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Factors Influencing the Responsiveness of Textbooks and Course Readings

Trang Huynh, Hieu Doan

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Abstract

The paper is aimed at identifying the factors influencing the responsiveness of textbooks and course readings at an academic library in the Mekong Delta, Vietnam. Using a quantitative approach, online survey was undertaken with 444 participants (370 undergraduates, 66 Master students and 8 PhD candidates). The findings from the study show that five groups of factors influenced the responsiveness of textbooks and course readings. They include textbook features, the publisher and author, the learner, library policy, and the teacher. Technology and Library staff had no influence on the responsiveness of textbooks and course readings. The learner was identified as the group with the strongest and positive influence whereas library policy was found to be the weakest and least positive influence on the responsiveness. The paper concludes by making recommendations to improve the responsiveness of textbooks and course readings for academic libraries.

Introduction

Training quality is a matter of growning concern to employers and higher education institutes. Improving the quality of training, meeting the requirements of quality accreditation at tertiary education institutions in Vietnam, including Can Tho University (CTU) is a current urgent demand. One of the important factors contributing to the quality of higher education is the learning materials at the library. According to Can Tho university regulations, teachers have to recommend textbooks, lecture notes, and reference materials in the course syllabus for the learners (undergraduate students, post-graduate students and doctoral students). The learners can search for learning resources in the university library named the Learning Resource Center. Since its establishment (2006), it has made great efforts to meet the needs of learners in terms of textbooks and course readings for the courses. However, the questions as to learner satisfaction and library services still remain. Little research has been conducted to assess the needs, level of learner satisfaction and factors influencing the responsiveness of textbooks and course readings. Therefore, there is a real need for evaluating the effectiveness of the learning materials from learners' views.

This study is expected to contribute to the knowledge of the evaluation of the effectiveness of textbooks and course readings at the academic libraries. Findings will provide evidence for the assessment of higher education accreditation on the library criteria, as well as contribute to training high-quality human resources for the society. In addition, the study shows the importance of library leaders focusing more on how to maximize the uses of textbooks and course readings to ascertain appropriate sources of references for the courses and the responsiveness of these learning materials to users take place.

METHODOLOGY AND LITERATURE REVIEW

Several studies have discussed on the factors influencing the use and responsiveness of textbooks and course readings. They are the type of learning materials, library policy, up-to-date learning materials, quality, language, role of teachers, reputation of author and publisher, and the like.

Type of learning materials: The type of learning materials is the factor that greatly affects their usage and responsiveness. In particular, in a study to evaluate the use of electronic textbooks at Andrews university library, Marques de Oliveira (2012) reveals that 55.4% of the respondents preferred to use e-books and articles for research in an electronic form. In the meantime, they enjoyed reading textbooks and manuals in printed one. His research findings indicate that users preferred e-books to print books because of storage space, convenient accessibility, and available and up-to-date information. Similarly, Lee, Messom and Kok-Lim (2013) contend that e-textbooks could replace printed ones in school training programs because of their outstanding advantages, rich contents and interesting forms such as multimedia, animation, multiple clips and games. These features attract the users' favours. Besides, e-learning materials allow the teachers to customize their lesson plans to meet their teaching purposes and satisfiy learners' needs.

On the contrary, in a research with the participation of 114 graduates and 686 undergraduate students, Lam and her colleagues (2014) found out that less than 5% of them have used e-databases and more tham 68% used printed materials. Similarly, Hoang and Nguyen (2018) stated that users' choice to use printed books over e-books in academic libraries in Vietnam is due to the domination of printed books in the market, lack of reading tools and e-books in the libraries, and the users' limited knowledge and information about e-books. In addition, Tosun (2014) explained that the users' limited access to e-books are affected by different factors such as reading device, software, price, copyright, and instructor's recommendation. The study also claims textbooks and course readings of the training programs should be sent to the publishers for their plans of books in print.

Le (2015b) states that most e-learning materials of the university are in PDF format (converted from printed textbooks to e-verisons). They have not met the requirements of the credit-based teaching system. His findings also show that films, photos, diagrams, charts, and self-study exercises are the neccessary tools to enhance the pedagogical students' self-study capacities. They are also the factors influencing the level of usage and responsiveness of the learning materials. Similarly, Bhatti and Khan (2016) suggest that using e-books in Pakistan universities is still in progress. They indicated that well-trained librarians and the users' awareness of e-book advantages are the factors that help to enhance the responsiveness of e-learning materials. Moreover, in a recent study, Mar and Sum (2018) confirm that e-books and foreign language documents have influenced greatly on students' choices of reading materials because they often use smart electronic devices, especially mobile phones, to enjoy these types of documents anywhere and anytime.

Library collection development policy: Library collection development policy is the factor influencing the use and responsiveness of learning materials. Specifically, Pham (2012) considered the collaboration among librarians, lecturers and learners to collect and develop a library collection for the training programs as an influential factor to the usage and responsiveness of the learning materials. Vu (2014) believed that the academic library has to ensure their acquisition policy of the contents and specialized books for the learners. She also emphasized that academic libraries must prioritise the textbooks and course readings for training programs and research. Moreover, she suggested that academic libraries should coordinate and share resources with each other.

