Promotion of University-Wide e-learning through Course Guidance VODs
- A Case study at Nihon Fukushi University -

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Abstract: At Nihon Fukushi University (NFU), on demand course guidance videos have been developed and delivered to offer information about courses such as syllabus and learning goals before class registration for recent two years.. Development of the VODs gives many positive effects for both students and teachers. For the students, such advantages decrease the amount of classes dropped students because students can obtain appropriate information and images about their entering class preliminarily. Meanwhile for the teachers, their images about development of e-learning materials like anxiety and heavy responsibility are decreased because all of the faculty members need to be involved to make the contents. The development, in addition, provides educational improvements such as more reviewing of syllabi, enlivening of faculty development activities and an increase of blended instruction courses applying Information and Communications Technologies. We report the systematic approach for educational improvements with development and delivery of the VODs and many educational benefits obtained by the implementation in NFU. It is also shown that our approach has more advantages than that in other Japanese universities.

Keywords: higher education, e-learning, FD, learning contents, consciousness reform

INTRODUCTION

Nihon Fukushi University (referred to below as NFU) has six undergraduate schools, one correspondence school, four graduate schools, three campuses and about 13,000 students (including correspondent, commuting and graduate students). The effort for e-learning of NFU began in 2001 with the establishment of the correspondence school providing certifications for working peoples. In 2003 a university-wide course "Introduction to Welfare - Welfare and Society" was delivered as an on-demand course. In 2004, with operation of a common study support system for the entire university our university started full-fledged efforts for the development of university-wide e-learning (Sato, et al. 2006). Recently, the e-learning is getting lots of attention in higher education because they are required to engage in substantive efforts in the improvement of traditional classes and FD (faculty development) activities. However, there are moderate amount of institutions (universities), as the university-wide efforts, attempting to actually practice educational development and improvements to the educational environment with the e-learning. In many institutions there are one-sided work on the part of the school or the faculty's individual efforts.

Yoshida, Taguchi & Nakahara (2007) point out, "The limitations of e-learning are not only in its cost and the technology it demands. In other words, it also requires a reform of consciousness by the people who want to make use of the special features of e-learning and confront the challenge of educational reform (both those on the teaching and learning sides), a solid environment that supports that desire, and also the establishment of a system and the organizational structure to build and invest in a continuous educational system."Nihon Fukushi University's method for the university-wide advancement of e-learning and FD activities is to make all faculty responsible for providing course guidance videos, hereafter we describe course guidance VODs (Video on Demands),given introduction/orientation of a course to the entire student body. Currently, all faculties have worked to create at least one "Course Guidance VOD". 141 of the 175 full-time instructors (34 seminar instructors were excluded) have completed "Course Guidance VOD"s for 142 classes (see Figure 1).

Figure 1: *Course Guidance VOD*

In the present paper we show brief overview about efforts of educational improvements with university-wide e-learning development in NFU, and many educational benefits obtained by the development of course gaidance VODs.

The Development of Course Guidance VODs

Setting up the Development Support System and Guidelines

In the development of e-learning courses, the instructional design processes are needed to be taken into consderation, that is goals and subjects of a class to be clear. The ADDIE model (Gagne,R.M2007) was used as much as possible. It repeats a process of analysis, design, development, implementation, and evaluation, gives feedback, and aids content development and improvement. This model is said to be very important, and is overwhelmingly used in the creation of developmental support systems and guidelines. Without implementation, there can be no evaluation, so while taking the first steps in the unburdensome development of the course guidance VODs, plans were made to set up the essential developmental support system. First, a course guidance VOD prototype was made, then problems, comments and concerns from the faculty were collected, and issues where the support system was lacking were brought to light. Meanwhile, solutions were assessed, creation of guidelines and organization was moved forward, the plans were re-evaluated, and development advanced. Similarly, the developmental support system was established quickly by the school in order to reduce the burden on the faculty who participated in the production. As a result, aid in copyright handling and creating power point and other such documents, help in creating subtitles, the allowance of a flexible filming style/form, creation of a standard for professors for exchanging class time hours for content development hours and allowances for guest lecturers, and official support structures for creation of regulations were able to be set up. Incentive for the faculty to participate was the ability to exchange time spent doing content development with that of running classes when calculating their hours and allowances. After consideration, development and running classes, and full-time and part-time teachers were divided, standards were decided upon, and the school's approval was attained. At the same time, the school also approved personal expenses for assistant instructors within certain guidelines to help faculty with the running of classes.

