A case study of university-wide effects of e-learning promotion activities

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Abstract: Despite a growing trend towards the incorporation of e-learning into higher education in Japan, a shared challenge facing the promotion of such programs in many cases is the transience of such programs, which rapidly stall. We developed new support system including open a new office called the instructional design office, for faculty who needs various type of learning supports such as e-learning. This design was aimed to accommodate a diversity of learning activities and suit every class. We continued the measures over a 3-year period from 2013 to 2015, and formatively evaluated and analyzed them, through which we were able to make immediate corrections and increase the reach of e-learning. Achievement of the outcomes would see the number of LMS courses increase from 410 to 1004 courses (an increase of 594 courses or approximately 2.5 times) and the number of teachers who applied increase from 123 to 408 (or approximately 3.3 times). The questionnaire survey, which asked opinions on the promotional measures, demonstrated the validity of the measures and the suitability of a support system based on instructional design office. Additionally, it became clear that the teaching staff observed improvements in their classes due to the use of e-learning. This paper is a summarized report of the outcomes of the effort.

Key words: e-learning, Learning Management System, faculty development,

INTRODUCTION

Recent years have seen an increasing number of attempts to make use of e-learning in higher education. However, a shared challenge facing universities attempting to introduce and promote e-learning is that such initiatives are often transient in nature, stalling after their initial application (Iiyoshi 2014). In view of such an impasse, many universities are expected to benefit from measures to elicit the true value of the systems and personnel devoted to the implementation of e-learning initiatives, as well as to facilitate their more effective use. Ehime University has for the last several years convened training sessions concerning e-learning and instructional improvement, and faculty interest has also been keen. Nevertheless, in practice, actually incorporating e-learning as a method of instructional improvement has proved to be a time-consuming and psychologically challenging task for faculty. Consequently, this apparent interest has not led to any concrete activities (Nakamichi et al. 2013). As a solution, therefore, an Instructional Design Office (IDO) has been set up to support instructional design and e-learning promotion, establishing a university-wide promotion system (Nakamichi et al. 2013), In this paper, we focus on efforts to promote the university-wide spread of e-learning in connection with the implementation of an institutional system to support instructional design. As well as extracting assessments of faculty evaluations of these promotional measures from interviews and questionnaires, we also summarize and report on the results of a series of promotional measures.

PROMOTION STRATEGIES

The educational institution targeted for this implementation is a national university comprised of seven faculties, one course, and seven graduate schools, employing 855 faculty members (excluding the university hospital) and 432 staff (total number of administrative and technical staff excluding those employed by the university hospital) with a student enrolment of approximately 10,000 (as of May 1, 2015). The IDO at the heart of the present initiative commenced activities in 2012 on the basis of a pilot e-learning promotion initiative (Nakamichi et al. 2009), and was officially launched in 2013. Based on a theory (Rogers 2007) holding that a penetration rate of 16% will serve as an indicator of progress, the operational target for the school is to bring the percentage of faculty members making use of e-learning activities to over 16%, to which end the following four measures have been put into practice.

Institutional Backing for the Promotion of e-Learning

Firstly, efforts were made to establish campus regulations, rules and guidelines relating to e-learning. In addition to raising awareness on campus, these efforts demonstrated that these activities were in line with university policies, and facilitated their acceptance by faculty. At the IDO, team members – including instructional design experts, technical specialists in information and communications technologies (ICT), and administrative staff – undertook activities to establish a cooperative framework that could take advantage of their individual expertise. Main activities included supporting instructional design, assisting with the development of teaching materials, and providing operational support for lessons making use of e-learning. A proactive and collaborative stance was also adopted in the provision of support for instructional improvement, rather than a less engaged stance that simply responded to faculty members' desires.

Attentive Support

By taking care of copyright processing, providing support to experts in instructional design and ICT specialists, and improving systems for applying to Learning Management System (LMS) courses, the IDO has endeavored to ease anxieties and workloads among faculty members who either lack confidence or are unfamiliar with ICT. In addition, as well as providing ongoing support for faculty members who

have already begun taking advantage of e-learning, the office has enlisted their cooperation as opinion leaders in its public relations activities (Rogers 2007).

