

ONLINE PARENT-CHILD INTERNET ADDICTION TEST SCREENING & SCORING USING GOOGLE FORM & GOOGLE SHEET

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Abstract: The use of gadgets, which has increased significantly due to technological developments and the post-Covid-19 pandemic, has negative effects that can lead to addiction, both in adults and children. Gadget addiction is characterized by a person's inability to separate from their gadget. Before being declared to have gadget addiction, a test must first be carried out by a psychologist. This test is called PCIAT (Parent-Child Internet Addiction Test), which is based on PIMU (Problematic Interactive Media Use) criteria, and developed based on the Internet Addiction Test that has been widely used in clinical assessment. Currently, the PCIAT is web-based but still in English, while the one that has been translated into Indonesian is still conducted by psychologists manually using paper, which becomes inefficient and ineffective when faced with a large number of people taking the test. This research aims to make PCIAT screening and scoring online using Google Form and Google Sheet, so that it can be easily used by professionals and the public massively at one time, quickly, and reduce the use of paper. The result of this research, the availability of online PCIAT created using Google Form and Google Sheet, which is easy to use massively and faster in obtaining and processing screening data, so that it is faster to provide the analysis needed by psychologists.

Keywords: PCIAT, screening, scoring, google form, google sheet.

INTRODUCTION

Technological developments and the post-Covid-19 pandemic have significantly increased the use of gadgets. The Central Bureau of Statistics in the 2022 Indonesian Telecommunication Statistics catalog states that cellular phone users increased, from 65.87% in 2021 to around 67.88% in 2022. Internet users also increased from 62.10% in 2021 to 66.48% in 2022 [1]. According to the Indonesian Internet Service Providers Association (APJII), the internet penetration rate in Indonesia reached 78.19% in 2023. This means that 78.19% of Indonesia's total population is connected to the internet, with details based on community education groups as follows: (1) Postgraduate/S2/S3: 100%; (2) Bachelor/S1/D1/D2/D3: 97.61%; (3) SMA/SMK/Package C: 94.74%; (4) Junior High School/Package B: 85.42%; (5) Elementary School/Package A graduate: 67.20%; (6) Not yet graduated from elementary school: 30.16%; and (7) Not in school: 16,75% [2]. According to the We Are Social report, there are 185 million individual internet users in Indonesia as of January 2024, about 66.5% of Indonesia's total population of 278.7 million people [3]. The increase in cell phone and internet users not only has positive impacts but also negative impacts. One of them is gadget addiction.

Gadgets are electronic devices that have updates from day to day that make life more practical, so they have a great influence on human life, as well as on children [4]. Technically, gadgets refer to technological devices or services such as cell phones, computers, laptops, smart phones, internet, smart televisions, ipods, pen drives, email, Facebook, Youtube, Instagram and Twitter that are often used every day by someone, especially young people [5].

Gadget addiction is the behavior of an individual who cannot control and depend on the internet through gadgets such as smartphones, tablets, laptops, or portable gaming devices, or social media [6].

Dr. Kimberly Young, an American psychologist, paid special and serious attention to this gadget addiction until she published her research on internet addiction in 1998. According to Young, gadget addiction is the same as internet addiction, which is an individual who cannot control and depend on the use of internet-based technology [7].

Young argues that it is usually parents who first suspect that their children may have PIMU problems. PIMU (Problematic Interactive Media Use) is a behavior characterized by compulsive use, increased tolerance, and negative reactions after stopping the use of interactive media that interfere with a person's physical, mental, cognitive, and/or social functions. Therefore, Young developed the Parent-Child Internet Addiction Test (PCIAT) measurement tool to evaluate the condition of children who experience PIMU problems. PCIAT is designed to measure children's online activities from the parents' perspective, based on the Internet Addiction Test (IAT) [8], which is widely used in clinical assessment.

Currently, PCIAT has been conducted online based on web but in English. In Indonesia, it has been translated into Indonesian but the test is still done manually using paper, which makes the test inefficient and ineffective when faced with a large number of people taking the test, as well as the length of data processing of the test results.

