Analysis of Trends and Tendency in Journal Papers of 「The Journal of Education Information and Media」
: 2001 No.1 ~ 2010 No.3

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ABSTRACT
This study was conducted to identify the most productive affiliation and the most productive authors in 「The Journal of Education Information and Media」 from 2001 to 2010. Also we confirmed the characteristics of contents in 「The Journal of Education Information and Media」 and then analyzed characteristics of keywords according to the system of classification of subject domains which are 1) design and development; 2) teaching-learning theory; 3) teaching medium; 4) management/administration/operation; and 5) business training. Productivity scores were calculated using the number of first, second and third authorships in the journal. Characteristics of contents and keyword analysis used the system of classification of subject domains suggested by DongSik Kim (1996). As a result, Seongho Kwon (Hanyang University) is ranked on No. 1 with total of 47 points and Hanyang University ranked first in productive affiliation. Characteristics of contents, It can be verifiable that researches in distance education/virtual education/WBI/network are the most activate field in publishing. Finally, the result of analyzing major keywords showed that 1) group learning will be grown in the future, 2) Web will be arranged more actively. Especially, it is figured out that studies applying high-tech media such as robots besides computers will increase gradually.

Keywords: Paper trends in Educational technology,

PURPOSE
In domain of educational technology and media research, new directions and approaches are being consistently attempted and numerous studies have conducted to utilize high-tech media and information engineering. But the studies have brought out questions about striving after new technologies and concepts with unproved about an effect on promoting learning (Mimi Bong, 2003). From analysis of journal, attempting to verify meaning in study of relevant field of educational technology and media, and understanding the mainstream after shed new light on the future direction of research. Hence 「The Journal of Education Information and Media」, a registered quarterly-paper with academic journal of educational technology and media research, was selected. Research papers which had published in 「The Journal of Education Information and Media」 from 2001 to 2010 for 10 years are analyses with restructuring the understanding method of trend in thesis publishing that adequate for domestic circumstances, based on Heng-yu K(2009), also checked the trends of studying and publishing until today by analysis and investigation based on classification of educational technology research. 1) Check the publishing points in the journal, and the rank of primary author and institute that the most published in 「The Journal of Education Information and Media」 from 2001 no.1 to 2010 no.3. 2) Check the characteristics of contents in 「The Journal of Education Information and Media」 from 2001 no.1 to 2010 no.3. 3) 「The Journal of Education Information and Media」 from 2002 no.3 to 2010 no.3, published in the paper, the research of the subject terms to determine research patterns and trends.

METHODS
In this study, 324 theses in "The Journal of Education Information and Media" from 2001 no.1 to 2010 no.3 are investigated. Each author, affiliation and subject area of thesis are classified, and "Olympic grading type (Gold 3, Silver 2, Bronze 1)" is used, adopting analysis method in publishing trend of Heng-Yu Ku (2009). According to Olympic grading type, the primary author of thesis got 3 points, secondary author got 2, and third author got 1 point. Calculated the publishing productive score by giving points above third, except below fourth. Literature study was not included in the precedent study; however it is included in this data analysis. Carried out frequency analysis to investigate the ranking of each author and affiliation, and classified field according to subject area classification.

Finally, core key words were coded in an order suggested in the thesis in order to confirm the study tendency. Classification work was conducted by selecting only first-suggested keywords in order to avoid duplication of keywords. Centering keywords which were repeated twice or more, the same or similar keywords were grouped and the frequency analysis was conducted. And the characteristics of keywords were classified according to the system of classification of subject domains suggested by DongSik Kim (1996). The characteristics of keywords were divided into 5 categories; 1) design and development; 2) teaching-learning theory; 3) teaching medium; 4) management/administration/operation; and 5) business training, and study tendency and progress was examined focusing on major characteristics which were predominant.

Results

As the results of this study, first, to investigate the score ranking of researcher's journal publishing points, give 3 to 1 point in order of primary to third author by using "Olympic grading type (Gold 3, Silver 2, Bronze 1)". As a result of determining the ranking, Seongho Kwon (Hanyang University) is ranked on No. 1 with total of 47 points, Yeonghwan Kim (Pusan National University) hold the second rank with 35, Gyurak Jo (Yeungnam University) ranked third with 25 points.

Second, as a result of analysis of publishing number of primary author, Seongho Kwon (Hanyang University) and Jiheon Ryu (Chonbuk National University) jointed in first place with 14 theses. Sangsu Lee (Pusan National University), Jeongseo Han and Myeonghui Kang (Ewha Womans University), Yeongman Yu (Hanyang University) jointed in second place with 10 theses. It could be verifiable that the most authors in high rank are belonging to university which has educational technology major.

Third, the analysis of the most published affiliation in the journal showed that Hanyang University ranked first (42 theses), Ewha Womans University ranked second with 27 theses, Pusan National University ranked third (23 theses). ChonBunk University (16) and Keimyung University (12) are followed after that.

