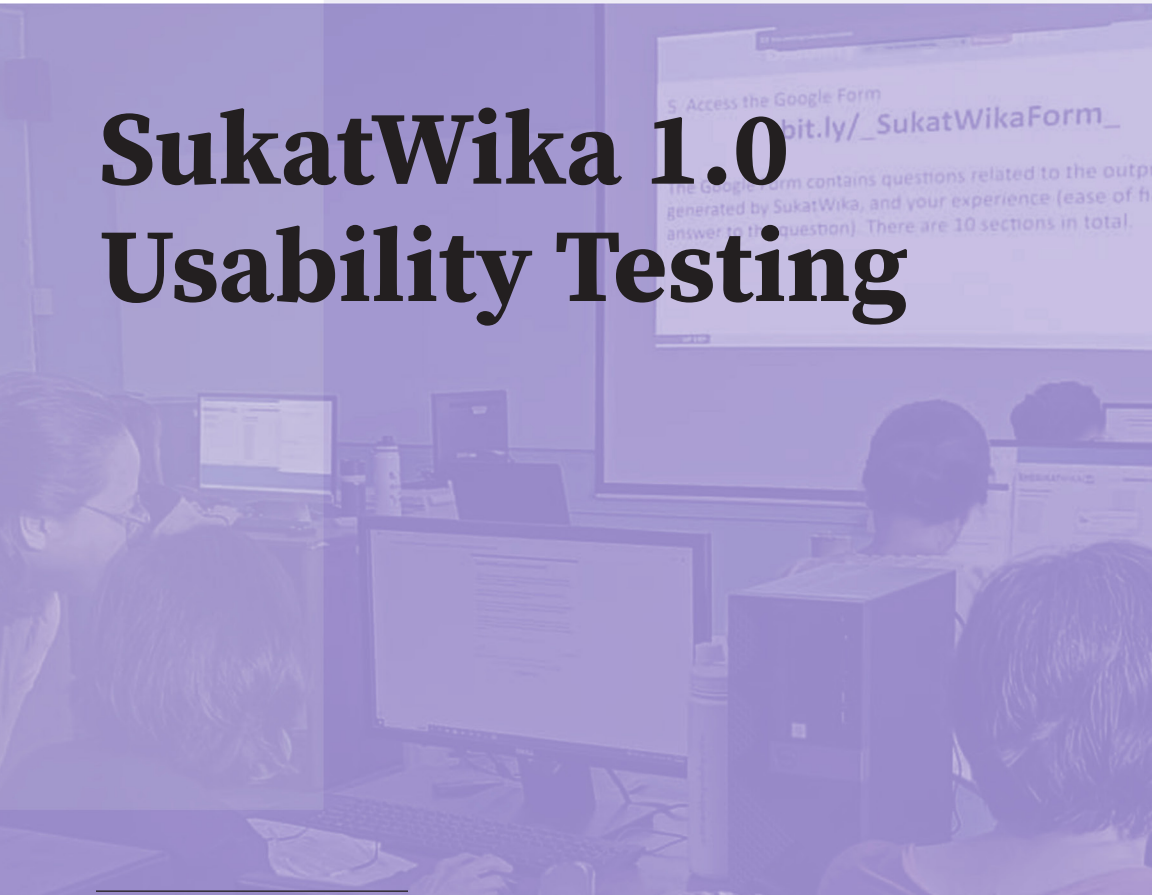
Proceedings 2025-30

SukatWika 1.0 Usability Testing



17 September 2024

Vidal A. Tan Hall, University of the Philippines Diliman
Quezon City, Philippines

Prepared by Kathrina Lorraine Lucasan, Astrid Sister, Kaye Danielle Sandigan, and Dina Ocampo

upcids Education Research Program

UNIVERSITY OF THE PHILIPPINES
CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES

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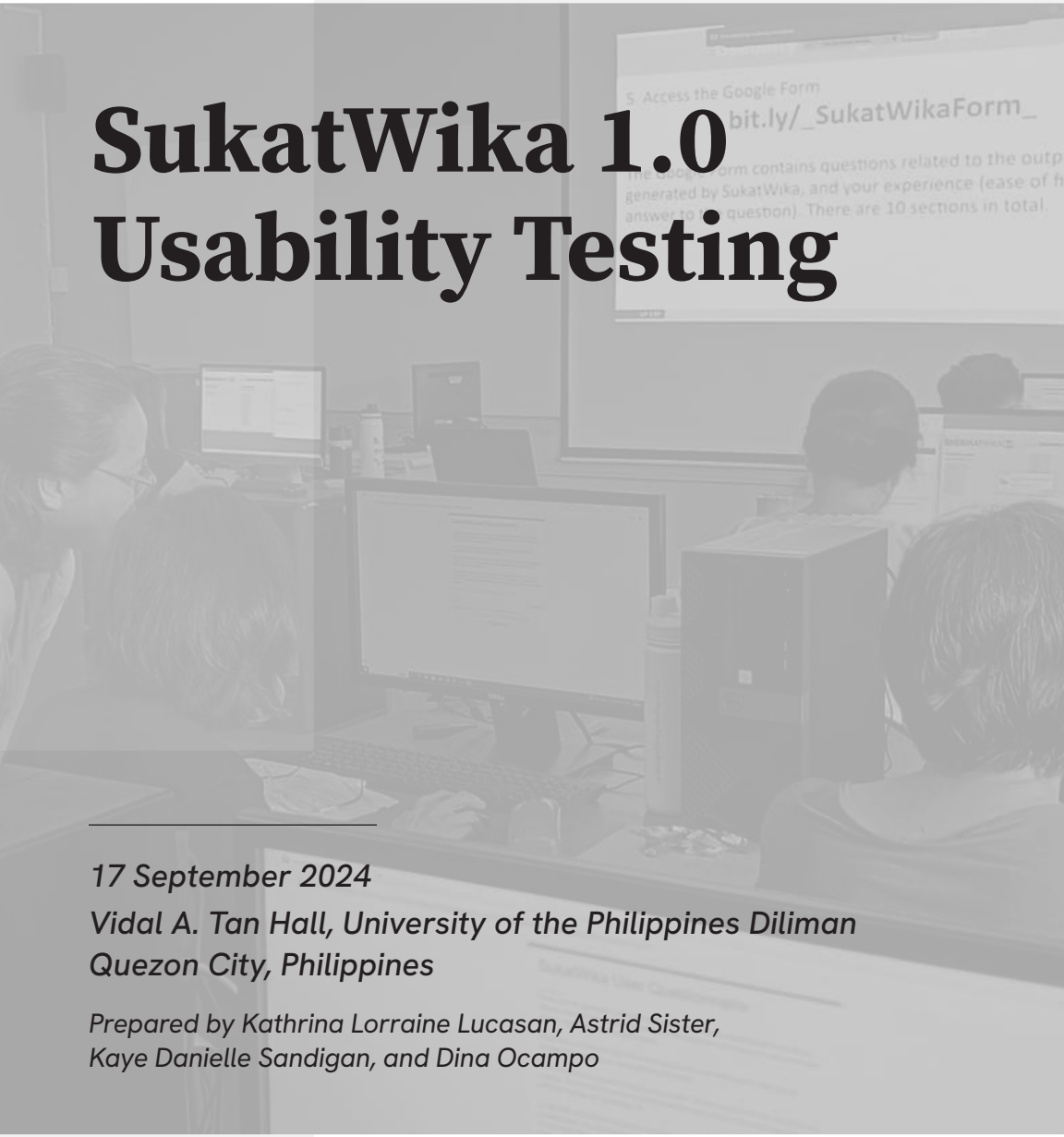

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UP CIDS Proceedings
is published by the

University of the Philippines
Center for Integrative and Development Studies
Lower Ground Floor, Ang Bahay ng Alumni
Magsaysay Avenue, University of the Philippines
Diliman, Quezon City 1101

cids.up.edu.ph

Telephone: (02) 8981-8500 loc. 4266 to 4268 / (02) 8426-0955
Email: cidspublications@up.edu.ph
Website: cids.up.edu.ph

ISSN 2718-9295 (Print)
ISSN 2718-9309 (Online)

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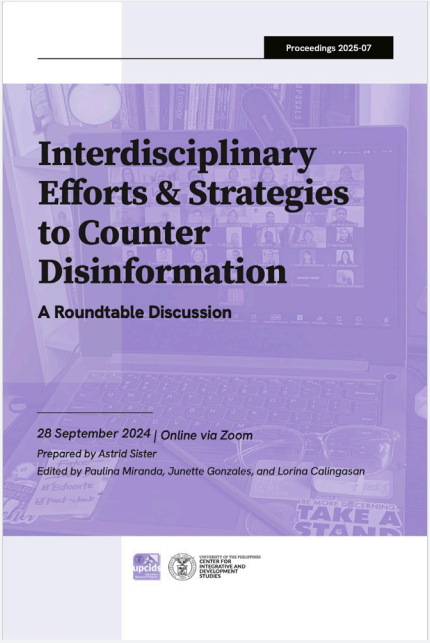

Interdisciplinary Efforts and Strategies to Counter Disinformation_A Roundtable Discussion

Aiming for Seamless and Integrated Lifelong Learning Delivery in the Philippines

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Foreword

SukatWika 1.0 is a software that serves as a psycholinguistic analyzer for four languages used in the Philippines, namely: Filipino, Sinugbuanong Binisaya, Ilokano, and English. It is a technological innovation that supports the study of printed language and can be a helpful tool for researchers, teachers, and content developers alike. SukatWika 1.0 was developed by the University of the Philippines (UP) Center for Integrative and Development Studies - Education Research Program (CIDS-ERP) in collaboration with the UP Institute for Electrical and Electronics Engineering Digital Signal Processing Laboratory (Lucasan et al. 2019; UP CIDS 2024).