Establishment of Organizational Support

It is extremely important to show the goals of these efforts clearly to the faculty council. Thus we emphasized the following advantages and positive effects:

- Students can get an image of the post learning, understand the final results, and be better able to register for courses. Thus, they can avoid having to drop a class part-way through.
- For instructors, e-learning becomes less awkward, and it is a good opportunity to look back over their courses. In addtion, they can make learning goals to be clear and ensure their class times over the academic year (once out of 15 times).
- It is expected for the organisation that the faculty development may be more activity and that pre-reviewing of courses between the instructors may become more active.

The prototype was created with the above in mind, in a way that was easy to understand for the faculty and that relieved doubts that the development was excessive. Their role and what was expected of them was made clear, and

manuals and guidelines for creating content were prepared and distributed. For professors not well versed in ICT, a complete development support system was put in place that allows for the progression of elaborate content making, but left a certain degree of freedom for the filming style based on the feelings of staff who "want to make something even better".

Results from Implementation

Student Survey

Viewing of the 142 course guidance videos was made available on the learning support system (nfu.jp) in March 2007, and from that time until the end of April, a total of 2,940 students viewed them on the system. A user (student) survey was loaded onto the learning support system and carried out using a web survey feature. The results are shown below. The total number of surveys completed with usable answers was 295.

In regards to the question, "Q1: Were the course guidance videos helpful in registering for classes", 68.4% of those surveyed answered either that it was "helpful" or "somewhat helpful" (see Figure 2).
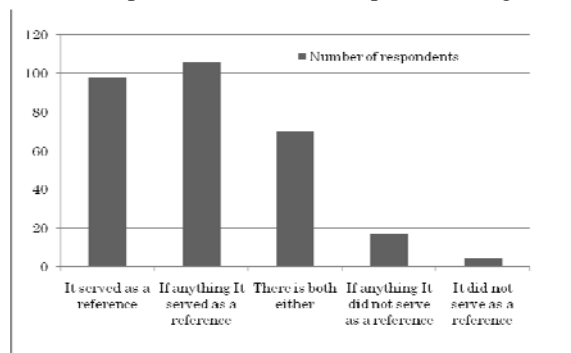

Figure 2: *student survey answers (Q1)*

Furthermore, in response to question 2, "Were the course guidance videos more helpful compared to the syllabi generally found in student handbooks", 66.1% of students answered that they were "more helpful" or "somewhat more helpful" (see Figure 3).
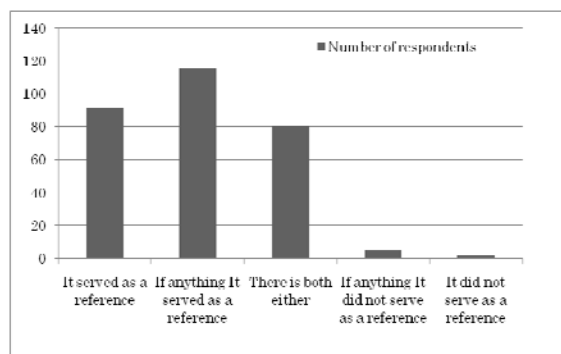

Figure 3: *student survey answers (Q2)*

In the free response area, we received comments such as "The fact that I could watch the video several times to mak sure of the information was very helpful in selecting my courses", and "I got a good understanding of the learning goals". Based on the results above, it seems that the course guidance VODs were received favorably by the students and harbored many advantages.

However, we did also receive criticisms such as:

"The videos should all be about the same length"

"A 15 minute video is too long"

Thus, in 2008, we decided to revise the video lengths to be between 5 and 15 minutes based on such student opinions.

Faculty Survey

At the beginning of 2008 after the development of the "course guidance VOD"s, we performed a non-anonymous faculty survey, with the participation of all 141 staff members. However, the total number of surveys completed with usable answers was 99. Before development, the overwhelming number of faculty was against "course guidance VOD"s, but after implementation, the number for them increased significantly. Figure 4 shows the results of the faculty survey.
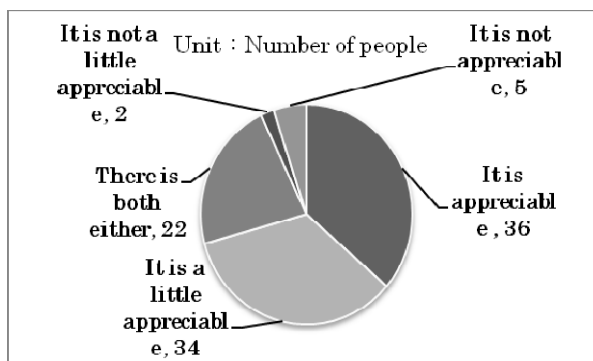

Figure 4: *faculty survey*

In response to the question, "How would you evaluate the contents of the filming, editing and slides made in the education design lab for your course guidance VOD(s)", 70.7% answered either "well" or "somewhat well".