Similarly, Nguyen (2014) believes that quality of library learning materials will be the factor attracting the users' common usage besides priority categories, understanding the needs of information users, coordination between information users and libraries, between libraries and information agencies. In addition, Nguyen (2018) addresses the role of learning resources in meeting learners' needs. Learners' knowledge and accessing capacities to course materials depends on the teachers and the library resources. She suggested that librarians, lecturers and learners should collaborate in collecting and introducing training progam textbooks and course readings. A similar study conducted by Nageswara, Kumar and Tripathi (2018) identified factors that encourage or discourage the use of textbooks and e-reference books in the Jawaharlal Nehru university library. In particular, the library policy of collection development corresponds to the needs of the users. Their findings also indicate that users expected both printed and electronic versions of books and reference materials at library.

Textbook update: Textbook update is the factor influencing the usage and responsiveness to the students. According to Nguyen (2006), textbooks play an extremely important role in teaching and expanding knowledge for students. In the universities of Western countries, textbooks are used very carefully and reviewed their currentness and updating every year by the users. He also claimed that textbooks in Vietnamese libraries are limited in number and old publications (30-40 years old). Similarly, Dinh (2011) indicated that 50% of learners claim the lack of textbooks and course readings in their institutes. This is also one of the factors influencing their academic performance. In addition, his finding showed that most textbooks are old and dissatisfied the requirements of credit-based training program. Moreover, Luong (2017) said that the updating of the textbooks also affects the usage and responsiveness to the students. He believed that human knowledge has developed rapidly, so textbooks should be updated accordingly.

Textbook quality: Another important factor influencing the usage and responsiveness of learning materials is their quality. Gurung and Martin (2011) stated the value of images, pictures, illustrations, format and the role of teachers in reading the required learning materials. These authors argued that when choosing a textbook, instructors should pay special attention to the quality of the materials such as format, pedagogical support, images, and visual aids instead of focusing on its thickness, price, or quantity. Similarly, in a study with the participation of 810 students at 14 universities in the US, Landrum, Gurung, and Spann (2012) identified three factors that affect the textbook attraction. They are essential to life, easily accessible, and easy-to-understand charts and graphs. In addition, these authors identified three factors influencing the use of textbooks. They are a summary in each chapter, a user manual, and an easy-to-use document. In particular, Nguyen and Truong (2014) said that the training program has modules associated with knowledge and practical professional skills and teaching materials provided to the learners must be clear. These are the factors attractive and meet the needs of users.

Language: Language influences the use and responsiveness of textbooks and course readings for learners. In particular, Lam (2014) said that the language is a barrier that affects the difference in the textbook usage between undergraduate and post graduate students. Moreover, Mar and Sum (2018) studied the factors influencing the students' choice of reading materials at the Indonesian University Library. Their research findings show that language is the most dominant factor to students' choices of library materials (56.5%), the book legibility (22.6%) and the comfort of holding printed books (19.4%). These authors believed that these factors can increase students' interest in reading books.

The teacher: In previous studies, teacher is considered as the factor influencing the students' usage of textbooks and course readings. The less textbook and course readings the lecturer requires, and the longer the study time is in the program, the more students are interested in reading. If teacher forces a lot of materials (topics, lectures, discussions, readings and tests) in too short a time, students' reading and learning will not work (Filene, Peter & To, 2008). A national study found that 33% of teachers teaching freshmen in the United States do not use the textbooks and course readings in their course syllabus (Kingman, 2006). Similarly, Landrum et al. (2012) asserted that once students feel that they can do well on exams through listening to lectures in class, students will not care about further readings. It is important that teachers have to use the textbooks in teaching so that students can follow their teachers. In particular, teachers should make lesson plans compatible with the contents students need to read and regularly ask students about the contents that students read in the textbooks. In this way, new students actively read the required textbooks. Similarly, Le (2015a) encouraged teachers to provide appropriate electronic textbooks and consider this as the official document of the course. Teachers should update the textbooks and it is the best to update them immediately after each course to make the rich and effective contents. At the same time, teachers should create situations to stimulate the positive thinking of learners. In addition, the selection of tools to build electronic textbooks will greatly determine the teaching effectiveness of the textbooks.

Publisher and Author: The author's reputation and prestige are the factors to be considered. Specifically, Nguyen (2011) stated that if the author is professional and has a good reputation, his book is usually reputable; that is, the author's reputation decides his or her book value. Importantly, Nguyen (2011) pointed out how to recognize the author's reputation. For example, learners who read a lot of books will natrurally recognize the authors. Besides, they can look up dictionaries or consult their teachers about the authors' reputations. Similarly, Cabonero and Mayrena (2012) showed that 88.89% of the respondents were interested in the author's reputation and prestige in reading books. Another study by Cabonero and Mayrena (2012) also stated that the criteria for further readings are the author's and publisher's reputation, the quality of the contents, format, and usability for one or more courses. With the same view, Nguyen (2014) stated the reputation and prestige of the author and publisher as a considerable factor. She explained that each author usually has qualifications and reputation for specific major. Similarly, each publisher has its own publishing strengths for specific types of documents and contents.

