. Key change strategies include: clear and consistent strategic goals over an extended period; using critical reflections on the capability of the institution to stimulate changes in operational actions supporting that strategy; involvement of staff in the generation of new models of education relevant to the particular situation of the institution; and respect for and recognition of the need for staff to be supported actively and systematically in the development of new skills.

Organisational Context

ITP-Z is a mid-sized ITP (Institute of Technology or Polytechnic) based in an urban setting. A successful institution, both financially and for its students, ITP-Z has had a clear intention that technology plays a significant role in its learning and teaching activities. The institutional strategy has stated a clear goal that the institution use technology to drive new opportunities for students and for the institution in the future. While technology is seen as important, the institution recognises the importance of face-to-face contact for its student body, subjects and level of qualifications and is intending that technology support face-to-face teaching rather than fully online teaching.

eMM Assessments and Change Projects

Methodology

The e-learning Maturity Model (eMM) assessments were conducted as described in Marshall (2006; 2010). The figure displays a summary of the eMM assessment with dark squares indicating a stronger capability than light as described in the legend. Each of the 35 key processes is described on five dimensions: *Delivery*; *Planning*; *Definition*; *Management*; and *Optimisation*. For the current project, an initial eMM assessment was conducted in 2010 generating a report for the institution that was used to inform a change workshop and identify change projects that were implemented in 2010/2011. An additional eMM assessment was performed in late 2011 to identify changes in capability arising over the 18 months of the project.

Initial Capability Assessment

ITP-Z has been using the eMM for six years to benchmark its e-learning capability to identify potential areas for improvement, and to assess progress towards the achievement of its strategic objectives for technology use.