These proceedings document a usability testing process for SukatWika 1.0. This was held to solicit insights from potential users of the software in view of the further enhancement of SukatWika. This activity was held on September 17, 2024, at the UP Information Technology Development Center, Vidal A. Tan Hall, UP Diliman, from 9:00 am to 12:00 pm. Participants representing stakeholders and target users of the analyzer took part in the usability testing.

This paper follows the program flow of the usability study, beginning with the history of SukatWika and its current functions, user experience data collection, and UP CIDS-ERP's ways forward, given the gathered data.

The proceedings also present the collated input of the testing participants during the focus group discussion which immediately followed the usability testing process. This input will give evidence basis for the necessary refinements to the software and give rise to an improved version in SukatWika 2.0.

Opening and Introduction

The Development of SukatWika 1.0

The usability testing for SukatWika began with an introduction of the participants and the activity. To provide context to the process, it was important to share with the participants the groups that were behind the development of SukatWika, as well as the history and development of this language technology that is being developed by the UP CIDS-Education Research Program.

HISTORY

In 2019, the University of the Philippines Center for Integrative and Development Studies-Education Research Program (UP CIDS-ERP) was in the process of developing the Multi-Literacy Assessments for Filipino Children (MLAF). MLAF is an early literacy assessment battery for Kindergarten to Grade 3 (K to 3) children (Ocampo, Fua, and Lucasan 2023). UP CIDS-ERP wanted to devise a way to ensure that the assessments to be developed contained words that typical Filipino K to 3 children usually encounter in printed text. This was when the idea of a psycholinguistic analyzer for written text arose.

The development of SukatWika 1.0 spanned over six months, from May to November 2019. Though MLAF administration was halted over the pandemic, other research initiatives of UP CIDS-ERP continued. These provided the avenues to further try out the functions of SukatWika 1.0 (TalkTogether 2021a; 2021b).

It was also during this period that copyright for the program was awarded to the University of the Philippines. Prior to its awarding, representatives of UP CIDS-ERP were invited to attend the University Innovation Fellowship of the UP Technology Transfer and Business Development Office. Through this fellowship, UP CIDS-ERP was taught regarding the value of the program and the possibility of marketing it to the public.

FEATURES AND USES

A portmanteau in the Filipino language, SukatWika is a blend of two words: *Sukat* means to measure, while *wika* means language. Therefore, SukatWika is a tool that can be used to measure aspects of language. As a psycholinguistic analyzer, it can analyze texts in Filipino, English, Hiligaynon, Sinugboanong Binisaya, and Ilokano. It can determine paragraph and sentence lengths, word lengths, and word frequency. It also has a word search function (Lucasan et al. 2019; UP CIDS 2024).

Given a text document in these languages, the program then provides the lengths and frequencies of lexical and grammatical units, as well as an interface for searching lexical units within the text. The features of SukatWika 1.0 are listed below:

- **Paragraph length counter.** This displays the total number of paragraphs in the text, and enumerates the frequency of paragraph lengths, answering the question "How many paragraphs contain n sentences?"

- **Sentence length counter.** This displays the total number of sentences in the text, and enumerates the frequency of sentence lengths, answering the question, "How many sentences contain n words?"

- **Phoneme counter.** This displays the total number of phonemes in the text, tabulates the frequency of appearance of individual phonemes, and enumerates the frequency of word lengths by phoneme, answering the question "How many words contain n phonemes?" It also gives a list of unique words in the text, ordered by the number of phonemes in each word.

- **Word frequency counter.** This displays the total number of words in the text, tabulates the frequency of appearance of unique words in the text, and sorts the words alphabetically and by frequency.

- **Word length counter.** This displays the total number of syllables in the text, and enumerates the frequency of word lengths, answering the question "How many words contain n syllables?" It also gives a list of unique words in the text, ordered by the number of syllables in each word.

- **Word searcher.** This allows the user to input a string of characters and gives a list of words containing the string. It also provides options to filter the words displayed by the number of syllables contained in the word, as well as the position of the string in the word (i.e., start, middle, or end of the word).

For the rules of orthography used, the rules for syllabication and phonemic transcription of individual words were based on official orthographies for Filipino (Almario 2014), Sinugbuanong Binisaya (Akademiyang Bisaya 2011), and Ilokano (Komisyon sa Wikang Filipino 2012). For English, phonemic transcriptions were extracted from the CMU Pronouncing Dictionary (Carnegie Mellon University 2014), while syllable counts were performed by simply counting the number of vowels in the phonemic transcription, since each syllable in an English word is known to contain only one consonant or vowel sound (Malone 1957).

Tokenization rules were identical for all four languages: words were tokenized based on whitespace, while sentences and paragraphs were tokenized based on end-of-sentence and newline characters. The parsing rules for each type of analysis were then encoded as Python functions and used in the succeeding scripts to produce the necessary outputs.

APPLICATIONS OF SUKATWIKA 1.0

SukatWika 1.0 was used in several projects that required analysis of words and texts to develop materials, and tools for research projects. To demonstrate, below are brief descriptions of these projects and how using SukatWika helped create more developmentally appropriate and precise word lists and provide input for the leveling of literacy materials for young readers.

Development of the wordlists in the Multi-Literacy Assessments for Filipino Children (MLAF) 1.0 and 2.0

UP CIDS-ERP consolidated learner's materials from the Department of Education (DepEd) Learning Resources (LR) Portal. This consolidated text was processed through SukatWika to determine the words that were in the materials–their features and frequency counts. For the MLAF 1.0 development, this data helped validate whether selected words were words which learners were exposed to in school.

During the development of the beginning-of-year, middle-of-year, and end-of-year assessment forms for MLAF 2.0, SukatWika 1.0 was used to determine where words would be included. For instance, "the" occurred 9,673 times while "family" occurred only 69 times. Given this data, it was decided that for the English Spelling test, the item "the" should be put in the beginning-of-year assessment since it occurred more frequently than "family." The likelihood that learners encountered it in their daily lessons was high. "Family" was put in the end-of-year spelling list instead (Ocampo, Fua, and Lucasan 2023).

Validation of Literacy Assessments in Sinugbuanong Binisaya

Apart from the development of MLAF in Filipino and English, SukatWika 1.0 was also used in the development of decoding and reading comprehension assessments in Sinugbuanong Binisaya (Lucasan 2021). Similar to the MLAF, consolidated Sinugbuanong Binisaya learner's materials were processed through SukatWika. The results, which showed the lengths of sentences, paragraphs, and words in the learner's materials, were adopted in the wordlists and texts included in the assessment.

Selection and analysis of words for the Age of Acquisition study of the Global Challenges Research Fund-UK Research and Innovation (GCRF-UKRI) TalkTogether Project

For the Age of Acquisition study (Dulay and Nag 2021), SukatWika helped determine words with the same "base forms" in the wordlist (e.g., masaya and masayahin, which have "saya" as a common base) so that they would not repeat. For the Morphology Study, the word search function was used to determine the complexity of texts for a particular grade or key stage (TalkTogether 2021a; TalkTogether 2021b). For both studies, the analyzer was used to determine syllable, phoneme, and frequency counts.

SukatWika 1.0's use, functions, and possible future steps with regard to its continued development have been presented in various conferences, fora, and classes. Participants of these academic gatherings have mentioned the analyzer's potential not only to conduct research related to text complexity but also to develop better learners' materials and assessments.

Development of TuklasBasa: An Early Literacy Lesson Package for Community Learning Hubs

This project aims to develop instructional materials for early readers who participate in community learning hub teacher/tutoring sessions (UP CIDS 2024). To develop the lessons, SukatWika was used to identify high frequency words so that these could be integrated into the lessons, particularly for sight word development.

Development of High Frequency Word Lists

One of the ongoing projects of the Education Research Program is the development and validation of high frequency word lists for Kindergarten to Grade 3, generated through SukatWika. This project intends to provide guidance to teachers about words which learners will meet most frequently in storybooks and learning materials at specific grade levels. This could potentially aid in the curriculum development for early literacy as well as the sight word development among young readers (Ocampo 2024).

