



# Retrospective Method for Analyzing Typographic Design Work in Higher Education

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**Abstract.** They are 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 the Minister of Education and Culture officially launched in early 2020. The findings state that the perception of students' mental perception was sufficient—not heavy nor light. This follow-up study examines the student's project results more deeply. The topic for analysis will be designing a logo—a new material from the 20/21 curriculum undergone by students during the COVID-19 pandemic with more than enough assignments. Four student representatives stated their perceived heavy and low mental load as they completed this new curriculum. They said the course was serious, light, and excellent, with good scores on their way to achieving this curriculum. Using a retrospective method that relies 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 mental loads—when completing the designing-a-logo task? In this research, we have discovered that the perception of the student's cognitive loads when completing the commission 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 student's daily activities that involve: their work and task completion rhythms, the 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 the logo and the function of doing it step-by-step, unlike those with moderate degrees whose primary goal is to graduate from this typography course. In addition to this study's findings, 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, and it is feared that the same thing will happen to other lecture materials.

**Keywords:** Online learning, MBKM, Retrospective, Typography

## 1 Introduction

Students are often perceived as stressed individuals due to a large amount of academic workload they bear. Stress is an emotional feeling that makes a person 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 workload can be defined as the amount of work charged to a person in a certain period. In this case, assignments, tutorials, lectures, quizzes, reports, and practicums need to be done and completed by students to be able to graduate [4]

Before 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 to train 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 system, worth three credits through a manual process for initial sketches. A digital process also added some new materials, namely Logo design, with whole online learning for one semester. Previous research by the research team revealed that the typography course is one of the subjects that need to be considered in terms of the material and the delivery process because it is assumed 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. Achievement of Course Learning (CPMK) was also achieved.

Further research was conducted to determine students' mental burden when completing the Typography course in the new curriculum. Focused on designing a logo design, the reason that this task occupies a maximum allocation of five face-to-face lecture materials, with a perceived value of the medium mental load, the study of designing the logo was added to the new curriculum, which started in the 20/21 odd semester. The learning was carried out entirely online. Online learning is often dull and uninteresting, but it is so many and flexibility that some students do not complete the tasks given [6]. Will the online learning materials on the study 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 excellent (A) and sufficient (C) scores. The urgency of this research is to know what kind of design is designed and how the student carries out the design process because a design is not made solely because of the wishes of the designer who made it. Crucial stages and processes in designing a design. This is also consistent with the opinion that design is a goal-oriented process. The design aims to solve problems, meet needs, improve situations, and create something new or useful [7]. In addition, they also want to know if they understand how to design a good and attractive logo or only completed the Typography course but did not get the competence in designing a logo.

## 2 Research Method

This research quantitatively measured students' workload who completed an online typographic course in the Department of Visual Communication Design in Bandung. Six checkpoints were taken using NASA-TLX [7] for this course in a separate study based on assignments. This instrument measured 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 the previous study, then the current study only focuses on the new materials given in this course as part of course evaluation, namely the 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 sessions in one semester in synchronic and a-synchronic methods).

Hence, this study uses a semi-structured interview based on retrospective self-report, effectively reporting what was done instead of what should have been done on this particular assignment; [8] it was then finalized using 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 as having a high mental load, and the understanding of their learning results was unknown. Therefore, this study aims to examine the knowledge of particular types of students, incorporating their perception of their loads and results. To separate this category, the data collection in this study is 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 chosen 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 the 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

To validate findings, we collected respondents' documented files and separated them into five design steps according to Santoro [9] thumbnails, critique, comprehensive, presentation, and production. Moreover, the interview questionnaire would dig into 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 a digital one? 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 a 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 the Fall Semester of 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

<p><b>Sub Learning Outcomes:</b>                  Students can create an attractive and communicative (C6) Logo Design, create a Graphic Standard Manual Logo</p>
<p>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</p>
<p><b>Indicators and Assessment Weights:</b>                  Good process steps, good understanding of how to design a logo and GSM, achieving aesthetics and functional of the logo work.</p>
<p><b>Implementation Schedule:</b>                  Five times face-to-face, Full online class</p>
<p><b>Equipment needed:</b>                  Paper, stationery, computer, printer (if any)</p>

### 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-spDhvzR5WaO04coI5FameRnjVt-IdLO?usp=sharing>

### 3.3 Syntax and Semantic Curriculum Interview

The data is attached in the following link

<https://drive.google.com/drive/folders/1b-spDhvzR5WaO04coI5FameRnjVt-IdLO?usp=sharing>

## 4 Discussions

Jl- 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 correctly and adequately step by step, collected per stage of the process according to the deadline determined by the lecturer. Good understanding of logo material and how to design a good and attractive logo, supported by exploring the right ideas. Design programs and manual skill flexibility make the logo creation process more straightforward. Line sketching skills are essential for 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 advantages. Sketching on a computer allows students to work in more steps to create details, but students can see natural 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 not expressed when they use paper as a medium for sketching. [13] Paper sketching is essential 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 designer move between the overall idea, general concept, and detailed aspects of the design into a dialogue between the designer and what is being designed [14]. This student can follow the rhythm of the assignment given, even though learning has been 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 actions 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 were missed due to time feeling too fast for this student. Understanding the material for designing a good and attractive logo is lacking; some even forget it. 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 logo design process has been attempted to follow the material and deadlines given. The understanding of the material is abysmal; 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. The process of exploring ideas and sketches is instant; I just searched on 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 delicate task is deficient, 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 and are also less prepared for some academic competencies. Two years of learning that has been carried out online with information and communication not limited by space and time give rise to various learning interactions [15]. Class of 2020, a sample of this study is those who have received online learning since entering lectures until now. Students who are used to working independently, have good learning motivation, and try to get good grades will lead positive interactions. 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 can they 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 offer the potential for students to understand the learning materials provided. In line with the statement that students can obtain significant potential for valuable learning experiences in a virtual environment through the support of the university's growing technological infrastructure and the quality of interaction with teachers [16]. Due to the panic situation during the COVID-19 pandemic, as a lecturer, you can develop an innovative pedagogical approach to this panic situation, also known as "Panicgogy." This situation is also a new challenge to build learning content that meets the curriculum's learning outcomes and 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 medium 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. With its function shifted, communication media automatically has limitations regarding features and capabilities. Apart from the communication media used, lecturers and students also need to make various adjustments to the teaching-learning habits 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 must be allocated to new courses following 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 starting from the odd semester 20/21, with the entire online learning method since the COVID-19 pandemic. After one semester had passed, data were collected retrospectively and categorized according to Bateson learning.

Students' perception of the workload, whether light or heavy, when completing the logo design task did not affect students' understanding of the lecture material, in this case, designing the logo. They relate 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 a logo and the function of doing it step-by-step, in contrast to those with moderate grades – C, whose

primary goal is to graduate from this typography course. Step-by-step designing logo design has also been forgotten.

However, both students who understand designing logo designs and those who don't understand still pass. This needs to be a consideration or note for the guardian lecturers, and it is feared that the same thing will happen in other lecture materials. I passed but did not understand what was being studied; it affected the final project as if the student had never received the material.

This finding also answers from previous research conducted by the research team. It is revealed that the Typography course is one of the subjects 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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