PCIAT consists of 20 questions in the form of a closed questionnaire. According to Sugiyono (2010: 199), a questionnaire is a data collection technique by giving a set of questions or written statements to respondents to answer them. According to Arikunto (2010: 195), a closed questionnaire is a questionnaire that has provided answers so that the respondent only has to choose. Each questionnaire requires a validity and reliability test to qualify as a data collection tool [9]. PCIAT has been tested by Maharani, et al (2018) which resulted in the conclusion that IAT has a good reliability test and validity test, so it is empirically proven to be included in the science category and not pseudoscience [10], and can be used as an instrument for screening internet addiction in Indonesia [11].

In general, when a questionnaire is still in paper form, there are several disadvantages such as less interactive, limited question possibilities, using a lot of paper especially when a lot of respondents are needed, limited space and time, does not provide feedback to respondents and researchers, data collection and processing takes a long time, costs more and is less effective [12].

According to Rahardja, et al (2018), Google Form is a form facility that can be used to obtain a person's data in the form of a questionnaire or registration, which is provided by the Google platform and is easily used for free in Google Drive on condition of having a Google account [13].

Some of the advantages of using Google Forms are (1) collecting respondent data faster than using paper manually; (2) distributing questionnaires more easily and quickly via email, social media platforms or websites; (3) processing data faster, which is connected to Excel or Google Sheet [14]; (4) respondents can fill out surveys anonymously without revealing personal data; (5) free of charge; (6) other features are available besides surveys; (7) easy because there are already templates and examples [15]; (8) encourages paperless culture, no more printing forms, even tabulation of results is automatic and online [16]; and (9) data collection and presentation of individual information and summary of overall results in real time based on the internet [17].

Based on the explanation above, researchers consider it necessary to make PCIAT screening and scoring online using Google Form and Google Sheet.

RESEARCH METHOD

This research is an R&D (Research & Development) study, with four stages of development, namely Define, Design, Development, and Dissemination. At each stage, researchers always conduct interviews with psychologists who focus on the problem of gadget addiction. At the define stage, researchers identified and defined the problem, namely how to develop PCIAT which was previously manual using paper to be online. Then continued with a literature study, looking for articles, journals, and similar research related to the research. At the design stage, the researcher made a PCIAT screening using Google Form. At the development stage, researchers worked with psychologists to evaluate whether the Google Form made was in accordance with PCIAT and was tested. Finally, at the dissemination stage, researchers distributed Google Forms to research subjects.

The subjects of this study were student guardians at SDIT Al Iman Bintara from grade 1 to grade 6, with a total of 516 students. This research took place from May - June 2024.

The data collection technique of this research is an interview with a psychologist to analyze the problems and needs of the Google Form, as well as a questionnaire to determine the satisfaction of using Google Form, and a Google Form trial..

RESULT AND DISCUSSION

Based on interviews with psychologists at the define stage, PCIAT has been conducted by filling out questionnaires in paper form (manually). The main obstacle during doing this is converting the results of filling out the questionnaire from paper form into an Excel file, especially when there are many respondents and at one time.

Referring to the stages of R&D (Research & Development) research, the following are the results of PCIAT development and discussion.

- 1) The first page that appears when users access the Google Form link.



Figure 1. Home Page

- 2) The second page that appears after pressing the Next button on the main page.

The image shows the "Data Responden" (Respondent Data) page of the Google Form. It contains instructions for parents/guardians to fill out the form. The instructions state that the data will be used for a parenting event and that the form is specifically for one child. It provides an example: "anak pertama di kelas 1 Al Farabi, anak kedua di kelas 2 Alkhowarizmi, anak ketiga di kelas 3 Sa'ad, berarti mengisi link kuesioner sebanyak 3x." (first child in class 1 Al Farabi, second child in class 2 Alkhowarizmi, third child in class 3 Sa'ad, means filling out the questionnaire link 3 times). A note defines "Gadget/Gawai" as smart TV, smartphone/handphone, laptop, tablet/ipad, tv, and kabel. The form has three input fields: "Tanggal Pengisian Kuesioner" (Date of questionnaire completion) with a date picker, "Nama Lengkap Anak" (Full name of the child) with a text input field, and "Kelas Anak" (Child's class) with a dropdown menu showing "Kelas 1 Umar Bin Khattab".

