

# SURAT PENCATATAN CIPTAAN

Dalam rangka perlindungan ciptaan di bidang ilmu pengetahuan, seni dan sastra berdasarkan Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta, dengan ini menerangkan:

Nomor dan tanggal permohonan : EC002024222518, 11 November 2024

## Pencipta

Nama : Elizabeth, S.Sos., S.Sn., M.Ds., Ph.D., Dr. Hapnes Toba, M.Sc. dkk

Alamat : Jl. Sidomukti No.60, RT.002 RW.007, Cibeunying Kaler, Bandung, Jawa Barat, 40123

Kewarganegaraan : Indonesia

## Pemegang Hak Cipta

Nama : Universitas Kristen Maranatha

Alamat : Jl. Prof. Drg. Surya Sumantri, M.P.H. No. 65, Sukajadi, Bandung, Jawa Barat 40164

Kewarganegaraan : Indonesia

Jenis Ciptaan : Poster

Judul Ciptaan : Poster Learner's Perception Of Scientific Textual Layout Designs Based On Eye-tracking Technology

Tanggal dan tempat diumumkan untuk pertama kali : 7 November 2024, di Bandung  
di wilayah Indonesia atau di luar wilayah Indonesia

Jangka waktu perlindungan : Berlaku selama hidup Pencipta dan terus berlangsung selama 70 (tujuh puluh) tahun setelah Pencipta meninggal dunia, terhitung mulai tanggal 1 Januari tahun berikutnya.

Nomor pencatatan : 000794950

adalah benar berdasarkan keterangan yang diberikan oleh Pemohon.

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DIREKTUR JENDERAL KEKAYAAN INTELEKTUAL

u.b

Direktur Hak Cipta dan Desain Industri

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| 1  | Elizabeth, S.Sos., S.Sn., M.Ds., Ph.D. | Jl. Sidomukti No.60, RT.002 RW.007,<br>Cibeunying Kaler, Bandung |
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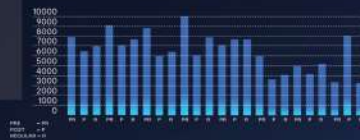


## INTRODUCTION

- 1 Lifelong learning is the major themes for the human capital growth.
- 2 Universities as the provider of education services also having increase of adult
- 3 The presence of technological device which open the access support various learning resources
- 4 Student not only come from digital native generation, but also come from different age
- 5 Two research question for this research are:
  - a. What characteristics of Aol (area of interest) can attract learners' attention
  - b. Which characteristics are preferable for adult learners?

## RESULT (01)

The TTFF (measure amount of time of Aol fixed look) performance of the experiment group (in ms) – shorter for post test, except for Image 8 which has dark background, arguably challenging people for finding the Aol.



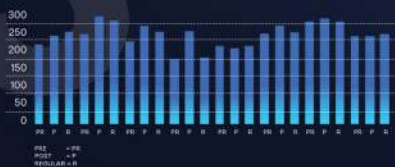
## RESULT (02)

The FFD (how long avg time in ms in a group fix attention to Aol on first visit) performance of the experiment group in ms. FFD for post test for adult learners increases indicating they can concentrate on the Aol after further instruction.



## RESULT (03)

The time learners spent in the Aol of 1st image is significantly shortest, indicating once the learners see the Aol, they move to the next image and concentrate on a language they mastered.



The authors gratefully acknowledge the full financial support for this research provided by the Institute for Research & Community Service of Universitas Kristen Maranatha, Indonesia (Decree number 023/SK/ADD/UKM/V/2024).



Preparations



Experiments



Evaluations



Analysis

User Groups

Adults Regular

Pre Post Post

Eye Tracking

8 Images

Aols Evaluations

Durations Distance

Significance

Research Questions

## ANALYSIS AND FINDINGS

### RQ1. what characteristics of Aol can attract learners' attention

- 1 Learners paying attention to something they recognize (ex. Language familiarity)
- 2 a two-column layout is preferable.

### RQ2. what characteristics are preferable for specific learner groups?

- 1 Adult learners needs more time than regular learners but they concentrate better on details
- 2 Digital immigrants' older adult prefer textual representation in more formal layout
- 3 Aol with gap or space to the body text perceived more important event without enlarging the font size and making it bold.

## RESEARCH METHOD

- 1 Purpose: investigate learners perceive to layouts of journal papers and posters
- 2 The utilization of eye-tracking set using 60Hz, 20 fps, which enable to recaps gaze points every 16.6 ms.
- 3 Real Eye online research platform which empowers webcams choose in this study.
- 4 The result were in form of fixation duration that marks heat maps and Aol viewed by participants.
- 5 Novelty of this study is to separate the number of seconds of each image observation into three fixation time leaps (TL): first, middle/ median, and last second.
- 6 Average metrics were used to observed image in all groups of participants (pre vs post-test; and adult learners' vs regular learners)
- 7 Setting of Real Eye:
  - a. Each layout, provided to participants for 15 seconds
  - b. Single web camera use to facilitate interactive eye-gaze tracking
  - c. Aol pre-designated before (there are 1 or 2 Aol per layout)
  - d. Vector distance measured between two-unit length in terms of pixelNote: distance to center point indicating 'attractiveness of Aol'

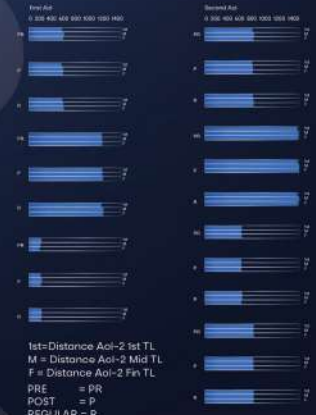
## RESULT (04)

Overall fixation average duration around 0.2 seconds: all learners concentrate on the important areas if they already know what to find, representing by table on image 6



## RESULT (05)

All learners directed their attention to the side-by-side Aols. Distance to left Aol lower than the right, indicating they pay more attention to content with their mother tongue (Bahasa Indonesia)



Left Distance Aol-2 1st TL  
M = Distance Aol-2 Mid TL  
F = Distance Aol-2 Fin TL  
PRE = PR  
POST = P  
REGULAR = R

## RESULT (06)

Locating Aol in significantly shorter time than others by creating bigger Aol area help the learners locate their fixation faster & assure them to follow the content.

# TRACKING TECHNOLOGY

## Learner's Perception of Scientific Textual Layout Designs Based on Eye-tracking Technology

Screenshot of learning materials accessed by participants:



1 2 3 4 5 6 7 8



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Dengan Menugaskan kepada :

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|-----|--------|------------------------|------------|
| 1   | 640070 | Elizabeth Wianto, Ph.D | Pencipta 1 |

Pembuat Karya Ciptaan sebagai berikut :

Nomor dan tanggal permohonan : EC002024222518, 11 November 2024  
Jenis Ciptaan : Poster  
Judul Ciptaan : Poster Learner's Perception Of Scientific Textual Layout  
Designs Based On Eye- tracking Technology

Demikian surat penugasan ini dibuat, untuk dapat dipergunakan dan dilaksanakan dengan baik. .



**Dr. Krisman Kusbiantoro, S.T., M.T**  
Dekan Fakultas Humaniora dan Industri Kreatif  
Universitas Kristen Maranatha,



**Riki Himawan Mulyadi, S.Sn., M.M., M.Ds.**  
Ketua Program Sarjana Desain Komunikasi Visual  
Fakultas Humaniora dan Industri Kreatif





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