Information Seeking Behaviour of Four Generation at IPDN Library

Perilaku Pencarian Informasi dari Empat Generasi di Perpustakaan IPDN

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Abstract

Background: The availability of baby boomers, X, millennials, and Gen Z in an organization has become a matter of concern due to the generation gap between these people. This phenomenon can be seen in the Library Unit of IPDN (Institute Government of Home Affairs) as an information provider for students and Academic Community. **Purpose**: Therefore, this research aimed to describe the information seeking behavior of four generations in IGHA using the Ellis model. **Method:** It was conducted using a descriptive quantitative method. The population was from the IPDN academic community, totaling 1,776 people, while the sample consisted of 198. Primary and secondary data were obtained from questionnaires and literature, with the instrument developed based on Information Seeking Behavior Model by Ellis. **Results:** The results showed that all respondents were in an average index (%) of 75% -100%, but those from Gen Z had the highest index (%) for each indicator, namely starting (89%), chaining (90%), browsing (86%), differentiating (90%), monitoring (89%), and extracting (90%). The behavior was in the frequent category and comprised 136, 148, 130, 122, 138, and 142 people in the starting, chaining, browsing, differentiating, monitoring, and extracting groups, respectively. **Conclusion:** There were differences in information seeking behavior between these four generations. Gen Z is a phydigital and seek unlimited information. Generations X and Y are of working age, with little time to search for information according to the Ellis model. Meanwhile, baby boomers can keep up with technological and information developments.

Keywords: Information Seeking Behavior, GAP Generation, Library Services

Abstrak

Latar Belakang/Permasalahan: Kesenjangan generasi bukanlah masalah baru, namun belakangan ini menjadi hal yang diperhatikan karena saat ini terdapat empat generasi dalam satu organisasi yaitu *baby boomers, gen X, milenial dan Gen Z.* Fenomena ini dapat terlihat di IPDN, termasuk Unit Perpustakaan sebagai penyedia informasi bagi Praja dan Civitas Akademika. Perpustakaan harus bisa melayani seorang profesor hingga mahasiswa baru yang mungkin memiliki perilaku pencarian informasi yang berbeda. Perbedaan perilaku pencarian informasi dapat dijadikan pertimbangan dalam mengembangkan layanan Perpustakaan. **Tujuan**: Tujuan penelitian ini untuk mendeskripsikan perilaku pencarian informasi empat generasi di IPDN dengan model Ellis. **Metode**: Penelitian ini menggunakan metode deskriptif dengan pendekatan kuantitatif. Populasi berasal dari civitas akademika IPDN yang berjumlah 1.776 orang, sedangkan sampel terdiri dari 198 orang. Data primer berasal dari kuesioner penelitian dan sumber sekunder barasal dari literatur. Instrumen dikembangkan berdasar Model Perilaku Penulusuran Informasi dari Ellis. Kuesioner dibuat dengan cara mereplikasi penelitian sebelumnya. **Hasil**: Hasil penelitian menunjukan seluruh responden berada dalam rata-rata indeks (%) antara 75%-100%. Responden yang berasal dari Gen Z memiliki nilai indeks (%) tertinggi di setiap indikator yaitu *starting* (89%), *chaining* (90%), *browsing* (86%), *differentiating* (90%), *monitoring* (89%) dan *extracting* (90%). Ketegorisasi responden dalam melaksanakan aktivitas penelusuran informasi berada

dalam ketegori sering yaitu *starting* (136 orang), *chaining* (148 orang), *browsing* (130 orang), *differentiating* (122 orang), *monitoring* (138 orang) dan *extracting* (142 orang). **Kesimpulan**: Responden dari empat generasi di IPDN telah melaksanakan tahapan perilaku pencarian informasi dengan model Ellis. Indeks terbesar pada setiap indikator diperoleh Gen Z. Hal ini diduga karena Gen Z merupakan generasi phydigital sehingga pencarian informasinya pun tidak terbatas.

Kata kunci: Perilaku Pencarian Informasi, GAP Generasi, Layanan Perpustakaan

I. INTRODUCTION

Background. Every individual engages in interactive sessions to meet and satisfy certain needs and interests in the work and educational fields. According to Kundu (2017) and Riani et al. (2017), this process is known as information behavior**.** This interaction starts with the awareness to utilize the relevant information from various sources (Puspitadewi et al., 2016; Yusuf & Subekti, 2010)**.** The act of searching for specific knowledge is called information seeking behavior (Solehat et al., 2016; Yusuf & Subekti, 2010). Therefore, it is ideal for categorizing it as part of information behavior.

