

Retrospective Method for Analyzing Typographic Design Work in Higher Education

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Continuing the previous research about analyzing the perception of the students' academic workload from online learning in the odd semester of the 2021 Typography course because of a change in the Independent Learning Program – Merdeka Campus (MBKM) curriculum which was officially launched by the Minister of Education and Culture in early 2020. The findings states that the perception of the students' mental perception was in fact, sufficient—not heavy nor light. In this follow-up study, we examine the student's projects results more deeply. The topic for analysis will be designing a logo—a new material from the 20/21 curriculum that was undergone by students from the COVID-19 pandemic with more than enough assignments. Four student representatives stated their perception of heavy and low mental load as they completed this new curriculum. They said that on their way of completing this curriculum, the course was heavy, light, and very good with sufficient scores. Using a retrospective method that is relying on past initial concepts, both manual and digital sketches for data collection, the data were analyzed and grouped through the Bateson learning theory to find out the answer to the question: At which level will students understand the material given—relating to their own mental loads—when completing the designing-a-logo task? For a fact in this research, we have discovered that the perception of the students' mental loads when completing the task to design a logo in this Typography course (KV203) does not affect their understanding of the lecture material. It is, however, related to the busy habits of the students' daily activities that affect: their work and/or task completion rhythms, effort put in exploring and carrying out ideas and all stages of assignments accordingly to the set deadlines. Students with high grades understand more about designing logo and the function of doing it step-by-step, in contrast to the students with moderate grades whose main goal is to just graduate from this typography course. The conclusion of this study is that students who understand very well about designing logo designs and those who do not understand both still pass. This needs to be a consideration or note for the guardian lecturer, it is feared that the same thing will happen to other lecture materials.

CCS CONCEPTS • Social professional topic • Computing methodologies • Computer Graphic

Additional Keywords and Phrases: Online learning, MBKM, Retrospective, Typography

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1 INTRODUCTION

Students are often perceived as stressed individuals due to the large amount of academic workload they bear. Stress is an emotional feeling that makes a person feel uncomfortable and unhappy with the situation, he must deal with [1]. Academic related stressors refer to any academic activity such as exams, curriculum, lifestyle, achievement system [2], workload, time management and others [3]. The term workload can be defined as the amount of work that is charged to a person in a certain period. In this case assignments, tutorials, lectures, quizzes, reports, and practicums that need to be done and completed by students to be able to graduate [4]

Prior to the 20/21 Odd Semester, the Typography Course was divided into two semesters, namely Basic and Applicative Typography, with a weight of 3 credits each. 90% of basic typography is done manually, with the aim of training the hand's sensitivity to the structure and design of letters. Applied Typography is done digitally. Both courses are intended for 3rd and 4th semester students. Starting from the Odd semester 20/21 the Typography course is condensed into one course worth 3 credits, through a manual process for initial sketches, followed by a digital process like Applied Typography and added some materials new, namely Logo design, with full online learning for one semester. On Previous research conducted by the research team revealed that the typography course is one of the subjects that needs to be considered in terms of the material and the delivery process, because it is considered that the competency objectives have not been achieved when students take the final project [5]. Data for one semester on 32 students who completed this course revealed that students' perceptions of this course had an optimal mental burden—not heavy and not light, or in other words, students were not stressed and Achievement of Course Learning (CPMK) was also achieved.

Further research was conducted to determine the perception of students' mental burden when completing the Typography course in the new curriculum, which was focused on the task of designing a logo design, with the reason that this task occupies a maximum allocation of five face to face lecture materials, with a perceived value of medium mental load, the task of designing the logo was added to the new curriculum which started in the 20/21 odd semester and the learning was carried out fully online. Regarding online learning, which is often boring, uninteresting, but there are so many and flexibility that some students do not complete the tasks given [6]. Will the online learning materials on the task of designing logos be conveyed well to students.

There are data that 32 students who completed the task of designing a logo with light and heavy mental burdens got very good (A) and sufficient (C) scores. The urgency of this research is to want to know what kind of design is designed, how the design process is carried out by the student, because a design is not made solely because of the wishes of the designer who made it. Required stages and processes in designing a design. This is also consistent with the opinion that design is a goal-oriented process. The purpose of design is to solve problems, meet needs, improve situations, and create something new or useful [7]. In addition, they also want to know if they really understand how to design a good and attractive logo or only complete the Typography course but did not get the competence in designing a logo.

