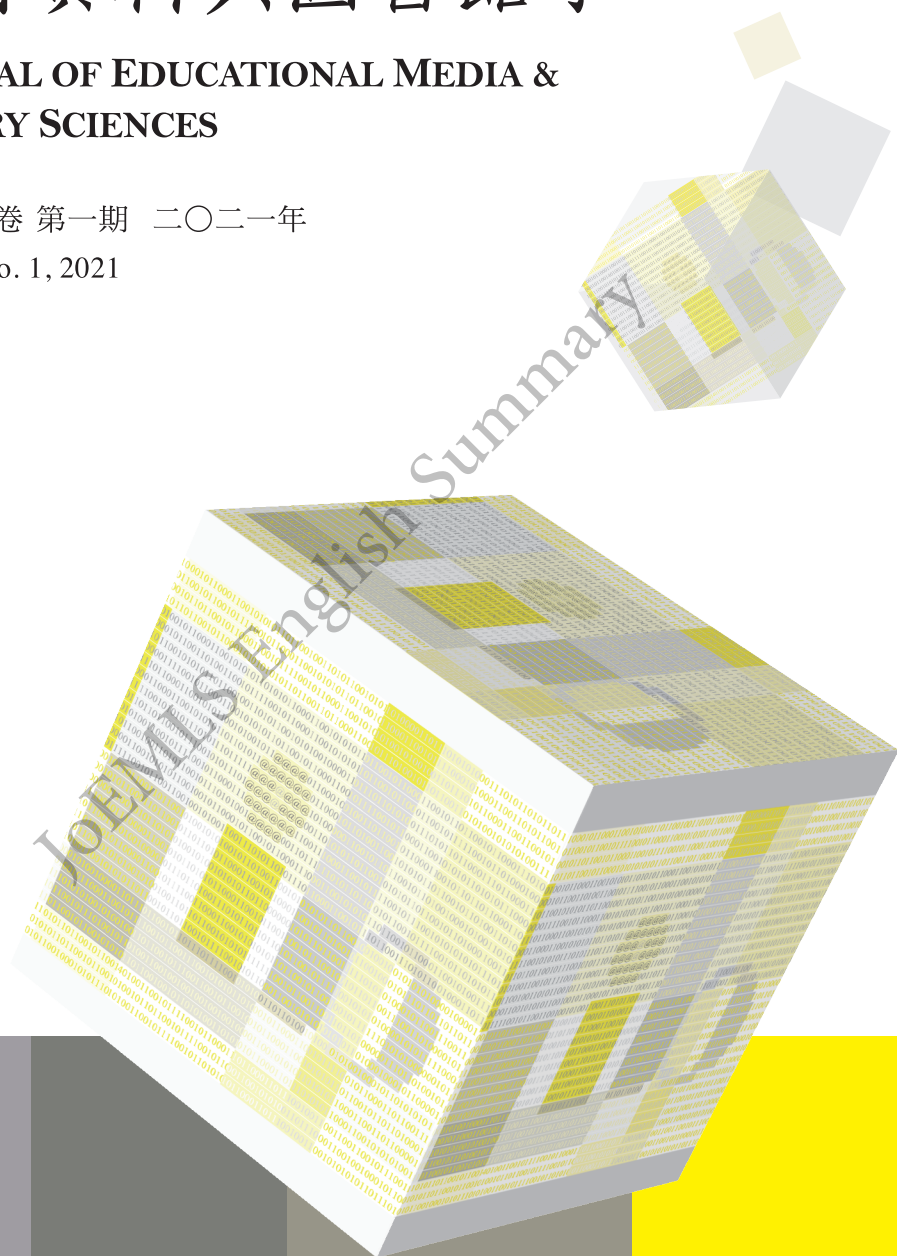


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教育資料與圖書館學，始於1970年3月創刊之教育資料科學月刊，其間於1980年9月更名為教育資料科學，並改以季刊發行。自1982年9月起易今名。另自2016年11月起，改以一年出版三期（3月、7月、11月）。現由淡江大學出版中心出版，淡江大學資訊與圖書館學系和覺生紀念圖書館合作策劃編輯。本刊為國際學術期刊，2008年獲國科會學術期刊評比為第一級，2015年獲科技部人文社會科學研究中心評定為教育學門專業類一級期刊。並廣為海內外知名資料庫所收錄(如下英文所列)。

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EDITORIAL

The Blind Spots of “Publicness” of Scholarly Publishing Under the Open Access Policy

During the development of scholarly publishing industry, it requires efforts from experts of various fields to build a progressive atmosphere and create substantial growth. In Taiwan, in addition to efforts of scholars and academic institutions, the scholarly publishers in private sectors have also cultivated for a long time, occasionally along with the supervision and guidance of government. In other words, this is an academic environment and market created together by a scholarly publishing community.

