

A Strategy for Supporting the Learning Community in Cooperation with Industry

Won-Ho Kang^{*,†}

Professor, Director, Innovation Center for Engineering Education of Dong-A University^{*}

Abstract

Learning community is one of the important pillars of the education in knowledge-based society. How to encourage students' spontaneous participation to the learning community is one of the actual problems to solve for the revolution of the education scheme. In this paper we introduce a strategy to boost the activity of the learning community, which works in the on-line space. The keys for the on-line supporting system for the learning community are to have communication space, trading space and connection with industry. To support activities of each space, we provide an on-line web site which includes a community module, a knowledge market module and an industrial commentary module. Students can start their self-leading study in the communication space, and they can also practice skills for the knowledge management in the knowledge trading space. Through the connection space, they can learn more from the real world critics with help of industry.

Keywords: Knowledge-based society, Learning community, On-line portal, Knowledge trading, Industry cooperation

1. Introduction

Importance of learning community in the educational scheme of knowledge-based society cannot be over-emphasized. It is closely related with the requirements of knowledge management. Ichijo et al. (2006) defined these requirements as socialization, externalization, connection and internalization. To manage knowledge we need places for these requirements, which can be defined as the place for creation, conversation, organization and practice. In a word, we need some place for knowledge activity for students', and learning community can be a powerful answer for it. Although we already have the learning community in the traditional learning system, the organization is off-curriculum and regarded as a supplementary system. In the knowledge-based society, education takes place not only at school, but also in the society, and life-long education has primary importance. Therefore,

we need a new type of learning community to fulfill the requirements of cross the board, such as in- and out- curriculum, on- and off-line, in and out of school, regular and non-regular students. Additionally, the learning community, which has close contact with society and provides open chances for the further learning is very important. Especially for the engineering education, this contact should be open to the industry. As learning community for the knowledge-based society is a main component of future education system, activities of knowledge managements will not be limited as those of simple meetings of students, but closely related with practicing place of knowledge managements, which include knowledge creation, organization, conversation and practice.

Another thing to consider for the learning community in real world is that present is a transition period, that is to say, we still work in the traditional education system, which is based on solid curriculum however, and the learning community is not the essential part of this system. Students are passive to participate in learning community if their activity is not rewarded by traditional regime. Especially, in relation to the job, students of engineering college tend to concentrate their efforts only on the evident

Received : December 4, 2009

Revised : April 6, 2010

Accepted : May 10, 2010

[†] Corresponding author: whkang@dau.ac.kr

This work was supported by the Korea Research Foundation Grant funded by the Korean Government (MEST) (KRF-2008-562-D00001)

requirements of job recruitment, such as good grade and certificates of qualification. Since learning community is not directly related with traditional curriculum system and their activity cannot be easily assessed like credits in curriculum, students feel their activity is not rewarded properly and tend to be passive. In the long run, future students will be assessed by their intellectual profile instead of curriculum profile, but until now they are assessed by the credit system. Therefore we should design a learning community which has close relation with traditional education system and their future job.

II. Online supporting system

1. Introduction

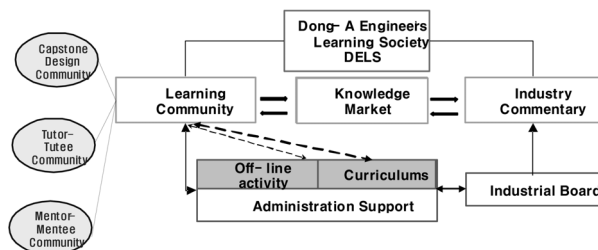
An online learning community is a meeting place on the internet that fulfills the learning needs of its members through proactive and collaborative partnership. Through social networking and computer-mediated communication, people work at a community to achieve a shared learning objectives (Barab et al. 2000). Learning in cyber space and online learning community is already popular as an alternative of the off-line education (Parloff et al. 1999). However, most of them provide online learning course or simple meeting place of anonymity. As a learning community of the future education system, requirements of knowledge management should be applied in the online learning community. In short, the activity related with the socialization, externalization, connection and internalization of knowledge takes place in the community. To satisfy the requirements of knowledge handling, some functions should be added to the traditional online community. We propose this function with a module which is a component of the online supporting system. We call it a knowledge market module, where various type of knowledge product will be traded. It resembles online market, while the trading items are completely different. Ideas, design, processed knowledge will be traded in the module. The trading work gives students an experience of knowledge management. It will also influence the activities of learning community as a knowledge management oriented one, that is to say, students become to regard knowledge as goods to trade and work to make them salable.

