



DIGITAL LIBRARY ACCEPTANCE ANALYSIS USING COMPUTER-ASSISTED QUALITATIVE DATA ANALYSIS SOFTWARE (CAQDAS) AT UIN SUNAN AMPEL SURABAYA

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Abstract

This study aims to determine the factors that influence the interest of UIN Sunan Ampel Surabaya students in using the Digital library. This study uses the Content Analysis model using the Computer-Assisted Qualitative Data Analysis Software (CAQDAS) technique as the sampling method. The number of samples in this study were 6 informants. Content Analysis according to Krippendorff, (2004) is a research method used to arrive at conclusions that can be replicated with valid results from the data to the context, with the result being new insights, representations of facts and practical guidance for action. To manage the data that has been obtained in the field, researchers use the NVivo software. The results obtained show seven significant conclusions, that the acceptance of the Digital Library by UIN Sunan Ampel Surabaya students is good enough with constructive answers.



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I. INTRODUCTION

Digital Library (Digilib) is an online database for collecting, creating, storing, distributing and maintaining digital objects, including text, images, video and audio, over a network (Cheng, CM 2014). The use of a digital library is important because it provides easy access compared to using an offline library. This is because in a digital library, material can be searched and accessed from anywhere and at any time (Park et al., 2009).

At UIN Sunan Ampel Surabaya (UINSA), the digital library is a digital collection center that has responsibility for building, collaborating, managing, maintaining and disseminating content and is committed to facilitating access to digital collections by university academics. The Digital Library of UIN Sunan Ampel Surabaya can be accessed at the following link <http://digilib.uinsby.ac.id> (About the Repository - Digilib UIN Sunan Ampel Surabaya, 2023).

This study aims to determine user acceptance of Digilib using Computer-Assisted Qualitative Data

Analysis Software (CAQDAS) and Content Analysis and NVivo as software to obtain accurate analysis results and can provide input for the development of Digilib, so that it can provide benefits for users and readers. In contrast to previous research references namely Kaefer's research, 2015 "A Software-Assisted Qualitative Content Analysis of News Articles: Examples and Reflections" this research is on a national scale with the aim of knowing the level of acceptance, while Kaefer's research is on an international scale with the aim of solving problems in New Zealand.

II. LITERATUR

2.1. Theory Relating to Research Object

A digital library is a place for collecting data in the form of multimedia that has a broad reach with a structured information management that can display data as reference sources and useful knowledge for users in various organizational and social lines (Griffin, 1999).

In this study using qualitative research methods, is a research method that focuses on in-depth observation and has a goal tends to use descriptive analysis. Qualitative research is a form of systematic empirical inquiry into meaning (Shank 2002). Content analysis is a qualitative research method that emphasizes content, meaning, reading of symbols and symbolic interactions that exist during communication. (Bungin, 2011).

Technically content analysis includes the classification of symbols in communication, the use of certain analyzes in formulating an analysis and the use of criteria for classification (Bungin, 2011). CAQDAS assists analysts in organizing, sorting and analyzing qualitative data in a more efficient and structured manner (Trujillo Amaya, 2018). In this study CAQDAS is used as a search tool and modeling software allows making data visible in ways that are not possible with manual methods, enabling new insights and reflections on a project (Siccama & Penna, 2008).

2.2. System Theory Used

NVivo software is a qualitative data analysis software developed by Qualitative Solution and Research (QSR) International, the company is the first software company that can be used for qualitative data analysis. NVivo was originally a NUDIST (NonNumeric Unstructured Data, Index Searching, and Theorizing) software (Bazeley, 2007). The software also includes several analytical tools, such as conceptual modeling, thematic analysis, and network analysis, which help find patterns and relationships in data. NVivo is very useful for conducting qualitative research, and helps them manage and analyze data in an efficient and structured manner (Abdul Rahman & Mohezar, 2020).

In this study using the NVivo software according to (Basak, 2015) that the latest software used in qualitative data analysis includes: Atlas. Ti, N4 Classic, N5, NVivo and Winmax, but only Nvivo provides more complete and ideal tools for qualitative data analysis.

III. RESEARCH METHODS

3.1 Research Design and Flow

This research uses descriptive qualitative research methods using content analysis and CAQDAS research methods as technical methods and NVivo as software. To facilitate research, a research flow is made. The following flow is carried out in this study can be seen in Figure 1.

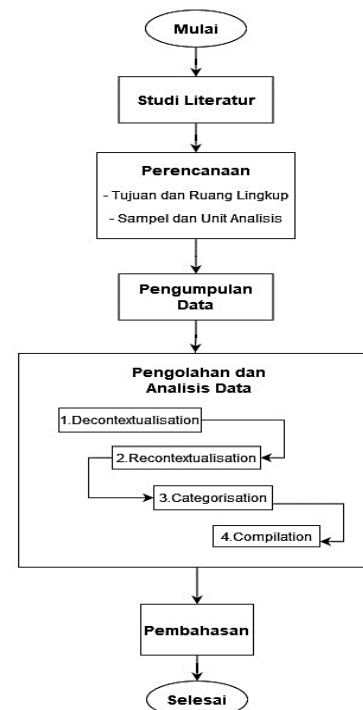


Figure 1. Research Method Flowchart

The stages of the method flow are described in the following sub-chapters.

3.1.1 Literature Study

Literature study in this study uses scientific writing that has research relevance. With the aim of collecting literature and analyzing affiliated previous research to solve the problems that exist in this study. The research refers to 4 previous studies which are used as references. Namely in research that has the same methods and theories used in

This research is theory: Qualitative method, Content analysis, Computer-assisted qualitative data analysis software, NVivo and Digital library UIN Sunan Ampel Surabaya.

3.1.2 Planning

The planning stage is the stage in determining what are the stages in this study including the objectives, research scope, sample and unit of analysis to determine the extent to which the planning process is carried out. The stages of the planning process are described as follows:

Purpose and Scope

In this study, it begins with setting objectives, which are structured in the research design and define its boundaries (Downe-Wamboldt, 1992). Making research objectives to identify interesting and unexplored problems, then present them in a concise form. If the research objective is too broad, the risk of touching on too many aspects can prevent achieving the desired depth of the phenomenon being studied (Silverman, 2006).