The table of contents of textbook is a factor that determines its usage and responsiveness for learners. In particular, in the book "The Generation of Tomorrow", Nguyen (1952) emphasized the very necessary table of contents in a book. A complete and detailed table of contents makes it easy for the reader to find each key point in the book. Unfortunately, in Vietnam, many authors do not pay much attention to this and do not invest properly in the table of contents. In addition, he asked us to pay attention to further readings from the references of the book to expand the relevant contents. Similarly, Nguyen (2017) advised us not to read a book without a table of contents and not to buy the book with too sketchy table of contents even though they are cheap. These books make it difficult for learners to orientate the topic to read. In addition, the author emphasized that users should pay attention to the references and citations of the book. The reference list helps readers with clear and complete evidence for the contents they are interested in. In addition, the book with references makes further readings easier.

In summary, these previous studies showed that textbooks and course readings, either in printed or electronic format, are useful and practical, which should be included in the training program and the library is responsible for collecting and supplementing them to serve the learning needs of learners. However, each study offered different findings in terms of their usage as well as the responsiveness. In general, users want both types in their universities. Textbooks and course readings are the important factors that positively contribute to improving the training quality. This is also a practical factor contributing to the success of learners.

METHOD

This study was conducted using quantitative approach. Quantitative research method is used in many studies because of its strengths such as: flexibility, objectivity and time saving. However, this method still has the disadvantage of not exploiting the research content in depth (Edmonds & Kennedy, 2017). To overcome this weakness, the open-ended questions were added to the survey questionnaire for further information. A pilot

survey with 20 students was aslo conducted to modify and complete the questionnaire due to the surveyors' comments.

Five-point-Likert scale was used to measure impacting level of factors to responsiveness of textbooks and course readings.

Samples and sampling

The total number of undergraduate and post-graduated students at this university is 37,313 (Can Tho University, 2019). The minimum number of survey samples must be 380 to ensure the representativeness and reliability of the study (Krejcie & Morgan, 1970; Matthews, 2007). Among 444 responses, there were 370 undergraduates, 66 Master students and 8 PhD candidates. In terms of gender, 253 samples (57%) were from males and 191 samples (43%) were from females. To the participants' majors, 255 of them were studying natural sciences (57.4%) and 189 (42.6%) were learning social sciences. The study called for learners' paticipation regardless of gender, degree, region, and major of study. Especially, freshman students were excluded in this sudy because they had studied only one semester and their usages of textbooks and course readings were not much. Consequently, their contributions to the study might be limited.

Data collection

Due to the Covid-19 pandemic, a direct survey was not conducted. Instead, an online survey using a questionnaire designed on Google Form was sent to all learners through the teachers. Teachers helped to send survey links to their sophomore, junior and senior students. The survey questionnaires were not directly sent via email to all students due to 2 reasons. One is that the student email did not exclude the first-year students as the intended sampling method and was easily annoying to this group of students. Second, the university does not encourage individual research to use students' group email for their own purposes; distract students from information, announcements or regulations of the university. Therefore, the URL of the survey was sent to the students through the teachers. This helps the research to obtain data that is consistent with the samples and avoids research ethics issues. Students participate completely voluntarily and without any form of coercion from the teachers.

To determine the reliability of the survey questionnaire, Cronbach's Alpha was tested. With 96 survey items, Cronbach's Alpha is 0.969 (Table 1). This proves that the survey quesionnaire is at a very high reliability, satisfying the condition for data analysis (Hoang & Chu, 2008).

Table 1. Reliability Statistics

Cronbach's Alpha	N of Items
.969	96

Data analysis technique

Quantitative data from the survey was entered into the software of Statistical Product and Services Solutions (SPSS). Some SPSS functions were used such as: frequency analysis, percentage level, correlation, Exploratory Factor Analysis (EFA), and KMO (Kaiser-Meyer-Olkin) analysis. Multivariable Regression Analysis (MRA) was also used to determine the influencing level of the groups of factors on the responsivesess of textbooks and course readings.

MRA (Multiple Regression Analysis) of SPSS is used for this purpose. EFA analysis is a statistical method used to simplify an initially complex set of variables into a smaller set of variables in the form of factors. According to Nguyen (2011), Factor analysis will help reduce a large number of variables to a smaller number of variables without losing the meaning of the research variables because the new set of variables represents all the original variables. To Hoang and Chu (2008), factor analysis is an interdependent technique in which all interdependent relationships are studied. Multivariate regression is a method of estimating a single regression model with one or more independent variables. When the regression model includes many dependent variables, this method of model estimation is called multivariable regression (Hair et al., 2009). The purpose of multivariate regression analysis is to determine the factors that affect more or less or do not affect the dependent variable.

In this study, there are 07 groups of factors (Figure 1) with 57 observed variables known as independent variables, which are included in the survey to find out the groups of factors influencing the responsiveness of textbooks and course readings (dependant variable). Specifically, the group 1 (F1) *Textbook features* has 11 observed variables, (F2) *Technology* has 6 observed variables, (F3) *Library policy* has 10 observed variables, (F4) *Teachers* has 7 observed variables, (F5) *Learners* has 13 observed variables, (F6) *Library staff* has 5 observed variables, (F7) *Publisher and Author* with 5 observed variables.