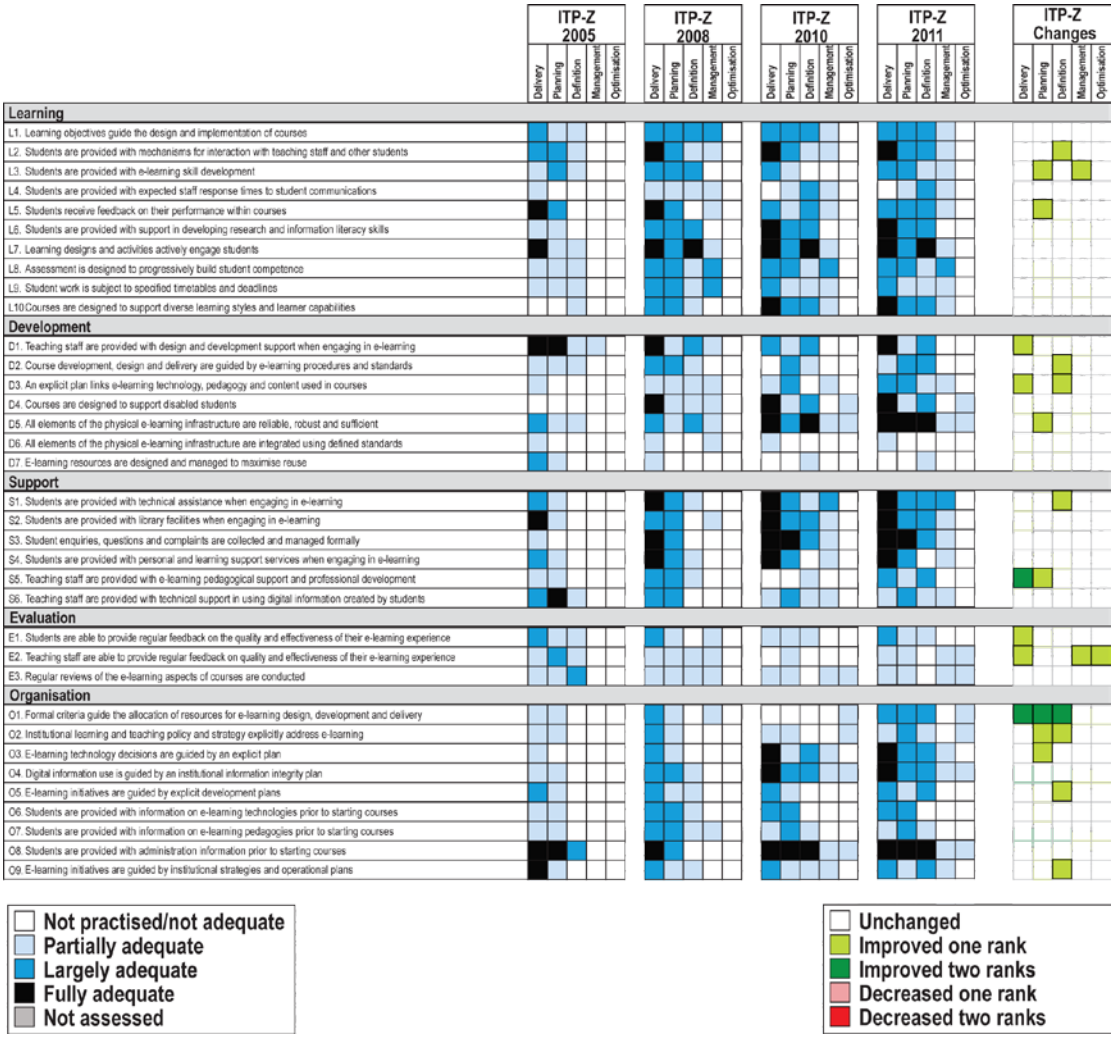

Figure: ITP-Z eMM Assessments, changed capability marked in green on last carpet

The assessments in the Figure show an overall strengthening of the capability over period 2005-2010, although with some aspects that have weakened since 2008 in particular. A reduction in capability can occur for a number of reasons. Firstly, e-learning is a fast-moving field and activities that would be *Fully adequate* in earlier assessments may no longer be so. The 2008 assessment used only the core eMM practices while the current assessment uses the full set and this can lead to changes in the process summary assessment for each dimension due to rounding differences. Finally, and likely to be the cause here, ITP-Z went through some significant changes in how e-learning is supported during 2008 and 2009 as part of a commercialisation focus and this appears to have disrupted existing support mechanisms.

In 2008 ITP-Z identified the following areas as needing attention:

- The addressing of e-learning in institutional learning and teaching policy;
- Pedagogical aspects of e-learning;
- Information on the type and timeliness of staff responses to communications students can expect;
- Design of courses to support disabled students;

- Guidance of course development, design and delivery by formally-developed e-learning procedures and standards;
- Pedagogical support and professional development in using e-learning for teaching staff;
- Design and development support for teaching staff when engaging in e-learning;
- Support for research and information literacy skills development by students.

The disruption to the support of e-learning that occurred within ITP-Z during 2008/2009 appears to have seen little progress towards the addressing of these areas, however there were improvements noted. Positive trends in the 2010 assessment included the clear strengthening of the capability relating to the e-learning infrastructure and student support. ITP-Z has invested significant resources over the last decade to provide a modern information technology infrastructure, including an Learning Management System (LMS), and to provide a full range of support services for students on its campus. The *Delivery* dimension capability in the *Learning* and *Support* areas clearly conveyed the strong focus the institution has on the experience of students and on their educational success, although this is in the context of relatively little use of technology and e-learning pedagogies and with a primarily face-to-face model.

The major issue identified in the 2010 assessment was the absence of a structured set of operational activities aimed at realising the strategic goal of the institution for technology use. This lack was identified in planning documents, including the need for greater development of staff skills and the use of technology to change the experience of students, but had not been reflected in actual activities at that time.

"I think they've ticked the e-learning box and then moved on – on to something else." [Staff member, 2010]

When the 2010 assessment was performed ITP-Z had made a strong push to commercialise the work its staff were doing in the area of e-learning. This included the transfer of support staff from an internal unit to an external, commercially-oriented subsidiary. Teaching staff were encouraged by the management to identify courses and materials that could be turned into products for sale by the external unit. This generated a sense that the use of technology was no longer being driven by the needs of students internally, but rather by the commercial opportunities and not unexpectedly some staff regarded this negatively.

"I think about 4-5 years ago…around about that time there seemed to be a big institution sort of move towards e-learning. But that seems to have been a bit like a bell curve in that sense that it flattened off in recent years, the kind of the innovation" [Staff member, 2010]

"I think it's not so much an outside focus as a focus that's actually battened on to [institution] and that is sucking a lot of content from this institution and repackaging" [Staff member, 2010]

A couple of key professional development staff also moved to another institution and replacements were taking some time to employ, resulting in a further gap in the support facilities. These factors in combination generated the decline in capability in the processes relating to staff support (processes D1 'Teaching staff are provided with design and development support when engaging in e-learning', S5 'Teaching staff are provided with e-learning pedagogical support and professional development' and S6 'Teaching staff are provided with technical support in using digital information created by students').