This research was conducted to determine the level of acceptance of using Digilib at UIN Sunan

Ampel Surabaya, as well as how to use CAQDAS using NVivo software which is used as an analysis tool for interview results, so that solutions can be produced from the problems studied. In making questions for conducting interviews there are core aspects of the UTAUT qualitative method used, the following aspects of the questions used for interviews in this study:

- a. Performance Expectancy (PE)
Performance expectancy (PE) The technology of interest is defined as the user's belief in increasing their ability or performance to gain influence on their work (Venkatesh et al., 2012). PE influences students' belief that Digilib UIN Sunan Ampel Surabaya will be useful for them, to find reading books online effectively and efficiently with time and effort. So PE improves student performance when using Digilib UIN Sunan Ampel Surabaya.
- b. Effort Expectancy (EE)
Effort expectancy (EE) is defined as the user's confidence to interact using the desired technology free of problems (Venkatesh et al., 2012). In this study, EE can influence students' behavioral intentions because the effort gained in using the digital library of UIN Sunan Ampel Surabaya is easier.
- c. Social Influence (SI)
Social influence (SI) is defined as the extent to which the level of trust in the surrounding environment requires it (Venkatesh et al., 2012). The impact of social influence has been confirmed in the implementation rules, especially in steps first implementation (Venkatesh & Davis, 2000). At this stage it has social effects that focus on external influences such as environmental pressure or the role of people around and so on that affect students about Digilib at UIN Sunan Ampel Surabaya.
- d. Facilitating Conditions (FC)
Facilitating conditions (FC) is the stage of measuring the level of confidence in the assessment of technical and non-technical organizational facilities available to support the use of the system. An example of a factor that supports FC is that there is Digilib media so that when using the system a guide is given regarding its use. Therefore FC can significantly influence students in using the digital library of UIN Sunan Ampel Surabaya. From these aspects, the questions used for interviews were obtained as aspects of interview questions.

Unit of Analysis

In a qualitative study the unit of analysis is determined based on information needs so that research questions can be answered sufficiently (Krippendorff, 2004). The unit of analysis determines the material to be analyzed as a whole or divided into

smaller results, to refer to the sample, and determines whether the material is to be analyzed as a whole or divided into smaller units.

Data collected at different times must be analyzed for the purposes it seeks to achieve, and each unit of analysis implies a different research focus. The main problem in making this decision is to decide what to explain through research studies (Patton, 2002). The criteria for the unit of analysis set in this study were the type of visits made by 6 informants consisting of 3 students who actively used Digilib instead of visiting the library, 3 students who were more comfortable visiting the library than using Digilib.

Each of the 6 students is further divided into 3 levels, namely students who often, seldom, and never, more details as follows: "Students who have never visited the library and often use Digilib", "Students who have never visited the library and rarely use Digilib", "Students who have never visited the Library and have never used Digilib" 3 of these results are the level of students who often use Digilib. "Students who often visit the library and often use Digilib", "Students who often visit the library and rarely use Digilib", "Students who often visit the library and never use Digilib" 3 results are the level of students often visiting the library.

From this data it is determined based on the use of Digilib visits to the library within the last 2 years in 2022 to 2023. The data processing used is in the form of voice or voice recordings which are transcribed into text on NVivo software, compared to other analysis software such as Dedoose, Dovetail, Coding Analysis Toolkit (CAT), MAXQDA and NVivo. NVivo provides more complete and ideal tools for qualitative data analysis (Basak, 2015).

3.1.3 Data Processing and Analysis

The next stage is data analysis, which aims to organize and obtain results from the data collected, which can later be used as valid and realistic conclusions (Polit et al., 2001). Data analysis has been predetermined using the Computer-Assisted Qualitative Data Analysis (CAQDAS) method with the NVivo tool for data processing as the next stage in this study. The data analysis stage is divided into four stages, namely: Decontextualization, Recontextualization, Categorization and Compilation (Bengtsson, 2016). The analysis process is described as follows.

1. Decontextualization

At the decontextualization stage, all data in the form of sound recordings is converted into transcribed text and then read first to improve overall understanding, namely to learn "what is going on?", before the existing data is broken down into small code or meaning units. To determine the code obtained, a certain label is made in the statement of the source. Small meaning (code) contains the meaning needed in research, as well as sentences or paragraphs

containing interrelated aspects, answering questions that have been set in the objectives (Graneheim & Lundman, 2004).

Each identified unit of meaning is labeled with a code, which must be understood in relation to the context of analysis. Codes are obtained inductively or deductively, depending on the study design. If the research has a deductive reasoning design, and must make a list of codes before starting the analysis process. Inductively generated code may change as the study progresses, as more data becomes available. The interpretation of a unit of meaning that seems obvious at the start can be obscured during the process. Therefore, the coding process must be carried out repeatedly, starting from a different page of text each time to increase stability and reliability (Downe-Wamboldt, 1992). However, it is easy to achieve high reliability with deductively generated code lists rather than inductively (Catanzaro, 1988). In this study using NVivo as computer software.

2. Recontextualization

The second stage is recontextualization. After the units of meaning are identified, then examining all aspects of the content that have been included in relation to the objectives (Burnard, 1991). The code that has been made is checked first to ensure that the code is appropriate to reflect the data, and is the same as the two subjective aspects, namely affective and cognitive evaluation.

Consider whether unmarked text should be included or not. If unmarked text provides multiple answers to the research questions, then it should be included in the analysis otherwise it may be excluded (Burnard, 1991). The code list obtained was then observed repeatedly consistently to compare the coding with the transcript results.

3. Categorization

At this stage, starting to make categories of extended meaning units must be summarized. This proves that the number of words is reduced without losing the unit content (Graneheim & Lundman, 2004). The unit of meaning determines the level at which the analysis can be carried out. This process of compaction is often required when data are based on interviews and when analysis of latent content is to be carried out.

The material obtained was divided based on the questions that were applied when the data was collected, based on theoretical assumptions from the literature (Graneheim & Lundman, 2004). Categories and themes are identified into codes that have links, then these codes can be grouped, with categories that have all the information that corresponds to parts of the cognitive evaluation and effective evaluation. After that the resulting

categories are put together into themes (Burnard, 1991). The term subtitle, is the smallest unit based on the unit of meaning. In manifest analysis, this is sometimes the same as the meaning unit code. Sub-categories can be sorted into wider categories. Sub-theme concepts can be used in latent analysis as a substitute for concept categories (Graneheim & Lundman, 2004).