2 RESEARCH METHOD

This research quantitatively measured the workload of students who completed an online typographic course in the Department of Visual Communication Design in Bandung. In separated study, there were six check point taken using NASA-TLX [7] for this course based on assignments given. This instrument was measuring the perception of mental load, divided into six dimensions as follows: (1) Mental Demand, (2) Physical Demand, (3) Temporal Demand, (4) Performance, (5) Effort, and (6) Frustration Level [8]

Nevertheless, as the continuation from previous study, then the current study only focusing on the new materials given on this course as part of course evaluation, namely Logo Design assignment which shown bearing the relative medium mental load (mean 63.1 +/- 13.76, range 37.3 to 100 points of Nasa TLX points). Moreover, this assignment took five face-to-face meetings out of 16 meetings in one semester, in synchronic and a-synchronic method).

Hence, this study adopts a semi-structured interview based on a retrospective self-report for reporting what was already done instead of what should have been done [8] on selected assignment and continue with the qualitative descriptive method. However, even though this instrument cut-off point was interpreted as medium mental load (data collected from 32 participants, the breakdown of the low, medium, and high mental load was: 5, 15, and 11, respectively). That means more than 1/3 of students perceived this assignment was giving a high mental load and the understanding about their learning results was not known. Therefore, this study tried to explore the understanding from the specific type of student combining their perception about the load and their results. To separate this category, the data collection in this study divided into three steps data collection as follows:

2.1 First Step: Selecting Potential Respondent

Based on the preliminary study, we purposely selected four students who stated that this assignment gave a heavy mental load, with two results: highest and lowest scores. Thus, four students were selected for this study, each representing: 1) heavy mental load with the best result; 2) heavy mental load with the worst result; 3) low mental load with the best score, and 4) low mental load with the lowest score. Contrasting the level of mental load and the result or marks gained was an example of whether any difference between four clusters was made. This effort was made to understand factors that might affect study results, aside from the perceived mental load. Result refers to scores from 1 to 100, with 100 as the total score. We assume that the student learned other aspects, which will become an evaluation for the more compelling material given.

2.2 Second Steps: Depicting Respondent's Artworks and Composing Semi Structured Interviews

In order to have validated findings, we collected respondents' documented files and separated them into five design steps according to Santoro [9] which consists of thumbnails, critique, comprehensive, presentation and production. Moreover, the interview questionnaire would dig the respondent's retrospective self-report, so the questionnaire was arranged in low-level order (syntax) and compared with their understanding related to the inquiry in designing logo steps (semantics) [10].

Syntax or low-level questionnaire consists of seven questionnaires, start with the instructions to relate when they take the typography as follows: 1) when you get the logo assignment, did you already know the steps to make it, or is this new for you? 2) What are the logo steps you remember? 3) What is the function of making mind mapping? How do you make that kind of mind mapping? 4) What is the function of making a manual sketch? Did you provide more than what the lecturer asked, or not? Why? 5) What is the function of making digital sketches?

Is there any problem with converting your manual sketch to digital? Did you find your digital result better than your manual sketch? Why? 6) What is the function of making a responsive logo? 7) What is the function of the Guide Standard Manual book? What's inside?

The semantic or high-level questionnaire consists of two questions, based on their understanding or practice now, as follows: 1) Imagining once you get logo assignment (could be in the future, or for your freelance job if you had), from these five steps of designing logos, which one you think is not necessary? 2) Did you understand it easily after finishing the logo assignment? Can you explain?

2.3 Third Steps: Categorizing Learning Type

Each respondent took the typographic course in Fall Semester 2021; however, to see the learning retention, this semi-structured interview was conducted in July 2022 (roughly six months after finishing the course). We are eager to know whether the mental load and remarks impact learning retention. Findings then would be clustered into Bateson learning types 0 to 2 [11]. In short, the nested loops of the Bateson type of learning were stacked from the bottom (level 0) to the highest (level 2) as adopted in this paper as follows: 1) level 0 was represented by students who responded to the stimuli (in this case: each step in the assignment) but did not make any changes; 2) level 1 were represented by straight A student, which searches for knowledge itself and receives knowledge, skills, and attitude for future implementation; and 3) level 2 were represented by students who learn how to learn (represented by the students who also aim for a good score, not only the knowledge only). This study did not discuss the higher level of Bateson's type of learning (level 3), as our emphasis is on learning retention.