The absence of operational systems engaging with the implications of technology was also apparent in the weakness in the *Definition, Management* and *Optimisation* dimensions. ITP-Z lacked detailed information on the needs and capabilities of staff and students with regard to technology use. Standard feedback surveys were used that failed to recognise the strategic intentions for technology. There were no formal reviews of the impact of systems, or changing support models, and little encouragement for staff or students to provide suggestions for improvement. There was also no evidence of monitoring whether the investments in technology were generating the intended outcomes for staff or students.

Decisions about investment in technologies and support appeared to be subject to a mix of budget controls, management decisions and individual tutor or support staff interest and availability, rather than being systematically linked to the strategic and operational objectives of the institution as a whole. There were no stated priorities for changes to courses using technology and the policies and procedures of the organisation were silent on the expectations for how new tools should be used, other than in regard to conduct. Students were not told, either in advance or after courses started, how technologies such as the LMS would assist in their learning and there was little integration of the technology with the assessment, feedback or other activities within courses.

Change Projects Undertaken Following the eMM Assessment

A workshop was held at ITP-Z in October 2010 to disseminate the assessment and to facilitate the identification of priority areas for improvement. This provided an opportunity for reflection on the lack of progress since the previous assessment and the impact of the changes over the period 2008-2010. Two projects were identified by those present, respecting the need for change projects to be achievable in the context of the institution at that time:

- development of professional development qualification for staff focused on e-learning
- development of library resources for students supporting digital literacy.

In addition to the eMM assessment, ITP-Z undertook at the end of 2010 a strategic review of ITP-Z's teaching led by an external consultant with a strong relationship to the institution. These two reviews, combined with a survey of staff confidence in the use of existing technologies led to the realisation by senior managers that existing operational actions were not generating the outcomes envisioned in the strategic plan. In response, two more projects were initiated, supported by existing staff and a newly refreshed team in the ITP-Z professional development group.

"I think the overall strategic priority of flexible delivery, and learning technologies is more known and understood by people, and what it can mean to the teaching and learning and assessment space. There was a key project…[t]hrough that process [staff] worked with heads of schools and their teams to help express what it was all about, and the importance to [ITP-Z] as an organisation going forward, but more importantly for our student groups, that their needs have changed. Whether you're talking about the young people or the mature students, they have different needs now in the area of learning. The fact that we want to be the leading tertiary institution provider in that area, we have to get ahead of that game. The next generation of student, considering what they have at pre-school, primary, intermediate and secondary is vastly different to any experiences we had in those learning

environments. It's not just the high-decile schools either. So we have to be ready for that generation." [Manager, 2011]

The third change project started with an internal identification of the various models of e-learning appropriate and useful to ITP-Z students. These models were used to support the creation and training of champions who work within a development framework to identify priority courses that use or are able to take advantage of e-learning. This information guides the investment of resources by [e-learning development group] to strengthen the portfolio of courses.

The fourth change project started with the creation of a self-assessment framework for staff to use to self-identify gaps in their own skills and confidence in technology. This raised a number of significant questions about the collective ability of the staff to support the strategic intentions of the institution for technology use. In response, ITP-Z organised a mandatory two-day workshop for all teaching staff in which they were given an extensive programme of workshops and opportunities to develop their knowledge, skills and confidence. Additional workshops are provided during the year to further support this and a new qualification has been developed for staff.

In total these actions represent a substantial response to the challenge posed by ITP-Z's strategy. The 2011 assessment in the figure shows a consequential and dramatic strengthening across the entire process set over the year, addressing many of the processes that had weakened between 2008 and 2010. Notably, most of the improvement is in the *Planning* and *Definition* dimensions reflecting the creation of operational procedures and materials supporting both staff and students in making more effective use of technology.

Teaching staff have experienced a substantial re-engagement with their needs over the last year. The change projects and the development of the new qualification are seeing the creation of a substantial set of resources for staff. In combination these are clearly influencing the perception staff have of the need to engage with the changing needs of students and the institution, and the impact this is having on models of learning and teaching.

"I think now other people are seeing a lot more support: there's the staff laptop scheme so people are getting equipped. And I think all of those things working together are developing, perhaps growing confidence, and people can see that it something that is achievable and that we will be supported in doing." [Staff member, 2011]

It is apparent that there is little improvement in the *Management* and *Optimisation* dimensions. In part, this reflects the relatively early phase many of the latest initiatives are in. It also continues to reflect weaknesses noted earlier with the general absence of systematic information gathering and monitoring activities, and the ability of the institution to self-critique the impact of the changes made while looking actively for further opportunities to improve.