The identified themes and categories must be internally homogeneous and externally heterogeneous, which means that no data will fall between two groups or fall into more than one group (Patton, 2002). The theme is the overall concept of meaning that underlies at the latent interpretive level, and it answers the question "How?" (Graneheim & Lundman, 2004). There is no informal way of describing specific strategies when categorization is made.

Moving units of meaning back and forth between categories provides a progressive development of the resulting categories, and Post-it notes may be of assistance in this process. Initially several categories were generated, but the number was later reduced (Burnard, 1991). How to know when a categorization is good enough depends on the purpose of the research, and categorization is complete when a plausible explanation has been reached.

4. Compile

After the category is determined, a compilation will be made which begins with the writing and analysis process. There are differences between the various methods of qualitative analysis one of which is how to engage with the analysis process itself and adapt it to the results. The next step is to find the essence of the phenomenon being studied, namely by having the opportunity to achieve a deeper understanding even at a descriptive level (Patton, 2002).

In the process of analysis, they often include the word informant, and still realize the need to refer back to the original text. In this way, it is possible to remain true to the original meaning and context (Burnard, 1991). Next, identify the meaning of the text and then describe the quotations on the transcript to describe the theme and several categories that contain the result codes from the unit of analysis. Identification of codes, categories and themes will be discussed periodically to obtain agreement on themes.

IV. RESULTS

The results of this study contained several steps, namely: 1. Study of source documents, 2. Interviews and 3. Acceptance level analysis. After getting the data from the sources that have been determined, there are 6 sources obtained from the central library of UIN Sunan Ampel Surabaya based on the last 2 years. After the data is obtained, 4 implementation

stages will be carried out starting from Decontextualization, Recontextualization, Categorization and Compilation. A more detailed description of each stage will be described in sub-chapters 4.1 to 4.4.

4.1 Decontextualization

The data obtained was in the form of interviews with students at UIN Sunan Ampel Surabaya. Interviews were conducted with 6 informants who were divided into groups who often visited the library and never visited the library and the level of digital library usage among the 6 informants. The interview consisted of 21 questions grouped into 4 aspects. Figure 2 below is the interview audio import process.

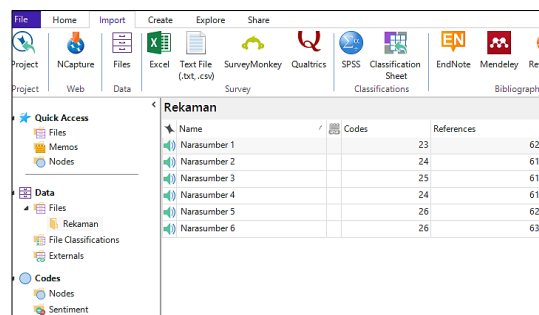


Figure 2. Interview Audio Import

In Figure 2, the interview audio data imported into the NVivo software can be stored in files that have the name of the recording so that if other data is added after import, the data is not mixed with the data in the recording files. Furthermore, the results of the interviews with the 6 informants who have been imported are then transcribed manually sequentially through the NVivo software. After the transcription process, the audio interview file is listened to and re-read to ensure that the transcript results are in accordance with what was discussed in the audio interview. The following is Figure 3. The process of transcribing the interview audio into text.

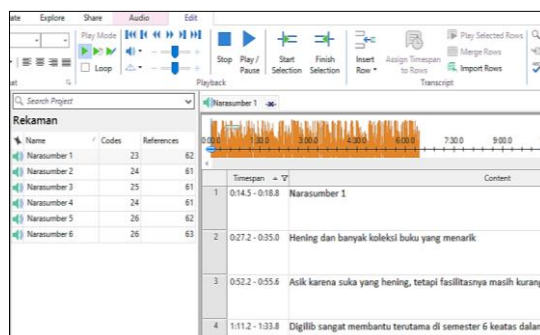


Figure 3. Interview Audio Transcript Process

The picture above is a transcript process that was carried out directly on the NVivo software, the transcript process was done manually to get the results of the text transcripts that match the audio interview results that were transcribed previously.

4.2 Recontextualization

The results of the transcripts were micro-analyzed by breaking them into meaning units based on sentence by sentence through simple coding and then identified using NVivo software. Predefined texts are codenamed via nodes. Such as a simple code that is compiled and organized into larger parent nodes and smaller categories or child nodes which are separated based on their relevant meaning into groups within the same category.

In this study audio that has gone through the transcript process is then coded, after which the code that has been made is grouped according to the main nodes which are differentiated according to the aspects of the question that have been used as the theme of the code. These themes are grouped into 7 themes or main nodes starting from students who are more comfortable visiting the library than using Digilib, students who actively use Digilib rather than visiting the library.

This is followed by the acceptance aspects of Digilib which are grouped into 4 aspects, namely Performance Aspects, Effort Aspects, Social Aspects and Facilitating Condition Aspects, and the final theme is resource elaboration. The results of the audio transcripts of the answers from the 21 interviews were then grouped according to the same unit of meaning in the NVivo software. The following Figure 4 results of text transcripts coded on nodes.

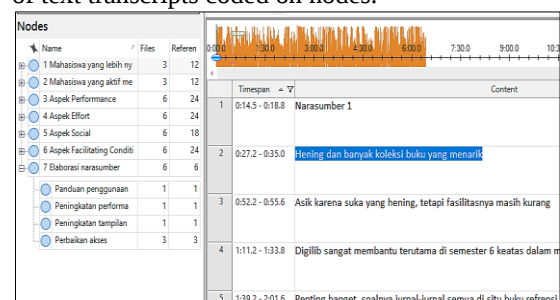


Figure 4. The results of the transcripts coded on the nodes

Figure 4 above shows the results of the transcript that has been coded on the Nodes. In the NVivo software the coding process can be done manually and automatically, in this study the coding process was done manually by blocking each sentence from the transcript and then clicking and dragging the sentence to place it on the Nodes.

