CONTENT TYPE ON WEBSITE AND LEARNER PERSONALITY: CASE STUDY OF MICROSOFT EXCEL

[1]NUKROB MEESAN, [2]LALITA SANTIWORARAK

[1]College of Education Science, Dhurakij Pundit University Bangkok, Thailand
[2]College of Creative Design and Entertainment Technology, Dhurakij Pundit University Bangkok, Thailand
E-mail: [1]nukrob.mee@dpu.ac.th, [2]lalita.san@dpu.ac.th

Abstract - Today, Life style of person change because of technology is higher than previous time. People can access information every time and every place. Therefore, Learning is change too. Person learning style is changing. They can study and learn by online channel like website, social media. Learning website have many kind of content such as sound, video documentation and multimedia. So, person who have responsibility about creating content for learner should focus on that. Characteristic of learner is the person behaviors which help content creator to create the appropriate content for each learner. This article aims to study about content type on learning website and learner personality by using case study of Microsoft Excel.

Index Terms - Personality, Big Five, Behavior, Content, Content Format, Learning Website, Excel

I. INTRODUCTION

Learning style of learner is changing to online learning. Thus, creating content on online channel is very important for content creator because of content is the first thing which learner use on the channel. Therefore, content creator should emphasize about the type of content which use on learning website that if teacher or content creator know about learner personality, they will create suitable content for each learner. Personality is a group of individual differences behaviors of person. Person personality presents their ideas, feelings, and actions, the nature of the person demonstrates how the person responds to the environment. McCrae and Costa's Personality Theory is based on five elements: Neuroticism, Extraversion, Openness Agreeableness and Conscientiousness. This personality theory is called the Five Factor Model (FFM) or Big Five.

Nowadays, personality theory is used to analyze the perception of information on the Internet. For example, the study of personality [6] from the five-dimensional model and the time which they use on the Internet found that individuals with their personality, for example, the a show off person which like contact by face to face spend a little time on the internet but the person who have the behaviors like conscious, thoughtful and careful personality do not use the Internet on their free time but they usually use the Internet only research activities. Person's personality classification use the scoring method for each question and score of some questions is reversed because of it is opposite of the personality which question placed in the group and the score in personality shown in Figure 1. For example, question 6, 21 and 31 is reserved score to be in Extraversion personality.

BFI Scale scoring ("R" denotes reverse-scored items):	
Extraversion:	1, 6R, 11, 16, 21R, 26, 31R, 36
Agreeableness:	2R, 7, 12R, 17, 22, 27R, 32, 37R, 42;
Conscientiousness:	3, 8R, 13,18R, 23R, 28, 33, 38, 43R
Neuroticism:	4, 9R, 14, 19, 24R, 29, 34R, 39
Openness:	5, 10, 15,20,25,30,35R, 40,41R, 44

Figure. 1 Personality Score

Microsoft Excel [5] is a spreadsheet software which widely used by scientists for data collection, calculation, and analysis. It have many tools for various objective. MS-Excel sheet is very simple, user-friendly and does not require any specialized learning.

II. LITERATURE REVIEW

The research conceptual of Kamolrat Kitikannakorn [3], is personality and perception of human are differentiate. There are different responds in perception of information because of individual characteristics or dispositional attributes. Then, this research has studied the relationship between customer personality, Website quality and solid organizations relationships in context of the life insurance business by using the Big Five: BFI and use E-qual tools, the website quality assessment tools of Barnes and Vidgen. E-qual tools evaluate the responding of user requirement in information, services and interactions. The result of website quality assessment is person who have emotional stability have high performance in develop relationship with organization when they use high quality website.

Developing website content for teaching based on the concept of research by Marjan Krašna and et.al [4] found the most frequently used of website content of e-learning are PDF, Microsoft Word, and Microsoft PowerPoint. In addition, most students take notes and learn the content of the lesson from the slides of Microsoft PowerPoint, and the things will help student to easily study are adapting content of their website to different learning styles, like text, audio and video, etc. S.Malik and A.Agarwa [7] studied about multimedia using and they found multimedia is the tools of new education technology, high performance and flexible then there are the reason of multimedia is the popular learning tools.

III. METHODOLOGY

A. Population and Sample

Sample of this paper is 100 learner from difference faculty and college in Dhurakij Pundit University, Thailand

B. Research Tools

The tools which use in this paper are questionnaire with learner demographic and personality testing questions from The Big Five Inventory: BFI Theory and learning web which 3 type of content in Microsoft Excel subject.