Furthermore, the number of teachers that put forth requests for blended instruction from their own intent doubled.

Change in the Faculty's Attitudes Towards e-learning

In order to get a grasp on the change in the instructor's feelings towards e-learning, investigative interviews with the faculty were carried out at the end of the year in 2008.

We performed face to face interviews with three different individuals. We chose to interview staff members who had a negative view of the "course guidance VOD"s all the way until the end, and initially refused to do them, but wound up turning one in the end. The concerned professors stated that after the development of the course guidance VODs, they recognized the importance of making course learning goals clear each time, and strove to make improvements such as establishing such goals every time and re-evaluating the running of their classes. Annual data on the pass/fail ratio and the number of people to drop classes was compared for the courses that had course guidance VODs. This data included students who did not view the course guidance VODs, but still shows a decrease in the number of classes dropped (see Figure 5). Let us consider this as just one example brought about by course guidance.
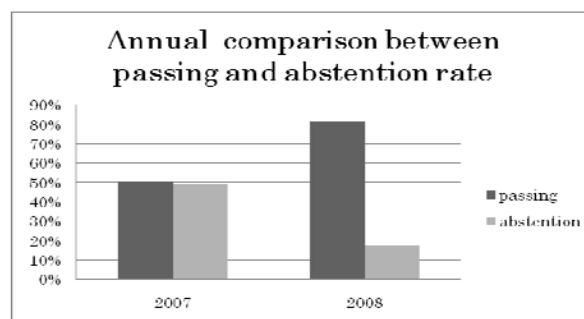

Figure 5: *Annual comparison between passing and abstention rate*

When asked what lead them to the mindset of re-evaluating their classes, the interviewees answered that several class improvements (such as 3D illustrations) that they did not think possible due to their own limited technological ability now seemed realistic with the help of the technology support staff, and that e-learning was now something that they could indeed incorporate into their classes. They were also asked if they felt this way before, to which they responded that they first realized that they could make such improvements to their classes by communicating with the development staff about the process of creating course guidance VODs.

This was the case for one individual instructor. Other results attained from the interviews were comments such as, "I could see how other teachers were running their classes, which was insightful", "It provided a good opportunity to cooperatively examine other courses", "I was able to get an image of what sort of development blended instruction is", and "Utilizing features like videos and self-check tests provided me with an opportunity to think about classroom improvement". In order to verify the validity of this study, it must be continued by collecting more cases through investigative interviews with more faculty members.

The cases above also lead us to believe that the construction of a development support system helps instructors who are not very familiar with ICT get involved with e-learning content development, relieves much of the feeling of burden that they imagine, and helps to alleviate some of the awkwardness they feel towards it. Through these kinds of efforts, opportunities are created for the faculty to think on their own about making improvements to the ease of understanding course contents, and ICT is put into their field of vision for doing so. Positive opinions of e-learning rise, even in what staff members are saying about it.

This study also suggests a relation between the staff's consciousness reform and the process of making course guidance VODs, which is a good chance for the teachers themselves to look back over their classes, and bears positive effects.

Clarification of the Faculty's Learning Goals

There are many cases where the learning goals and how to evaluate them were not made clear in the syllabi provided in the student handbooks that were released up until now. Furthermore, the classroom was internally made for only the students and the course instructor. An investigation in regards to this was performed. The central targets of the study were 823 lecture courses in the 2007 school year. It was based on Suzuki's (2002) 5 categories of learning results, rated on a 4 point scale, and performed by the administrative office. The standard graded against was whether or not learning goals were exhibited in the actual direction of the class. A class was judged to be [Clear] if the direction of the class was explicitly the same. A class was judged to be [Somewhat Clear] if the direction was not explicitly the same, but would be if some parts were changed. A class was judged to be [Unclear] if the direction of the class was not explicitly the same and would require a large amount of correction to fix. A class was judged to be [Unknown] in cases such as those where no learning goals were specified at all. The results of the 2007 study are shown in figure 4. According to the results of the investigation into the conditions of learning goal set-up in the course outlines (syllabi) of 2007, only 7.9% were judged to be "clear", and it was deemed that improvements were needed. Thus, as a part of efforts to improve teaching methods (FD), when filming the course guidance videos, the clear presentation of learning goals and how to evaluate them as shown by Suzuki's (2002) 5 categories of learning results was called for. In order to measure the influence on next year's student handbook's syllabi, 868 courses in 2008 were tested using the same methods. A comparison of the results of the 2007 and 2008 surveys are shown in Figure 6.
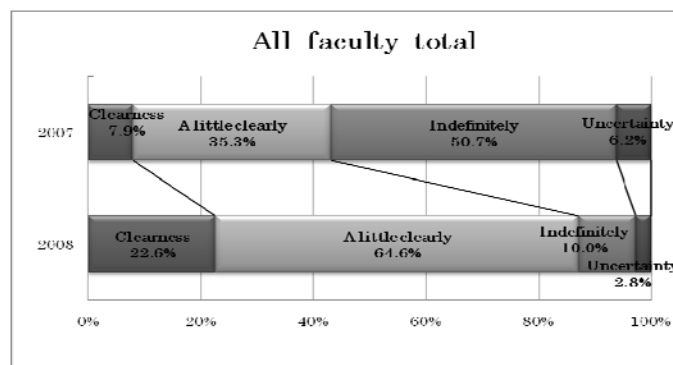