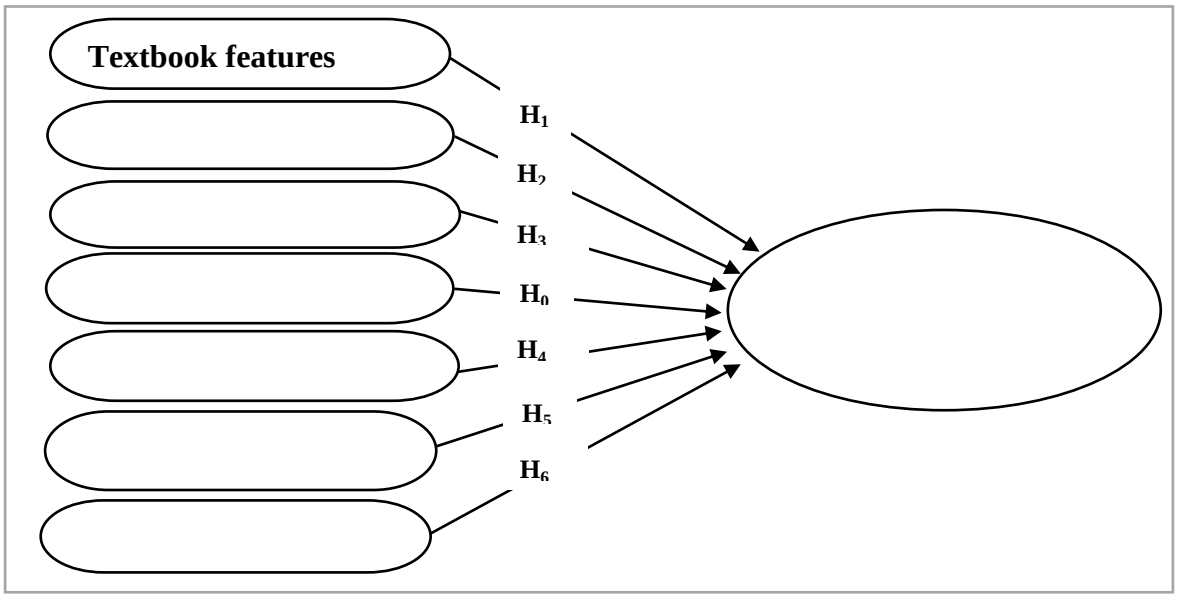

Figure 1. Model of impacting factors

FINDINGS

1. Factors influencing the responsiveness of textbooks and course readings

In order to determine what factors influencing the responsiveness of textbooks and course readings, exploratory factor analysis (EFA) in SPSS was operated. To conduct this SPSS function, some compulsory tests including Cronbach's Alpha, observed variables, sample size, and KMO and Bartlett's test had to be done.

Cronbach's Alpha test

Cronbach's Alpha test is aimed at examining the sum of the observed variables related to the total variable in order to remove the incorrected variables or observed variables with low correlation coefficient compared with the total variable. For EFA, it is first necessary to test the reliability of the scale using Cronbach's Alpha. A scale has good reliability when Cronbach's Alpha coefficient is between 0.6 and 0.9. Corrected Item with a coefficient of 0.3 or more is accepted (Nguyen, 2011). Cronbach's Alpha coefficient of 0.930 is in the range of 0.8 to 1.0 and Cronbach's Alpha coefficient of all factor groups is > 0.6, proving that this scale is very good and appropriate (Table 2). This satisfies the first requirement of EFA.

Table 2. Cronbach's Alpha test

Coded	Groups of factors	Number of variables	Cronbach's Alpha
F1	Textbook features	11	.943
F2	Technology	6	.937
F3	Library policy	10	.948
F4	Teacher	7	.932
F5	Learner	13	.917
F6	Library staff	5	.921
F7	Publisher & author	5	.915
Total		**57**	**0.930**

Test of observed variables

The number of observed variables in 7 groups of factors in Table 2 is all ≥ 5. In which, 2 groups of factors have the lowest number of observed variables is 5 and 1 group has the highest number of observed variables is 13. It is consistent with Hoang and Chu (2008) that the ratio of observed variables (items) is 5:1. It means that 1 measured variable needs at least 5 observed variables. The best is a ratio of 10:1 or more.

Test of sample size

To perform exploratory factor analysis (EFA) in SPSS, Hoang and Chu (2008) say that the number of samples must be at least 4 or 5 times the number of observed variables. This study has 57 observed variables, so the actual number of samples (444) is higher than the requirements. Moreover, the number of samples exceeds

that suggested by Hair J. F. et al. (2009) that exploratory factor analysis (EFA) requires a minimum of 50 samples and ideally 100 samples.

KMO and Bartlett's test

KMO coefficient (Kaiser-Meyer-Olkin) is an index used to consider the appropriateness of factor analysis. In other words, KMO is an indicator used to assess whether the factor analysis method can be used or not. If the value of KMO is between 0.5 and 1, it is eligible to use this analysis. If this value is less than 0.5, then this method is not suitable for the data set, which means that another method must be used for analysis. The KMO coefficient is also used to compare the magnitude of the correlation coefficient between two observed variables Xj and Xi with the magnitude of their respective correlation coefficients. Kaiser (1974) suggested that when: $0.5 \leq KMO \leq 1$, factor analysis is appropriate. In which KMO >= 0.6 is so so, KMO>= 0.7 is rather well, KMO >= 0.8 is good and KMO >= 0.9 is very good. In addition, Bartlett's test is used to view if the observed variables are correlated or not. If Bartlett's test is statistically significant (Sig. < 0.05), the observed variables are correlated with each other in the population (Nguyen, 2011).

Eigenvalues are used to determine the number of factors, if Eigenvalues > 1, the factor is kept in the model, otherwise, factors with Eigenvalues < 1 are excluded from the model. Thus, Eigenvalue is a commonly used criterion to determine the number of factors in EFA analysis. With this criterion, only factors with Eigenvalue 1 are kept in the analytical model.

