

## College Students Media Multitasking Behavior

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**Abstract.** Activities involving the use of several media simultaneously or alternately while working on a task are even better known as multitasking behavior in using media (media multitasking). This study aims to describe the behavior of multitasking in using media for students at the University of Nusa Cendana (Undana). The approach used is a quantitative approach with a descriptive research type. The data collection technique used the MMM-S Likert scale with the results of the measuring instrument trial showing the Cronbach alpha scale value of 0.856. The research respondents were 395 Undana students. The results of the study found that Undana students showed high multitasking behavior in using media because the empirical mean was greater than the hypothetical mean ( $40.17 > 30$ ), with a low category of 39 people, medium 132 people, and high as many as 224 people. Multitasking behavior in using the media is known to be 4.24 times more women respondents than men, in the age range 22-25 years, 1.64 times more than those aged 18-21 years, while based on where the respondents live in 1.32 times more households than living in a boarding house.

**Keywords:** *Media Multitasking, MMM-S, Undana students,*

**Abstrak.** Kegiatan yang melibatkan penggunaan beberapa media secara bersamaan atau bergantian saat mengerjakan suatu tugas bahkan lebih dikenal dengan perilaku multitasking dalam menggunakan media (multitasking media). Penelitian ini bertujuan untuk mendeskripsikan perilaku multitasking dalam penggunaan media pada mahasiswa Universitas Nusa Cendana (Undana). Pendekatan yang digunakan adalah pendekatan kuantitatif dengan jenis penelitian deskriptif. Teknik pengumpulan data menggunakan skala MMM-S likert dengan hasil uji coba alat ukur didapatkan nilai skala alpha cronbach sebesar 0,856. Responden penelitian adalah 395 mahasiswa Undana. Hasil penelitian menemukan bahwa mahasiswa Undana menunjukkan perilaku multitasking yang tinggi dalam menggunakan media karena mean empiris lebih besar dari mean hipotetik ( $40,17 > 30$ ), dengan kategori rendah 39 orang, sedang 132 orang dan tinggi sebanyak 224 orang. . Perilaku multitasking dalam menggunakan media diketahui responden perempuan 4,24 kali lebih banyak dibandingkan laki-laki, pada rentang usia 22-25 tahun, 1,64 kali lebih banyak dibandingkan usia 18-21 tahun, sedangkan berdasarkan keberadaan responden 1,32 kali lebih banyak di rumah daripada tinggal di kost.

**Kata kunci:** *Mahasiswa Undana, Multitasking Media, MMM-S*

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### **Introduction**

Humans use various tools to help make their lives easier, such as using television and radio as a means of obtaining information, while to communicate with other human use the help of cell phones or smartphones. Students as individuals who are still studying in college also use learning aids, for example, a laptop that functions to type and make presentations, smartphones are not only used for communication but also used as a medium for finding information, and knowledge.

Media is something that can transmit messages, stimulate a person's thoughts, feelings, attention, and willingness so that it can encourage the learning process in him (Pito, 2018). Rosen (2008) states that the simultaneous use of various types of media, such as television, internet, video games, electronic messages, telephones, and e-mail is referred to as multitasking media. Media multitasking is not only the behavior of using more than one media, but also the behavior of using one media by carrying out various activities that are exclusively specific (Yeykelis, Cummings, and Reeves, 2014).

Students perform multitasking behavior in various activities such as when using a laptop to type while chewing or listening to songs, then searching for information via the internet or books (Fatmawati, 2017). During the Covid-19 pandemic, every learning process was not carried out directly but online with the help of smartphone or laptop media. This causes each student to take advantage of several media at the same time such as smartphone or laptop media and books as assistive media in learning. Marendha, Susanto, and Arifiana (2016) said that multitasking behavior can provide changes to students in facing various assigned

tasks so as to improve work quality and flexibility, as well as increase response to new technological changes. Although multitasking behavior can provide positive benefits to students, it can also have an impact on reducing the brain's ability to retrieve information from assignments, reducing long-term concentration skills and, the risk of fatigue.