The information seeking behavior model was first introduced by Wilson in 1981, after which it underwent a series of development until Ellis, Khulthau, and other models emerged. The Ellis model, which appeared in 1997, suggested six activities, covering: Starting, simply implies searching for information based on interests or fields of knowledge; Chaining, such as noting important information; Browsing, namely searching for structured or semi-structured information; Differentiating, meaning reducing both usable and non-usable data; Monitoring entails seeking the latest information from the field of interest; Extracting, namely taking useful information from a particular source (Kundu, 2017; Ridlo et al., 2020; Septian et al., 2021; Widiyastuti, 2016; Yusuf & Subekti, 2010).

The Ellis model is in the form of a concise process applicable in various areas of science. This model has been tested by social scientists, English literature studies, physicists, and chemists, as well as engineers and experts in the field of industrial environment (Kundu, 2017). However, this model also applies to various social categories due to the reliable tests on various social fields.

Melvin DeFleur stated that individuals in a certain social category are likely to respond to certain stimuli similarly. According to Mukarom (2020), these individuals usually respond to messages and information. Social category tends to be implemented based on age, gender, ethnicity, education, economy, religion, etc. This tends to lead to differences in information seeking behavior among generations.

Data on the Composition of Indonesia's Population based on generations released by the Central Statistics Agency in the Official Statistical Gazette No. 07/01/Th. XXIV, January 21, 2021, specifically discusses the results of the 2020 Population Census. It shows that Gen Z (1997 to 2012) has the highest percentage at 27.94%, while post Gen Z (≥ 2013) has 10.88%. The second and third positions are occupied by millennials (1981 to 1996) and Gen X (1965 to 1980) at percentages of 25.87% and 21.88%. Finally, baby boomers (1946 to 1964) and pre-boomers (≤ 1945) have percentages of 11.56% and 1.87%, respectively (Central Statistics Agency, 2020).

Problem. The generation gap is not a new problem, although, recently, it becomes a matter of concern. Aside from the way of thinking and acting, it also creates differences in receiving and seeking information. This is an interesting topic because there are four different generations in organizations with differences in communication.

Baby boomers use touch-tone phones, while Gen X uses cell phones, even though it is only for work. Millennials are experiencing the development of communication media by understanding the internet, photos, e-mail, and smartphones. Gen Z, faced with rapid technological developments since birth, can use communication media in the form of video calls, social media applications, and various other features (Parengkuan & Tumewu, 2020). Differences in the way of communication can lead to dissimilarities in information seeking behavior.

The generation gap can also be felt within the scope of higher education, one of which is at the IPDN (Government Institute of Home Affairs). In line with Erwin Parengkuan, librarians in the IPDN Library Unit are dominated by four generations, namely baby boomers, Gen X, millennials, and Gen Z. This library serves professors and new students who tend to have different information seeking behavior. However, this difference can be considered in terms of developing library services.

Literature Review. Several previous research have been conducted on information-seeking behavior using various models over a prolonged period. The first research reported that the Library and Information Science Study Program students at Satya Wacana Christian University (SWCU) implemented the starting (82.6%), chaining (83.4%), browsing (78.4%), differentiating (83 %), monitoring (79.1%), and extracting (77.9%) stages (Septian et al., 2021).

The second research examined students' information seeking behavior using instant messengers, namely the Official Account LINE of Bidikmisi Student Family of Padjajaran University. This research generated the following six conclusions, 1) students need information from the account, 2) obtain relevant information, 3) explore the type , 4) understand the information conveyed, 5) record and disseminate information from the account, and 6) be satisfied with the information obtained (Sitorus et al., 2020).

The third research compared the information seeking behavior of first and final-year students at Babcock University. The results showed similarities in reasons and preferences regarding using information materials (Onuoha & Obiako, 2013).