In Taiwan, the governmental institution, Ministry of Science and Technology (MOST), has played an influential and often decisive role on a journal evaluation system. It is the administrative unit, and also the ultimate decision maker. However, being influential suggests that any subtle actions of the public sector would be watched closely by the public, thus the institution should have its self-knowledge, knowing if its own conditions, such as influence, authority, executive power, and policy making, etc., could meet the needs for development. The public sector should also appreciate the efforts and contributions of each participant in this industry. Furthermore, since it is the national administrative unit and policy maker of the scholarly publishing environment, it should exercise the due care of a good administrator, and take the full responsibility for the development of the environment.

For many years, the MOST (the former National Science Council), has supervised and managed the scholarly journals through the means of journal ranking systems, such as Taiwan Humanities Citation Index (THCI Core) and Taiwan Social Science Index (TSSCI). This system has developed into a considerate scale and had certain achievements. Several regulations regarding the conditions of ranking have been partially improved, such as the new regulation addressing that the rejection rate should count in the numbers of rejected manuscripts in the internal editorial review process. It is believed that this new regulation could enhance the editorial and review efficiencies of journals and deal with the problems of publication ethics. This is a progress, but limited. However, recently we are surprised to find out that the MOST, along with the National Central Library (NCL), has boldly advocated the so-called “publicness” of scholarly publishing, without comprehensive policy debates and planning among scholars and government.

“Publicness” here could mean the quality or state of being public or being owned by the public, however, the real meaning of this term proclaimed by the MOST or NCL remains somewhat of an ambiguity. As a chief-editor and publishing science scholar, I have no choice but to express my concerns and opinions.

1. The phrase “publicness of scholarly publishing” claimed by the MOST and NCL covers a wide range, including scholarly journals, professional books, theses and dissertations, conference papers, and research reports, etc. It also involves the publications of various public and private sectors. It is thus a phrase with latent, numerous and jumbled meanings. It is nothing but a vague slogan.

2. The government advocates the “publicness” of scholarly publishing, without considering if the administrator, such as the NCL, would commit to or be capable of undertaking the tasks of promoting academic resources overseas (including the Mainland China), budgeting, managing and providing services? Whether the government is capable of achieving what the scholars look forward, that is, scholarly communication dynamics?

3. With the so-called “publicness of scholarly publishing”, it is wondered whether the government has ever set national policies regarding Open Access to academic resources? This is an issue involving national academic development, scholarly publishing industry development (i.e. the Knowledge Industry), as well as those controversial issues regarding scholars’ copyright and scholarly communication effects.

4. When public affairs involve rights and interests of public and private sectors, the government should be more cautious to respect and understand the needs and expectations of “stakeholders” relevant to the scholarly community, including authors, scholars (peers and readers), publishers, institutions and sponsors in scholarly publishing.

5. The concept of “publicness of scholarly publishing”, in general, equals “publicness of academic resources”, requiring comprehensive planning, consulting, sustainable government budgeting, and determination and executive power for sustainable management. The MOST, and the NCL, should have got prepared before they announced and advocated the concept; otherwise, this kind of scattered, one-shot, short-term, parochial policy manipulation is nothing but despicable and irresponsible bureaucratic monopoly.

6. Any country promoting so-called “Open Access to academic resources” policy should deal with the two major issues — publishing and archiving, and prudentially and comprehensively assess various situations and conditions, including relevant development strategies, market distributions, potential threats,

budgets and manpower. It also requires detailed reports of impact assessment.

7. The “publicness” of scholarly publishing is not absolutely equal to Open Access policy. To some extent, I am afraid that the premise of “publicness”, similar to “nationalization”, is (forced) releases of rights, implying demands from higher-level administrators. On the other hand, the Open Access policy emphasizes respecting copyright owners’ willingness of making resources public for free. With the “publicness” of scholarly publishing, governments are powerful hegemonies, and they have to bear the overall responsibility of budgeting, advising, supervising relevant to academic resources, as well as the success or failure. With the Open Access policy, governments select policies after steps of prudential considerations among groups of policies, balancing between open access policy and appropriate development of the scholarly publishing industry. It also requires a balanced reciprocity between academic resources owned by private enterprises and public sectors.

8. If the Open Access policy is encouraged in the TSSCI, then journal publishers and chief-editors should be clearly informed with all the possible options and compliance practices. The government (i.e. MOST and NCL) should not advocate its policies biased toward any specific journal platform as the priority criterial of evaluation, should not pass off the sham as the genuine, and should not try to carry out partial “publicness” policies nationwide.