Factor loading represents the correlation relationship between the observed variable and the factor. The higher the factor loading coefficient is, the greater the correlation between that observed variable and the factor is and vice versa. Factor loading factor is an indicator to ensure the practical significance of exploratory factor analysis, loading factor > 0.3 is considered to be minimum, loading factor > 0, 4 is considered important. Meanwhile, Hair J. F. et al. (2009) state:

• Floading factor ± 0.3: Minimum condition for the observed variable to be retained.
• Floading factor ± 0.5: The observed variable has good statistical significance.
• Floading factor ± 0.7: The observed variable has very good statistical significance.

Percentage of variance is explained by each factor. This value shows how much the factor analysis is condensed and how much is lost. Residual is the difference between the correlation coefficients in the input correlation matrix and the produced correlation coefficients estimated from the factor matrix (Hoang & Chu, 2008).

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.931
Bartlett's Test of Sphericity	Approx. Chi-Square	7543.120
	df	210
	Sig.	.000

Source: Survey data in 2020

Data in Table 3 show that KMO = 0.931 > 0.70 allows EFA to be performed. Bartlett's test is 7543.120 with the observed variables in the population being correlated with each other at the Sig. significance level. = .000 < .05. This proves that data used for factor analysis is completely appropriate. There are 5 factors extracted at the breakpoint eigenvalues is 1.103 and the extracted variance is 78.414 > 50% (Table 4). Factor loading > 0.7 shows that the EFA model has very good statistical significance (Hair J. F. et al., 2009).

Table 4. Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.078	47.989	47.989	10.078	47.989	47.989	4.216	20.076	20.076
2	2.135	10.165	58.154	2.135	10.165	58.154	3.786	18.026	38.103
3	1.906	9.074	67.228	1.906	9.074	67.228	3.773	17.967	56.070
4	1.246	5.935	73.163	1.246	5.935	73.163	2.429	11.567	67.636
5	1.103	5.251	78.414	1.103	5.251	78.414	2.263	10.778	78.414
6	.640	3.048	81.462						

7	.506	2.410	83.872
8	.414	1.973	85.845
9	.356	1.695	87.540
10	.345	1.642	89.182
11	.299	1.426	90.608
12	.264	1.259	91.867
13	.238	1.132	92.999
14	.227	1.082	94.080
15	.225	1.071	95.152
16	.207	.986	96.138
17	.198	.945	97.083
18	.188	.895	97.977
19	.172	.819	98.797
20	.130	.618	99.415
21	.123	.585	100.000

Extraction Method: Principal Component Analysis.

With all satisfying preprequisite tests, exploratory factor analysis (EFA) was conducted to find out the groups of factors influencing the responsiveness of textbooks and course readings. Factor rotation is a method that makes it easier for researchers to explain and is different from the Rotated Component Matrix. The Rotated Component Matrix contains the coefficient values of each variable and informs which group it belongs to. In the analysis, the Varimax Procedure factor rotation method will be used. This method aims to minimize the number of observed variables with large coefficients at the same large factor, thereby increasing the explanatory power of the large factors. In this study, to ensure very good statistical significance of the loading factor, the factors with values of 0.7 or more are kept; the factors with the loading factor < 0.7 are removed from the model (Hair et al., 2009). The results of factor analysis to explore EFA with rotation matrix (2 times) (Table 5), the study obtained 5 out of 7 groups of factors that affect the responsiveness of the textbooks and course readings in terms of physical communication and cognitive skills at the library. Moreover, out of 57 observed variables, only 21 have an effect on the responsiveness (Table 6). Two groups of factors Technology and Library staff with 36 observed variables have no influence.

Bảng 5. Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
Well-organised textbooks	.862				
Professional knowledge	.830				
Table of contents	.826				
Abstract	.825				
Interesting textbooks	.790				
Publisher strengths		.821			
Publisher reputation		.818			
Author’s reputation		.805			
Author’s prestige		.801			
Author’s major		.742			
Bio-psychology			.830		

Habits			.802		
Health			.795		
Learning methods			.793		
Reading skills			.777		
Teacher's test				.840	
Teacher's questions				.797	
Homework and exam				.766	
Library services					.784
Acquisition time					.763
Adjustment level					.755

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Table 6. Factors influencing the responsiveness

No	Groups of factors	Observed variables	Coded	Count
F1	Textbook features	Well-organised Professional knowledge Table of contents Abstract Interesting	TF7 TF11 TF10 TF8 TF6	5
F7	Publisher & Author	Publisher strength Publisher reputation Author's reputation Author's prestige Author's major	PA5 PA4 PA2 PA3 PA1	5
F5	Learner	Bio-psychology Habits Health Learning Methods Reading skills	LE8 LE9 LE7 LE10 LE11	5
F4	Teacher	Testing Questioning Homework & Exam	TE5 TE4 TE7	3
F3	Library policy	Library services Acquisition time Adjustment level	LP3 LP7 LP4	3
Total				**21**