Figure 2. Respondent Data Entry

- 3) The third page contains twenty (20) questions based on the PCIAT (Parent-Child Internet Addiction Test) which will appear after filling in all the questions on the second page and pressing the Next button.

Bagian Satu

Kuesioner bagian satu ini terdiri dari 20 pertanyaan.

Silakan Ayah/Bunda baca perlahan tiap pertanyaan dengan hati-hati, dan berikan jawaban yang sesuai dengan kondisi anak untuk setiap pertanyaan.

Note:
Gadget/Gawai = smart TV, smartphone/handphone, laptop, tablet/ipad, tv kabel

Seberapa sering anak anda melanggar batas waktu yang anda tetapkan dalam penggunaan gadget? *

Tidak Pernah
 Jarang
 Kadang-kadang
 Sering
 Sering Sekali
 Selalu

Seberapa sering anak anda mengabaikan tugas rumah tangga (misal merapikan mainan) untuk lebih banyak menghabiskan waktu dengan gadget? *

Tidak Pernah

Figure 3. PCIAT Question Page

- 4) The fourth page contains eight (8) supporting questions created by the psychologist at the development stage. This page will appear after filling in all the questions on the third page and pressing the Next button. These eight questions have a function to support PCIAT so that it can further analyze the results of PCIAT scoring.

Bagian Dua

Kuesioner bagian dua ini terdiri dari 8 pertanyaan.

Silakan Ayah/Bunda baca perlahan tiap pertanyaan dengan hati-hati, dan berikan jawaban yang sesuai dengan kondisi anak untuk setiap pertanyaan.

Note:
Gadget/Gawai = smart TV, smartphone/handphone, laptop, tablet/ipad, tv kabel

Berapa jam/hari anak online atau bermain gadget? *

< 2 jam/hari (kurang dari 2 jam/hari)
 2 - 5 jam/hari
 > 5 jam/hari (lebih dari 5 jam/hari)

Apakah anak anda sudah bermain games online? *

iya, sudah bermain games online
 tidak, belum bermain games online

Jika sudah bermain games online, games apa saja? (jika menjawab tidak, silakan isi dengan angka 0) *

Figure 4. Supporting Question Page

- 5) The last page, in the form of a closing as well as to save the respondent's answer by pressing the Submit button.



Figure 5. Closing Page

Before conducting a trial to the guardians of SDIT Al Iman Bintara students, the researcher first asked psychologist to test the developed media. This test was conducted to obtain input in the form of suggestions or improvements as well as an assessment of the development of PCIAT online using Google Form.

- 6) From the results of the pilot test by the psychologist and evaluated, the following results were obtained.

Tabel 1. Evaluation Results

Question	Score				
	Very Easy	Easy	Quite Easy	Difficult	Very Difficult
How easy is it to use the google form?	v				
	Very Good	Good	Fair Good	Bad	Very Bad
What is the quality of the features in the google form?	v				
	Very Fast	Fast	Fast Enough	Slow	Very Slow
How is the performance of google form accessing data?	v				
	Very Satisfied	Satisfied	Quite Satisfied	Dissatisfied	Very Dissatisfied
Are you satisfied with this goole form?	v				

Based on table 1, it can be seen that psychologist find it easy to conduct PCIAT test using Google Form, the quality of features in Google Form is considered very good, Google Form's performance in accessing data is considered fast compared to manually, and psychologist is satisfied with the development of PCIAT using Google Form.

From the results of the second interview after piloting the development of PCIAT using Google Forms, psychologist thought that PCIAT was quite fast to develop and easy to make. In the implementation of the trial, psychologist thought that the link was easy to access and could be done anywhere and anytime, easy to understand how to fill in and fast enough to do it. When asked if there were any differences in the PCIAT assessment before and after using Google Form and Google Sheet, the psychologists answered that there were, the data was collected more quickly, easy to fill in, and fast data processing.