C. Methodology

At first, we developed learning web application which have the type of content for participant and personality questionnaire system. Then, divide excel content for 3 group such as basic, intermediate and advanced level. Next is invited learner to join and collected data about their demographic, behaviors of choosing file and the last one is getting data to study about the kind of content which difference personality person choose to learn.

D. Objectives

Difference personality satisfy difference content type level on learning website.

IV. FINDING AND DISCUSSION

The questionnaire which learner characteristic testing questions from Five Factor Model Theory are illustrate on learning website. The learner must do the personality questionnaire testing only on first time when they come to learning website . Example of testing questions on learning system are shown on Figure 2

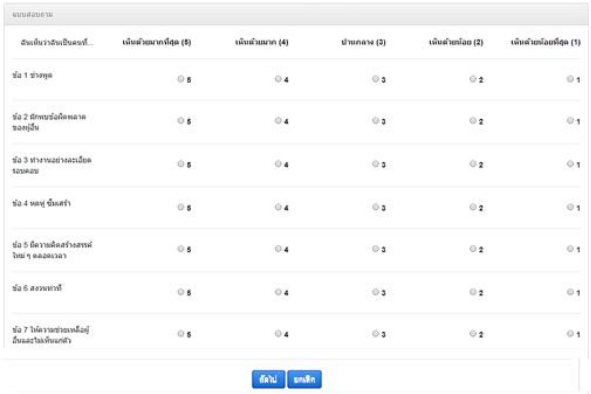


Figure. 2 Personality Testing Questions

Quantity and gender of 100 participants from 5 college and 6 faculty in Dhurakij Pundit University are show on table 1. We have 29 males and 71 females from different college and faculty to visited learning website.

Table 1. Learner information university website in

Faculty	Male	Female
College of Innovative Business and Accountancy	4	6
College of Integrative Medicine	1	5
College of Innovative Technology and Engineering	5	7
College of Aviation Development and Training	2	8
College of Creative Design and Entertainment Technology	2	6
Faculty of Law Predeepanomyong	1	6
Faculty of Arts	2	6
Faculty of Communication Arts	3	8
Faculty of Fine and Applied Arts	2	7
Faculty of Public Administration	5	5
Faculty of Tourism and Hospitality	2	7
Total	**29**	**71**

The data from personality testing questionnaires consist of 18 Extraversion, 27 Agreeableness, 19 Conscientiousness, 12 Neuroticism and 24 Openness learners.

Table 2. Classification of Personality

Personality	Quantity
Extraversion	18
Agreeableness	27
Conscientiousness	19
Neuroticism	12
Openness	24
Total	**100**

List of Microsoft Excel Level content are illustrate on Table 3.

Table 2. Classification of Personality

Level	Quantity
Basic	- Introduction of MS Excel
	- Calculate concept, Basic functions
Intermediate	- Criteria functions
Advanced	- Report

Microsoft Excel level content consist of Basic level, in basic level we have content like ability of software, how to calculate in Excel and basic functions such as sum, max, min, average etc. Next, the content of intermediate level are criteria function like if, sumif, countif etc. The last one is content in Advanced level, in this level consist of how to use report in Excel as subtotal, chart, filter, sort and pivot table.
The data from learning website are shown on table 3. It is show about quantity of file download at first time when learner click the download button. It is count on first time only.

Characteristic	PDF File	Video Clip File	Interactive Multimedia File	Total
Basic Level Content	40	31	29	**100**
Intermediate Level Content	36	31	33	**100**
Advanced Level Content	42	28	30	**100**
Total	**118**	**90**	**92**	**300**

Table 3. The number of first file when learner start to download their resources group by content level

The result about content level of MS Excel which learner download from learning website are 40 pdf files download, 31 video clip files download and 29 interactive multimedia files download in Basic Level. Intermediate level content have 36 pdf files download, 31 video clip files download and 33 interactive multimedia files download. The last level of Microsoft Excel content have 42 pdf files download, 28 video clip files download and 30 interactive multimedia files download.

The result of personality learner and content file format grouped by content level are illustrate on table 4.

Characteristic	Basic			Intermediate			Advanced			Total
	PDF File	Clip Video File	Interactive Multimedia File	PDF File	Clip Video File	Interactive Multimedia File	PDF File	Clip Video File	Interactive Multimedia File	
Extraversion	12	3	3	8	6	4	9	5	4	54
Agreeableness	7	7	13	9	5	13	9	6	12	81
Conscientiousness	10	6	3	8	5	6	9	4	6	57
Neuroticism	3	4	5	4	6	2	3	5	4	36
Openness	8	11	5	7	9	8	12	8	4	72
Total	40	31	29	36	31	33	42	28	30	300
	100			**100**			**100**			

Table 4. Personality Learner and Content File Format Grouped by Content Level

From table 4, There are 54 of extraversion, 81 of agreeableness, 57 conscientiousness, 36 neuroticism and 72 of openness.
Number of file download group by learner personality are shown on table 5.