Research related to media multitasking has been carried out, one of which by Anggarini (2018) found three types of multitasking behavior in students as content creators who are conducting information search activities through web searching, namely sequential multitasking behavior driven by boredom, simultaneous multitasking behavior driven by responsibility, and mixed multitasking behavior is driven by habits. Baumgartner, Weeda, Heijden, and Huizinga (2014) in their research showed a negative relationship between multitasking behavior in media use and the executive functions of daily life in adolescents.

Based on the description above, the authors find that multitasking behavior in the use of media provides positive benefits and also has a negative impact, besides that during the Covid-19 pandemic this caused all students, especially Undana students, to learn online by utilizing various media. So we feel the need to do this research with the aim of knowing the description of multitasking behavior in using media in Undana students. The research hypothesis is that students have high media multitasking behavior.

### **Method**

The population used in this study were all Undana students from 11 Faculties totaling 29,618 people (Undana in Figures, 2019). The sampling technique used is convenience sampling, which is a sampling technique from people who are easy to find and reach and able to provide the required information. The number of samples used in this study was obtained through the Slovin formula (Sugiyono, 2019), namely 395 people.

This research uses a quantitative approach with a descriptive research type. The measuring instrument used to collect data is the adaptation scale of the Short Media Multitasking Measure (MMM-S) made by Baumgartner, et al (2016) as follows:

Table 1.  
*MMM-S items*

Aspect	Items	Answer Options			
		TP	KK	S	SS
Television	When watching television, how often do you do it while listening to music				
	When watching television, how often do you do it while sending messages via laptop / cellphone				
	When watching television, how often do you do it while accessing social media / social networking sites				
Social media	When accessing social media / social networking sites, how often do you do it while listening to music				
	When accessing social media / social networking sites, how often do you do it while sending messages via your laptop / cellphone				
	When accessing social media / social networking sites, how often do you do it while watching television				
Messages	When sending messages via laptop / cellphone, how often do you do it while listening to music				
	When accessing social media / social networking sites, how often do you do it while accessing social media / social networking sites				
	When accessing social media / social networking sites, how often do you do it while watching television				

Information: TP: Never, KK: Sometimes, S: Often, SS: Very often

Each respondent was not forced to fill in the MMM-S scale but they had the right to refuse or be willing to fill in the scale. The scale model used for this research is the Likert scale. The content validity test used is the Content Validity Ratio (CVR). The CVR number moves between -1.00 to +1.00, if the greater the CVR from the number 0, the more essential and the higher the validity of the content, but if the item has a negative CVR value or equal to zero then the item is eliminated (Azwar, 2016). Obtaining CVR calculation data comes from the results of the assessment of a group of experts called Subject Matter Experts (SME). There are 3 SMEs in this study, namely a doctor, a master, and a psychologist.

Reliability testing is done through the help of the computer application SPSS ver. 16.0 using the provisions of Widhiarso (2011) which states that a measurement item is said to be reliable if it has a corrected item-total correlation above 0.3 or an alpha value if the deleted item is below the resulting Cronbach's alpha value. The author tested the reliability of the MMM-S scale measuring instrument on 100 respondents from various groups, namely high school students, college students, and those who were working, this was done so that the variance of the results obtained was wider. The author obtained reliability results with a Cronbach's Alpha value of 0.856. The data analysis technique used in this research is descriptive statistical techniques with the help of the SPSS ver. 16.0, which seeks to describe the symptoms or phenomena of a research variable without explaining the existing relationships. This study uses descriptive statistics of the central tendency.

### **Result**

Respondents in this study were Undana students aged 18-25 years, both male and female, totaling 395 people, which can be described as follows:

Table 2.

*Respondents Data*

<b>Respondent Data</b>		<b>N</b>	<b>%</b>
Gender	Women	298	73.16
	Men	106	26.84
Age	18-19	48	12.15
	20-21	166	42.03
	22-23	165	41.77
	24-25	16	4.05
Residence	Boarding House	237	60
	Living with Parents	158	40
MMM-S	Mean	SD	
	40.17	14.41	

The table above shows that the number of research respondents based on gender was not the same, namely 289 women (73.16%) and 106 men (26.84%). Based on the age level, there were 48 respondents (12.15%) with an age range of 18-19 years, as many as 166 people (42.03%) with an age range of 20-21 years, as many as

165 people (41.77%) with a range of ages 22-23 years, and as many as 16 people (4.05%) with an age range of 24-25 years. Meanwhile, based on the residence of the respondents, 237 people (60%) live in boarding houses and 158 people (40%) live in houses. The MMM-S scale has a mean of 40.17 with a standard deviation (SD) of 14.41.