In short, problems need to be solved, doubts need to be clarified, and policies should be effective and well-intended. It is wished that the MOST and NCL should be more prudential, mature and stable in making decisions.

In this issue (Number 1, Volume 58), 14 manuscripts have gone through the review process. According to the new regulation, the rejection rate of this issue is 71.4% (10 out of 14). The calculation of rejection rate is presented below.

$$\frac{[\text{number of rejected manuscripts (4)} + \text{number of rejected manuscripts during the internal review process (6)}]}{[\text{number of rejected (4)} + \text{number of rejected during the internal review process (6)} + \text{number of accepted and published manuscripts (4)}]}$$

The four manuscripts published in this issue include “The Effectiveness of School Libraries on Students’ Reading Engagement and Learning Achievement: A Case of Rural Schools in Hunan, China” by Tsung-Yeh Lee, Chao-Chen Chen, Wai-Ming Leung, and Hong-Shiu Liang, “Exploring Government Officials’ Data Collection Process in Open Data Initiatives” by Chung-Cheh Ma and Tung-Mou Yang, “Exploring Fact-Checking Behavior: A Case Study on Food Safety Message” by Ho-Chin Xiao, Chaoyun Liang, Jung-Hung Yen, and Yuting Sun,

and the “Transformative Agreement: An Exploratory Study of Journal License Agreements” by Chia-Ning Li and Meng-Ling Lin.

These four excellent papers are with profound insights and long-term observations. It is expected that they can motivate future researchers to generate more insights and have various applications in practices.

Jeong-Yeou Chiu
JoEMLS Chief Editor

JoEMLS English Summary



The Effectiveness of School Libraries on Students' Reading Engagement and Learning Achievement: A Case of Rural Schools in Hunan, China

Tsung-Yeh Lee^{a*} Chao-Chen Chen^{bc} Wai-Ming Leung^d Hong-Shiu Liang^e

Abstract

Regarding whether school libraries have an effect on students' learning achievement, previous findings in empirical studies are inconsistent across different developing and developed countries. This is an interesting phenomenon, which is still an important research topic that needs to be further tested and explored. In this study, a total of 16 rural primary schools in Shuangfeng County, Hunan Province were selected as the research subjects. After two years of follow-up survey investigation and data collection, the independent t-test and the difference-in-differences (DID) approach were used to analyze the differences of students' reading engagement and the countywide standardized test scores. The result shows that there were significant differences in the aspect of reading engagement between the students at the schools with and without a school library and the reading program. The result also indicates the value of school library and reading program in cultivating students' reading interest, reading attitude and reading strategies. The t-test reveals that there were significant differences in the aspect of standardized test scores, however, there was no consistent significant difference in DID test. The intervention in this study included the implementation of a reading program in addition to setting up a physical school library, thus, the results of this study may complement some previous empirical studies conducted in developing countries.

Keywords: School libraries, Reading program, Reading engagement, Learning achievement, Difference-in-difference approach

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SUMMARY

Introduction

Studies of school libraries' impacts on students' learning outcomes often generate different results in different countries, cultures, economics, and educational environments. Compared to the countries in Europe and the United States, studies on middle and elementary school libraries in Asia are insufficient, and large-scale analyses of school libraries' impacts on students' reading engagement and subject test scores are rare, suggesting a call for relevant studies. In 2016, the Reading Dreams Foundation established school libraries and supported reading programs in 8 selected elementary schools in Shuangfeng County, Hunan Province. Cooperating with the Reading Dreams Foundation, the researchers of this study spent two years following up the establishing of school libraries and reading programs in the 8 sponsored schools, as the experimental group of this study; another 8 non-sponsored schools were also studied as the control group. The research goal was to see whether the school libraries and reading programs would have impacts on students' reading engagement and subject test scores. The significance of this study was for bridging the research gap, and for providing references to the national government when it plans policies regarding launching reading programs and establishing middle and elementary school libraries, or to schools when they promote reading programs.

Research Methods

The quasi-experimental research framework was adopted in this study, and subject test scores and questionnaires were collected. The eight sponsored schools were set as the experimental group, and another eight non-sponsored schools of the same county were as the control group. For the subject test scores, the language and math scores of county-wide standardized tests at the end of semesters were collected. For the questionnaires, the reading engagement scale designed by Wu (2017) and Chen et al. (2017) was adopted and revised for this study. In December of 2016, before the associated school libraries were established, the first questionnaire investigation was conducted, and the language and math scores of county-wide standardized tests at the end of semesters were collected. In March of 2017, associated school libraries were established and teacher training was completed. The second, third and fourth questionnaire investigations and test score collections were conducted in June of 2017, December of 2017, and June of 2018, respectively. The independent *t*-test and the difference-in-differences (DID) approach was adopted for the data analysis.