Usability Testing Methods

RATIONALE

The purpose of usability testing and this workshop was to test the functionality of SukatWika in real-time with real users. The goal was to evaluate the experience of SukatWika 1.0 users while navigating and doing tasks through the application. These could potentially reveal the strengths and weaknesses in the design of the SukatWika's user interface which enable or hinder ease of using the app. Additionally, first time users of SukatWika would also be able to explore the current functionality of the app and provide input on what other capacities should be integrated into the design and programming of the app.

PROFILE OF PARTICIPANTS

The 18 participants who took part in the usability testing of SukatWika 1.0 were teachers, literacy researchers, textbook writers, publishers, government representatives, and software programmers. Of the 18 participants, eight (8) were teachers. Among these teachers, one (1) was a textbook writer and parent, two (2) were literacy researchers, and two (2) were government school representatives. Half of the teachers taught in basic education, while the other half taught in higher education. Four (4) participants were representatives of different publishing houses. Of these four (4), one (1) was also a teacher.

Six (6) of the participants were representatives of government offices. Five (5) of them were from DepEd offices, while one (1) was from the National Library of the Philippines. One (1) participant from the DepEd had a programming background.

Two (2) other participants rounded up the list of usability testers. A representative from the CIDS administrative office, who is in-charge of technical support, also participated, and one (1) UP student. The four (4) members of the UP CIDS-ERP present aided the participants as needed.

Annex A shows the list of participants and their user category based on their professional designation and as indicated in their response in the Google Form.

■ **Figure 1.** On-site Hosts and Participants of the SukatWika 1.0 Usability Testing

INSTRUMENTS

Three instruments were used during the usability testing: First was the SukatWika app, which was the object of the testing process. Integrated in this app were the texts which would be the material on which the participants would apply the SukatWika capabilities.

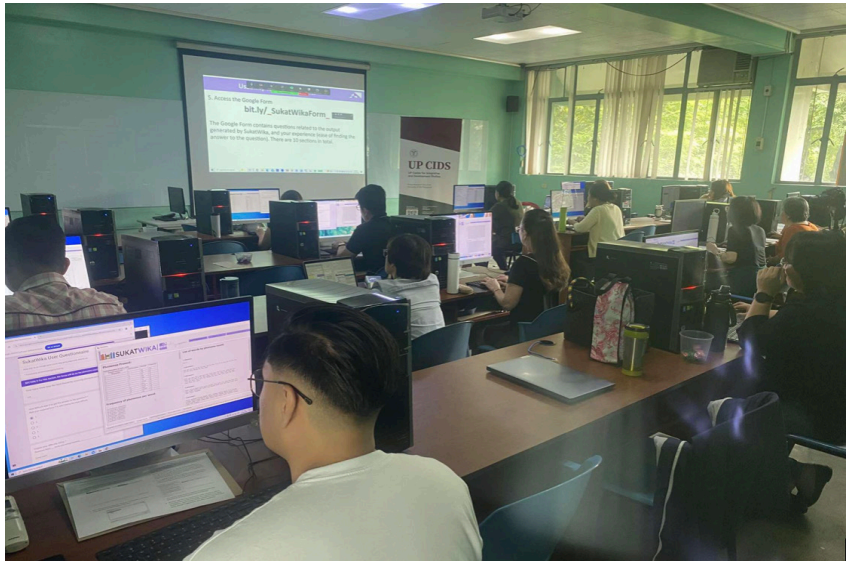
The second tool was a questionnaire developed with instructions and questions about the various tasks. Using a Google Form, the participants were requested to write about their experiences while using the app. The Google Form was made up of 10 sections. Two of the sections explained the activity, prompted the participant to run SukatWika already prior to accomplishing the form, asked for the participant's name and user category, and other comments that participants may have had regarding the Form and SukatWika. The eight remaining sections pertained to functions of SukatWika. Participants accomplished a total of 17 tasks, with 1-2 tasks per section. For each task, they were asked to rate their ease and speed of finding the answer from the SukatWika results using a Likert scale (1-5) and to explain their ratings. Annex B shows the questions in the questionnaire.

Finally, there were focus group discussion questions. The questions of the FGD intended to confirm the responses on the questionnaire. The questions were:

1. What features of SukatWika 1.0 should be retained?
2. What features of SukatWika 1.0 should be improved?
3. What features should be added to SukatWika 1.0?

MECHANICS

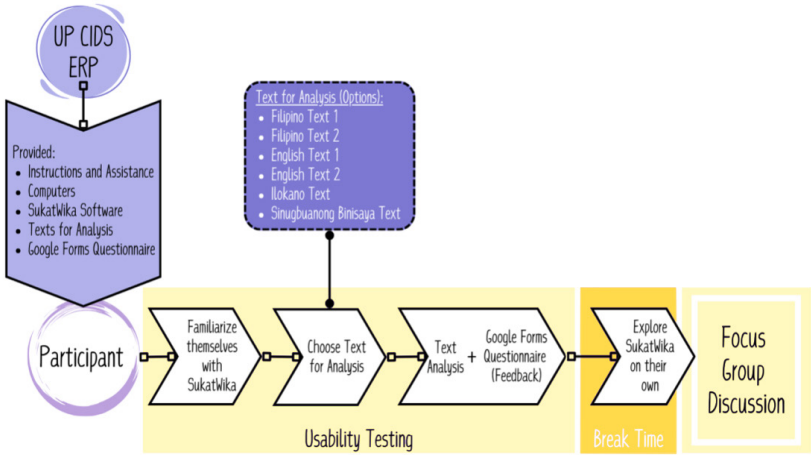
Participants ran the SukatWika program on their designated computers and answered an accompanying online questionnaire on Google Forms to document their experience. ERP provided all the necessary equipment and materials: the computer, software, and documents.



■ **Figure 2.** Usability Testing Proper

One hour was dedicated to the usability testing process. During this time, they familiarized themselves with the SukatWika tool on their computers. After this, each participant was free to choose one document to analyze. They also chose the language of the text they would work with. However, the SukatWika team requested participants familiar with Ilokano and Sinugbuanong Binisaya

to try text written in these languages instead of selecting the English or Filipino reading materials. The participants simultaneously worked on the textual analysis and outputs, and their feedback on the Google Form, which had a total of ten sections. At the start, some technical issues came up, such as the lack of access to the Google Form because of intermittent internet connectivity, as well as the poor processing speed of one computer. The latter was addressed by replacing the computer used by the participant. Figure 1 shows the mechanics process flow.



■ **Figure 3.** SukatWika 1.0 Usability Testing Process Flow

In general, participants worked silently and independently to complete the whole usability testing process, with some working for an hour, while others took as much as one hour and 35 minutes to complete the tasks.

During the break, they were also given time to further explore the tool on their own.

Participants had the option to use six (6) texts. Two (2) of the texts were in Filipino, two (2) were in English, one (1) in Sinugbuanong Binisaya, and one (1) in Ilokano. Table 1 describes the documents used during the study.

Table 1. Texts Used During the Usability Testing

DOCUMENT NAME	NUMBER OF PAGES	NUMBER OF WORDS
Filipino Text 1	1	374
Filipino Text 2	706	162,383
English Text 1	1	372
English Text 2	299	69,440
Ilokano Text	84	2,290
Sinugbuanong Binisaya Text	67	2,181

Results of the Google Form Questionnaire

The following sections discuss the texts selected by the participants, the results per text, accompanied by tables that summarize the responses, the ratings based on functionalities of SukatWika, and the explanations of participants for these ratings.

TEXTS SELECTED BY THE PARTICIPANTS

Half of the participants (n = 10) used either variation of the English text, while 30 percent used the Filipino text (n = 6). Two (2) participants looked at the Ilokano text, and another two (2) analyzed the Sinugbuanong Binisaya text (see Table 2).

Table 2. Choice of Text

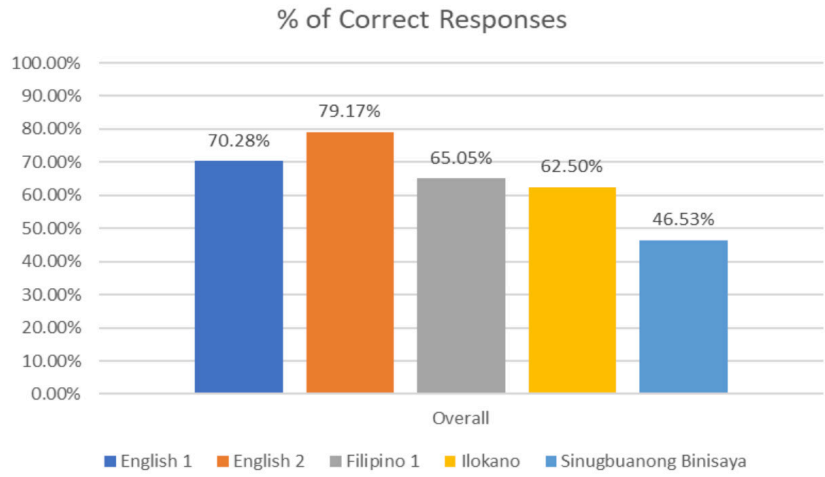
TEXT CHOICE	NUMBER OF PARTICIPANTS WHO USED THE TEXT	% OF TOTAL
English text 1	5	25.0 %
English text 2	5	25.0 %
Filipino text 1	6	30.0 %
Filipino text 2	0	0%
Ilokano text	2	10.0 %
Sinugbuanong Binisaya text	2	10.0 %
Total	**20**	**100.0%**

Two of the participants opted to repeat the process when they noted that there was time to do so. One of them used two different texts (Filipino first, and then the Ilokano text on her second turn) while the other one opted to use the same text (Sinugbuanong Binisaya) for both turns.