Similar to the third, the fourth research focused on a comparative description of information seeking behavior between students from Canada and international ones, such as Chinese, Turkish, Arabic, Spanish, Korean, Iranian, Portuguese, and Vietnamese. The results indicated that both samples viewed co-workers as an important resource and relied heavily on Google to gain access to academic information. In terms of credibility, 18-year-old students are more sensitive to the credibility of information than those in grade seven (Beheshti et al., 2018).

The fifth research examined differences in information seeking behavior among Indonesia University of Education Library and Information Science students class of 2019 before and during the COVID-19 pandemic. The results proved a decrease and an increase in both physical and electronic-based information seeking activities (Nurfadillah & Ardiansah, 2021).

State of The Art. All research found information seeking behavior in the social category, and some even compared the two groups. However, previous research failed to categorize the individuals' answers into high, medium, and low implementation of each activity. The results and discussion section outlined the impact of Ellis model on the information seeking behavior in the IPDN environment which consist of starting, chaining, browsing, differentiating, monitoring, and extracting. These activities were also categorized into high, medium, and low groups, which illustrated the differences in behavior among the four generations at the IPDN Library.

Purpose. This research aimed to describe the information seeking behavior of the four generations at IPDN. It also intended to enable librarians to develop ideal services to meet the information needs.

II. METHODS

This quantitative research adopted a descriptive method to describe objects or activities examined (Darmawan, 2014)**.** Analytical descriptive in a quantitative approach is defined as the process of finding respondents' answers to research statements using percentages, while simple analysis utilizes frequency (Darmawan, 2014)**.**

The primary and secondary data sources were obtained from questionnaires and literature, respectively. The instrument was developed based on the Information Tracing Behavior Model from Ellis, which conisists six activities, namely starting, chaining, browsing, differentiating, monitoring, and extracting. The questionnaire was made available with a research replication entitled "Information Seeking Pattern for SWCU Library and Information Science Study Program Students Using Ellis Theory" by Septian in 2021.

The questionnaire consisted of 2 statements and 37 questions on research data. However, the statements on research data were divided into 13, 4, 7, 3, and 5 for starting, chaining, browsing, differentiating, alongside monitoring and extracting indicators, respectively. The respondents' data involved using a nominal scale, while that of the research adopted an ordinal scale with a value of 4 = Strongly Agree, 3 = Agree, 2 = Disagree, and 1 = Strongly Disagree. The 'Neutral' option was omitted to avoid opinion bias, and the questionnaires were distributed through Google Forms using the link https://forms.gle/LmHdM4ndJRAuJDLk6 from July 3 to 5, 2022.

The population involved was the IPDN Academic Community, with a total of 7,116, consisting 5,850 students and 1,266 employees. Eemployees consisted of baby boomers (159), Gen X (595), millennials (494), and Gen Z (18). Meanwhile, all students were categorized under Gen Z, with a simple ranmdom probability technique employed to obtain a population of 5,868. Calculations were made using the Slovin formula with an error rate of 7%:

$$
\begin{aligned}
n &= \frac{N}{1 + Ne^2} \\
n &= \frac{7.116}{1 + \ 7.116\ (0{,}07)^2} \\
n &= \frac{7.116}{1 + \ 7.116\ (0{,}0049)} \\
n &= \frac{7.116}{1 + \ 34{,}87} \\
n &= \frac{7.116}{35{,}87} = \ 198{,}38 \ \approx \ 198
\end{aligned}
\qquad (1)
$$

The samples taken are 198 people belonging to each generation:

Table 1
Sample Per Generation

GENERATION	SAMPLE
Baby Boomers	$n = \frac{159}{7116} x198 = 4{,}42 \approx \mathbf{4}$
Gen X	$n = \frac{595}{7116} x198 = 16{,}56 \approx \mathbf{17}$
Millennials	$n = \frac{494}{7116} x198 = 13{,}75 \approx \mathbf{13}$
Gen Z	$n = \frac{5.868}{7116} x198 = 163{,}27 \approx \mathbf{163}$

Sources, Research Data, 2022

Table 1 shows 4, 17, 13, and 163 as representatives from baby boomers, Gen X, millennials, and Gen Z, respectively.

The data were processed using SPSS version 23 and Microsoft Excel, which was followed by testing for validity and reliability. The reliability test was performed using the Cronbach Alpha formula:

$$r_{11} = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{\sigma_1^2}\right] \quad (2)$$

The instrument was declared reliable, supposing the Cronbach Alpha value is > 0.6. A Cronbach Alpha of 0.962 was obtained from the calculation, indicating that all instruments were reliable.