Research Results and Suggestions

From the results of the independent *t*-test of reading engagement

questionnaires, it was revealed that there were significant differences between the experimental group and the control group in aspects of Reading Motivations, Intrinsic Motivation, Reading Efficacy, Reading Value and Pro-social Goals. Through a further DID test, it showed that there was a significant difference between the two groups in the aspect of Reading Motivations, due to the promotion of reading programs, which also had a positive encouraging effect on the Reading Behaviors aspect. As to the Reading Strategies aspect, most strategies had generated significant outcomes after two years of school libraries and reading programs. The reading strategies that had generated the most significant differences were those of Meta-cognition, suggesting that through the intervention of experiments, students tended to demonstrate uses of higher-level reading strategies, which corresponded to the findings of previous studies by Guthrie et al. (2013) and Wigfield et al. (2004), claiming that through reading instructions, students' strategic reading abilities could be improved, their reading comprehension enhanced, and their cognition difficulties reduced. From the *t*-test and DID test, it was evident that the schools of experiment group and control group had had similar environmental conditions, but with the establishing of school libraries and the promotion of reading programs, the students of the experimental group had better reading engagement than those of the control group.

From the first-time independent *t*-test of subject test scores, we could see that there was no significant difference in the language scores between the experimental group and the control group, but a significant difference appeared in the math scores. After a year and half of reading programs, the averages of language and math scores of the experimental group were both higher than those of the control group, and there were significant differences. Since there was no significant difference in the language scores but a significant difference in the math scores of the pre-test, we could claim that the establishing of school libraries and promotion of reading programs had positive impacts on students' language scores, which was a different result from the previous research findings in many developing countries. From the DID test of subject test scores of the experimental group and control group, it was revealed that there was a significant difference in the language scores of the post-test, but no significant difference in the math scores of the post-test. It could be said that, in terms of the DID test, the intervention measures had positive impacts on the language scores of the experimental group, but no significant impacts on the math scores.

Overall speaking, in this study, the independent *t*-test was conducted to investigate the reading engagement and learning outcomes of the experimental and control groups, and it showed that there were significant differences in the scores of both groups. However, through the DID test, it was revealed that there

was a significant difference in reading engagement, but no consistent significant difference in the subject test scores. One of the reasons could be that, the reading lessons and afternoon reading classes were carried out only by teachers, without full-time professional librarians taking charge of school-wide reading promotion and further collaborating with teachers for incorporating reading and information literacy into various subject studies, as the cases of schools in advanced countries. Another explanation might be, like what Alvarado and Adriatico (2019) addressed, the enhanced reading motivation does not mean that students have sufficient motivation to enhance their subject performances. Soemer and Schiefele (2018) also claimed that, good subject performances require students fully engaging in learning, and subject test scores cannot be used as the only evaluation indicator of reading outcomes. In other words, students who get interested in reading may not certainly engage in subject learning and tests.

Through the *t*-test and DID test in this study, it was revealed that school libraries and reading activities had positive impacts on students' reading engagement, which suggested the values of school libraries and reading programs. It is suggested that educational administrative units should value the resource investments in school libraries and reading programs. The associated school libraries in this study did not deploy school librarians or teacher librarians, and the reading programs were just for encouraging students to borrow materials, and promoting reading lessons and afternoon reading classes. Although it could not be proved that this was the reason causing no significant difference in subject test scores, from the comparisons with previous research findings in advanced countries, we could know that, with full-time professional librarians in school libraries and the collaboration between librarians and teachers, school libraries could have positive impacts on students' learning outcomes. It is thus suggested that educational administrative units should invest full-time professional librarians in school libraries.

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Exploring Government Officials' Data Collection Process in Open Data Initiatives^ψ

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Abstract

The implementation of open government data (OGD) initiatives has become a worldwide phenomenon over the last decade. While there have been many studies exploring this phenomenon, few have focused on data collection phase in data opening process, during which government officials seek government-owned datasets for OGD purposes. To establish a model for the process of data collection phase, this study conducted semi-structured interviews with fifteen participants recruited through purposive and snowball sampling methods from eleven central and local Taiwanese government agencies. This paper discusses the research findings regarding (1) why government officials undertake tasks of data preparation, (2) how potential datasets are discovered, selected, and obtained from multiple government agencies, and (3) how information is sought to facilitate tasks of data preparation. These findings bridged the research gap in the study of data opening process and verified previous information seeking models. Suggestions for future practitioners and topics worthy of further exploration are enumerated in the conclusion section.