Lessons for Other Institutions and for the Sector

Most modern tertiary education institutions have in their strategies an acknowledgement of the need to support innovation and adapt to changing societal requirements. ITP-Z is not unusual in this respect and has had essentially the same statements about technology,

student choice and innovation in their strategy over the six years they have been assessed with the eMM. In common with most institutions, this was initially seen as requiring investment in infrastructure, leading to modernisation of the information technology and the establishment of key systems including an LMS, student records system and library facilities online, as reflected in the 2008 eMM assessment of ITP-Z.

This investment has not substantively changed the learning experience of students. The absence of any critical examination of the actual outcomes and systematic feedback from staff or students means that a perception of the success of the technology use developed, leading to a belief that this could support a new strategy of commercialisation. Unfortunately, while not a failure, the commercialisation strategy failed to capture the imagination and support of the teaching staff. In part this represents a conflict between the ethos of public education and the increasingly blurry line between the public sector generally and commercial activities. The critical point appears to have occurred in late 2010 when a small group of senior managers realised that, based on the eMM assessment, a consultant's review and a survey of staff, ITP-Z was not able to deliver the type of continuous innovation and educational change aspired to in the strategy.

"Instead of imposing a change around e-learning we forgot about all that and really tried to get the schools to come up with their own ideas and into using their staff to make it happen." [Manager, 2011]

The response led to a number of activities arranged in two main themes: development of staff capability; and development of new pedagogical models for courses respecting the options provided by technology. The combination of an explicit acknowledgement of their needs, combined with a genuine opportunity to generate new ideas for how they might teach, has resulted in a very positive improvement in the institutional culture.

"We pushed technology training as well as a key training initiative at the beginning of the year. We had the [technology] festival, which was two days, where we managed to showcase some of our own people, academic staff who are actually doing some stuff in e-learning. That just was another catalyst to get people inspired by what others were doing. Other people became really interested and we got these hubs happening everywhere." [Manager, 2011]

"…to truly be agile and change an organisation, which is very difficult, you've got to give the power to the people in a way. That's the only way it's going to happen. You've got to have these hubs or innovation, or whatever it may be, and to have strong links into the schools. But if you can truly operate in that chaos instead of trying to control everything, to actually get people fully engaged and get people to feel that they can be part of that journey, that's something good. We've got something like that happening but I'm not sure if we yet know how powerful it is or how we're going to channel that." [Manager, 2011]

The leadership model seen here is very consistent with the collegial values of public tertiary education. The managers responsible for much of the activity over the last year have set goals and provided resources, including new staff, but then they stepped back and let much of the detail be determined by the teaching staff. Decisions about priorities for courses, teaching models and changes have been made primarily by the staff directly involved.

"It's been an uphill battle to get it framed and know enough about it. The way I feel is that we finally have this emergence to happen. The right people are getting involved and they're feeling passionate about their area." [Manager, 2011]

It is important to emphasise that this is not an 'early adopter' model of innovation (Rogers, 2003). The systems put in place are aimed at involving all of the staff. The 'technology festival' was mandatory for all staff – not a special event for a small number of early adopters. The models and frameworks for development and pedagogical change are intended for use by all staff and substantial resources for professional assistance are available to ensure that courses are redeveloped because of their priority to the organisation, not the passion or skill of an individual teacher.

Perhaps the final lesson is the need for senior leaders to be confident in their strategies, keeping with a clear goal for six years in this case, but also prepared to recognise when the mechanisms and capabilities of their organisation are failing to support progress towards that goal.

"We're on an endless journey. Our aim is to be a truly international ITP. It's not like we're aiming for MIT in the States or anything but we definitely want to be an institute of technology rather than a polytechnic and with that comes attracting international students. It's about that whole modernisation side. You can't stand still; if you're not modernising all the time you're gone next year." [Manager, 2011]

The changes seen at ITP-Z over the last year are a credit to the staff involved, at all levels, but also a reminder of the value that evidence gathering, critical reflection, benchmarking and feedback have in stimulating, enabling and supporting change.

"The answer to large-scale reform is not to try to emulate the characteristics of the minority who are getting somewhere under present condition...Rather, we must change existing conditions so that it is normal and possible for a majority of people to move forward." (Fullan, 2001)

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