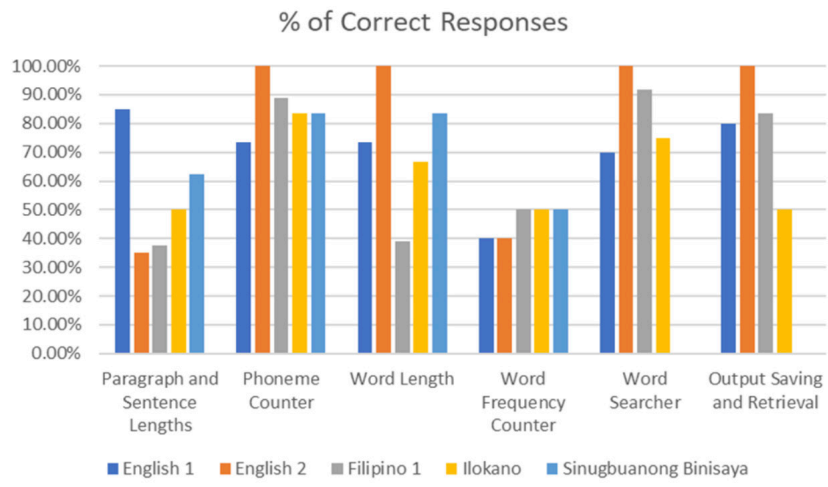
OVERALL RESULTS

Correct Responses

Overall, the participants who used the English 2 text had the highest average of correct responses (79.17 percent), followed by those that used the English 1 text (70.28 percent). Figure 4 shows the overall percentage of correct responses per text, while Figure 5 shows the breakdown per task and kind of text.



■ **Figure 4.** Overall Correct Responses

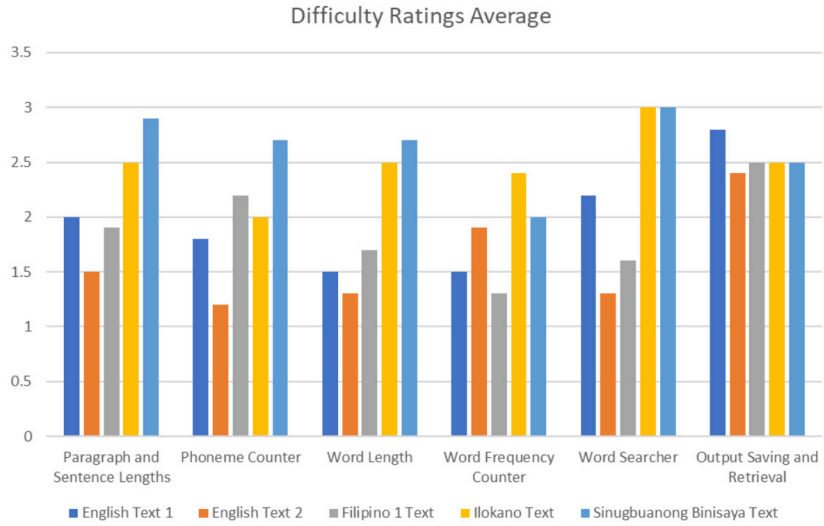


■ **Figure 5.** Correct Responses Per Text

Difficulty

In terms of difficulty, the rating scale used was from 1-5, with 5 being the most difficult. A common area with the most difficulty was the Output Saving and Retrieval function, as shown in Figure 6.

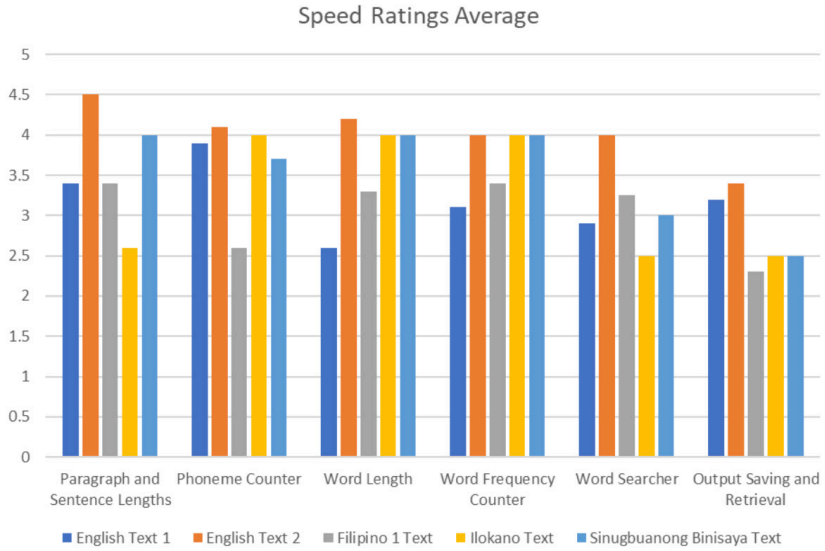
Relatively, participants who analyzed the English (1 & 2) texts and Filipino text reported less difficulty across most areas. On the other hand, participants that used the Ilokano and Sinugbuanong Binisaya texts rated certain sections difficult on average, such as Paragraph and Sentence Lengths, Word Searcher, and Word Length.



■ **Figure 6.** Participants' Difficulty Ratings

Speed

The same scale (1-5) was used for speed. In contrast to difficulty, a higher speed rating would mean that a task is faster to accomplish. Consistent with the difficulty ratings, Output Saving and Retrieval garnered the lowest speed ratings for all groups on average. There are certain areas with relatively low speed ratings for some texts: Paragraph and Sentence Lengths and Word Searcher for the Ilokano text and the Phoneme Counter for the Filipino text. These are shown in Figure 7.



■ **Figure 7.** Participants' Speed Rating by Text

QUANTITATIVE RESULTS BY TEXT

English Text 1

A total of five participants chose to use the English Text document. These were a government representative/librarian, two teachers, and two publishing house representatives. Annex C shows a summary of their responses.

Correct Responses

Measured by the number of correct responses, all five participants answered the number of sentences in the shortest paragraph and the number of words in the shortest sentences correctly. However, zero participants were able to answer correctly on the task of identifying the first two words that occurred the least frequently in the text.

Difficulty

All five participants found the following tasks easy to do: (i) giving three words with three syllables in the text; (ii) identifying the most frequently occurring word/s in the text; and (iii) identifying the number of words in the shortest

and longest sentences. On the other hand, participants rated the level of identifying the number of sentences in the shortest/longest paragraph and saving the output as relatively difficult among all tasks. For the former, it was because it was the first task in the questionnaire and participants were still familiarizing themselves with it. For the latter, the use of the "export" instead of "save" button was a source of confusion for some participants.

Speed

For those who used the English Text document, their ease with the use of SukatWika grew as they went through the tasks. On average, the tasks that they identified were the fastest for them to do were (i) giving examples of words with two phonemes and (ii) listing words with four phonemes. The reason they gave was that the results were presented clearly. In contrast, the item that took participants the most time was answering how many syllables are in the shortest words. One participant shared that they were initially confused about where to look for the information, while another answered that syllable counting is more familiar.

Other Observations

It was also noticed that the speed rating scale may have been reversed (marking 1 as the fastest, and 5 as the slowest) by two (2) of the participants using the English Text 1, given their explanations. It is also important to note that one (1) of the participants from this group approached the organizers afterwards to say that she did not realize that she could click on the tabs and shift from tab to tab. What she had done was to use only the first set of data on screen to answer all of the questions in the Google Form.

English Text 2

A total of five participants chose to use the English Text 2 document. This group was composed of one teacher/literacy researcher, one student, and three government office representatives. Annex D summarizes their responses.

Correct Responses

Participants were able to give the largest number of correct answers among all groups. Specifically, all five participants were able to correctly answer the

following sections: (i) counting the phonemes, (ii) identifying the syllables in word length, (iii) searching using word searcher; and (iv) saving the output. Interestingly, none were able to answer correctly the number of words in the longest sentence because they had to rearrange the sentences in terms of word count manually, and the first two words that occurred the least frequently in the text (similar to the English Text 1 group) because one participant reported that they got confused about where to look at in the application.