2. How to boost students' activity

A strategy to boost activity of learning community is the other important problem to solve. Primary causes of inactiveness lies on the connection problems with traditional curriculum system and job recruitment system. If students' activity at learning community is rewarded by grades of curriculum, and if it also influences employment positively, students may be more active. It is partly reflected on the grade estimation and job recruitment. However, most professors stick to the traditional assessment system and most companies still use simple tools of recruitment. In order to solve this gaps, we design a learning community module as a closely related one with curriculum. As trial, we apply this module for the two types of subjects in curriculum. One of them is basis subject such as mathematics, science and language. For them, we provide mileage system which can be used to buy learning material, tutor or learning related goods. The other type of subjects is engineering design subjects. There are learning community for students' design activity related with design projects of subjects in regular curriculum. With mileage system, students' activity will be rewarded by grading of credits, buying appropriate material, and having chances to work with industry.

3. Cooperation with industry

To make learning community closely related with job, we propose an industry commentary module. With the module in the supporting system, cooperative members of industry can search for the activity of students. The module resembles an internet portal searching site, like 'google' or 'yahoo'. Cooperative members use the module to search for the subjects of interest, to comment students' activity and to order industry requirements such as new idea. This connection is important because it influences community activity to accept industrial view. On the other side, companies also can recruit if they find students' activity valuable. This can be a desirable model of job recruiting, since history of intellectual profile, not curriculum profile is used as a measure of the recruitment. As well, the cooperative member can take part in the learning community, which is a valuable model of life-long learning.



[Fig. 1] Conceptual frame of the proposed learning community supporting system



[Fig. 4] Industry commentary module



[Fig. 2] Learning community module



[Fig. 3] Knowledge market module

4. Modules of supporting system

In conclusion, there are three modules for the on-line portal: on-line community module, knowledge market module and industry commentary module. The difference of the proposed supporting system compared with other community sites is that the on-line community is closely connected with other two modules which is cooperative with industry and traditional education system. With these two modules, students can practice their ability to process knowledge and reflect their knowledge by view of industry.

[Fig. 1] shows total framework of the supporting system. [Figs 2 to 4] show the three modules of the on-line portal: on-line community module, knowledge market module and industry commentary module.

<Table 1> Representative monitoring terms of system function (Goal values for the spring semester of 2010)

Category	Terms	Goal
Students Activity of Learning Community	Number of learning community	100
	Posted works	1000
Knowledge Trading	Exchange Volume	400
Commentary works	Participants	100
	Estimation Works	500

III. Application

Since the system starts to run in January of 2010, we cannot get valuable result of application closely related with subjects of curriculum. In this state we plan to monitor the function of the system before it is fully used.

The terms of monitoring to estimate successful use of the system is defined as some categories summarized in the <Table 1>. The three categories of 'Students activity', 'Knowledge Trading' and 'Comentary works' have monitoring terms of their activity. Only the representative terms are shown in the table.

IV. Conclusion

We propose a learning community supporting system to meet the requirements of knowledge management and to solve the practical problems of students' in activeness. The supporting system works on the internet which includes three modules to support learning communities. The characteristics of three modules are summarized as:

- Learning community module: it is a virtual place for the community activity. It is closely related with

subjects of curriculum. Students' activity is open to the other two modules.

- Knowledge market module: Results of the learning communities' activity can be traded as a processed knowledge. It is the place to practice the knowledge managements.
- Industry commentary module: industry members encourage students by recommending, assessing, and suggesting. The view and requirements are transferred by their action.

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The Author



Won Ho Kang

1981.2 Graduate from Seoul National University, Department of Civil Engineering / 1983.2 Master Degree from Graduate School of Seoul National University, Department of Civil Engineering / 1987.8 Ph.D. from Graduate School of Seoul National University, Department of Civil Engineering / Main Concern : Education Method,

Knowledge -Based Society, On-line support system

Phone : 051-200-7628

Fax : 051-201-1419

E-mail : whkang@dau.ac.kr