This grouping of meanings produces child nodes which are then included in the appropriate parent nodes. In this study, there is one of the main nodes, namely students who are more comfortable visiting the library than using Digilib. From the parent node, there are several child nodes from the equation of the answer to the 6 sources, namely Digilib saves knowledge, Digilib is important, Digilib is very helpful, Digilib is not very important, A library of reference sources, a comfortable library, a quiet library atmosphere, and never using Digilib. The

following Figure 5 results of coding on the parent nodes and child nodes.

Nodes	Name	Files	References
1 Mahasiswa yang sering mengunjungi perpustakaan dan sering menggunakan digilib		3	12
	Digilib menyimpan ilmu	1	1
	Digilib penting	2	2
	Digilib sangat membantu	1	1
	Digilib tidak terlalu penting	1	1
	Perpustakaan sumber referensi	1	2
	Perpustakaan tempat nyaman	1	2
	Suasana perpustakaan hening	1	2
	Tidak pernah menggunakan digilib	1	1
2 Mahasiswa yang tidak pernah mengunjungi perpustakaan dan sering menggunakan digilib		3	12
	Digilib cukup membantu	1	1
	Digilib penting sebagai referensi	1	1
	Digilib sulit digunakan	2	3
	Digilib Tidak terlalu penting	2	2

Figure 5. Coding results on parent nodes and child nodes

Figure 5 above is a display of the results of the coding that has been done on the Nodes, then from each of these codings the so-called child nodes are grouped on each parent node according to the predetermined theme aspects. Thus the results of the coding of the parent nodes and the corresponding child nodes can be produced as shown above.

4.3 Categorization

Categorization determines the units of meaning that are summarized. By determining the number of words to be reduced without losing the content of the specified meaning units (Graneheim & Lundman, 2004). The level of the unit of meaning determines the results of the analysis that can be carried out. This grouping process is needed when the data is based on interviews and when analysis is to be carried out.

In this study, the 6 predetermined themes had child nodes which contained interview transcripts which were categorized according to the similarity of words so that later they could produce child nodes that had a large number of words that frequently appeared. As in the theme of students who actively use Digilib instead of visiting the library, one of the child nodes says that Digilib is difficult to use. The child nodes are accompanied by transcripts of interview words in the form of 'In my opinion, Digilib is rather difficult', 'It is easier for me to find references on the internet media', and 'Accessing Digilib is more difficult'. The following figure shows 6 student child nodes who actively use Digilib instead of visiting the library.

Nodes	Name	Files	Referen
1 Mahasiswa yang aktif me		3	12
	Digilib cukup membant	1	1
	Digilib penting sebagai	1	1
	Digilib sulit digunakan	2	3
	Digilib Tidak terlalu pe	2	2
	Kurang nyaman berada	2	3
	Perpustakaan tempat m	1	1
	Tidak suka baca buku d	1	1
2 Mahasiswa yang lebih ny		3	12

Figure 6. Student Nodes Actively Using Digilib Instead of Visiting the Library

Figure 6 above is the result of coding the child nodes 'Digilib is difficult to use' from the main nodes 1 students who actively use Digilib instead of visiting the library which is shown as an example at the categorization stage. Next is one of the themes that has been imported to NVivo, namely the social aspect, on the social aspect there are many child nodes, namely Not recommended by friends, Friends agree to use Digilib, Don't know the benefits clearly, Suggested by friends and Digilib is useful. In the child nodes suggested by friends, categories were found in the form of similarity to 3 different sources' answers, namely 'usually shared with colleagues for book references', 'my colleagues suggested it, and 'my colleagues suggested it because I often use it'.

From the results of the three interviews it can be seen that the social aspect of using Digilib in the form of the role of friends has influenced some sources to use Digilib access because it is easier to get references, to use it with friends. Figure 7 below shows the social aspect of child nodes.

Nodes	Name	Files	Referen
1 Mahasiswa yang aktif me		3	12
2 Mahasiswa yang lebih ny		3	12
3 Aspek Performance		6	24
4 Aspek Effort		6	24
5 Aspek Social		6	18
	Digilib bermanfaat	2	2
	Iya disarankan teman	3	3
	Kurang tau manfaat jel	4	4
	Teman setuju menggun	6	6
	Tidak disarankan tema	3	3
6 Aspek Facilitating Condi		6	24
7 Elaborasi narasumber		6	6

Figure 7. Social Aspect Child Nodes

Figure 7 above is the result of coding the child nodes 'Yes, a friend suggested' from the parent nodes. The social aspect is shown as an example at the categorization stage. In addition to the stages already explained, this research also categorizes the elaboration of the results of the interviews with the informants so as to produce answers from a variety of different informants so that they can be grouped into different child nodes. In the Elaboration theme, several child nodes were produced, starting from the need to improve Digilib access, improve Digilib's appearance, improve Digilib's performance, and add guidelines for using Digilib. For Nodes children, the provision of usage guides resulted in an appropriate interview result, namely 'a guide to using Digilib was made to make it easier' so that in the future this suggestion could increase the mobility and quality of using Digilib. Figure 8 below shows the resource person's elaboration child nodes.

Name	Files	Referen
7 Elaborasi narasumber	6	6
Perbaikan akses	3	3
Peningkatan tampilan	1	1
Peningkatan performa	1	1
Panduan penggunaan	1	1

Figure 8. Child Resource Elaboration Nodes

In Figure 8 above is the result of the coding of the child 'User Guide' from the parent resource elaboration node which is shown as an example at the categorization stage.

4.4 Compilation

Compilation that determines the process of analysis and writing. The analysis process is carried out in order to get the desired results. Namely by finding the essence of the phenomenon being studied and getting a deeper understanding even at the descriptive level (Patton, 2002). When conducting qualitative content analysis, one must consider the data collected and consider its objectivity. The level of depth of analysis can be obtained from the level of data collected. The analysis can be carried out in stages through each identified category and through the themes in the latent analysis.

In the process of analysis it is necessary to refer to the original text to make it possible to stay close to the meaning and context of the original (Burnard, 1991). Data compilation must be done carefully and in accordance with the principles of good research. This includes maintaining data integrity, maintaining the confidentiality of sensitive information, and using appropriate methodologies to analyze the data that has been collected.