Leaflets Featuring Case Studies of the Use of ICT in Education by Familiar Faculty Members

The IDO has issued leaflets as a medium for publicizing its activities to promote e-learning. These leaflets are comprised of two sections, covering "e-Learning News" and "Case Studies of the Use of ICT in Education." The former section consists of articles with useful information, such as introducing the functionality of the Moodle e-learning software and providing news about the rollout of wireless Internet across campus, as well as toolbox-style articles relating to instructional improvement, including collections of useful hints about how to use LMS software effectively. The latter section brings together examples of the utilization of e-learning in the classroom and carries these along with accounts drawn from experience. The leaflets are published on a bi-monthly basis, and are also used as a tool for broadcasting the results of promotional measures. Furthermore, articles in the leaflet are posted on the IDO website along with video interviews with a view to securing even greater publicity.

Organizing Training Sessions Relating to ICT and Instructional Design

With the objective of widely promoting the use of ICT and instructional design among faculty members, training programs have been organized for participants at both beginner and advanced levels. While only one course was held in 2012, since the IDO had not yet officially opened, six courses were held in 2013, eight in 2014, and eleven in 2015. While the courses were initially targeted to a beginner audience, in response to participants' wishes, advanced courses and instructional design courses were subsequently added. In addition, from 2014 a framework was put in place for these courses to be made available through e-learning.

RESULTS

We evaluated the results of this initiative by observing the changing trends in the number of LMS courses offered (hereinafter "number of courses offered") and the number of faculty members offering these courses (hereinafter "scope of faculty involvement") based on findings from a questionnaire and interview survey. Between 2013 and 2015, the number of courses offered increased by 594, from 410 to 1004 courses (an increase factor of approximately 2.5), while faculty involvement rose from 123 teachers to 408 (a factor of approximately 3.3) (Figure 1). Questionnaire surveys conducted in 2014 and 2015 found an increase in positive evaluations of the IDO's activities and promotional measures, as well as in positive views towards instructional improvement (Figure 2). Similar opinions were also observed in an interview survey (Table 1). The interview survey was carried out with faculty members who offered courses for the first time in 2015 as well as with faculty members who have offered courses since 2013 and continued to make use of the IDO. The survey involved semi-structured interviews that were carried out in April 2016.