7) After that, the dissemination stage was carried out to 516 guardians of SDIT Al Iman students. The data that has been submitted by respondents will appear in a Google Sheet as shown in Figure 6 below.

Figure 6. Respondents' Submit Results in Google Sheet

8) After the data collection period is complete, scoring is carried out based on PCIAT scoring. Then the scoring results are converted to Categories, which are obtained from the total score of 20 questions based on the interpretation of scores in PCIAT.

	A	B	D	AU	AV
1	Timestamp	Tanggal Pengisian Kuesioner	Kelas Anak	Total Skoring	Kategori
2	5/25/2024 16:55	5/25/2024	Kelas 1 Abu Bakar Ash Shiddiq	32	Ringan
3	5/26/2024 13:07	5/26/2024	Kelas 1 Abu Bakar Ash Shiddiq	31	Ringan
4	5/26/2024 15:47	5/26/2024	Kelas 1 Abu Bakar Ash Shiddiq	43	Ringan
5	5/28/2024 11:24	5/28/2024	Kelas 1 Abu Bakar Ash Shiddiq	41	Ringan
6	5/26/2024 15:14	5/26/2024	Kelas 1 Al Farabi	31	Ringan
7	5/28/2024 8:14:1	5/28/2024	Kelas 1 Al Farabi	32	Ringan
8	5/28/2024 8:32:1	5/28/2024	Kelas 1 Al Farabi	31	Ringan
9	5/28/2024 8:41:0	5/28/2024	Kelas 1 Al Farabi	32	Ringan
10	5/28/2024 8:43:2	5/28/2024	Kelas 1 Al Farabi	38	Ringan
11	5/29/2024 20:49	5/25/2024	Kelas 1 Al Farabi	38	Ringan
12	5/29/2024 21:13	5/29/2024	Kelas 1 Al Farabi	40	Ringan
13	5/30/2024 9:24:1	5/30/2024	Kelas 1 Al Farabi	36	Ringan
14	5/25/2024 16:08	5/25/2024	Kelas 1 Umar Bin Khattab	42	Ringan
15	5/25/2024 17:11	5/25/2024	Kelas 1 Umar Bin Khattab	32	Ringan
16	5/26/2024 19:45	5/26/2024	Kelas 1 Umar Bin Khattab	40	Dinnan

Figure 7. PCIAT Data Scoring

Based on the stages of the research, it appears that screening and scoring PCIAT using Google Form and Google Sheet is an easy way to obtain results.

This is in accordance with previous studies which state that accessing Google Form does not require a long time, is easy to use, easy to understand, makes it easy to collect Midterm Assessment data, and is satisfied with Google Form [18]. Google Form can provide a person's database quickly [17]. Users are not bound by space and time, very easy to create and apply, test results or scores can be known quickly [19]. The use of Google Form is very effective, efficient, practical and easy so that it can minimize the use of paper [20]. Google Form is open source, easy to operate and integrate with related Google services [21]. Google Form is considered quite effective and shortens teacher performance in processing student learning outcomes [22]. Favoring the use of Google Form as an online questionnaire, easy to access, more efficient time, saves the use of paper, understands how to use it, and the display is easy to understand [23]. The use of Google Form provides convenience in data collection and analysis, as well as quick feedback [24].

CONCLUSION

Based on the analysis of the results and discussion, it can be concluded that PCIAT screening and scoring can be done using Google Form and Google Sheet. As evidenced by the results of the research discussion which is in line with psychologist interviews and trials which state that psychologists find it easy to do PCIAT using Google Form, the quality of features in Google Form is considered very good, Google Form's performance in accessing data is considered fast compared to manually using paper, and psychologists are satisfied with the development of PCIAT using Google Form because it is quite fast and easy to make.

In conducting the pilot test, psychologists found the link easy to access and can be done anywhere and anytime, easy to understand how to fill in and fast enough to do so. Faster data collection, easy filling, and fast data processing are the differences between PCIAT manually and PCIAT using Google Forms.

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