**Media Multitasking Behavior Data Categorization**

Respondent research data is presented in the following table:

Table 3.

*Description of Media Multitasking Behavior Data*

Variable	Hypothetical					Empirical				
	Min	Max	Range	Mean	SD	Min	Max	Range	Mean	SD
MMM-S	12	48	36	30	6	12	105	93	40.17	14.41

Based on the data obtained from the table above, we conducted a one-sample t-test with the help of the SPSS version 16 application to find out the population average value used as a comparison with the sample average so that the results obtained were  $P = 0.00$  and  $t = 14,145$  then the hypothesis is accepted.

We use hypothetical statistics in order to see the relative position of the group based on the measuring instrument, from the table above it is known that the hypothetical minimum value is 12 and the hypothetical maximum value is 48 with a range of 36, a mean of 30 and a standard deviation of the hypothetical 6. The table above will be used to determine the category of the Undana student's media multitasking behavior interval category, with the category formula, namely high category  $= X > \text{Mean} + 1 \text{ SD}$ , then a score of  $X > 36$  scales is obtained, namely as many as 224 people, medium category  $= \text{Mean} - 1 \text{ SD} < X < \text{Mean} + 1 \text{ SD}$ , then a scale score of  $24 < X < 36$  is obtained, namely as many as 132 people, and category low  $= X < \text{Mean} - 1 \text{ SD}$ , then the score of  $X < 24$  is obtained, namely 39 people. Based on the formulation of this score category, it can be seen that the score categories are as follows:

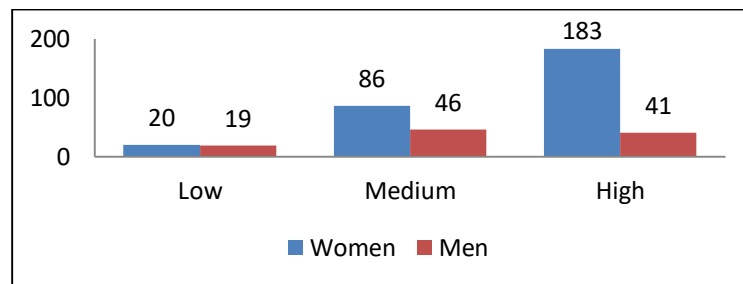


Figure. 1 Categorization of Media Multitasking Behavior Scores by Gender

Based on the picture above, it can be seen that from 395 respondents, the score of media multitasking behavior in women is known to be low with 20 women respondents (6.92%), medium as many as 86 people (29.76%), and high as many as 183 people (63.32%). While men respondents are known to score low media multitasking behavior as many as 19 people (17.92%), medium as many as 46 people (43.40%), and high as many as 41 people (38.68%). Calculation *odd ratio* shows that the odds value for women is 9.15 and for men is 2.16, with the odds ratio value of 4.24. This means that women have a tendency to show multitasking behavior in using media by 4.24 times greater than men.

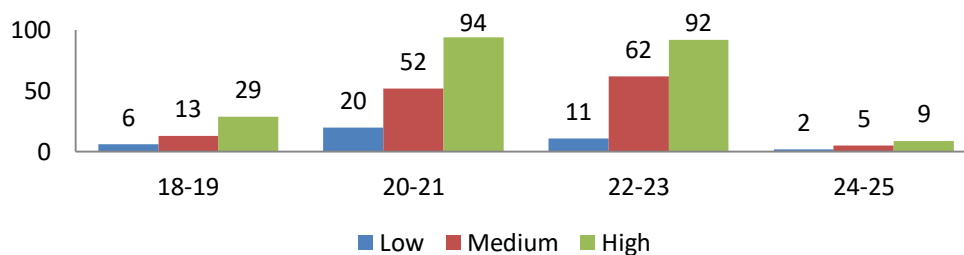


Figure 2. Categorization of Media Multitasking Behavior Scores by Age

Based on the picture, it can be seen that of the 395 respondents, the score of media multitasking behavior at the age of 18-19 years is known to be low with 6 respondents (12.5%), 13 people (27.08%), and 29 people high (60 , 42%). Respondents with an age range of 20-21 years are known to score low media

multitasking behavior as many as 20 people (12.05%), medium as many as 52 people (31.33%), and high as many as 94 people (56.62%).