Figure 6: *Clarification of the Faculty's Learning Goals*

In comparing the results from 2007 and 2008, it can be seen that the number of classes judged to be [clear] and [somewhat clear] increased greatly. Since the 5 results of learning were presented to teachers and they were asked to clarify learning goals and how to evaluate them, improvement in the clarity of learning goals in the student handbook syllabus and course contents through the use of course guidance VODs has been shown. Furthermore, since all faculty members contributed to the course guidance videos, it would also seem that the first step has been taken in starting the use of ICT in the classroom.

Results of Investigation into Other Universities Undergoing Similar Efforts

Outline

We did visiting investigations at other universities in Japan that are making similar efforts with "course guidance VOD"s, and report the common advantages and differences here. We examined whether similar efforts in "course guidance VOD"s showed positive effects on attempting to reform faculty's attitudes towards e-learning, and whether or not "course guidance VOD"s helped promote e-learning in institutions of higher learning.

Targets of the Investigation and Procedures

The following universities were used in the investigation (in the order tested).
- Gifu University (School of Education) 「Course Introduction VTR」
- Shinshu University (School of General Education) 「Video Course Catalog 」
- Tokyo University (School of Liberal Arts Development) 「Course Catalog」（Student Handbook）

Gifu University and Shinshu University were chosen for the investigation because of their similar efforts in making "course guidance VOD"s, while Tokyo University was chosen because of its system of giving course outlines in conventional student handbooks that cover several departments and must be looked through altogether. We carried out the study through interviews. The following items were asked about:
・The course and goals of implementing the efforts
・The effects of implementation (i.e., change in instructor's attitudes towards e-learning, etc.)
・Proposed method (i.e, support contents, development support system, etc.)
・Adequacy of incentive for instructors

Outline of Results

We have shown that "course guidance VOD"s and similar such efforts are highly effective as a first step in setting up e-learning or both teachers and students. We have also found that goals, proposed methods and development systems, and instructor incentives all play an important role. A comparative chart is shown as an outline in table 1.

Table 1: *Comparison of similar watches*

	Nihon Fukushi University	Gifu University	Shinshu University	Tokyo University
Purpose Result	Finishing, FD, Announcing to public,	Finishing, FD, Announcing to public,	Finishing, FD, Announcing to public,	Finishing, FD, Systematization
Proposal technique	○	○	○	△Illustration
All fuculty	○	△Only the graduate school	△Only the liberal arts education	○
Incentive	○	×	×	×

Goals and Results

These efforts, in order to help support students' self-study as a tied in goal, offered them something to help register for classes and were linked to their satisfaction. It was also a goal to help increase student applicants at open

campuses and other such events, with the exception of Tokyo University. In Tokyo University, classes are organized on the whole. Also, as a result of these efforts, it was found that consciousness reform of faculty members can be attempted, and that it is commonly held that they are related to increases in classroom improvement (FD) activities.

Proposed Methods and Development Systems

Several easy to understand prototypes were created for when explaining to the faculty. In the course catalogs in Tokyo University's student handbooks, the use of examples was implemented. Filming for the making of the prototypes that centered around videos, was done in studios, on location, and in classrooms (with the exception of Tokyo University). Explaining to the teaching staff that the making of the videos was up to their discretion got the understanding of many, but in order to obtain the cooperation of those who still held it in a negative light, a development staff and full support was provided. Each person was able to create elaborate content, even if they were not well versed in ICT, and their individual desires to "make something even better" were utilized to advance development.