The compilation process was carried out after the interview transcript data were categorized into appropriate child nodes through NVivo. One of the themes in this study was that students who were more comfortable visiting the library than using Digilib resulted in various child nodes with different answers appearing. In the main nodes it was found that interviews with 3 informants ranging from those who never accessed Digilib, rarely accessed Digilib and often accessed Digilib resulted in 8 child nodes with the highest frequency being 'important Digilib'.

The Nodes child shows that the use of Digilib is important for UIN Sunan Ampel Surabaya students as seen in the 2 answers of the source, namely 'It is very important because all the journals are there' and 'It is important because it is an online archive that can be accessed by anyone'. These results are further explained in Figure 9 below.

Name	Files	Referen
1 Mahasiswa yang aktif	3	12
2 Mahasiswa yang lebih	3	12
Digilib menyimpan	1	1
Digilib penting	2	2
Digilib sangat mem	1	1
Digilib tidak teralu	1	1
Perputakaan sump	1	2
Perputakaan temp	1	2
Suasana perputakaan	1	2
Tidak pernah meng	1	1

Figure 9. Students who are more comfortable visiting the library than using Digilib

The next theme contained in this study is the effort aspect, in the effort aspect there are 9 child nodes in the form of Don't know, Interaction with Digilib is not smooth, Interaction with Digilib is smooth, Digilib does not require more effort, Digilib requires more effort, Digilib is difficult to learn, Digilib is easy learned, Digilib is difficult to use outside the IT department, Digilib is easy to use outside the IT department.

Of the 9 child nodes, it was found that the highest frequency of emergence of answers in the form of Digilib did not require more effort. This shows that in the business aspect required by students using the Digilib software it can be said that it is easy or simple. This is supported by 5 interview answers saying 'No', 'Actually not because it is quite easy', 'No', 'No' and 'No'. The following is Figure 10 from the results of the effort aspect.

Name	Files	Referen
1 Mahasiswa yang aktif	3	12
2 Mahasiswa yang lebih n	3	12
3 Aspek Performance	6	24
4 Aspek Effort	6	24
Digilib membutuhkan	2	2
Digilib mudah di pelaj	3	3
Digilib mudah diguna	4	4
Digilib sulit digunaka	2	2
Digilib susah di pelaja	2	2
Digilib tidak membut	4	5
Interaksi dengan digil	2	2
Interaksi dengan digil	3	3
Tidak tahu	1	1
5 Aspek Social	6	18
6 Aspek Facilitating Cond	6	24
7 Elaborasi narasumber	6	6

Figure 10. Effort Aspect

Apart from the effort aspect, there are several other aspects which are also the theme, one of which is the facilitating condition aspect. This aspect results in various answers in the child nodes ranging from Not comfortable operating Digilib, Comfortable operating Digilib, Not getting help, Getting help, Not needing other equipment and needing guidance. Of all the child nodes, the answer that often appears is Does not require any other equipment.

Seen in the 6 answers of the interviewees 'It's not usually necessary to use a laptop', 'No need', 'No need', 'No', from a cellphone you can use a laptop',

'No, a cellphone can already' and 'No'. This shows that the acceptance aspect of Digilib in terms of facilities makes it easier for students to access it because it does not require other burdensome supporting tools. Below Figure 11 is the result of the facilitating condition aspect.

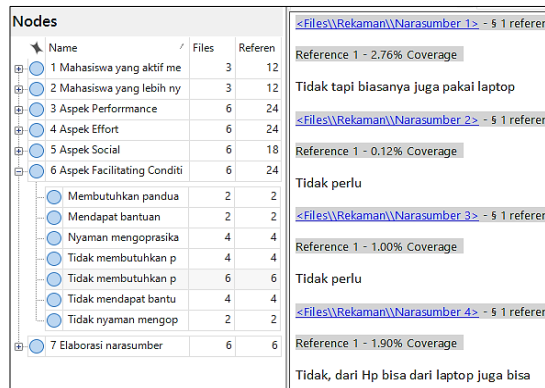


Figure 11. Aspects of Facilitating Conditions.

This study also explains the theme of resource person Elaboration. In this theme there are 4 child nodes in the form of Access Improvements, Appearance Improvements, Performance Improvements and Usage Guidelines. In which there were as many as 3 answers from sources regarding access improvement. The first informant said 'Yes, maybe the server repair is faster', followed by the second informant's answer 'More improvements to make it easier to use', and the last informant's answer 'My Digilib suggestion is fixed and easier to access'. Of the three, it shows that improved access is needed to improve the quality of Digilib UIN Sunan Ampel Surabaya. The following Figure 12 results from the resource person's elaboration.

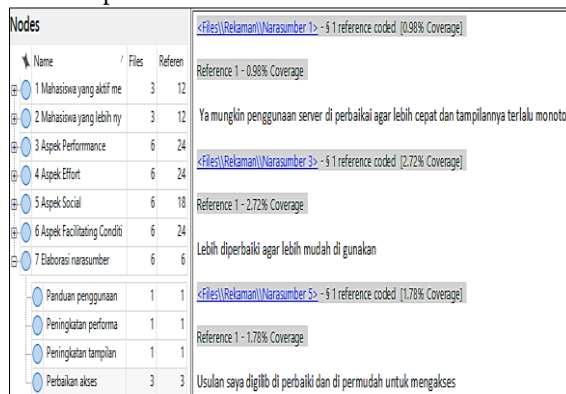


Figure 12. Resource Person Elaboration

In Figure 12 above is the result of the overall coding in the resource person's elaboration which has been grouped based on each child node that has been coded on the parent nodes.

4.5 Analysis

In the next stage, this research describes the stages of analysis to find out the perceptions of digital library acceptance according to students of UIN

Sunan Ampel Surabaya, which were obtained based on the most answers to child nodes from each parent node or theme using a hierarchy chart in the NVivo software. Hierarchical chart is a diagram that can show hierarchical data in the form of a tree map and sun burst with various sizes and levels of color density. The various sizes and color densities are determined by indicating the amount of coding on the parent nodes or the number of contents of the child nodes from the coding entered according to the results of the interview answers. The following Figure 13 displays the chart hierarchy in the NVivo software.