3 DATA RESULT

The material in the Typography course, the new curriculum which will be given in the Fall semester of 2021, has met Graduate Competence (SNDIKTI)-Knowledge Level 6 (D4/S1), namely (P2) Develop design concepts, (P3) Operate software design, (P5) Apply basic design principles, (P11) Create design work, (P12) Evaluate design work, (P13) Present design work.

3.1 Details of Student Assignments in Typography Course (KV203)

Table 1: Students assignment detail in Typography course

Sub Learning Outcomes: Students can create an attractive and communicative (C6) Logo Design, create a Graphic Standard Manual Logo
Method of Task Work Stages (Syntax curriculum): Students listen to the theoretical explanation from the lecturer, Students choose a product/service for which their logo will be designed Students make a simple analysis Students make a mind-map about the logo to be designed and then conclude it into a concept to design a logo. Students discuss with lecturers and agree on the logo concept Students design 20 manual sketches of logos Lecturers choose 3 alternative manual logo sketches and students develop into 9 alt designs and digitize them. Lecturer chooses 1 digital logo design Students provide alternative colors and logotypes Students finalize the logo that has been discussed with the lecturer in digital form. Student designing Graphic Standard Manual Logo
Indicators and Assessment Weights: Good process steps, good understanding of how to design a logo and GSM, achieving aesthetics and functional of the logo work.
Implementation Schedule: Five times face-to-face, Full online class
Equipment needed: Paper, stationery, computer, printer (if any)

3.2 A Sample of the Logo Design Process by Students

The data is attached in the following link

<https://drive.google.com/drive/folders/1b-spDhvzR5WaO04coI5FameRnjVtIdLO?usp=sharing>

3.3 Syntax and Semantic Curriculum Interview

The data is attached in the following link

<https://drive.google.com/drive/folders/1b-spDhvzR5WaO04coI5FameRnjVtIdLO?usp=sharing>

4 DISCUSSIONS

JI- 2064037- High Mental Burden (84.57), High Score (90); SF S, Low Mental Burden (45) High Score (85). In Bateson learning, it can be categorized into level 1. The logo design process is carried out properly and correctly step by step, collected per stage of the process according to the deadline determined by the lecturer. Good understanding of logo material, understand how to design a good and attractive logo, supported by exploration of the right ideas. Fluent in using design programs also manual skill flexibility makes the logo creation process easier. Line sketching skills are very important for the field of design (visual communication, products, interiors) and are basic skills that must be activated and improved through education [12]. Using digital or manual devices has its own advantages. Sketching on a computer allows students to work in more steps to create details, but students can see real objects and try out various effects in the software. Unfortunately, because students are forced to provide more detail while working on the computer, it allows a lot of imagination that is not expressed when they use paper as a medium for sketching. [13] Paper sketching is so important in the design process, especially in the early stages, because doing the sketching process allows the designer to deal with multiple levels of abstraction simultaneously. Paper sketches provide an opportunity for the designer to move between the overall idea and the general concept and detail aspects of the design into a kind of dialogue between the designer and what is being designed [14]. This student can follow the rhythm of the assignment given, even though learning is done online since this student started studying. The background of a reputable high school with fairly solid school activities carried out for 8 hours in 5 days makes the work rhythm or activities of these students accustomed to working on scheduled assignments. The design process that is well understood and carried out in stages affects the aesthetic and functional results of the work.

RC – 2064021- High Mental Burden (82.87), Low Score (65), in Bateson learning can be categorized to level 0. The logo design process has been attempted to follow the material and deadlines given, some processes are missed due to time felt too fast for this student. Understanding of the material to design a good and attractive logo is lacking, some even forget it altogether. This student feels heavy because the rhythm of the assignment is felt too fast, which is not in accordance with their daily activities, moreover the online learning that has been carried out since this student entered the University has formed a relaxed learning attitude. This affects the perception of mental load in the course of work assignments. The results of his design work are also not optimal, in terms of aesthetics and function, they do not reach, so the value obtained is also low compared to other students who perceive the mental burden of doing this task as heavy.