Data in Table 6 shows that 5 of 11 observed variables in *Textbook feafures* (F1) influence the responsiveness of textbooks and course readings. They are the *well-organised textbooks* (TF7), *textbooks providing professional knowledge* (TF11), *textbooks with table of contents* (TF10), *textbooks with summary* (TF8) and *interesting textbooks* (TF6). This finding indicates that library should focus on these 5 features to increase their responsiveness. In other words, texbooks with clearly designed, easy to use, a summary in each chapter will help the learners know the main points that need to be mastered. In addition, textbooks should have a clear table of contents, a list of references and citations for quick search and further readings. Moreover, textbooks and course readings should provide professional knowledge and experience for future careers. It is what the learners care about since they need good grades for studying, knowledge and skills for future work. In particular, textbooks should be attractive with pictures, tables, graphs, mindmaps and other illustrations for easily absorbing knowledge. This finding is similar to Nguyen's suggestion (2017) that the tables of contents of the textbooks are the factors that determine the learners' use of the books. It also supports Le's finding (2015a) that textbooks should have nice design, illustrations, diagrams, charts, self-study exercises, etc. to develop self-study ability for students.

The second group of factors in the rotation matrix that affects the responsiveness of textbooks and course readings is *Publisher and Author* (F7). All 5 observed variables meet the requirements and no one is

excluded from the factor rotation matrix. Specifically, two variables *Publisher strengths* (PA5) and *Publisher reputation* (PA4) help the learners associate the reliability of the source. The reputation of the publisher is very important because the information published by reputable publishers often goes through a rigorous process of editing and evaluation. In addition, observed variables such as author's reputation, author's prestige and author's major are of interest to learners since these variables determine the quality of information resources that learners are using in their own learning and research. Therefore, the author's reputation, prestige and major are the variables that affect the responsiveness of textbooks and course readings. This finding is fit with Cabonero and Mayrena (2012) and Nguyen (2014)'s concept that the publisher's and author's prestige as well as reputation are the most important criteria in selecting and supplementing information resources in the library.

Among 13 observed variables of the *Learner* group (F5), 8 variables were excluded from the model in the process of factor rotation (2nd time). Only 5 observed variables that affect the responsiveness of textbooks and course readings. They are *Bio-psychology* (LE8), *Habits* (LE9), *Health* (LE7), *Learning Methods* (LE10) and *Reading Skills* (LE11). These are subjectively observed variables from the learners themselves. This shows that only subjective factors have the influence on the responsiveness of textbooks and course readings. Other objectively observed variables such as: *Number of subjects* (LE2), *Satisfaction level* (LE12), *Parents* (LE13)… are completely unaffected. This result is consistent with previous research by Le Van Nhuong (2018) that each lecturer needs to build a set of tools to assess student capacity in accordance with course objectives and the students' bio-psychology.

The *Lecturer* group (F4) has 7 observed variables, of which 3 variables have an influence on the responsiveness of textbooks and course readings. These observed variables are *Teacher's tests* (TE5), *Teacher's questions* (TE4), *Homework and exams related to the contents of textbooks and course readings* (TE7). Four observed variables such as *Lecturer's teaching method* (TE1), *Instructor's reading requirement* (TE2), *Instructor's information from textbooks and course readings* (TE3), and *Instructor's stimulation to use textbooks and course readings* (TE6) were excluded from the model because they did not meet the requirements of loading factor at 0.7 or higher. This finding proves that the lecturer's teaching method did not affect the responsiveness of the textbooks and course readings. Instead, responsiveness was influenced by the lecturers' tests, questions, homework and exams related to the contents of the textbooks and course readings. This finding states that the responsiveness is usually passive: whenever the teachers' requirements are formed, the learners will access the learning materials and responsiveness is recorded. This finding is very consistent with Elliot's conclusion (2015) that learners tend to choose learning materials based on the lecturers' recommendations. If the teacher's request is not accompanied by assessment and grading, most students will not comply (Nguyen, 2010); and they are only interested in using learning materials when the quality of these resources are fit and useful for their work and study (Nguyen, 2016).

The last group of factors that affect the responsiveness of textbooks and course readings is *Library Policy* (F3). This group has 10 observed variables and only 3 of them affect the responsiveness. They are *Marketing* and *Information Literacy* (SC3), *Acquisition time* (LP7) and *Adjustment level of the library after receiving feedback from learners* (LP4). In terms of *Acquisition time*, this is the library appointment with learners to wait for the new learning material arrival. How long they should wait for accessing the books since they place an order. Library should notify the learners that the books have been procceeded and are ready to use in a certain day. The remaining seven observed variables such as Rules, reading space, etc. have no effect on the responsiveness of textbooks and course readings.

Technology (F2) and *Library staff*s (F6) are two groups that do not affect the responsiveness of textbooks and course readings. This finding may raise a controversial issue. In the current technological era, especially in the academic library environment, technology and librarians play an important role in serving the library documents. However, finding is different from this inevitable trend. Is the library technology quite good? Have library staffs been equipped with professional knowledge, skills and attitudes to meet users' expectations? Therefore, it requires a more in-depth study on this issue to help the library and staff have a better plan to support users effectively.

In summary, 5 groups of factors obtained from the study help the library leaders to have a comprehensive adjustment of policies and learning material features for the learners accessing and exploring the information resources available. Especially, the textbooks and course readings in the curriculum introduced by the lecturers should be published on the university website. Based on the objective factors such as lecturers, learners and the publisher reputation, library leaders should adjust the relationships between lecturers, learners and librarians to coordinate and supplement reliable and appropriate information sources.