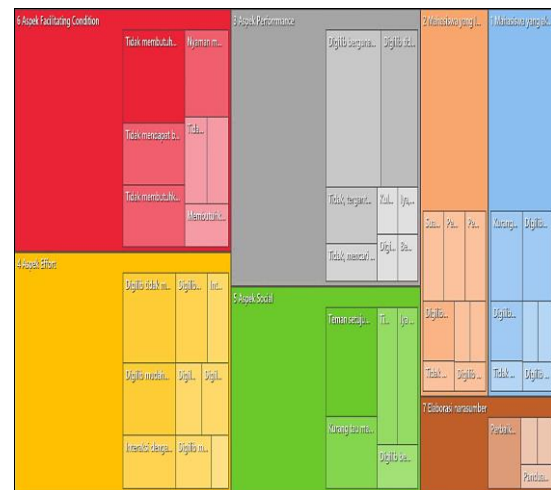


Figure 13. View of the Hierarchical Tree Map Chart in the NVivo Software

The results of the chart hierarchy in figure 13 are displayed according to the size of the room and the different color densities according to the display available on NVivo. So that the size of each result must be considered in relation to one another, not in the form of an absolute number so that a diagram of the results of the analysis can be produced. The widest area and the densest color are shown on the hierarchical graph in the form of a tree map and sun burst as well as a word cloud. The results of the hierarchy in the form of a tree map are described in detail based on each theme in sub-chapters 4.5.1 to 4.5.7 as follows.

4.5.1 Students who actively use Digilib instead of visiting the library

On the theme of students who actively use Digilib instead of visiting the library, this study consisted of 3 informants namely students who have never visited the library and often use Digilib, students who have never visited the library and rarely use Digilib, students who have never visited the library and never used Digilib. The explanation of the theme is displayed in the Hierarchy chart, producing child nodes with the biggest answers, there are 2 answers. Namely the answer 'Not comfortable in the library', there were 3 answers from 3 different sources, 'Digilib is difficult to use', there were 3

answers from 3 different sources, 'Digilib is not very important', there were 2 answers from 2 sources, 'The library is a place to seek knowledge, there is 1 answer. from 1 source, 'Digilib is important as a reference, 1 answer from 1 source, 'Don't like reading books in the library' 1 answer from 1 source, and 'Digilib is quite helpful' 1 answer from 1 source.

Thus it can be seen that there are some students who are uncomfortable being in the library or using Digilib. The results of these answers can be seen in the results of the tree map chart hierarchy in Figure 14 below.

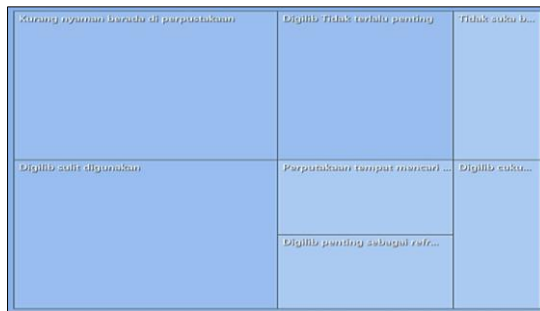


Figure 14. Hierarchy Chart of Student Results who Actively Use Digilib Instead of Visiting the Library

4.5.2 Students are more comfortable visiting the library than using Digilib

On the theme of students who are more comfortable visiting the library than using Digilib. This study consisted of 3 informants, namely students often visit the library and often use Digilib, students often visit the library and rarely use Digilib and students often visit the library and never use Digilib.

The explanation of the theme is displayed in the Hierarchy chart producing child nodes with the answer 'Digilib is important' which is the deepest color, with 2 answers from 2 different sources, 'Library atmosphere is quiet' with 2 answers from 1 source, 'Library is a comfortable place' with 2 answers from 1 resource person, 'Digilib is not very important' with 1 answer from 1 source, 'Digilib is very helpful' with 1 answer from 1 source, 'Never used Digilib' with 1 answer from 1 source and 'Digilib saves knowledge' with 1 answer from 1. Figure 15 results can be seen in the chart hierarchy below.

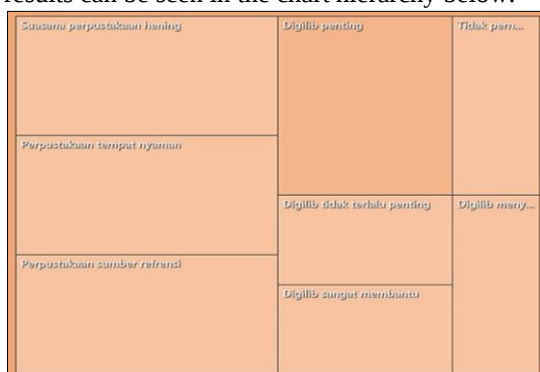


Figure 15. Hierarchical Chart of Results of Students Who Are More Comfortable Visiting the Library Compared to Using Digilib

4.5.3 Performance Aspect

In this research, there are 4 themes regarding aspects of Digilib acceptance. The theme of the first aspect of this research is the performance aspect. In the performance aspect, there are 8 child nodes starting from the least to the most answers, namely 'Useful for those who understand', 'Lectures depend on ability', 'Digilib is easily accessible', 'Yes Digilib makes productive', 'Don't look for references elsewhere', 'Self-independent', 'Digilib is not very useful to use' and 'Digilib is useful to provide many references'.

The results of the most answers on the performance aspect, namely the child nodes 'Digilib is useful for providing lots of references' is the deepest color, with 2 answers from 2 different sources, 'Library atmosphere is quiet' with 2 answers from 1 source, 'Library is a comfortable place' with 2 answers from 1 source, 'Digilib is not very important' with 1 answer from 1 source, 'Digilib is very helpful' with 1 answer from 1 source, 'Never used Digilib' with 1 answer from 1 source and 'Digilib saves knowledge' with 1 answer from 1 source. Below is Figure 16 the results of the performance aspect chart hierarchy.



Figure 16. Hierarchy Chart of Performance Aspect Results

4.5.4 Effort Aspect

The theme of the next aspect in this study is the aspect of effort. In the effort aspect, there are 9 child nodes starting from the answers with the faintest to the darkest colors, namely 'I don't know', 'Digilib is difficult to use outside of IT majors', 'Interaction with Digilib is smooth', 'Digilib is difficult to learn', 'Digilib requires more effort.', 'Interaction with Digilib is not smooth', 'Digilib does not require extra effort', 'Digilib is easy to use outside of the IT department', 'Digilib is easy to learn' and 'Digilib does not require extra effort'. Of the 9 child nodes, the most intense color is 'Digilib doesn't require more effort'. Figure 17 chart hierarchy of results from the effort aspect can be seen below.