VJ - 2064001- Low Mental Burden (37.33), Low Score (60). in Bateson learning can be categorized to level 0. The process of designing the logo design has been attempted to follow the material and deadlines given. The understanding of the material is very poor, even when interviewed, many forget, because when completing this task, it is very dependent on the notes/pdf material provided. This student does not try to remember the material given to design a good and attractive logo design. The process of exploring ideas and sketches is instant, just searched from the internet and changed a little to make it look different. This affects the final work that does not meet the standardization to get a good score from the

aesthetic and functional point of view, so that even though the perception of mental burden when working on a light task is very low, understanding of the material is very lacking. This is in line with Dhawan's research, 2020 that students are not sufficiently prepared to balance their tasks, family, and social life with their online learning life, besides that students are also less prepared for some academic competencies. Two years of learning that has been carried out online with information and communication that is not limited by space and time gives rise to various types of learning interactions [15]. The class of 2020 that is the sample of this study are those who have received online learning since entering lectures until now. For students who are used to working independently and have good learning motivation and try to get good grades, it will lead to positive interactions, and maximum grades can even be better than offline learning. They can use their time as effectively as possible.

Only armed with quotas and gadgets or computers, they can complete learning materials from online sources other than those given by the lecturer. Online interaction related to learning can be done directly through interactive learning sites provided by the university and various free applications provide the potential for students to understand the learning materials provided. In line with the statement that great potential for valuable learning experiences in a virtual environment can be obtained by students, through the support of the university's growing technological infrastructure and the quality of interaction with teachers [16]. From the point of view of the subject lecturers; Due to the panic situation due to the COVID-19 pandemic, as a teacher, you can develop an innovative pedagogical approach in this panic situation which is also known as "Panicgogy". This situation is also a new challenge to develop learning content that not only meets the learning outcomes in the curriculum but also creates engagement for students [17]. This statement is also in line with the discussion of McLuhan's theory, showing that he focuses on the whole reality that is constructed outside the media itself [18]. In other words, every communication media exists or is designed to be used as intended. Hence, when the media is used to bridge online learning, there will be adaptations made by the users. However, due to a sudden need, every interested party will adapt. Communication media, with its function shifted, automatically has limitations both in terms of features and capabilities. Apart from the communication media used, both lecturers and students also need to make various adjustments to the teaching-learning habits that were previously done face-to-face.

5 CONCLUSION

In response to the Independent Learning Program – Merdeka Campus (MBKM) curriculum program launched by the government in 2021, several courses need to be allocated to new courses that are in accordance with the MBKM curriculum program. Typography courses are condensed from 6 credits to 3 credits. The task of designing a logo is a new material in this course which is available starting from the odd semester 20/21, which is taken by students who have been undergoing a full online learning method since the COVID-19 pandemic. After 1 semester passed, data was collected retrospectively and categorized according to Bateson learning, it was found that the perception of the workload, whether light or heavy, from students when completing the logo design task had no effect on students' understanding of the lecture material on designing logo designs in the Typography course (KV203) but related to the busy habits of students' daily lives that affect the rhythm of work or task completion and the effort made when they explore ideas and carry out all stages of assignments given according to the deadlines determined by the lecturer. Students with high grades-A, understand more about designing logo and the function of doing it step-by-step, in contrast to the students with moderate grades – C, whose main goal is to just graduate from this typography course. Step-by-step designing a logo design have also been forgotten.

However, students who really understand about designing logo designs and those who don't understand both still pass. This needs to be a consideration or note for the guardian lecturers, it is feared that the same thing will happen in other lecture materials. Passed but did not understand what was being studied, so that it affected the final project as if the student

had never received the material. This also answers previous research conducted by the research team, which revealed that the typography course is one of the subjects that needs to be considered in terms of the material and the delivery process, because it is considered that the competency objectives have not been achieved when students take their final project. As a recommendation, further research can be done with a research pattern like this in other subjects.

5.1 Research Limitations

This study had limited sample selection as our convenience sample only contrasted the farthest score and mental load apart. All the samples were still represented as passed students in the typographic course with the Grade Point Average of more than 3.00 out of 4.00, thus, the profile of participants may differ significantly if the students did not pass the course. Also, the course was online since the data collection points were still during the pandemic COVID-19 period.

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