Characteristic	Basic			Intermediate			Advanced			Total
	PDF File	Clip Video File	Interactive Multimedia File	PDF File	Clip Video File	Interactive Multimedia File	PDF File	Clip Video File	Interactive Multimedia File	
Extraversion	12	3	3	8	6	4	9	5	4	**54**
Agreeableness	7	7	13	9	5	13	9	6	12	**81**
Conscientiousness	10	6	3	8	5	6	9	4	6	**57**
Neuroticism	3	4	5	4	6	2	3	5	4	**36**
Openness	8	11	5	7	9	8	12	8	4	**72**
Total	**40**	**31**	**29**	**36**	**31**	**33**	**42**	**28**	**30**	**300**

Characteristic	PDF File				Video Clip File				Interactive Multimedia File				Total
	Basic Level	Intermediate Level	Advanced Level	Total of PDF File	Basic Level	Intermediate Level	Advanced Level	Total of Video Clip File	Basic Level	Intermediate Level	Advanced Level	Total of Interactive Multimedia File	
Extraversion	12	8	9	**29**	3	6	5	**14**	3	4	4	**11**	**54**
Agreeableness	7	9	9	**25**	7	5	6	**18**	13	13	12	**38**	**81**
Conscientiousness	10	8	9	**27**	6	5	4	**15**	3	6	6	**15**	**57**
Neuroticism	3	4	3	**10**	4	6	5	**15**	5	2	4	**11**	**36**
Openness	8	7	12	**27**	11	9	8	**28**	5	8	4	**17**	**72**
Total	**40**	**36**	**42**	**147**	**31**	**31**	**28**	**90**	**29**	**33**	**30**	**92**	**300**

Table 5. Total number of file download Grouped by learner personality

From table 5, we found the total number of download is 300 times. Quantity of PDF file download by learner who is extraversion is 29 times, 25 times of agreeableness, 27 times of conscientiousness, 10 times of neuroticism and 27 times of openness. Next, the total number of Video Clip file download cluster by learner personality is 90 times, include 14 times of

extraversion, 18 times of agreeableness, 27 times of conscientiousness, 15 times of neuroticism and 28 times of openness and the last one is the total number of interactive multimedia file download combine by learner personality is 92 times, enclose 11 times of extraversion, 38 times of agreeableness, 15 times of conscientiousness, 11 times of neuroticism and 17 times of openness.

CONCLUSION

As the result from learning website, we found, the person who is Extraversion personality and Conscientiousness view PDF File as the first type, Agreeableness personality use interactive multimedia file more than other content type and Openness and Neuroticism personality use Clip Video for their learning.

The learner who is Extraversion and Conscientiousness personality have total number of pdf file download in basic level more than other level. Next, the personality which have the most number of pdf file download in intermediate level is agreeableness and openness personality download pdf file in advanced level more than other level.

Difficult level of content is important issue for find the relationship between learner personality, content file format and level of content because of type of file for learning will depend on difficult level of content too.

REFERENCES

[1] Cloninger, S. C (2000). Theories of Personality: Understanding Persons. 3rded. New Jersey, Prentice Hall.

[2] John, O.P. and Srivastava, S (1999). The Big-Five Trait Taxonomy: History, Measurement, and Theoretical Perspectives, University of California at Berkeley.

[3] Kamonrat Kittikannakorn (2009). The relationship between customer personality, Website quality and solid organizations relationships in context of the life insurance business. Thesis of Master of Science, Faculty of Commerce and Accountancy, Chulalongkorn University, Thailand.

[4] Marjan Krašna, Matjaž Duh and Tomaž Bratina (2014). E-learning next step – learning materials for students, MIPRO 2014, pp. 674-681.

[5] MKS Sastry, SMIEEE and et.al (2014)., Power Distribution System Load Flow using Microsoft Excel. 2014 Fourth International Conference on Communication Systems and Network Technologies, pp. 954 – 959.

[6] Patrakosol, B., and Kitikannakorn (2009). K.,Different Persons See Things Differently: Dispositional Factors in Information Visualization. Paper Presented at 3rd International Conference on Information Technology Applications and Management, pp. 27-34.

[7] S.Malik and A.Agarwal (2011). Use of Multimedia as a New Educational Technlo, Fetaji, M., and Fetaji, B., Devising M-learning Usability Framework 33rd Paper Presented at International Conference on Information Technology Interfaces (ITI 2011), pp. 275-280.

★★★