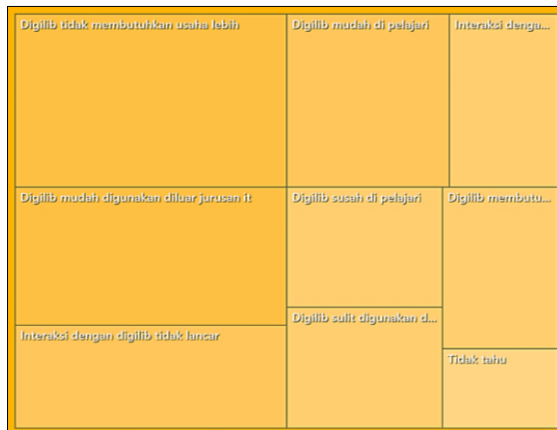


Figure 17. Hierarchy Chart of Effort Results.

You can see Figure 17 of the chart hierarchy above the most intense color which shows the most results, namely 'Digilib does not require more effort' with a total of 5 answers from 5 sources, 'Digilib is easy to use outside the IT department' with a total of 4 answers from 4 sources, 'Interaction with Digilib not current' with a total of 3 answers from 3 sources, 'Digilib is easy to learn' with a total of 3 answers from 3 sources, 'Digilib requires more effort' with a total of 2 answers from 2 sources, 'Digilib is difficult to learn' with a total of 2 answers from 2 sources, 'Interaction with Digilib went smoothly' with a total of 2 answers from 2 sources, 'Digilib is difficult to use outside the IT department' with a total of 2 answers from 2 sources and 'Don't know' with a total of 1 answer from 1 source.

4.5.5 Social Aspect

The theme of the next aspect in this study is the social aspect. On the social aspect, there are 5 child nodes starting from the fewest answers with the most answers, starting from 'Digilib is useful', 'Yes, it was recommended by friends', 'Not recommended by friends', 'Don't know the exact benefits' and 'Friends agree to use Digilib'. Of the 5 child nodes, 'Friend agrees to use Digilib' is the child node with the most answers. Figure 18. Hierarchical chart of the results of the social aspect can be seen below.

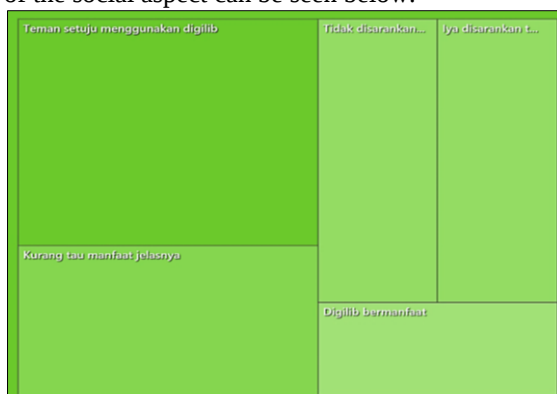


Figure 18. Social Aspect Results Hierarchy Chart.

From Figure 18 the chart hierarchy above the most answers are 'Friends agree to use Digilib' with 6 answers out of 6 sources, 'Don't know the exact benefits' with 4 answers out of 4 sources, 'Not recommended friends' with 3 answers out of 3 sources, 'Yes, it was recommended by a friend' with 3 out of 3 answers and 'Digilib is useful' with 2 out of 2 answers.

4.5.6 Aspects of Facilitating Conditions

The theme of the last aspect in this study is the facilitating condition aspect. In the facilitating condition aspect, there are 7 child nodes starting from the answer with the faintest color to the most intense, namely 'Needs guidance', 'Uncomfortable to operate Digilib', 'Received assistance', 'Convenient to operate Digilib', 'No need for guidance', 'Got no help' and 'No need for other equipment'. The most intense color results in the facilitating condition aspect are the child nodes 'No need for other equipment'. Figure 19 chart hierarchies of the results of the facilitating condition aspect can be seen below.

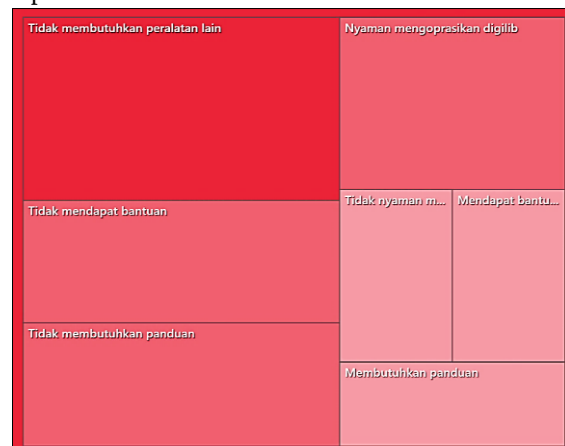


Figure 19. Hierarchy Chart of Facilitating Condition Aspect Results.

Based on Figure 19, the hierarchical chart with the most intense colors which shows the most results are 'No need for other equipment' with 6 out of 6 informants, 'Not receiving assistance' with 4 out of 4 informants, 'No need for guidance' with 4 out of 4 sources, 'Comfortable operating Digilib' with 4 out of 4 sources, 'Uncomfortable operating Digilib' with 2 of 2 sources, 'Receiving assistance' with 2 of 2 sources and 'Needs guidance' with 2 of 2 sources.

4.5.7 Resource Person Elaboration

Furthermore, the last theme in this study is the elaboration of the resource persons. In the resource person's elaboration there are 4 child nodes starting from the fewest answers to the most answers namely 'Usage Guide', 'Performance Improvement', 'View Improvement' and 'Access Improvement'. Of the 4 child nodes, 'Improved access' is the result of the most child nodes. The following is Figure 20 chart hierarchies as a result of the resource person's elaboration.