Pearson Correlation

Data in Table 7 shows the value between the dependent variable (RE) and 5 independent variables (TF, LP, TE, LE, PA) is statistically significant (sig. =.000 < .05). This proves that the independent variables are linearly correlated with the dependent variable. The Pearson correlation value (*r*) between the independent and dependent variables is positive. In other words, when the independent variables such as TF, PA, LE, TE and LP increase, the dependent variable (the level of responsiveness of textbooks and course readings) also increases.

Moreover, the *r* value tends to approach 1, showing that the linear correlation between the independent variable and the dependent variable is strong and very close. In particular, the Pearson correlation coefficient with the symbol ** identifies pairs of variables that have a linear correlation at the 99% reliability (1% significance level = .01). In terms of the strength and weakness between the independent variable and the dependent variable in the absence of other pairs of variables, it is seen that *Learner* (LE) and *Responsiveness* (RE) are correlated. The strongest correlation with *r* coefficient is 0.368, between *Textbook features* (TF) and *Responsiveness* (RE) has the weakest correlation with *r* coefficient of 0.194. It is worth noting that all the independent variables have a statistically significant linear correlation (Sig. = .000 <.05). Therefore, no independent variable was excluded in performing multivariate regression analysis.

Considering the linear correlation between the independent variables, it is revealed that Sig. = .000 (< .05) and Pearson's correlation value $r > 0.4$. This warns of the possibility of multicollinearity among the independent variables. This question will be answered by the VIF coefficient in the regression analysis.

Table 7. Pearson Correlation

		RE	TF	PA	LE	TE	LP
RE	Pearson Correlation	1	.194**	.282**	.368**	.296**	.286**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	444	444	440	444	444	444
TF	Pearson Correlation	.194**	1	.549**	.488**	.603**	.622**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	444	444	440	444	444	444
PA	Pearson Correlation	.282**	.549**	1	.488**	.496**	.507**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	440	440	440	440	440	440
LE	Pearson Correlation	.368**	.488**	.488**	1	.499**	.470**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	444	444	440	444	444	444
TE	Pearson Correlation	.296**	.603**	.496**	.499**	1	.555**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	444	444	440	444	444	444
LP	Pearson Correlation	.286**	.622**	.507**	.470**	.555**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	444	444	440	444	444	444

**. Correlation is significant at the 0.01 level (2-tailed).

2. Level of responsiveness

In order to identify how strong or weak, positive or negative the effect of groups of factors on the responsiveness of textbooks and course readings, the multivariate regression analysis was conducted. As mentioned, the multivariate regression method is used to estimate a single regression model with one or more independent variables. When the regression model includes many dependent variables, this method of estimation is called multivariable regression (Hair J. F. et al., 2009). In other words, multivariate regression analysis is a feature of SPSS that helps to identify factors that have more or less influence on the dependent variable.

Regression model among 5 independent variables (1) *Textbook features* (TF); (2) *Publisher and Author's reputation* (PA); (3) *Learner* (LE); (4) *Teacher* (TE); (5) *Library policy* (LP) and dependent variable (the *responsiveness* of textbooks and course readings - RE) is shown in Table 8.

Table 8. Model summary

Model	R	R^2	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.415[a]	.172	.163	.54135	2.044

Model	R	R^2	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.415[a]	.172	.163	.54135	2.044

a. Predictors: (Constant), LP, LE, PA, TE, TF

b. Dependent Variable: RE

The R value of 0.415 in Table 8 shows that the relationship between the variables in the model has a very close correlation. The R2 (R Square) value of 0.172 indicates the appropriateness of the model to the population. The adjusted R value (0.163) shows that there is a linear regression model between the responsiveness of learning materials and 5 groups of independent variables.

Table 9. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.451	5	5.290	18.051	.000[a]
	Residual	127.188	434	.293		
	Total	153.639	439			

a. Predictors: (Constant), LP, LE, PA, TE, TF

b. Dependent Variable: RE

Data from ANOVA analysis shows that the F = 18.051 was significant at Sig. = 0.000 (< 0.05) (Table 9). This means that the regression model fits the collected data and the included variables are statistically significant. The linear relationship is very significant (p < 0.05), which also shows that the independent variables in the model are related to the dependent variable (*Responsiveness of the textbooks and course readings*).

Table 10. Multivariate Multiple Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.338	.161		14.547	.000		
	TF	-.088	.036	-.154	-2.445	.015	.480	**2.083**
	PA	.079	.042	.106	1.883	**.060**	.598	1.673
	LE	.214	.045	.260	4.795	.000	.648	1.543
	TE	.087	.038	.135	2.272	.024	.543	1.842
	LP	.091	.042	.130	2.178	.030	.536	1.866

a. Dependent Variable: RE

Findings of the regression coefficients show that the significance level of the components Sig. = 0.000 (< 0.05). Therefore, all independent variables have an impact on responsiveness of textbooks and course readings (except PA). This is a positive impact because the regression coefficients all have positive signs (except TF).