Keywords: Open data, Data opening, Data collection, Data seeking, Information seeking

SUMMARY

Open government data (OGD) can be defined as government-owned raw data which is timely released online in machine-readable and non-proprietary formats for free access and reuse. In recent years, OGD initiatives have been launched in various countries, which develop into a phenomenon studied by many scholars from multiple disciplines. However, details regarding the data opening

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process in OGD initiatives have not yet been addressed enough, especially the data preparation phase during which government personnel in charge of OGD implementation discover, select, and obtain government-owned datasets for OGD initiatives. This is a crucial phase of data opening process because it influences the subsequent procedures and determines the kinds of data that can be accessed by users, which makes it an important research topic worthy of further investigations. In the goal of establishing a data preparation model of government personnel in charge of OGD implementation, bridging the research gap mentioned above, and providing references to government agencies planning OGD policies, theories of information-seeking behaviors are incorporated in this study to investigate the OGD phenomenon. The research questions of this study include, (1) why do government personnel in charge of OGD implementation undertake data preparation tasks; (2) how do they discover, select and obtain datasets for OGD initiatives; and (3) how do they seek information to facilitate data preparation tasks.

Based on literature on information seeking behaviors, and assisted with details drawn from OGD literature, a research framework is generated and divided into three parts, including context and situation, data seeking process, and information seeking process. The context refers to the data opening process, that is, the process of data creation, data preparation, data release, and data reuse, as mentioned in relevant literature. In this context, exist the situations in which government personnel in charge of OGD implementation perform data preparation tasks. These data preparation tasks comprise three phases, which are data discovery, data selection, and data obtainment. These phases develop into two concepts, task needs and data seeking, which form the part of data seeking process in the research framework. Also, according to the literature on information seeking behaviors, the government personnel in charge of OGD may feel the information needs with growing specificity derived from data preparation tasks, and demonstrate several information seeking features with different levels of activeness to obtain needed information from multiple information sources, under the influences of various information seeking determinants. These phenomena develop into two concepts, information needs and information seeking, which form the part of information seeking process in the research framework.

In this study, semi-structured interviews were conducted to investigate the behaviors, cognitions, and emotions of Taiwan government personnel in charge of OGD. Purposive sampling and snowball sampling were incorporated to recruit related government officials from information departments of central and regional government agencies with a larger scale of OGD development. The transcripts of the interviews were then analyzed with qualitative approaches.

From the analysis of empirical data, three major research findings were revealed in this study and presented as below.

1. The government personnel in charge of OGD implementation undertake data preparation tasks because of: (a) internal spontaneity that government personnel in information departments spontaneously engage in data preparation tasks when concurring with the ideal of open government, convinced by the potential benefits, or inspired by the global trend of OGD development; (b) internal assignments from supervisors of government agencies who decide to commence OGD initiatives and assign data preparation tasks for similar reasons causing internal spontaneity; and (c) external demands from advocates (e.g. interest groups, representatives, mass media, etc.) inspired by the global trend of OGD development.
2. To accomplish data preparation tasks, government personnel first audit datasets possessed by the business departments of government agencies with three modes of data discovery, including (a) the need-oriented mode, with which the targeted business departments are requested to provide dataset lists that are relevant to the received data needs; (b) the non-need-oriented mode, with which data audit begins with business departments of higher ranks or those having fewer opened datasets; and (c) the hybrid mode, with which a group of business departments are selected with non-need-oriented approaches and requested to offer information regarding the department's major functions, which is forwarded to data users for feedbacks on data needs. Then, under the influences of data selection determinants, including personal rationality, data provider characteristics, data reuser characteristics, and data characteristics, government personnel prioritize the release of discovered datasets through three phases of data selection, which are (a) preliminary prioritization of potential datasets, (b) consulting and persuading business departments for more data release; and (c) getting approvals from the supervisors of government agencies. Finally, government personnel obtain selected datasets from business departments and accomplish the data preparation tasks.
3. To facilitate the data preparation tasks, government personnel may require the information regarding data needs, data sources, and data seeking strategies. The discernibility of these information needs increases during the data preparation process. Usually, the information regarding data needs are provided by data reusers; the information regarding data sources are provided by staffs, databases, and websites of business departments; while the information regarding data seeking strategies are provided

by staffs of other agencies, subcontractors of OGD platforms, scholars, data reusers, and OGD platforms of other agencies. The selection of these information sources is mainly determined by information source characteristics and organizational environment. While all government personnel perform information seeking features of chaining and browsing to obtain the required information, only the ardent ones further perform more active features like monitoring, differentiating, extracting, and verifying. The activeness of government personnel's information seeking behaviors fluctuates under the influences of personal rationality, psychology, interpersonal relationships, organizational environment, and characteristics of information need.