DISCUSSION

University-wide measures to promote e-learning were carried out from 2013 to 2015. As a result of these promotional measures, a significant increase was observed in both the number of courses offered and the scope of faculty involvement, while the utilization of e-learning expanded dramatically. The target of 16% identified in 2012 represented 137 faculty members, which was successfully surpassed when the scope of faculty involvement reached 177 after the implementation of promotional measures in 2013. Furthermore, from 2014 to 2015, the number of courses offered increased by 23 while faculty
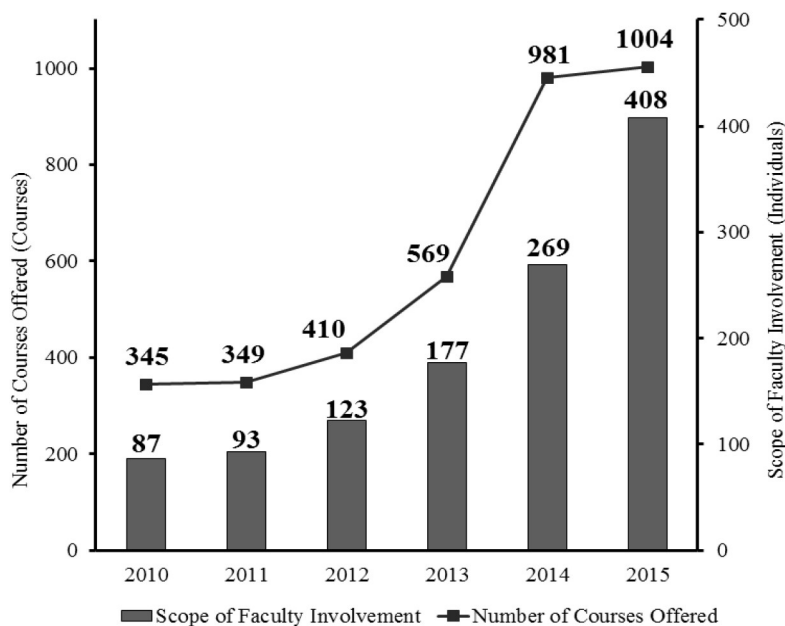
Figure 1: Annual Trends in the Number of LMS Courses and Scope of Faculty Involvement
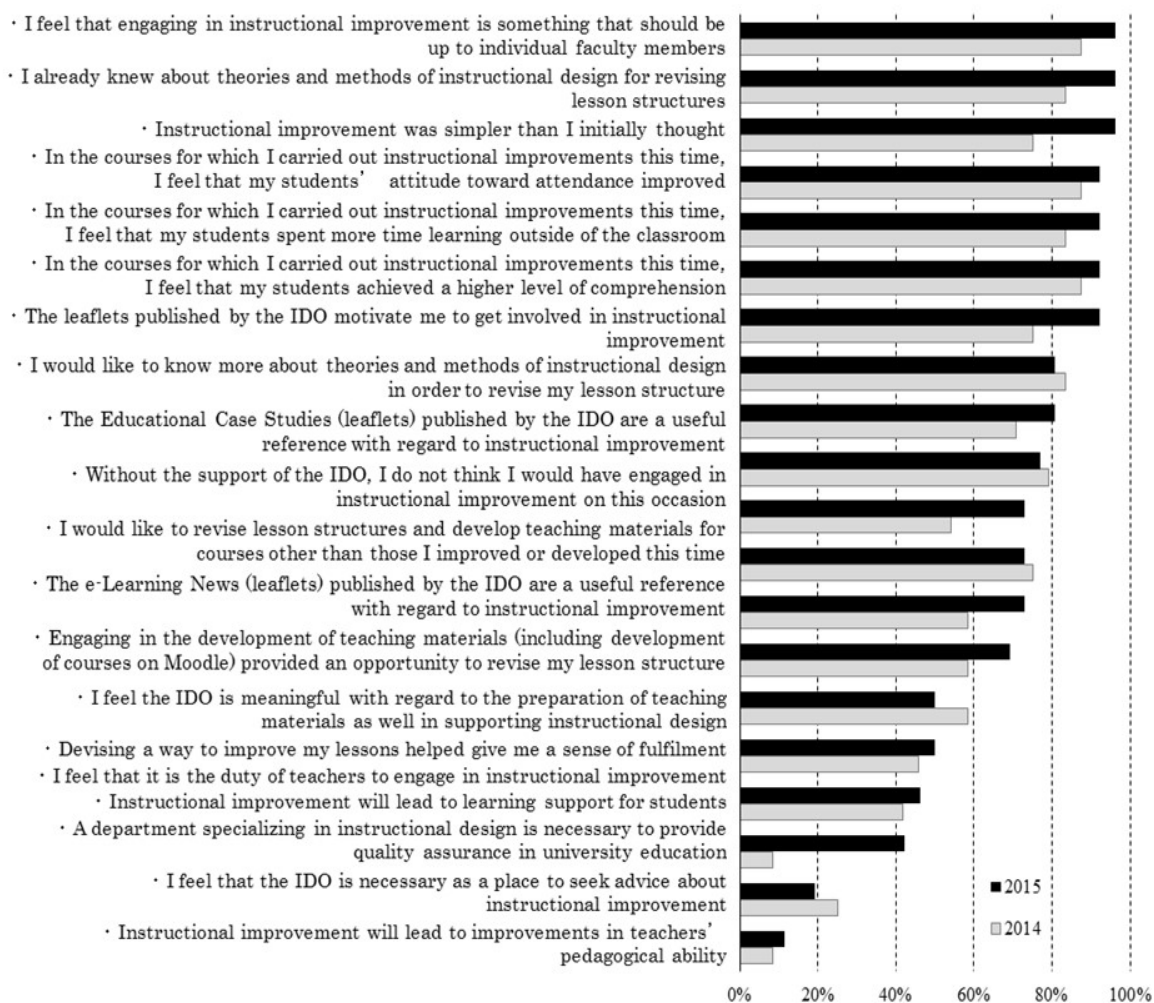