However, because the data were on an ordinal scale, the validity test was carried out using the Spearman Rank formula, as follows:

$$\rho = 1 - \frac{6\sum d_i^2}{n(n^2-1)} \quad (3)$$

The confidence level adopted was 5%, therefore, the r_{table} was 0.197. The instrument was presumed to be valid when $r_{count} > r_{table}$. The values of r_{count} for each indicator, namely starting (0.983), chaining (0.835), browsing (0.890), differentiating (0.793), monitoring (0.861) and extracting (0.867), were higher than r_{table} (0.197), hence, all instruments were declared valid.

Descriptive analysis was used to describe the data obtained by calculating each indicator's index percentage and category. The index percentage was calculated using the following formula:

$$Index\ (\%) = \frac{Total\ Score}{Total\ Maximum}\ x\ 100\% \quad (4)$$

The total score is the individual score obtained from the given responses. The total maximum is the maximum score achieved by respondents, while 100% is a constant. The intervals used for the index are strongly disagree, disagree, agree, and strongly agree for 0% to 24.99%, 25 to 49.99%, 50% to 74.99%, and 75% to 100%, respectively.

Furthermore, the implementation indicators are categorized into three, namely frequent, moderate, and infrequent. This calculation aims to determine the frequency of respondents exhibiting information seeking behavior. Individual scores are compared to intervals to determine certain categories. The following is the interval for each indicator:

a) Starting has intervals of never (13 to 26), sometimes (26 to 39), and frequent (39 to 52).
b) Chaining has intervals of never (four to eight), sometimes (eight to 12), and frequent (12 to 16).
c) Browsing has intervals of never (seven to 14), sometimes (14 to 21), and frequent (21 to 28).
d) Differentiating has intervals of never (three to six), sometimes (six to nine), and frequent (nine to 12).
e) Monitoring and extracting have intervals of never (five to 10), sometimes (10 to 15), and frequent (15 to 20).

Categorization is processed with crosstabs between generation and score, thereby enabling the frequency of implementation by respondents on each indicator to be obtained.

III. RESULTS AND DISCUSSION

This research involved 198 respondents from the IPDN Academic Community, comprising 89 (45%) males and 109 (55%) females. In terms of generation, 4 (2%), 17 (9%), 14 (7%), and the most relatively 163 (82%) respondents were categorized baby boomers, Gen X, millennials, and Gen Z, respectively.

The results were discussed per indicator taken from Ellis model on information seeking behavior, namely starting, chaining, browsing, differentiating, monitoring, and extracting. Each indicator discussed data realized from calculating the frequency index per statement and the categorization implementation.

In each table, some symbols and letters depict certain meanings, for example, "P", "B", "X", "Y", and "Z" stands for Statement, baby boomers, Gen X, millennials, and Gen Z, respectively, while the symbol $\bar{x}$ depicts average.

Starting. This indicator consisted of 13 related statements, which refer to the activities of individuals who are aware of the information needs, hence, they start searching for initial sources (Kundu, 2017). Information needs can come from a place of interest or scientific fields.

Statements on this indicator include:

a) I make a list before seeking information
b) I seek information through the journal or book index
c) I determine the topic before seeking information
d) I group the information needs
e) I seek advice from experts
f) I obtained information from from lectures, seminars, workshops, etc.
g) I ask librarians about books containing the information needed
h) I use books as a source of information
i) I use the journal as an information source
j) I interview individuals who are considered experts on the desired topic are interviewed to get more information

k) I seek references from books or journals
l) I use references to complete certain information
m) I thoroughly seek for references

After the questionnaires were distributed, the index data summary (%) was obtained as follows:

Table 2
Index (%) for Starting Indicators

INDICATORS	GENERATION			
	B	X	Y	Z
P1	88%	85%	84%	85%
P2	88%	78%	80%	87%
P3	94%	91%	86%	92%
P4	88%	79%	84%	91%
P5	81%	81%	75%	84%
P6	81%	81%	77%	89%
P7	94%	93%	71%	87%
P8	81%	85%	79%	89%
P9	75%	79%	82%	90%
P10	81%	76%	82%	90%
P11	88%	82%	82%	92%
P12	88%	78%	84%	92%
P13	81%	82%	84%	90%
$\bar{x}$	85%	82%	81%	89%

Sources, Research Data, 2022

Based on Table 3.1, baby boomers had an index of 85%, 3% higher than Gen X (82%). Gen Z and millennials had the largest and least indices of 89% and 81%, respectively. Even though there were differences, the average results proved that all generations were in the strongly agreed interval for the starting activities, known as the initial stage of information seeking.