Based on the research findings of this study, three suggestions for Taiwanese OGD practitioners are offered: (1) Advance the enactment of **OGD Act**, incorporate OGD tasks into agencies' daily routines, establish a centralized information system for OGD collection, and customize OGD KPIs for different types of agencies; (2) establish interagency platforms for the exchange of data preparation experiences among government personnel to facilitate OGD implementation; and (3) apply both need-oriented and non-need oriented modes of data discovery to meet both the explicit and implicit data needs. For now, this study only addresses the data preparation process of government personnel in charge of OGD implementation. Future studies can further broaden and deepen the understanding of data opening process in OGD initiatives by looking into (1) the detailed decision-making process of data selection phase and its relevant determinants, (2) the differences of weights and relations of data selection determinants among different agencies; and (3) the differences of data preparation process among agencies in different countries, and those with different OGD experiences and implementation scales.

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Exploring Fact-Checking Behavior: A Case Study on Food Safety Message

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Abstract

Individual autonomous fact-checking is a crucial response strategy to food safety misinformation. Based on the theory of planned behavior, the present study considered individual trust in and user experience of using a fact-checking platform and conducted a survey to explore the public's behavioral intentions toward fact-checking. The results revealed that the hypothesis of trust as a mediator was partially supported. Perceived behavioral control was the most positive factor for promoting the public's use of the fact-checking platform; furthermore, user experience, benevolence (trust), and competence (trust) could significantly and positively affect people's fact-checking behavioral intentions. The results further indicated that the integrity (trust) revealed by the platform had significant and negative effects on individuals' fact-checking behavioral intentions.

Keywords: Using experience, Food safety misinformation, Trust, Theory of planned behavior, Fact-checking behavior

SUMMARY

Individual autonomous fact-checking is a crucial response strategy to food safety misinformation. On the basis of the theory of planned behavior (TPB), the present study investigated individuals' trust in and the user experience of using fact-checking platforms and conducted a survey to explore the public's fact-

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checking intentions. The three research questions to be answered were as follows: 1. How do the variables of TPB (attitudes, subjective norms, and perceived behavioral control) affect people's intentions of using fact-checking platforms? 2. How do people's trust in fact-checking platforms and experience of using it affect their fact-checking intentions? 3. What role does the aforementioned sense of trust play in the predictive model discussed in this study? A literature review was thus conducted on four topics, namely food safety misinformation and response strategies, trust and use intention, the TPB, and the user experience.

The present study employed SurveyCake to distribute an online questionnaire. The research team included citizen journalist, agricultural entrepreneurs, information society experts, and agricultural extension scholars and the team members utilized their contacts and professional networks in a coordinated way. They reached out to several professional forums and groups as well as the seminars and talent cultivation activities sponsored by the Council of Agriculture and Ministry of Health and welfare between October and November 2019. Because of research ethics considerations, the first page of the questionnaire clearly informed the participants of the purpose of the study and that their participation was anonymous and that they could answer without worrying about their privacy.

The results of confirmatory factor analysis revealed that the TPB was divided into three factors, namely attitudes, subjective norms, and perceived behavioral control. Sense of trust was divided into three factors, namely ability, integrity, and benevolence. The hypothesis that trust was a mediator was partially supported. Perceived behavioral control had the strongest positive effect on the public's use of fact-checking platforms. Furthermore, user experience, benevolence (trust), and competence (trust) significantly and positively affected people's fact-checking intentions. The integrity of (trust in) a platform had a significant negative effect on individuals' fact-checking intentions. Attitude and subjective norms were found to not significantly influenced the fact-checking behavior.

Perceived behavioral control was discovered to be the core factor affecting behavioral intentions (Han et al., 2010; Liu et al., 2019; Wang et al., 2016). The results confirmed that the perceived behavioral control enables the public to continue to pay attention to the development of food safety issues, share methods of verifying information with relatives and friends, and actively inform relevant units of misinformation. This finding highlights the necessity of incorporating information and media literacy into compulsory education and the importance of extending information and media literacy into social education.

This study also discovered that user experience was a decisive factor in motivating people to use fact-checking platforms. The study verified the

importance of functions, ease of use, and the efficiency of digital technology platforms, with a look and feel that emphasizes on safety and security (Doney & Cannon, 1997; Hassenzahl & Tractinsky, 2006; Jones & Marsden, 2006; Rowley et al., 2014). For people concerned about food safety misinformation, fact-checking platforms must be easily searchable (e. g., the website name is easy to remember and the site address is easy to find), and users must be able to see the latest food safety information. The content must be clear and easy to read. The fact-checking platform must make determination on which articles have been verified easy to read for the public. This will make the public feel that relaying the results of food safety information checks is easy.