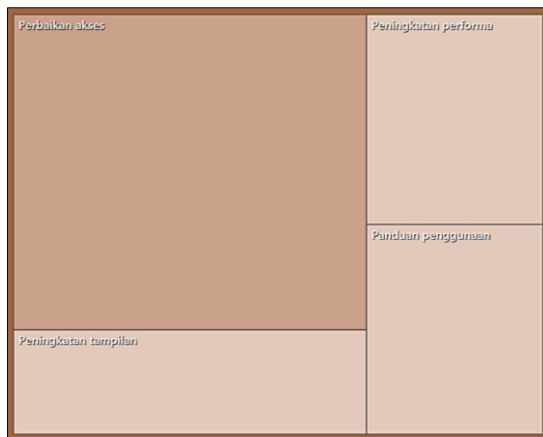


Figure 20. Hierarchy Chart of Elaboration Results of Resource Persons.

From Figure 20 the chart hierarchy above 'Access Improvement' is the child nodes with the most results, namely 3 out of 3 informants, 'Display improvement' has 1 interview result from 1 interviewee, 'Performance improvement' has 1 interview result from 1 interviewee and 'Usage Guide' There is also 1 interview result from 1 source.

Furthermore, in the results of the discussion of this study, all themes or aspects of digital library acceptance by UIN Sunan Ampel Surabaya students who have been determined get results in the form of the amount of coding obtained from data sources. The data is visualized using a chart hierarchy with two diagrams, namely the tree map chart hierarchy and the sun burst chart hierarchy as well as additional data reinforcement with the word cloud. From the results of the visualization of the sun burst chart hierarchical diagram as shown in Figure 21, it was found that the information or words that appear most often are based on the results of the interview transcripts of the 6 informants, these results can be seen from the densest color or the largest size.

In Figure 21 the child nodes that have the densest color include 'Digilib is important for students who often go to the library' on the theme of students who are more comfortable visiting the library than using Digilib, 'Digilib is difficult to use for students who have never been to the library' and 'Not comfortable are in the Library' to students who actively use Digilib instead of visiting the Library, 'Digilib is useful in providing lots of references' on the performance aspect, 'Digilib does not require more effort' on the effort aspect, 'Friends agree to use Digilib' on the social aspect, 'No equipment needed others' on the aspect of facilitating conditions and 'improved access' on the elaboration of the resource persons.

These various answers can prove that acceptance of Digilib by UIN Sunan Ampel Surabaya students is dominantly received positively with constructive answers.

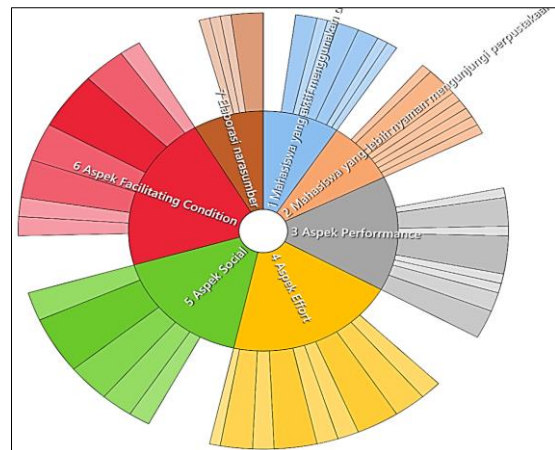


Figure 21. Sun Burst Chart Hierarchy of Analysis Results

Figure 21 above is a hierarchical sun burst chart which is displayed as a whole to find out the results of the analysis process in the NVivo software, a sun burst is a diagrammatic model in the form of a circle or sun used for visualization of research data by looking at each area of the diagram with different colors different, the wider and darker the color in the sun burst results are the most results.

Furthermore, Figure 22 results from the word cloud analysis in the form of the words that are most often mentioned or often appear as a whole in the interview results which are used as data reinforcement, these results can be seen from different sizes and colors, the more words that appear, the bigger the size the word. The word cloud results include 'Digilib', 'Reference', 'According to', 'For', 'Easy', 'Convenient', 'Maybe', 'Informants', 'Library' and some others. Figure 22 below shows the results of the word cloud used in this study.



Figure 22. Word Cloud Analysis Results

The results of the word cloud above resulted in the word 'Digilib' being mentioned 29 times, the word 'Reference' being mentioned 15 times, the word 'According' being mentioned 14 times, the word 'For' being mentioned 14 times, the word 'Easy' being mentioned 12 times, the word 'Convenient' is mentioned 10 times, the word 'Maybe' is mentioned 8 times, the words 'Informants' and 'Library' are

mentioned 6 times and so on until the smallest word size is mentioned 1 time.

V. CONCLUSION

In the process of implementing Content Analysis conclusions using the Computer-Assisted Qualitative Data Analysis Software (CAQDAS) technique on the NVivo software starting from the Import audio data interview stage, then the audio is transcribed into text, the transcript results are then coded on nodes, then the results Coding is grouped according to predetermined themes or parent nodes, after all data results are coded on nodes, data visualization is carried out so that it is easy to analyze using chart hierarchies and word clouds. The results of the chart hierarchy are in the form of tree map and sun burst and word diagrams. cloud.

The results of measuring qualitative analysis of digital library acceptance at the Central Library of UIN Sunan Ampel Surabaya by students of UIN Sunan Ampel Surabaya, it was found that acceptance tended to be accepted. The most dominant answers received were 'Digilib is important', 'Digilib is useful for providing lots of references', 'Digilib does not require extra effort', 'Friends agree to use Digilib' and 'No need for other equipment'. While the most dominant ones were not accepted or lacking were 'Uncomfortable being in the library' and 'Improved access'. From the results of this analysis it proves that the dominant digital library acceptance analysis was received positively with constructive answers for the digital library at the central library of UIN Sunan Ampel Surabaya

The limitations and suggestions from the results of this study are explained as follows the research instrument uses structured interviews which are relatively rigid so that it does not emphasize elaboration, for further research it is recommended to improve this. The number of informants in this study is limited to 6 student informants, for further research it is recommended to increase the number of informants so that the data obtained is more varied. In the next research analysis, it is recommended to use a different analytical model using other diagrams on NVivo in this study. It is advisable for future research to use other qualitative analysis software besides NVivo 12 plus which is a free version or trial version, to get access to better usage so that the results obtained are more robust and accurate.

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