At this stage, the individuals start to develop a strategy for information seeking. There are two strategies, namely independent seeking and using the help of others (Yusuf & Subekti, 2010). The independent strategy is associated with registering and grouping the information needed from experts, while the help of others is obtained from libraries. Strategy-making tends to relate to the surrounding environment because it influences individual activities (Yusuf & Subekti, 2010). For example, in P9, with the statement "I use the journal as an information source", Gen Z has the highest percentage, 90%. However, this indicates that the information seeking behavior is frequently dependent on journals.

The implementation frequency of the starting indicator by each respondent is shown in Table 3:

Table 3
Starting Indicator Categorization

Generation* Starting Cross-tabulation						Percentage
Count		Starting			Total	
		Never	Sometime	Frequent		
Generation	B	0	1	3	4	75%
	X	0	2	15	17	88,23%
	Y	0	5	9	14	64,28%
	Z	2	25	136	163	83,43%
Total		2	33	163	198	82,32%

Sources, Research Data, 2022

Table 3 shows that 163, 33 and 2 respondents were in the frequency, sometimes and never categories, respectively. Based on these calculations, the majority often engaged in starting activities as the first step in seeking information.

Librarians should always be ready to answer certain questions quickly to enable respondents to seek information immediately, considering that they most frequently carry out starting activities. The answers are either provided directly at the library or through online services via live chat or other mass media. The "often" category interval between the smallest percentage (Gen Y of 64.28%) and the largest (Gen X of 88.23%) is 19.15%. This allows for differences in starting activities concerning the information seeking series.

Gen Y or millennials are closely associated with the Fear of Missing Out (FOMO) or missing information and liking instantly (Aisafitri & Yusriyah, 2021; Parengkuan & Tumewu, 2020; Tanhan et al., 2022). Therefore, they always need to be updated with various kinds of information. This may cause a few to become less aware of when the information seeking stage starts. It is believed that information can only be obtained by scrolling through online media.

Chaining. This indicator consists of four related statements, and it refers to writing or highlighting important points to either identify or refer to documents or initial information (Kundu, 2017).

Statements on chaining include:

a) I use references to validate original information
b) I compare the selected sources with other references
c) I re-analyze its appropriateness and compare it with other sources
d) I compile information related to the topic sought by starting with the easily understood excerpt.

After the questionnaires were distributed, the index data summary (%) was obtained as follows:

Table 4
Index (%) for Chaining Indicators

	Generation			
	B	**X**	**Y**	**Z**
P14	88%	81%	88%	91%
P15	88%	87%	84%	91%
P16	94%	87%	88%	90%
P17	88%	75%	86%	90%
$\bar{x}$	89%	82%	86%	90%

Sources, Research Data, 2022

Table 3.3 shows that the chaining indicators of baby boomers, Gen X, millennials and Gen Z were 89%, 82%, 86% and 90%, respectively. Even though there were differences, the average results proved that all generations were in the strongly agreed interval related to chaining activities to validate the information by linking diverse sources.

The implementation frequency of chaining indicators by each respondent is shown in Table 5:

Table 5
Chaining Indicator Categorization

Generation * Chaining Cross-tabulation						**Percentage**
		Count				
		Never	Chaining Sometime	Frequent	Total	
Generation	B	0	1	3	4	75%
	X	0	7	10	17	58,82%
	Y	0	5	9	14	64,28%
	Z	1	36	126	163	77,30%
Total		1	49	148	198	74,74%

Sources, Research Data, 2022

Table 5 shows that 148, 49 and 1 respondent were in the frequent, sometimes, and never categories, respectively. They, most often, engaged in chaining activities to validate the information obtained. Therefore, there is a need for a search engine or Online Public Access Catalog (OPAC) to provide alternatives and enrich the information sources. The "frequent" category interval between the smallest percentage (Gen X of 75%) and the largest (Gen Z of 77.30%) is 18.48%. This allows for differences in carrying out chaining activities concerning information seeking series.