Fourth, in terms of the characteristics of educational technology contents, It can be verifiable that researches in distance education/virtual education/WBI/network are the most activate field in publishing. Instructional design theory/model (research/development) and management/administration/operation are followed with 70(21.6%) and 37(11.4%) theses. Any research had not conducted in visual and auditory media and ICAI field. Otherwise the publishing number of film/video/educational broadcasting field is decreased rapidly from 2007, instructional design theory/model and industry field are increased consistently from 2006 to 2010 than before.

< Table 1 > "The Journal of Education Information and Media" Ranking by each study area

<table>
<thead>
<tr>
<th>Study subject area</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General education technology</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>15 (4.6)</td>
</tr>
<tr>
<td>Theory of instructional design/Model (Research/Development)</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>5</td>
<td>12</td>
<td>12</td>
<td>8</td>
<td>12</td>
<td>6</td>
<td>70 (21.6)</td>
</tr>
<tr>
<td>Teaching-learning theory</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>19 (5.9)</td>
</tr>
<tr>
<td>Teaching media</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General teaching media</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>19 (5.9)</td>
</tr>
<tr>
<td>Visual/auditory media</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Movie/video/educational</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
</tbody>
</table>
As shown in the table which classifies characteristics in contents, it was found that The Journal of Education Information and Media was an academic journal which was mainly composed of studies relevant to teaching media and computers, and it was also known that studies relevant to design and development of teaching methods in media and computers accounted for the most.

Fifth, the result of analyzing major keywords in order to examine the study tendency and progress shown in the Journal of Education Information and Media is as follows.

1) In an area of design and development of teaching methods, it is known that studies relevant to group learning such as discussion, collaborative learning, learning communities and project learning rather than to individual learning have been conducted steadily. And, studies relevant to Wiki have been conducted every year since 2008. Wiki is an open-source learning management system for managing learners’ learning in web-based learning environment, and it can be inferred that studies on its design and application plans are constant object of attention.

2) In an area of teaching-learning theory, there are many studies on self-directed learning and problem-oriented learning. Learning which uses teaching media and computers has a characteristic where learners should learn everything autonomously and the learners take the initiative in learning (Lee, Han, Lim, 2010). As shown in the characteristics in contents, as studies are mainly being conducted based on teaching media and computers, it can be said that studies relevant to teaching-learning theory which reflects characteristics of media such as problem-oriented learning where learners take the initiative in learning mainly appear.

3) In an area of teaching media, educational environment changes according to the development of media and means, and it was shown that studies about design, development, application and effect of teaching methods considering the educational environment are being conducted actively as the educational environment changes.
It was confirmed that education was developing by combining with a game, not simply as game-based learning or computer games. It was also confirmed that the area of teaching media was more greatly influenced by the change of educational environment and the stream of times than other areas, and the study tendency and issues change according to the government’s educational policies or the direction of education.

4) As in an area of management/administration/operation, studies relevant to teaching media including computers because of the nature of the journal, it is figured out that it pays a lot of attention to university education such as cyber universities and distance universities. Currently, majority of distance learning institutions relevant to the regular school curriculum in the country are related to university education (12 schools of 4-year cyber universities and 2 schools of 2-year universities), and it is hard to find such schools in middle and high school courses except the Air and Correspondence High School. With that reason, it seems that there are many studies relevant to university education.

5) In an area of business training, with the start of studies on keywords such as HRD tendency and e-learning for companies in 2007, there have been many studies relevant to business training. This can be seen as a phenomenon appeared when companies started to use e-learning positively.

CONCLUSION

To sum up the result of the research, first, the researcher who is a member of upper ranked university leads the main stream of educational technology and media research through all sorts of study and national organization projects (BK21, NURI etc.) by carrying active research out. Second, the most influential research subject field related to academia relevant to educational technology and media is figured out to be distance education/virtual education/WBI/Network area and instructional design theory/model (research/development) area. Third,

Third, as a result of examining the study tendency and progress shown in the Journal of Education Information and Media, it was known that studies are mainly conducted based on teaching media, and studies considering the characteristic of learning environment, that is, Web tended to increase. Studies on group learning are greatly conducted in the area of design and development of teaching methods and the area of teaching-learning theory, and it seems that studies on group learning including interaction rather than on individual learning will be conducted constantly in the future. As for teaching media, it seems that studies on learning which uses Web will be arranged more actively. Especially, it is figured out that studies applying high-tech media such as robots besides computers will increase gradually.

Through above study results, the author aims to suggest the followings. First, it is necessary to prepare an activity to figure out the tendency and issues in the study area relevant to other educational technology and media besides “the Journal of Education Information and Media” as a standard for classifying re-criteria considering the current study tendency based on the study results.

Second, studies should have different context and classification though they were classified according to the classifying method of precedent studies, and there are many difficulties in classification. It seems that it is necessary to make an effort to set one system for detailed fields of studies relevant to educational technology and media through discussion.

Third, as this study classified precedent studies focusing only on the 1st keywords, it has a limitation that it only confirmed fragmentary parts. Accordingly, works to figure out keywords and core issues of the whole thesis should be arranged. Furthermore, it is necessary to analyze the overseas study tendency as well as in the country, to compare the results with that of domestic studies and to examine the international interest in current educational technology. Through this, it is possible to set the direction of domestic educational technology studies and to figure out the characteristics of studies in each country.

REFERENCES