Figure 2: Changes in the Proportion of Favorable Questionnaire Responses ("Agree" or "Somewhat Agree")

Table 1: Interview Survey Results

1. Institutional Backing for the Promotion of e-Learning
· Having content production guidelines helped get me started since they demonstrated a format to follow.
· Having institutional support put me at ease, and I felt that e-learning did not have a high threshold.
· It was easy; the entire IDO took care of the schedule all the way to the end.

2. Attentive Support
· The breadth of instructional design has expanded.
· Thanks to the IDO, I was able to build a lesson in only a short time with little effort.
· It was helpful to receive assistance with things like editing teaching materials
· I was happy with the advice I received on how to prepare tests and the responses to my questions about instructional design.
· It is very helpful that they provide open access to things like the template for their questionnaire function.
· They made improvements so that students could apply to Moodle course offerings with the touch of a button, making the application process easier.
· It was easy to make use [of e-learning], since they worked together with me on content development and I was able to receive operational support.
· I feel that the application method is simple and convenient.
· They worked together with me at the beginning, and by halfway through the process I was able to work on my own.
· I was happy with how they eased my misgivings about dealing with copyright issues, tool and proposed a method of converting newspaper articles to illustrations

3. Organizing Training Sessions Relating to ICT and Instructional Design
· I took part in an e-learning training session 2 years ago. Since I found this quite informative, I'm now trying to participate in conjunction with a training session for educational coordinators.
· What I learned by taking part in the training session inspired me to get to work on my next batch of teaching materials.
· I gained knowledge of ICT.

4. Leaflets Featuring Case Studies of the Use of ICT in Education by Familiar Faculty Members
· It's good that there is some promotion of what exactly it is that they do.
· It was useful, as it helped me understand the nature of the support they offer.
· I appreciated the tips on how to take advantage of Moodle.
· I file all of the leaflets, which I put to use as a tool for obtaining necessary information.
· For the time being at least, I appreciate that the leaflets are printed.
· I was very pleased that a student contacted me after watching the online video introduction.
· The case studies of other teachers all have something of interest. I find them quite informative.

involvement increased by 139, reaching totals of 1004 courses and 408 faculty members. The scope of faculty involvement represents the number of faculty members who applied to offer courses through the LMS, while the number of courses offered represents the number of courses that were actually offered. In other words, these numbers can be presumed to indicate the presence of a large number of faculty members preparing to offer courses; from the increased proportion of positive opinions in the questionnaire, as well, it seems highly likely that the number of courses offered will continue to increase in future years.

The positive opinions and feelings of necessity shown in the results of the questionnaire survey, which solicited responses concerning instructional improvement and IDO support, suggest that the increase in the number of courses offered and the scope of faculty involvement is a result of the promotional activities. In particular, it could be argued that faculty motivation towards instructional improvement was prompted by the IDO's support activities, as well as its leaflets and other public relations media. From the above, it has become clear that the stalled penetration of e-learning in

universities can be overcome and its utilization promoted through the implementation of the four promotional measures identified above.

CONCLUSION AND FUTURE CHALLENGES

The period from 2013 to 2015, during which the four promotional measures were implemented, saw a dramatic expansion in the utilization of e-learning in the target school. From the number of LMS courses offered, the scope of faculty involvement in offering these courses, and the results of interviews and questionnaires, it has become clear that these four promotional measures are effective as strategies for achieving continued penetration following the introduction of e-learning. As a future challenge, it will be necessary to clarify the reasons why e-learning has been underutilized, so as to explore the possibility of its further promotion.

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