Each individual has certain expectations regarding the information obtained. The selected media are influenced by trust, judgment, and satisfaction and are used as sources (Yusuf & Subekti, 2010). These attributes motivate individuals to engage in chaining activities till they get the expected information.

The selection procedure is likely to be influenced by media dependency. This makes individuals always perceive it as a reference. According to Yusuf & Subekti (2010), dependence is influenced by individual orientation, pleasure, ideology, education, and age.

Millennials are used to FOMO, while Gen Z prefers phydigital or physical digital, a state where the boundaries between reality and digital are extremely thin (Parengkuan & Tumewu, 2020; Tolstikova et al., 2020). Gen Z can download a wide variety of information and quickly link one source to another. Based on this reason, they have the highest score on

this indicator. Gen Z, who are of school age, can look for other sources to complement those used for assignments. Meanwhile, Gen X and Y tend to be busy with the jobs.

Browsing. This indicator consists of seven statements and refers to structured and semi-structured information seeking activities (Yusuf & Subekti, 2010). However, browsing can be performed by using certain sources in the form of books, which entails looking at the bibliography, abstracts, indexes, or other representations of information (Kundu, 2017). Electronic sources can be done using search bars, advanced search, and Boolean logic methods.

Statements on browsing include:

a) I use the boolean logic method when seeking information on the internet
b) I used keywords when seeking information
c) I use the advanced search engine feature when seeking information
d) The abstract was used to obtain the relevant information
e) I use the library's OPAC (online catalog)
f) The information was searched directly by going to the bookcase
g) I browse through the journal's table of contents when seeking information

After the questionnaires were distributed, the index data summary (%) was obtained as follows :

Table 6
Index (%) for Browsing Indicators

	Generation			
	B	**X**	**Y**	**Z**
P18	69%	75%	70%	79%
P19	94%	82%	93%	93%
P20	75%	74%	84%	88%
P21	81%	68%	82%	87%
P22	69%	84%	70%	83%
P23	56%	76%	68%	85%
P24	81%	79%	82%	88%
$\bar{x}$	75%	77%	78%	86%

Sources, Research Data, 2022

Table 6 shows that the browsing indicators of baby boomers, Gen X, millennials, and Gen Z were 75%, 77%, 78% and 86%, respectively. Irrespective of the differences, the average results proved that all generations were categorized in the strongly agreed interval related to browsing information sources.

The implementation frequency of the browsing indicator by each respondent is shown in Table 7:

Table 7
Browsing Indicator Categorization

Generation * Browsing Cross-tabulation						Percentage
		Count				
		Never	Browsing Sometime	Frequent	Total	
Generation	B	0	3	1	4	25%
	X	0	8	9	17	52,94%
	Y	0	8	6	14	42,86%
	Z	2	47	114	163	69,94%
Total		2	66	130	198	65,66%

Sources, Research Data, 2022

Table 7 shows 130, 66, and 2 respondents were in the frequent, sometimes, and never categories, respectively. Accordingly, it was evident that most of them frequently engaged in browsing activities. It is important to develop many library applications, several of which can be used for browsing, considering that everyone's way of seeking information is different. The "frequent" category interval between the smallest percentage (baby boomers of 25%) and the largest (Gen Z of 69.94%) is 44.94%. This allows for differences in browsing activities concerning the information seeking series.

Millennials grew up with technology, while Gen Z was born with it, hence, the possibility to use five devices simultaneously to conduct searches (Parengkuan & Tumewu, 2020). Gen Y, who used to FOMO, believes that browsing is necessary to avoid being misinformed. However, because they are of working age, browsing activities concerning the aforementioned statement are rarely conducted. These activities are performed by scrolling through social media, the web, or just pressing notifications from their favorite news pages to gain information. This saves time, specifically since old news applications already have settings, making it easier for users to gain information of the choice or interest. Gen X tends to experience a similar circumstance because they are most likely at the top management level.

Differentiating. This indicator consists of three related statements, and it refers to relevant and irrelevant data reduction activities (Kundu, 2017; Yusuf & Subekti, 2010).