Besides, according to the theory of variance exaggeration, VIF helps to find out multicollinearity among independent variables. Multicollinearity is a phenomenon where the independent variables are strongly correlated with each other. Some statistical documents and books suggest that if VIF < 10, there is no multicollinearity phenomenon. However, the rating at 10 is only suitable for technical and physical topics that do not use the Likert scale. For economic and social topics, researchers believe that VIF > 2 will have multicollinearity. More specifically, Nguyen (2011) identifies signs to identify multicollinearity as: If the variance magnification coefficient VIF > 2, there is a sign of multicollinearity. If VIF is > 10, there is definitely multicollinearity. If VIF is < 2, it is not multicollinear. In addition, the acceptance value (Tolerance) is considered according to the formula Tolerance = 1/VIF. If the tolerance factor is less than 0.5, there is a sign of multicollinearity. If the value of Tolerance is less than 0.1 then there is definitely multicollinearity. According to multivariate regression results in Table 11, the VIF coefficient of the independent variable TF is 2.083 (> 2) and the tolerance = .480 (< 0.5). Therefore, there is multicollinearity in this model (independent variables are correlated with each other). This confirms the suspicion of multicollinearity in Pearson linear correlation analysis is correct. Therefore, the independent variable TF needs to be considered to be excluded from the

regression model. Besides, the independent variable PA has the value Sig. = .60 (p > .05) should be considered. It is likely that these two independent variables contain observed variables that influence each other. Therefore, the study removes these two independent variables from the regression model.

The standardized regression equation of the model is:

RE = 0.260*LE + 0.135*TE + 0.130*LP

The model also shows that all 3 independent variables (LE, TE, LP) have a positive influence on the responsiveness of textbooks and course readings at the confidence level of 14.547% (t = 14.547). This means that if the independent variable LE increases by 1, the average level of rsponsiveness increases by 0.260 points. Similarly, when the evaluation score of lecturers increases by 1 point, the level of responsiveness increases by an average of 0.135 points, and when the evaluation score of Library policy increases by 1 point, the level of responsiveness increases 0.130 points.

The indicator of Standardized Coefficients Beta illustrates the importance of each independent variable to the dependent variable. Beta in Table 10 shows the strong or weak influence between 03 independent variables on the dependent variable. The bigger Beta is, the greater the influence of that independent variable is. Thus, the descending influence of these 3 independent variables is LE, TE and LP, respectively. In other words, *Learner* (LE) is the group of factors that have the strongest influence on the Responsiveness of textbooks and course readings with Beta = .260. The group of factors with the lowest influence is *Library policy* (LP) with Beta = .130.

3. Hypothesis tests

H_0: "*Teacher* is not the group of factors influencing the responsiveness of textbooks and course readings". With Sig. = .013 (p < .05), this hypothesis is rejected because the research findings show that the *Teacher* is the factor that affects the responsiveness of textbooks and course readings.

H_1: "*Language* is the strongest influencing factor on the responsiveness". This hypothesis is rejected because Beta indicator of multivariable regression determined that *Learner* is the group of factors that has the strongest influence on the responsiveness with *p* = .000. The responsiveness of textbooks and course readings is completely independent of the used language. Language is a means of information transmission, contents and information searching tools in learning materials are important for the learners. More specifically, clear, attractive, indexing and summarizing textbooks providing professional knowledge are the factors that affect the responsiveness to users.

H_2: "*Technology* has an effect on the responsiveness of textbooks and course readings". Research findings do not have enough evidence to accept this hypothesis. The EFA exploratory factor analysis shows that *Technology* had no influence and was excluded from the research model. The responsiveness of textbooks and course readings depends mainly on the contents, quality of the learning materials, *Technology* is not considered as much important as expected by learners.

H_3: "*Library policy* has a positive influence on the responsiveness of textbooks and course readings". Research finding has provided support for this hypothesis. Once the library has good policies such as marketing, information literacy for users, short acquisition time and adjustment time for the learners, then the responsiveness will also increase.

H_4: "The *background knowledge of learners* has a positive influence on the responsiveness of textbooks and course readings". Factor analysis exploratory factor EFA and regression show that this factor has no influence. Instead, bio-psychology, reading habits, health, learning methods and new reading skills are the factors that have a positive influence on the level of responsiveness.

H_5: "The *capacity of librarians* has an influence on the responsiveness of textbooks and course readings". Research findings do not have enough evidence for this hypothesis because this group of factors is excluded from the research model when conducting exploratory factor analysis (EFA).

H_6: "The *Publisher and Author's reputation* have a positive influence on the responsiveness of textbooks and course readings". Research findings did not have enough evidence to confirm this hypothesis. Multivariable regression analysis showed that the *reputation of Publisher and Author* were correlated with the *textbook features*, creating the phenomenon of multicollinearity, un-statistically significant and excluded from the multiple linear regression model.

CONCLUSIONS

Academic library is seen as the heart of the university and library resources are the core factors influencing the library existence and value. Library resources including textbooks and course readings are crucial for the learners. Textbooks and course readings are considered as the required source for professional knowledge, the main objectives of teaching and learning. Moreover, in the current trend of online teaching and learning, this learning resource is indispensable. Therefore, the organization, collection, dissemination and promotion of this resource for the learners to access, exploit and use them are the library and librarians' responsibilities. Most importantly, libraries should acquire the clear, attractive, indexing and summarizing textbooks. Librarians should develop marketing strategies, information literacy for users, short acquisition time

and adjustment time for the learners to reach these learning materials for the university training programs and quality accreditation.

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Author Information

Trang Huynh
Senior Lecturer
School of Social Sciences & Humanities
Cantho University

Hieu Doan
Senior Lecturer
School of Social Sciences & Humanities
Cantho University