Difficulty

Compared to the English Text 1 group, the sections which were relatively difficult compared to the rest were the (i) word frequency counter and (ii) output saving and retrieval. For the task on the word frequency counter (least frequency), three participants shared that they had to scroll up and down the navigator because of the long list, while one said it was difficult to recheck. Regarding output saving, some participants noted it was better to use "Save" instead of "Export", another commented that it does not appear in the default folder, and one was unsure of where to look for this feature in the application.

Speed

Among all tasks, finding the number of sentences in the longest paragraph and identifying the most frequently occurring word/s in the text were the fastest based on the participants' perception. However, the tasks that they felt they were relatively slow involved the first two words that occurred the least frequently in the text (which also generated no correct responses and were the most difficult), as well as output saving.

Filipino 1 Text

A total of six participants chose to analyze the Filipino 1 document. The majority were teachers with multiple hats (textbook writer/parent, publisher, government representative, and literacy researcher). Two also identified themselves as publishers. Annex E summarizes their responses. \

Correct Responses

There were three tasks that all six participants were able to answer correctly: (i) identifying the number of words that have two (2) phonemes, (ii) identifying the most frequently occurring word/s in the text; and (iii) identifying three-

syllable words beginning with “ta”. In contrast, none got the correct answer for (i) identifying the number of syllables in the longest word and (ii) identifying the first two words that occurred the least frequently in the text.

Difficulty

Participants often said they needed to check their answers and/or data source and their interpretation of the questions/data. For them, tasks that were relatively easiest based on their average scores were : (i) identifying the number of syllables in the longest word; (ii) identifying the most frequently occurring word/s in the text; (iii) identifying the first two words that occurred the least frequently in the text (even if no one got the correct answer); and (iv) identifying two-syllable words that end with “in”. There was ease in identifying word lengths because there was already a category on “Word Length Counter,” while they did not find difficulty in word frequency counter tasks because it was arranged by word and frequency. Lastly, they found it easy to use the word searcher function, with one participant even noting that it was easy for them because their first language is Filipino/Tagalog.

On the other hand, the frequency at which the most often-occurring phoneme appeared was rated the most difficult because of: difficulty in navigation, the confusion in the data presented (e.g., frequency of phonemes per word, and frequency of phonemes present, and unsure where to look at the three available boxes), and the need to unlock the definition of frequency.

Speed

On average, participants rated the following tasks the fastest to do: (i) identifying the number of sentences in the shortest paragraph; (ii) identifying the number of words in the longest sentence; and (iii) the first two least frequently occurring words in the text (even if none got the right answer).

However, tasks that required the most time for them to accomplish, based on their perception, were (i) listing five examples of four-phoneme words and (ii) saving their output. Based on their responses, they had to spend time on listing because they wanted to counter-check, or needed time to read due to the small font size and characters. Lastly, some of the participants had difficulty finding the “Save” function because of unfamiliarity with the system/ Windows and the platform.

Ilokano Text

A total of two participants selected the Ilokano document for analysis. One was an administrative officer, while another was a teacher. In general, the teacher-participant grasped the terminology and concepts being asked in the questions, while the administrator-participant, relatively, had an easier time navigating through the technical aspects and interface. Annex F summarizes their responses.

Correct Responses

Two participants answered the following tasks correctly: giving (i) the number of words with two phonemes; (ii) five examples of four-word phonemes; (iii) the number of syllables in the longest word; (iv) three words with three syllables; (v) the word/s that occurred the most frequently; and (vi) two-syllable words that end with "in". Items which they were not able to answer correctly included identifying the number of syllables in the shortest word and identifying the first two words that were the least-frequently occurring.

Difficulty

Compared to the English and Filipino texts, participants rated a higher level of difficulty for the Ilokano text. The participants rated the following tasks as relatively easiest: (i) all tasks on phoneme counting; (ii) two tasks on word length (shortest word, three-syllable words); and the task of identifying the top two least frequently occurring words (even if incorrect).

For them, the relatively difficult tasks were (i) identifying the number of syllables in the longest word, (ii) listing three-syllable words beginning with "ta", and (iii) saving the output. Given limited responses, the reason why these were difficult was that they needed to find the data (e.g., syllable) and/or the feature (e.g., save button).

Speed

What took them the fastest time to accomplish was (i) listing three-syllable words and (ii) identifying the first two least frequently occurring words. This is because the data is already there, though one participant reported that they had to scroll to find the answer for the latter. On the other hand, the relatively

slowest was identifying the number of words in the longest sentence because the answer was in the list of sentence lengths.

Sinugbuanong Binisaya Text

A total of two participants picked the Sinugbuanong Binisaya document for analysis. One represented a government office, while one was a teacher. Annex G summarizes their responses.

Correct Responses

Interestingly, the participants also answered many items correctly, specifically: (i) the number of sentences in the shortest and longest paragraph; (ii) the number of times the most frequently occurring phoneme occurred; (iii) the number of words with two phonemes; (iv) the number of syllables in the shortest and longest word; (v) the words that occurred the most frequently in the text. However, none of the two (2) gave the right answer for the following items: (i) the number of words in the longest sentence; (ii) the first two words that occurred the least frequently; (iii) three-syllable words beginning with "ta"; (iv) three-syllable words ending with "in"; and (v) saving the output.

Difficulty

Similar to the finding for the Ilokano text, the two participants rated a higher level of difficulty for the Sinugbuanong Binisaya text compared to their counterparts who analyzed English and Filipino texts.

Among all tasks, the participants found it relatively easy to (i) identify the most frequently occurring word/s and (ii) identify the first two least frequently occurring word/s in the text (although none gave the right answer). The item that was given the highest difficulty rating was identifying three-syllable words beginning with "ta". One participant said they needed time to familiarize themselves with the system, while another said that none of their suggested words were found.

Speed

Among all the non-English texts, the participants who analyzed the Sinugbuanong Binisaya text had the highest rating in terms of speed. This indicates that they perceived that the tasks were relatively fast to accomplish

(regardless of the number of correct responses and/or difficulty). However, the task that they found to be the slowest to accomplish was identifying three-syllable words that begin with "ta". Their reasons were similar to the reasons for their respective rating on the difficulty of the said task.

QUALITATIVE RESULTS

Improvements Suggested for SukatWika drawn from the Questionnaire

The Google Form also included a section where participants could encode their suggestions. The input gathered from this section focused on improving user experience by suggesting changes such as: increased font size, easier navigation, more intuitive button labels, and the ability to search for specific information beyond word level. Some users suggested adding a feature to reorder data from highest to lowest, exporting results in multiple formats, and clarifying the language selection process. Others proposed design enhancements for the layout and presentation of data, including color coding and hyperlinks. Finally, there were suggestions to provide better guidance for new users, such as explanatory videos and visual orientation of features, adding a search function to each tab, and clarifying instructions for unfamiliar concepts like phonemes. These insights highlighted the need for user-friendly features and accessible content.

See Annex H for the verbatim responses submitted via Google Form.

Suggestions for improving the questionnaire

In the Google Form, participants also left their feedback on how to improve the form itself. The feedback highlighted concerns about the order of questions, confusion regarding the Likert scale, and suggestions for improving the user experience. One participant suggested that the section on Word Frequency should precede the section on Word Length based on the logical flow of the form's structure in relation to the SukatWika program, though it was also mentioned that this may be a deliberate part of the form design. Several users also expressed confusion regarding the Likert scale, where a rating of "1" initially corresponds to the easiest difficulty but later shifts to the fastest response time. This inconsistency, users said, hinders the smooth flow of the assessment.

It is also worth noting that nine participants also indicated that they have no feedback on the Form. See Annex I for the specific responses of the participants regarding the Google Form.

FOCUS GROUP DISCUSSION SUMMARY

A focus group discussion (FGD) was conducted and centered around the following aspects: their user experience, the applicability of the tool in their work, suggestions on design, and others. The FGD lasted a total of 39 minutes. The FGD aimed to answer the three main research questions:

1. What features of SukatWika 1.0 should be retained?
2. What features of SukatWika 1.0 should be improved?
3. What features should be added to SukatWika 1.0?

User Experience

When asked, "How would you describe your experience? Was it mostly easy or difficult and why?" a few participants reported that there was some difficulty in familiarization, navigation (specifically between Google Form and SukatWika), and question/results interpretation. Two participants found the word search function easy to use.

With regards to results interpretation and navigation, most issues dealt with the aesthetics, layout, and navigation features of the tool, specifically:

1. Confusion in the chronological/non-chronological presentation of numbers between two tables displaying different data (e.g., number of paragraphs) side-by-side;

2. Visualization of data/results, which all come out at the same time, so it is difficult to prioritize and can overwhelm/paralyze the user;

3. Small text sizes of data presented in one (1) space are distracting for users.

In terms of content, one participant who analyzed the texts of two different languages observed that there is more information available for the English text than the Ilokano text.