Statements on differentiating include:

a) The needed information is categorized
b) I make a list of the selected information
c) The information found is compared to see the relevance

After the questionnaires were distributed, the index data summary (%) was obtained as follows:

Table 8
Index (%) for Differentiating Indicators

	Generation			
	B	**X**	**Y**	**Z**
P25	81%	76%	88%	90%
P26	88%	79%	80%	89%
P27	88%	87%	89%	90%
$\bar{x}$	85%	81%	86%	90%

Sources, Research Data, 2022

Table 8 shows that baby boomers, Gen X, millennials, and Gen Z had differentiating

indicators of 85%, 81%, 86%, and 90%, respectively. Even though there were differences, the average results proved that all generations were in the strongly agreed interval related to differentiating activities.

The implementation frequency of differentiating indicators by each respondent is shown in the following table:

Table 9
Differentiating Indicator Categorization

Generation* Differentiating Cross-tabulation						Percentage
		Count				
		Category_T4			Total	
		Never	Sometime	Frequent		
Generation	B	0	2	2	4	50%
	X	0	8	9	17	52,94%
	Y	0	6	8	14	57,14%
	Z	5	36	122	163	74,85%
Total		5	52	141	198	71,21%

Sources, Research Data, 2022

According to Table 9, 141, 52, and 5 respondents were in the frequent, sometimes, and never categories, respectively. It can be concluded that the majority of respondents were frequently engaged in differentiating activities. However, through this process, librarians can evaluate which collections are in high demand to be able them execute development programs appropriately. The "frequent" category interval between the smallest percentage (baby boomers of 50%) and the largest (Gen Z of 74.85%) is 24.82%. This allows for differences in carrying out differentiating activities concerning information seeking series.

After obtaining much information from various media, the seeker has the right to reduce the data to obtain the appropriate source (Kundu, 2017). Data reduction is carried out according to the different information needs of individuals. In addition, trust in sources can also be involved at this stage.

Monitoring. This indicator consists of five related statements and refers to the monitoring activity of the latest information during the seeking process (Yusuf & Subekti, 2010).

Statements on monitoring include:

a) I make important notes about the information obtained
b) I follow the development of the information obtained
c) I always double-check the information obtained whether there are changes or updates through the library's new book
d) The information obtained is always double-checked either for changes or updates through the online journal system
e) I always double-check whether there are changes or updates to the information obtained

After the questionnaires were distributed, the index data summary (%) was obtained as follows:

Table 10
Index (%) for Monitoring Indicators

	Generation			
	B	**X**	**Y**	**Z**
P28	88%	81%	88%	92%
P29	81%	81%	82%	89%
P30	88%	87%	75%	89%
P31	88%	82%	84%	88%
P32	88%	84%	79%	88%
$\bar{x}$	86%	83%	81%	89%

Sources, Research Data, 2022

Table 10 shows that baby boomers, Gen X, millennials, and Gen Z consisted 86%, 83%, 81% and 89% indices, respectively. Even though there were differences, the average results proved that all generations strongly agree on intervals related to information monitoring activities.

The implementation frequency of monitoring indicator by each respondent is shown in Table 11:

Table 11
Monitoring Indicator Categorization

Generation* Monitoring Cross-tabulation						**Percentage**
		Count				
		Category_T5				
		Never	Sometime	Frequent	Total	
Generation	B	0	2	2	4	50%
	X	0	7	10	17	58,82%
	Y	0	6	8	14	57,14%
	Z	3	42	118	163	72,39%
Total		3	57	138	198	69,69%

Sources, Research Data, 2022

Table 11 consists 138, 57 and 3 respondents were in the frequent, sometimes and never categories, respectively. Based on this calculation, the majority frequently engaged in monitoring activities on the information needed. Librarians can promote the newest collections both online and offline to be monitored by users and used immediately. The interval between the smallest percentage (baby boomers of 50%) and the largest (Gen Z of 72.39%) is 22.39%. The "frequent" category interval allows for differences in performing monitoring activities concerning the information seeking series.

Currently, information can be easily monitored (Purnama, 2021), specifically for millennials and Gen Z. Furthermore, Gen Z has the largest "frequent" category index and percentage. They also have a greater competitive nature coupled with phydigital, helping them to monitor information without limiting sources (Parengkuan & Tumewu, 2020; Reza et al., 2022).