This study investigated sense of trust toward fact-checking platforms as a mediating variable. Fact-checking intentions had extremely high predictive validity, and the explanatory power of sense of trust was satisfactory. The results show that perceived behavioral control and user experience are the essential elements for creating a sense of trust in fact-checking platforms. Only when people can confidently and actively check food safety information in an effective and enjoyable manner can the trust in the fact-checking platform be established. The results of this study about trust as a mediator can serve as a crucial reference for scholars to re-examine in the future.

The findings also reveal that the integrity aspect of trust negatively affected the public's intentions of using fact-checking platforms. After a careful study of the literature, the researchers discovered many studies found that the public still has several doubts about digital-platform-related privacy, data, and asset protection. If a platform emphasizes its open management and transparent operation, these aspects may eventually affect the public's trust in the platform (e. g., Urban et al., 2000). Gefen et al. (2003) specifically mentioned that online trust must be established on the basis that the platform industry will not profit from deception and will absolutely guarantee the network security. Pavlou (2003) and Pavlou et al. (2007) also mentioned that if consumers feel that some risks may be associated with the transaction process, they trust the platforms less and it negatively affects their digital actions. The transparency of management disclosure and checklists, highlighted by the present study, may make the public worry that the excessive openness and transparency will violate their privacy and checking content.

In addition, in terms of the integrity aspect of trust, this study particularly emphasized the need for fact-checking platforms to make the members' background information public, to maintain fairness and rigor in the information review process, and to ensure that the mechanism for correcting false information is open and transparent. These considerations are consistent with the favorable

brand image that fact-checking platforms must establish. However, much food safety and agricultural misinformation in Taiwan is linked to political issues, such as the political tendencies of entrepreneurs and the illusion of oppressed innocent farmers. Because of the fierce competition between the blue and green political camps in Taiwan, many people believe that if the ruling party is not of their own ethnic group, then the party is generally untrustworthy. This distrust extends to the members of an inspection platforms, the information review process, and the information correction mechanism; that is, a backfire effect is caused. Even if verifications and claims are made by third parties or public interest organizations, people will ignore or refute them if they do not conform to their own beliefs (Nyhan & Reifler, 2010; Wood & Ravel, 2018).

Taiwan is often attacked by misinformation and is one of the worst countries worldwide in terms of this problem. The situation is also expected to worsen in the future (Walsh, 2020). Information manipulation has always been a tool used by authoritarian regimes or interested people to disrupt democratic countries or normal systems. In the past few years, this trend has become a normal threat to Taiwan, and this type of malicious cognitive warfare will become more intense, with machine learning and local cooperators employed to refine the content of false information and increase its pervasiveness (Ye, 2020). Although food safety misinformation is not as harmful to the society and the country as political misinformation is, it involves the same response of clearly identifying and defining threats, establishing discourse, and gaining public support. Through the joint effort of the government and nongovernmental organizations, the Taiwanese society should provide its citizens correct information and a strong democratic system, which is the best defense method. Timely response and information transparency are crucial for effectively combating misinformation. Without compromising the democratic system and the country's values, the most critical force behind devising a favorable strategy of combating misinformation is having people who can discern the authenticity of information and actively check for facts.

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Transformative Agreement: An Exploratory Study of Journal License Agreements

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Abstract

Discussions about open access (OA) have been going on for almost two decades. Under pressure from the OA movement, libraries and publishers started to renegotiate journal agreements with an emphasis on transparency and affordability. Library consortia and libraries demand OA parameters in agreements. On the other hand, publishers also make efforts to find a sustainable way to operate the business in the face of significant changes in scholarly communication. New pricing and agreement models have been developed and “transformative agreements” can be an umbrella term for them. Transformative agreements shift the focus of scholarly journal licensing from a subscription model to an OA publishing fee. New types of contract have resulted in major changes in how library budgets are allocated. In this paper, we review the literature to identify the basic principles of contracts and to summarize OA parameters by studying existing transformative agreements, including those agreements Iowa State University signed with Oxford University Press, Cambridge University Press, and the Association for Computing Machinery. It is hoped that libraries can have a better understanding of the direction of travel in future negotiations, and provide libraries with suggestions on how to negotiate OA agreements.