Usefulness in Work

It was clarified that there is still a need to determine who SukatWika could best serve before they go on to designing it for different platforms. However, some participants said that the tool can be useful for teachers because (i) they could know if they are giving the appropriate text to their students based on the statistics on the complexity of the text and (ii) they can identify which words and letters should be taught first and how many words should a child be able to read at their level, especially for the early grades (e.g., Lexile measure, readability index/formula). It can contribute to teaching effectiveness and addressing literacy difficulties in the classroom.

Aside from teachers, the tool can be useful for educational researchers. One participant relayed that SukatWika could help him analyze the complexity, accuracy, sophistication, and lexical specification to help track language development of Filipino students. As an automatic analyzer, it could be useful in empirically measuring the language development of children at different grade levels for local languages. On the part of the DepEd, SukatWika could be helpful in the development of tests/assessments.

SUMMARY OF QUALITATIVE RESULTS

Common findings from qualitative data from the Google Form and FGD were the following:

- **Users expressed a need for an improved user interface and experience in SukatWika.** Participants suggested features such as increased font size, color-coding, and a more intuitive layout for easier navigation and understanding of the data. These included a sentence or phrase search function, an internal database, a drop-down menu for data selection, support for various text formats, and explanatory videos.

- **There was a slight difficulty in understanding and using the Output Saving and Retrieval function.** Participants using different texts found this function confusing and time-consuming because of the terminology used (e.g., “export”) and/or familiarity with the system.

- **On the Google Form tool, participants noted that the structure and measurement can be further improved.** Suggestions for improvement included revising the order of questions, clarifying the Likert scale, and ensuring consistency in its interpretation.

Participants generally found SukatWika to be a useful tool for language analysis, but it needs further refinement in terms of user-friendliness and accessibility.

Recommendations

Generally, the interface is okay; and the data is available but, according to participants, some technical aspects can be improved:

1. User interface

The design must be seamless and user-friendly, especially for teachers. Participants suggested the use of color-coding (with user-friendly color schemes); creating options to adjust the sizes of the text displayed (e.g., magnifying glass, plus/minus icon); evenly distributing and leveling the presentation of the data (e.g., table format of counts); and providing easier guidance/tools to reset the search function.

2. Options to display which data to look at and when

One suggestion was to reduce the incidence of presenting all information at the same time, as one participant stated that it can be paralyzing because they didn't know what to prioritize. For example, there can be a drop-down option to display specific data at a given time.

3. Features requested

- A sentence or phrase search function
- The use of simpler terminology or an explanation of the terminologies and/or an “explainer” video
- An internal database to house multiple files within the tool
- A drop-down menu to select data needed at a particular time
- Other formats of texts to upload (e.g., PDF, JPEG)

4. Test the program per group

Given that the target end-users are yet to be finalized, it is recommended that target groups continue to take part in the user testing.

Conclusions of the Usability Testing Process

A summary of the plans for SukatWika was discussed. Participants were informed that they would be requested to come back for a second round of testing once SukatWika 2.0 is ready. The UP CIDS-ERP will work again with the UP Institute for Electrical and Electronics Engineering Digital Signal Processing Laboratory to improve the tool.

NEXT STEPS FOR SUKATWIKA 2.0

Considering all results of the Usability Test done on future target users of SukatWika, the possible improvements, changes, or additions to the software can be classified into two major categories: UI/UX (User Interface/ User Experience) Improvements and New Features. Most of the difficulties encountered by the participants were because what they were being asked to find cannot be seen easily. In other terms, the existing UI was not intuitive enough for the target users of SukatWika. With this, here is the proposed list of UI/UX improvements:

- Make tabs more visibly clickable or change the UI from tabs to other UI design alternatives like accordions
- Subdivide outputs of each tab so that users won't have to scroll for a long time when finding what they need
- Improve the "Export" button. This will be done by changing the button name to "Save" since this is more intuitive to the users. Choosing where the outputs will be saved will also be improved.
- Add Accessibility Tools. This includes: Buttons to adjust font sizes and a search functionality (similar to Ctrl+F) to search long outputs.

- Improve processing completion visual cues. This can be done by highlighting the tabs or making the progress bar more visible.

New features can also be added based on the suggestions of the test users.

- Most users had a hard time knowing the features and where they were. A Help Section will be very helpful to them. This help section includes the following:
  - List of features
  - Screenshots of how each feature looks like, with tooltips and captions
  - Explanations of what each feature outputs
- Multiple text analysis. This feature means to compare at least 2 texts simultaneously.

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ANNEX

Annex A. Usability Study Participants

	NAME	AFFILIATION	USER CATEGORY
1	Rhea Joyce Abat	University of the Philippines College of Education	teacher
2	Marie Yvette Alcazar	University of the Philippines College of Education	teacher, textbook writer, parent
3	Winston Ayon-ayon	University of the Philippines Center for Integrative and Development Studies	administrative officer in-charge of tech support
4	Elpidio Butaran	Rex Education	publisher
5	Leonor Diaz	University of the Philippines College of Education	teacher, literacy researcher
6	Sarah Edjan	Adarna House	teacher, publisher
7	Charmane Espejo	Philippine Normal University	teacher
8	Gio Karlo Fuellos	National Library of the Philippines	government office representative, librarian
9	Miguel Karlo Macariola	Department of Education Information, Communications, and Technology Service	government office representative
10	Audrey Morallo	University of the Philippines College of Education	teacher, literacy researcher
11	Danilyn Joy Pangilinan	Department of Education Bureau of Education Assessment	government office representative
12	Maria Reina Pante	Philippine Dyslexia Foundation	teacher
13	Mary Francis Therese Pelias	Abiva Publishing House, Inc.	publisher
14	Ma. Socorro Perez	Phoenix Publishing House	publisher, editor
15	Jasmine Romero	University of the Philippines Center for Integrative and Development Studies – Education Research Program	student
16	Gaudencio Luis Serrano	Department of Education Bureau of Learning Delivery	teacher, government office representative
17	Ramona Magdalena Victoria	Department of Education Bureau of Curriculum Development	government office representative
18	Rosalina Villaneza	Department of Education Bureau of Learning Delivery	teacher, government office representative

Annex B. Google Form Questionnaire

SECTION 1

1. What time is it now?
2. What is your full name?
3. To what user category do you belong? (Check all that apply.)
4. Which text are you using as basis for your responses?

SECTION 2

1. How many sentences are in the shortest paragraph?
2. How difficult was it to get the answer to the question?
3. Explain your difficulty rating.
4. How fast were you able to get the answer to the question?
5. Explain your speed rating.
6. How many sentences are in the longest paragraph?
7. How difficult was it to get the answer to the question?
8. Explain your difficulty rating.
9. How fast were you able to get the answer to the question?
10. Explain your speed rating.

SECTION 3

1. How many words are in the shortest sentence?
2. How difficult was it to get the answer to the question?
3. Explain your difficulty rating.
4. How fast were you able to get the answer to the question?
5. Explain your speed rating.
6. How many words are in the longest sentence?
7. How difficult was it to get the answer to the question?
8. Explain your difficulty rating.
9. How fast were you able to get the answer to the question?
10. Explain your speed rating.

SECTION 4

1. How many times does the most frequently occurring phoneme occur?
2. How difficult was it to get the answer to the question?
3. Explain your difficulty rating.
4. How fast were you able to get the answer to the question?
5. Explain your speed rating.
6. How many words have two phonemes?
7. How difficult was it to get the answer to the question?
8. Explain your difficulty rating.
9. How fast were you able to get the answer to the question?
10. Explain your speed rating.
11. What are examples of words with four phonemes? List 5 words.
12. How difficult was it to get the answer to the question?
13. Explain your difficulty rating.
14. How fast were you able to get the answer to the question?
15. Explain your speed rating.

SECTION 5

1. How many syllables are in the shortest word?
2. How difficult was it to get the answer to the question?
3. Explain your difficulty rating.
4. How fast were you able to get the answer to the question?
5. Explain your speed rating.
6. How many syllables are in the longest word?
7. How difficult was it to get the answer to the question?
8. Explain your difficulty rating.
9. How fast were you able to get the answer to the question?
10. Explain your speed rating.
11. Give three words with three syllables from the text.
12. How difficult was it to get the answer to the question?
13. Explain your difficulty rating.
14. How fast were you able to get the answer to the question?
15. Explain your speed rating.

SECTION 6

1. Which words occurred the most frequently in the text?
2. How difficult was it to get the answer to the question?
3. Explain your difficulty rating.
4. How fast were you able to get the answer to the question?
5. Explain your speed rating.
6. Which words occurred the least frequently in the text?
7. How difficult was it to get the answer to the question?
8. Explain your difficulty rating.
9. How fast were you able to get the answer to the question?
10. Explain your speed rating.