We also found that it was very important to relieve doubts and feelings of heavy burden from the faculty through the clear explanation of the support structures and making of guidelines, while at the same time clearly telling them in advance what sort of time and work expectations were being held of them.

University-Wide Efforts

Course guidance VODs can help the promotion of e-learning in any university, as well as bring about consciousness reform in teaching staff, and help broaden both instructors' and students' understanding of it. We found that organizational correspondence is very important in order to promote university-wide e-learning, just as it was with efforts in Nihon Fukushi University. Furthermore, it can be seen that one part of one department or process is not enough; realization of organizations and efforts that spread across the entire school is critical. Furthermore, realization of organization and efforts that spread across the entire school, not just one part of one department or process, is critical. For that reason, it is crucial that the development support system be set up to target university-wide support (Nakamichi, 2008b).

The Importance of Incentive

The efforts at Nihon Fukushi University did not just stop at making course guidance videos as course introductions for the students. They established an incentive system in which both teachers and students could receive the equivalent of one course credit, which was a big difference from other institutions making similar efforts, and caused a large gap in the promotion of e-learning between them. Aside from course guidance videos (about 5 minutes in length), Nihon Fukushi University also put e-learning introduction lectures into place, participation in which could be counted be counted for one class credit. The only condition was that one procure the equivalent of at least 2 hours of studying time (excluding doing lessons and review time, but including on-line tests and message board activity). Since students could take this and get one class credit, they could secure this learning opportunity.

The results of this study have shown us that similar efforts in "course guidance VOD"s have some common effects, and function across institutions of higher learning when utilized. Furthermore, when promoting university-wide e-learning, it is very important that organization and efforts span across the entire university and that both instructors and students are given proper incentive. It is also critical that development support systems get the same sort of position as a university-wide organization.

Considerations

Within the schools targeted in this study, we found that similar efforts in course guidance VODs 1) help students in registering for classes, 2) bear the same sorts of results when used in student recruitment publicity, but that 3) Nihon Fukushi University's efforts to promote e-learning dominated over others in achieving its goals of both promotion and changing faculty's feelings towards it. What made this university different were its university-wide efforts that included all faculty members, the construction of an organizational support system, investment in instructor incentives, and the promotion of e-learning by the whole institution - even individuals who were not skilled in ICT. We found that organizational development, promotion of e-learning and tying it in to classroom improvement (FD activities) for traditional classes as well, all with the approval of the faculty council was distinctive of this university.

In the future, the reason for the teaching staff's consciousness reform should be looked into through investigative interviews with instructors, as well as the underlying mechanisms.

Concluding Remarks

From the results of this study, we find that "course guidance VOD"s are effectively in the promotion of university-wide e-learning. The e-learning promotion can not progress only by employing a learning management system or organizing a e-learning developing team. The predominant feature of this effort is that all faculty members participate as developers for blended instruction courses using the "course guidance VOD"s. It is important to progress with faculty having their own understanding of e-learning, and thus even instructors who are not well versed in ICT should be involved as well, as it will still provide them with an opportunity to re-evaluate their classes. The success of our efforts, in other words, is that we can establish a prototype approach relieving worries of the instructors about the e-learning development, making instructor's responsibilities clear, and experiencing the process of development of a "course guidance VOD" to the instructors. We, in addition, describe that it is critical to adjust devices and proposed methods for involving the instructors in the development of "course guidance VOD"s.

Also the hearing investigation from staffs in some Japanese institutions indicates that it is quite possible to promote e-learning to institutions via the similar efforts using course guidance vidoes, though the specific approaches depending on its culture, circumstances and the state of the construction of its development support system are required for each university. We conclude that for the purpose to promote e-learning, the effective use of (1) a complete developmental support system, (2) the production of a prototype that promotes understanding of the further application of e-learning and (3) proper incentive for instructors are needed.

In Nihon Fukushi University the employment of course guidance VODs makes both teachers and students to be familiar with the e-learning. It can be effective in helping to wipe away the doubts and burdensome feelings towards e-learning, and shift feelings and concerns about educational contents and teaching styles. By just becoming involved with the development of "course guidance VOD"s, instructors can experience a piece of e-learning. However, from the very beginning of university-wide e-learning promotion, one must overcome current perception that many educators seem to have, which is that video on demand teaching materials and e-learning are one in the same. Furthermore, in order to measure the effects on the faculty's consciousness reform, continued investigative interviews with them are needed, and processes to clear the cause of their negative views towards e-learning must be analyzed.

Finally, we recommend that research be implemented to suggest construction of some "guidelines" that can be widely utilized by institutions of higher education for university-wide promotion of e-learning.

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