Keywords: Transformative agreements, Open Access, Article processing charges, Hybrid OA journal, OA publishing

SUMMARY

Introduction

Open Access (OA) has been discussed for over 20 years in scholarly communication. The average price of scholarly journals and subscription fees has

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been increasing rapidly in recent years, while the budgets available to libraries have declined or remained static. With the rise of open access, library consortia and libraries started to discuss the possibility of a transition from the subscription-based model to an article processing charge (APC)-based OA pricing model. On the other hand, publishers also make efforts to find a sustainable way to operate the business with big changes in scholarly communication. According to Wise and Estelle's (2019) research analysis, there are at least 27 strategies in the OA publishing market. By understanding the underlying journal license agreements, libraries are expected to respond to this changing scholarly communication system.

Research Purpose

The purpose of this paper is to identify the background and the basic principles of the new model of journal license agreements and to summarize OA parameters by studying existing transformative agreements. It is hoped that Taiwan's academic libraries can gain a better understanding of current subscription journal license agreements which are undergoing a transition to OA business model agreements. Moreover, we hope that libraries can develop a definite direction in negotiating future OA agreements with publishers.

Methods

Borrego, Anglada and Abadal (2020) analyzed 36 full-text transformative agreements listed in the Efficiency and Standards for Article Charges (ESAC) registry to distinguish three categories of transformative agreement, namely, the pre-transformative agreement, the partially transformative agreement, and the fully transformative agreement. Borrego et al.'s (2020) research analysis also summarized several OA parameters found in these agreements. In our study, based on the research analysis of Borrego et al. (2020), a literature review was conducted on existing agreements signed by a single institution and three library consortia to have a complete understanding of transformative agreements. Considering the status quo of scholarly publishing in Taiwan, where the great majority of scholarly outputs were from a few top universities, we aimed to analyze agreements signed by a single institution to give more practical evidence and provide a basis for comparison. Moreover, exploratory research on agreements signed by the other three library consortia gives us definite ideas about transformative agreements.

On 4 January 2021, the ESAC Registry contained 179 transformative agreements which were signed by 43 consortia, organizations or single institutions. Iowa State University, which registered the most agreements in the ESAC Registry, was chosen to be analyzed in this article. Iowa State University

has registered six agreements in the ESAC Registry, and among them only four full-text agreements were disclosed and available; three of them were chosen to be research objects due to the complete OA development history on the publishers’ websites. Furthermore, to have a comprehensive understanding of the transformative agreement based on annual publications, licensing members, and contract features, three library consortia agreements were chosen to be analyzed in this article. We aimed to analyze the content of the agreements that Iowa State University signed with Cambridge University Press, Oxford University Press and the Association for Computing Machinery and three other consortia agreements that dealt with the above three publishers, respectively. The agreements analyzed in the study are listed in Table 1.

Table 1 Research Objects and Agreements Analyzed in This Article

Publisher	Research objects and agreement period	
Cambridge University Press	Iowa State University (2020–2022)	The Association of Universities in the Netherlands (VSNU) (2017–2019)
Oxford University Press	Iowa State University (2020–2022)	Norwegian Directorate for ICT and Joint Services in Higher Education & Research (Unit) (2020–2022)
Association for Computing Machinery	Iowa State University (2020–2022)	IReL (2020–2022)

The agreements’ parameters analyzed in this study include contract charges (annual fee, read and publish fee), eligible journals, OA article allowance (article cap), OA license, and so on.

Discussion

In this study, we made four key findings:

1. There are many aspects of transformative agreements but as yet, no templates for new pricing model agreements. Publishers are still trying to find a sustainable way to make the transition to OA publishing.
2. New parameters in transformative agreements need to be identified when negotiating new journal license agreements. In the new model agreements, the focus shifted from subscription-to-read to pay-to-publish, and the OA features included in the agreements cannot be disregarded.
3. Journal license agreements are in transition, so they are flexible enough to allow customized adjustments. It seems that no agreements are identical, based on the size of consortia, institutions, and the publishing status, so the clauses in agreements are negotiable.
4. The cost of transformative agreements might be higher than previous subscription license agreements. It is still hard to know if the new model agreements are cost-neutral.

Suggestions

OA has been accelerating trends in journal licensing negotiation and transforming agreements. Transformative agreements are a European and American phenomenon, and unlike Western countries, which have better leverage for negotiating new journal license agreements, Taiwan has little room for negotiation due to comparatively fewer scholarly outputs. Although it is still doubtful whether transformative agreements can solve the cost problem of library budget constraints, the transformation of OA and journal pricing models has been an irreversible shift

In this study, we shed light on the features of new models of journal license agreement to provide libraries with insight into the direction of future negotiations. Libraries must take note in the near future of the trends that are impacting the pricing models and agreement terms to make a timely response to these changes.

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