SECTION 7

1. What 3-syllable words begin with “ta?”
2. How difficult was it to get the answer to the question?
3. Explain your difficulty rating.
4. How fast were you able to get the answer to the question?
5. Explain your speed rating.
6. What 2-syllable words end with “in?”
7. How difficult was it to get the answer to the question?
8. Explain your difficulty rating.
9. How fast were you able to get the answer to the question?
10. Explain your speed rating.

SECTION 8

11. How do you save the output?
12. How difficult was it to get the answer to the question?
13. Explain your difficulty rating.
14. How fast were you able to get the answer to the question?
15. Explain your speed rating.
16. How difficult was it to retrieve the output?
17. How difficult was it to get the answer to the question?
18. Explain your difficulty rating.
19. How fast were you able to get the answer to the question?
20. Explain your speed rating.

SECTION 9

1. What improvements do you suggest for SukatWika?
2. What improvements do you suggest for this form?

SECTION 10

1. What time is it now?

Annex C. English Text 1 - Results

ENGLISH TEXT 1									
Section	**Question**	**# of Correct Responses**	**# of Incorrect Responses**	**Difficulty Rating (5-most difficult)**	**Ave. Rating**	**Difficulty Rating Explanation**	**Speed Rating (5-fastest)**	**Ave. Rating**	**Speed Rating Explanation**
Paragraph and Sentence Lengths	How many sentences are in the shortest paragraph?	5	0	3, 1, 2, 3, 4	2.6	results presentation need improvement; application immediately opened and worked; expected to see actual paragraphs; had to reread descriptions under paragraph length; did not know which primary text to examine	2, 4, 3, 3, 4	3.2	needs getting used to; had to double check where to get the answer; needed to shift mindset-expected to see paragraphs; took quite some time to get to the answer; not too fast
	How many sentences are in the longest paragraph?	3	2	2, 1, 4, 2, 4	2.6	results presentation need improvement; getting more familiar now with the application and the steps to be followed; needed time to analyze the numbers; answer was easier to find since I now have prior knowledge on how info is presented onscreen; did not know which primary text to look at	3, 5, 3, 4, 2	3.4	numbers were confusing; app is still working well; needed time to visualize the sentence lengths described; easier to get the answer now, now able to adjust to how info is presented onscreen; confused with the question and the text
	How many words are in the shortest sentence?	5	0	1, 1, 1, 2, 2	1.4	getting used now to how info is presented onscreen; not difficult at all; now used to the questions and can better visualize now; order that the results was presented was confusing; now getting the hang of it	1, 5, 4, 2, 3	3.0	getting used now to how info is presented onscreen; there is a pattern making it easy to compare and find the answer; needed time to review; arrangement of info onscreen was confusing; getting the hang of the questions
	How many words are in the longest sentence?	4	1	2, 1, 1, 1, 2	1.4	explore possibility of being able to switch between number of sentences and words; getting more familiar with the application; already used to visualizing;	3, 5, 5, 4, 2	3.8	display of results were at random, difficult to find; the pattern made it easy to locate; already used to visualizing and reviewing;

						now more familiar with info presented onscreen; getting the hang of it			more familiar now with onscreen info; question is now clearer
Phoneme Counter	How many times does the most frequently occurring phoneme occur?	4	1	1, 1, 2, 3, 3	2.0	results were well-presented, easy to navigate; data is arranged from most frequent to least; trying to understand the info before I zeroed in on what the answer was; data arranged from most frequently occurring to least frequently occurring; did not know what phoneme means	1, 5, 4, 5, 3	3.6	results were well-presented, easy to navigate; data is arranged from most frequent to least; needed time to analyze the information; data arranged from most frequently occurring to least frequently occurring; had to repeat the counting
	How many words have two phonemes?	3	2	1, 1, 1, 1, 5	1.8	results were well-presented, easy to navigate; data is already arranged; data easily seen as presented; info presented in a clear manner; did not know what a phoneme meant	1, 5, 4, 5, 5	4.0	results were well-presented, easy to navigate; data is already arranged; did some reflection on what to write- “2” or “2 only;” info presented in a clear manner; not fast
	What are examples of words with four phonemes? List five words.	4	1	1, 1, 1, 1, 4	1.6	results were well-presented, easy to navigate; data needed is already categorized; easily seen as presented; information onscreen was presented in a clear manner; trying to count the sound a word or the words made	1, 5, 5, 5, 4	4.0	results were well-presented, easy to navigate; data needed is already arranged; information is presented in a clear manner; information onscreen was presented in a clear manner; not fast
Word Length	How many syllables are in the shortest word?	4	1	1, 2, 1, 3, 2	1.8	results were well-presented, easy to navigate; had to flip through tabs to double check; info in tab is easy to understand; experienced confusion looking for the answer, on which list; question is too hard	1, 1, 1, 3, 2	1.6	results were well-presented, easy to navigate; faster because I now get how the data is presented; not difficult to get info; initially confused on where to look for the information; syllable counting is more familiar

	How many syllables are in the longest word?	3	2	1, 2, 2, 2, 1	1.6	results were well-presented, easy to navigate; still had to flip through tabs and double check; checked headings of columns to validate answer; used the information under word lengths to identify the answer; quite easy to find	1, 5, 3, 4, 1	2.8	results were well-presented, easy to navigate; easier now that I get how the data is presented; had to inspect other words visually; took less time to find the answer; quite fast as syllable counting is more familiar
	Give three words with three syllables from the text.	4	1	1, 1, 1, 1, 1	1.0	results were well-presented, easy to navigate; words already categorized according to number of syllables; needed info is readily seen; information presented clearly' quite easy	1, 5, 5, 5, 1	3.4	results were well-presented, easy to navigate; words already categorized according to number of syllables; needed info is readily seen; information presented clearly; syllable counting is easier for me
Word Frequency Counter	Which word/s occurred the most frequently in the text?	4	1	1, 2, 1, 1, 1	1.2	results were well-presented, easy to navigate; needed to double check which tab to use to find the answer; information is readily seen; information is presented clearly, already arranged in order; easy	1, 5, 5, 5, 1	3.4	results were well-presented, easy to navigate; words already arranged according to frequency; information is readily seen; easily able to find the answer, information was presented clearly; have prior counting of frequently occurring words in previous sections
	Which words occurred the least frequently in the text? Write the first two only.	0	5	1, 3, 2, 2, 1	1.8	results were well-presented, easy to navigate; so many words that had "1" as a frequency; additional instruction to look for the first two only; had to scroll down and find the information; quite easy spotting the words	1, 3, 4, 5, 1	2.8	results were well-presented, easy to navigate; so many words that had "1" as a frequency; had to review; had to scroll down and look for the information; quite fast to spot the answer to the question

Word Searcher	What three-syllable words begin with "ta?"	4	1	1, 5, 1, 1, 3	2.2	results were well-presented, easy to navigate; unable to find the answer; software has the tabs that can be manipulated to get the information; easy to use the word search function; a new task, needed spotting of new words	1, 1, 4, 5, 3	2.8	results were well-presented, easy to navigate; unable to find the answer; was still figuring out the tabs and how they worked; easy to use the word search function; just middling speed
	What are two-syllable words that end with "in?"	3	2	1, 5, 1, 1, 3	2.2	results were well-presented, easy to navigate; unable to find the answer; previous exercise helped me with this part; word search function was easy to use; had to count	1, 1, 5, 5, 3	3.0	results were well-presented, easy to navigate; unable to find the answer; mind already used to doing the same thing; word search function was easy to use; the numbers confused me but I considered the sound they made
Output Saving and Retrieval	How do you save the output?	4	1	1, 4, 1, 3, 5	2.8	suggestion to use "save" instead of "export;" tried out buttons and check where the file was saved, not saved in a folder that was easily accessible; used to the word "export" which also means "save;" was looking for a tab that says "save" but could not find any on the screen; cannot find the word "save"	1, 3, 4, 3, 5	3.2	include save function on the lower right side; still had to try out buttons and check out the folder where the file was saved, was saved in a folder that was not accessible; had to validate first with proctor where I was supposed to save and what filename I was supposed to use; initially unsure of how to save it, was looking for "save" button; slow