Extracting. This indicator consists of five related statements, and it refers to the activity of obtaining information to meet certain needs (Yusuf & Subekti, 2010).

Statements on extracting include:

a) I always evaluate the information collected with respect to the updated one
b) I check the accuracy of the source, and whether it is appropriate for the assigned task

after updating the information obtained

c) I read the title, table of contents, abstract, and contents at a glance to prove whether the information can be used as a reference

d) I seek more in-depth information about the author, whether the person is competent in that field

e) I checked the excerpts of the information to find out where it was obtained

After the questionnaires were distributed, the index data summary (%) was obtained as follows:

Table 12

Index (%) for Extracting Indicators

	Generations			
	B	**X**	**Y**	**Z**
P33	81%	76%	80%	91%
P34	81%	81%	82%	91%
P35	81%	75%	82%	92%
P36	75%	84%	73%	86%
P37	81%	82%	79%	89%
$\bar{x}$	80%	80%	79%	90%

Sources, Research Data, 2022

Table 3.11 shows that baby boomers, Gen X, millenials, and Gen Z had indices of 80%, 80%, 79% and 90%, respectively. Even though there were differences, the average results proved that all generations were in strongly agree intervals relating to the execution of extracting activities.

The implementation frequency of extracting indicators by each respondent is shown in Table 13:

Table 13

Extracting Indicator Categorization

Generation* Extracting Cross-tabulation						**Percentage**
		Count				
		Extracting			Total	
		Never	Sometime	Frequent		
Generation	B	0	2	2	4	50%
	X	0	7	10	17	58,82%
	Y	0	8	6	14	42,86%
	Z	3	36	124	163	76,07%
	Total	3	53	142	198	71,71%

Sources, Research Data, 2022

Table 13 shows the frequency indicator categorization of 142 respondents, with 53 and 3 in the sometimes, and never categories, respectively. The majority frequently engaged in extracting activities for the information needed. The "frequent" category interval between the smallest percentage (Gen Y of 42.86%) and the largest (Gen Z of 76.07%) is 33.21%. This allows for differences in conducting extracting activities concerning the information seeking series. Gen Z obtained the highest score inseparable from phydigital, which allows them to easily

retrieve and search for sources of information (Parengkuan & Tumewu, 2020).

Research Limitation. The sample is limited to students and the IPDN Academic Community who are still active until July 2022, therefore, there is bound to be a difference in numbers when this research is eventually published. This is due to graduation and retirement for students and Academic Community.

IV. CONCLUSION

The categorization procedure showed that most respondents frequently engaged in the stages of information seeking behavior. Based on the percentage of each category table, specifically the 'frequent', there are differences in the behavior application. The percentage interval between generations in one indicator which has the greatest distance is browsing (44.94%), followed by differentiating (24.82%), monitoring (22.39%), and extracting (33.21%). The differences in the four indicators are used to obtain the attention of librarians during the development services. The starting (19.15%) and chaining (18.48%) indicators have smaller intervals compared to the remaining four indicators. Gen Z has the largest index on each indicator, as well as the percentage of the "frequent" category. This is because it is a phydigital generation, where there is virtually no boundary between the physical and digital worlds, the ability to seek information is unlimited. Gen Z is of school age and active in information seeking in an organized manner. Gen Y carries out communication activities through social media (Hafni & Sianturi, 2022), sometimes, they are not aware of seeking information through the homepage or trending features. Although Gen Y and X are of working age, most have difficulties implementing the information seeking process as a whole. Baby boomers can try to keep up with Gen X, Y, and Z to meet the information needs.

The research suggested that the IPDN Library Unit can develop fast search services such as the web https://pujasintara.perpusnas.go.id/service/ask-librarian and systems that support easy information seeking in the starting, chaining, browsing, and differentiating processes. It is important to promote these collections to help users monitor new information in the library. Given the importance of extracting activities in making decisions on the use of information by users, librarians can provide guidance services or enroll in tracking training. Furthermore, they should identify credible authors in a field of knowledge and create information-representative products from collections, such as abstracts and bibliographies. Baby boomers' efforts to balance Gen X, Y and Z can be considered by librarians in developing suitable services for them. Future research is expected to test comparisons to determine the significance value of differences regarding information seeking behavior between current generations.

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