Respondents with a range of 22-23 It is known that 11 people (6.67%) have low media multitasking behavior score, 62 people (37.58%) are medium, and 92 people (55.75%) high score. Meanwhile, in the age range of 24-25 years, it is known that the low media multitasking behavior score is 2 people (12.5%), 5 people (31.25%) are medium, and 9 people (56.71%) high. The calculation of the odds ratio shows that the odds ratio for the age range 18–21 years is 4.73, while in the 22-25 years age range it is 7.77, and the odds ratio value is 1.64. This means that the age range 22-25 years has a tendency to show multitasking media behavior by 1.64 times greater than the 18-21 year age range.

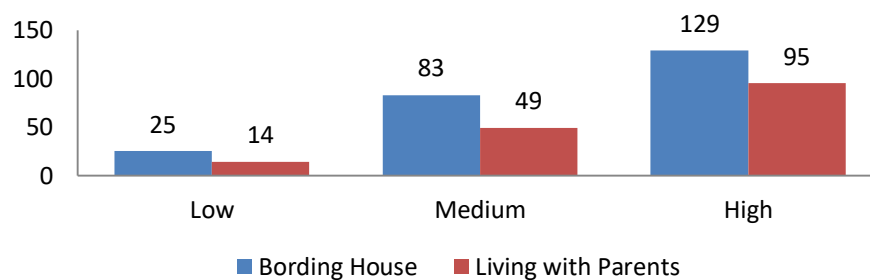


Figure 3. Categorization of Media Multitasking Behavior Scores by Residence

Based on the picture above, it can be seen that the score of media multitasking behavior of respondents who live in boarding houses is known to be low as many as 25 people (10.55%), moderate as many as 83 people (35.02%), and high as many as 129 people (54.43%) . Meanwhile, respondents who live at home are known to have low media multitasking behavior scores as many as 14 people (8.86%), medium as many as 49 people (31.01%), and high as many as 95 people (60.13%). The odds ratio calculation shows that respondents who live in boarding houses have an odd value of 5.16 and at home of 6.79, and an odds ratio of 1.32. This



means that respondents who live at home have a tendency to show media multitasking behavior 1.32 times greater than those who live at the boarding house.

Table 4.  
*Categorization of Respondents with High Scores by Aspects*

No.	Main Media	Average Total Use	Average Multitasking Use			
			Music	Message	Social media	Television
1	Television	2.67 hours / day	1.64	3.12	3.24	X
2	Social media	10.93 hours / day	2.65	3.25	X	2.64
3	Message	10.87 hours / day	2.67	X	3.13	2.53

Based on the table above, it is known that of the 224 respondents who are in the high category from the aspect of television media The average total usage is 2.67 hours/day, with the average sharing of music media 1.64, messaging 3.12, and social media 3.24. In the aspect of social media, the average total usage is 10.93 hours/day, with the average sharing of music media 2.65, message 3.25, and television media 2.64. Whereas in the aspect of media message the average total usage is 10.87 hours/day, with an average sharing of music media 2.67, social media 3.13, and television media 2.53.

### **Discussion**

This study aims to determine the description of multitasking behavior in using media in Undana students. Based on the data obtained through categorization of scores and odd ratio It was found that based on the gender of Undana students, women students were more likely show multitasking behavior in using media 4.24 times more than men, this proves that women have a tendency to divert some media or tasks more often than men. In line with the theory put forward by Treisman on the attention theory of the attenuation model that when using two media simultaneously one still processes information from one media even though attention is focused on the other media, so it can be interpreted that women are more likely to absorb information from other media when focused on

the media. Other causes them to tend to show multitasking behavior in using media than men. This is also supported by research conducted by Jeong and Fishbein (2007) which found that women are more likely to engage in multitasking behavior than men.

