Connection Structure Analysis of the "Journal of the Korean Society of Clothing and Textiles" through Citing and Cited

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Introduction
Korean academic associations publish diverse and abundant academic journals. A large variety of journals cover each field. References to articles serve an important role, linking groups of articles with other academic articles, forming a huge and complex network of articles. This network can provide useful information about interactions between individual journals and researchers (Chung & Kim, 2016). Academic associations seek to increase the influence of journals by recruiting high quality articles. Citation frequency is an important factor for evaluating the quality of journals. It is used to measure the influence of journals (Lukman et al., 2018). Therefore, this study investigated the connection structure of the *Journal of the Korean Society of Clothing and Textiles* (JKSCT) by analyzing journals with high levels of citing and cited in JKSCT.

Background
Many indicators measure the quality and influence of journals. Indicators for evaluating the research productivity of individuals, academic associations, countries and academic journals increased rapidly. Research evaluation institutions around the world are increasingly dependent on citation-based indicators (Bornmann et al., 2012). One of the many indicators that can be used in the evaluation of a journal is published research literature: journal articles. Tracking the frequency with which articles are referenced in subsequent publications, and synthesizing citation data, can be used to identify the relative influences of individuals, journals, fields, associations, and countries. Moreover, they may be used to identify structures in various research fields (Garfield & Welljams-Dorof, 1992). The proposed citation index acts as a tool for academic research. It can be used to provide an access point for articles, authors, and references on the subject field, allowing trends to be analyzed. As interest in citation indexing expands, Korea built a citation index database at the national level and developed related services. Significant to this phenomenon is the increased demand for citation index data and services that utilize it (Lee et al., 2010).

Method
Korea Citation Index (KCI) is a system for analyzing relationships between articles. It involves a database of Korean domestic journals, articles, and references. KCI provides academic information about various Korean domestic journals of published articles. It may be used to calculate the influence of journals, using the necessary statistical data and citation frequency for research resource management. Therefore, it can be used as a tool to evaluate the qualitative level of journals published in specific subject fields (Korea Citation Index, n.d.). This study used

KCI data (JKSCT highly citing journals data and JKSCT highly cited journals data) to investigate the connection structure of JKSCT. KCT taxonomy was used as academic subject categories. The top 20 journals of each data type, from 2008 to 2016, were used for analysis purposes. The NodeXL program was used to analyze the connection structure.

Results
As a result of the analysis of JKSCT highly-citing journals data, the top 20 journals citing from JKSCT were found to be distributed in nine subject categories: life science (7), business management (4), costumes (2), fiber engineering (2), economics (1), design (1), journalism/broadcasting (1), psychological science (1) and affective science (1). Linking highly citing journals data from 20 journals resulted in a connection of 103 journals in 34 subject categories. Specifically, life sciences, business management, journalism, and broadcasting journals were highly connected (Figure 1).

As a result of the analysis of JKSCT highly-cited journals data, the top 20 journals citing JKSCT were found to be distributed across six subject categories: life science (7), costumes (4), kinesiology (3), beauty (3), design (2), and arts (1). Linking highly cited journals data from 20 journals resulted in a connection between 98 journals and 25 subject categories. Among 25 categories, life sciences, kinesiology, design, and education journals were highly connected. Journals in business management and journalism/broadcasting categories that were highly connected in citing data were hardly connected in cited data. By comparison, journals in the kinesiology category, which were highly connected in highly cited journals data, were not connected in highly citing journals data (Figure 2).
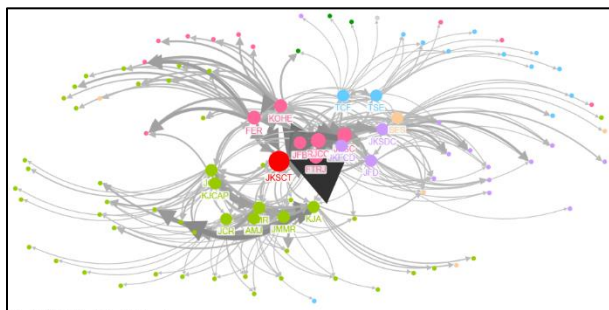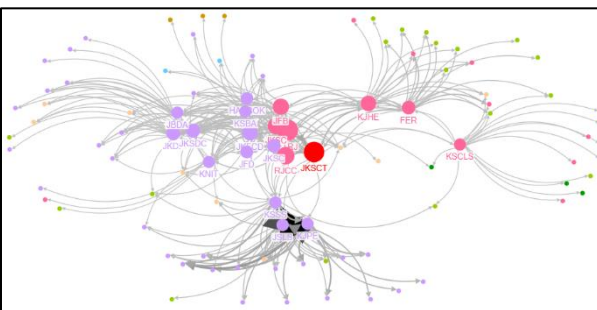

| Figure 1 JKSCT Citing | Figure 2 JKSCT Cited |

Discussion and Conclusion
In this study, the JKSCT research trend was found by using connection structure analysis. Given the variety of subject categories that JKSCT cites, it is apparent that JKSCT articles cover various themes. By comparison, the subject categories of cited JKSCT are narrower than those of other journals. Citation is an important factor for evaluating a journal's influence. If JKSCT is cited across diverse journals, the influence of the journals will expand further. To accomplish this aim, it is relevant to consider how to actively promote journals to researchers across various fields.

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