Research data based on the age level shows that Undana students in the age range of 22-25 years have a tendency to show multitasking behavior in using media by 1.64 times higher than those aged 18-21 years. This is supported by research by Soldatavo, Svetlana, and Anna (2019) which found that the older the respondent is, the more likely it is to work by multitasking. Respondents aged 22-25 years show greater multitasking behavior because of the demand to cope with a high workload (Koning and Lourdes, 2014). In line with the opinion of Aston Jones and Cohen (2005) on Adaptive Gain Theory (AGT) which explains that one of the Locus Coeruleus (LC) firing modes, namely, the LC tonic mode, when high can cause someone to switch between tasks or media with one another, This means that respondents aged 22-25 years tend to have higher tonic LC than those aged 18-21 years, so they are more likely to show multitasking behavior in using media.

Categorization data based on residence and odd ratio It was found that Undana students who live at home tend to show higher multitasking behavior in using media 1.32 times more than students living in boarding houses. This proves that multitasking behavior in using media is considered not something that needs to be supervised or considered strange by parents whose children live with them or in a boarding house.

The most widely used media for multitasking behavior is social media with a higher and longer average usage rate when used alone or with other media. Apart from social media, message media is the second most used media for multitasking behavior, this can be seen from the average total time used by 224 respondents who are in the high score category, which is 10.87 hours/day with a lower difference. 0.6 hours/day from social media for 10.93 hours/day. Respondents with high score categories can be seen multitasking behavior in using

media, namely when watching television the respondents do not use it much while listening to music with an average total score of 1.64, but the most average total score is spent involving the use of social media by 3,24. The television media tends to be rarely used by respondents because most of the respondents in this study live in boarding houses that do not have television media. Based on the research data we found that television media is not an attractive medium for respondents, this is evidenced in a day the media most used by respondents are social media and message media, while the least time is spent watching television.

Respondents listened to music while using social media with an average total score of 2.65, 1.01 points higher than while watching television, which was 1.64. Thompson, Graham and Russo (2005) in their research found that listeners with atonal musical melodies (target melodies) when performing counting tasks or visual tasks tended to reduce the depth of processing musical melodies, making it difficult for listeners to remember the musical melodies. This means that when doing a heavier task the tendency to remember musical melodies is getting less, so that the music media tends to be less attractive to respondents. In addition, when using social media, respondents tend to involve media messages more often with an average total score of 3.25.

When using message media, respondents with high score categories tend to divert it more often by using social media which can be seen from the average total score which is 3.13 higher than when using television media and listening to music as much as 2.53 and 2.67. This means that social media is the most widely used media so it tends to be difficult to let go of multitasking behavior which can be proven from the average score which tends to be higher when used together with other media.

### **Conclusion**

Based on the results and discussion of the research conducted, it can be concluded that the multitasking behavior in using media from Undana students

with a research sample of 395 people in the low category of 39 respondents (9.873%), medium as many as 132 respondents (33.32%), and high as many as 224 respondents (56.71%). Multitasking behavior in using media among Undana students is high because the empirical mean is higher than the hypothetical mean ( $40.17 > 30$ ).

The categorization of multitasking behavior in using media based on gender was found that women tended to show higher multitasking behavior in using media by 4.24 times more than men, based on the age category of respondents aged 22-25 years tended to show multitasking behavior in using media by 1,64 times more than students aged 18-21 years, while based on where students live at home, there is a higher tendency to show multitasking behavior in using media by 1.32 times more than students who live in boarding houses. The most widely used media for multitasking behavior is social media.

### *Suggestion*

The suggestions put forward in this study are that Undana students are expected to consider implementing regulations on media use so as to reduce distraction to media, especially social media by turning off media notifications when doing important activities such as studying or doing tasks that require more concentration. In addition, further research is expected to be able to find out more about media multitasking behavior in women respondents who tend to show more media multitasking behavior than men.

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