Annex D. English Text 2 - Results

ENGLISH TEXT 2									
Section	**Question**	**# of Correct Responses**	**# of Incorrect Responses**	**Difficulty Rating (5-most difficult)**	**Ave. Rating**	**Difficulty Rating Explanation**	**Speed Rating (5-fastest)**	**Ave. Rating**	**Speed Rating Explanation**
Paragraph and Sentence Lengths	How many sentences are in the shortest paragraph?	3	2	1, 2, 1, 3, 1	1.6	easily navigated; found the interface intuitive and easy to navigate; have experience using text analyzers, so this background knowledge helped in navigating the tool; for a first time user, it took some time to understand the question based on the results provided by SukatWika; had to think over the answer to the question; new to navigate the application the tabs were properly labelled/titled	5, 3, 5, 4, 5	4.4	I found the answer to the question fast. This was due to the clear and intuitive design of the tool; since I had to review the question to provide the answer, it took me around a minute to match the answer to the result of the software; question is quite tricky; easy to navigate through and get the answer; the tabs were properly labelled/titled
	How many sentences are in the longest paragraph?	2	3	1, 1, 3, 1, 1	1.4	easily found the answer to the question; the specific tool to use was also easy to find. no difficulty in providing the answer to the question as I have got used to the question based on the previous question on how many sentences had the shortest paragraph; question is quite tricky; easy to navigate through and get the answer; information was clearly stated	5, 5, 3, 5, 5	4.6	found the answer fast; the tool was easy to navigate to find the answer; got used to answering the question as the result is already available; have to analyze the question vis-a-vis the data on the interface; answer was already in the first tab; the screen has a title
	How many words are in the shortest sentence?	2	3	1, 1, 2, 4, 1	1.8	found the tool easy to navigate to find the answer; able to display the result in such a way (sorted result) to determine the answer to the question; can be easily navigated; there are several sentences that could be the shortest sentence among the rest of them;	5, 5, 5, 2, 5	4.4	found the answer fast due to the tool's logical and easy-to-follow interface; answer is in the first item in the result for sentence length; because it's already declared; the output in the screen has the information

						the screen window is properly labelled			
	How many words are in the longest sentence?	0	5	2, 1, 1, 1, 1	1.2	still had to screen the numbers for me to find the sentence with most words; there was no feature that allowed to rearrange the sentences in terms word count; it can be seen; the answer was easily located on the first tab able to display the result in such a way (sorted result) to determine the answer to the question; had to locate the biggest number in the list	3, 5, 5, 5, 4	4.4	took a few seconds to look for the sentence with the highest word count because the data could not be rearranged; last item in the result, which contributed to the speed of getting the answer; because it's already indicated; the number of words were easily located from the tabs; had to locate the biggest number in the list
Phoneme Counter	How many times does the most frequently occurring phoneme occur?	5	0	2, 1, 1, 3, 1	1.6	easily found the answer although had to double check if the data were arrayed from highest to lowest; no difficulty in retrieving the answer to the question; its already tabulated; had to make sure if looking at the right tab the frequency is ranked in order from highest to lowest	4, 5, 4, 3, 4	4.0	took me a few seconds to check if the data were arranged from highest to lowest; software displayed the result in a sorted manner; have to recheck answer; had to analyze each tab first before putting answer; had to check if the rank is sequentially ordered;
	How many words have two phonemes?	5	0	1, 1, 1, 1, 1	1.0	the answer was easy to find; it was already provided by the tool; no difficulty in getting the answer from the result; it's already indicated; you could easily locate which words use 2 phonemes; it was already given in the list	5, 5, 5, 1, 5	4.2	easily found the answer on the tool; result is sorted already, which is easy to find the answer to the question; it's already indicated; the answer can easily be seen due to it's easier grouping and category; the list is short
	What are examples of words with four phonemes? List five words.	5	0	1, 1, 1, 1, 1	1.0	the tool already provided the words with four phonemes; getting the answer was easy; it's already classified;you could easily locate which words have 4 phonemes; the right panel has the list of words and the sub-headings were provided	5, 5, 5, 1, 5	4.2	the answers were already listed on the tool, and I just had to copy them; result was sorted so was able to quickly retrieve the answers; it's already indicated; the words were already grouped together depending on how many phonemes they had; the interface is user-friendly

Word Length	How many syllables are in the shortest word?	5	0	1, 1, 1, 3, 1	1.4	the answer was easy to find on the tool; there is no difficulty in getting the answer; it's already tabulated; it was difficult to locate the specific answer from the tabled words; the information is given in the right panel in sequential order	5, 5, 4, 2, 5	4.2	the answer was easy to find on the word length counter tab; able to quickly locate the answer in the results; have to scan through the table first before answering the question; had to go through all the tabs to find it; the right panel shows the titles to each list
	How many syllables are in the longest word?	5	0	1, 2, 1, 3, 1	1.6	the tool was easy to navigate to find the answer; some words with fewer syllables were also long and had to check the character count; it's already indicated in the table it was difficult to make sure if this was the longest word amongst the groups the right panel has the list in sequential order	5, 3, 5, 2, 5	4.0	able to immediately see the answer; some words with fewer syllables were also long and had to check the character count; it's the only longest word; it was a bit difficult to go through a lot of the words; can easily locate the list with the most number of syllables
	Give three words with three syllables from the text.	5	0	1, 1, 1, 1, 1	1.0	the possible answers were already listed by the tool; there is no difficulty as it was easy to locate the answer; the words are already enlisted; the words were already grouped together, making it easier to choose the three words; the list has the words under the given title	5, 5, 5, 2, 5	4.4	able to immediately see the answers on the relevant tab; able to quickly get the answer; it's easy to identify from the interface; had to scroll through different groups before finding the one I needed; the words are given in the list
Word Frequency Counter	Which word/s occurred the most frequently in the text?	4	1	1, 1, 1, 4, 1	1.6	the answer was easy to find because the words were listed by frequency; there was no difficulty in getting the answer; it's the first on the list; a bit difficult since had to scroll down the tab to check which word best suited the question; the list is already sorted by frequency	5, 5, 5, 3, 5	4.6	could immediately find the answer on the list; able to quickly find the answer in the result; it's the first on the list; had to double check whether that was the word with the highest frequency; the list is already sorted by frequency

	Which words occurred the least frequently in the text? Write the first two only.	0	5	1, 5, 1, 3, 1	2.2	it was easy to find the least frequent words; to get to the bottom of the list, had to scroll all the way down; it's clearly indicated; got confused as to which part of the application should I look; the frequency is shown in the list across the given word	3, 4, 3, 3, 4	3.4	had to scroll up and down the navigator for me to find the first two least frequent words. (A feature that shows only the least frequent words could have helped here.); had to scroll all the way down; have to navigate the long list and it takes some time to scan using the arrow down key; it was a bit difficult to recheck everything; had to locate the first two words with 1 frequency
Word Searcher	What three-syllable words begin with “ta?”	5	0	1, 1, 1, 2, 1	1.2	it was easy to find the answer; it was just a matter of providing the parameters for the search; operating the query was easy; the words are listed alphabetically; it wasn't that difficult of a question but it was difficult to find; the tab on Word Searcher can be used for this purpose	4, 5, 5, 2, 4	4.0	could find the answer fast after input the parameters of the search; the generated result was very quick; the words are listed alphabetically; had to look through each column to find the word; had to enter entries in the search features of the tab
	What are two-syllable words that end with “in?”	5	0	1, 1, 1, 3, 1	1.4	search for the answers was easy and intuitive; operating the query was very easy; there is a word searcher in the system; it was a bit difficult to find that specific word; had to go through all of them; the tab on Word Searcher can be used for this purpose	4, 5, 5, 2, 4	4.0	finding the answer was fast; it was a matter of inputting the parameters of the search; generating the results was very fast; there are search tabs that can easily sort or classify the word based on parameters; still searching among the words columns which of those were the right one; had to put entries in the panel

Output Saving and Retrieval	How do you save the output?	5	0	1, 3, 3, 3, 2	2.4	exporting the data as an output was easy and intuitive; some users may have difficulty in understanding the button, "Export as .csv"; it is not explicitly indicated "Save results"; the system tends to load slower as expected and it doesn't appear easily on the default folder; unsure where to look for the answer in the application; no "SAVE" button but the "Export" tab is given in the upper right side of the panel	4, 4, 3, 2, 4	3.4	the speed was fast; The slowdown was mainly due to specs of the computer; exporting the result was fast and showed a prompt notifying me that the export/ save file had been completed; the computer took some time to load the expected output; exporting doesn't take a long time but it was difficult to find where it was placed; had to check the folder where I exported the csv file

Annex E. Filipino Text - Results

FILIPINO TEXT									
Section	**Question**	**# of Correct Responses**	**# of Incorrect Responses**	**Difficulty Rating (5-most difficult)**	**Ave. Rating**	**Difficulty Rating Explanation**	**Speed Rating (5-fastest)**	**Ave. Rating**	**Speed Rating Explanation**
Paragraph and Sentence Lengths	How many sentences are in the shortest paragraph?	4	2	1, 2, 3, 3, 3, 1	2.2	the beginning of the list was conveniently written from shortest to longest; had to re-read the statement twice or thrice to understand how it was written; tiningnan ko lang iyong lowest number character ng paragraph at ng sentences; malabo ang mata, nakakaduling dahil sa maliliit ang "characters" kaya need ko pang titigan; no difficulty since the heading helps me to identify the answer; since its new to me I cannot tell exactly what data is needed; just depending on how the question was understood the familiarity with the question because this is the 3rd run with issues of connection	4, 2, 3, 3, 4, 5	3.5	even if the question was easy, wanted to make sure I was answering it correctly; had to re-read the statement before answering nagbase ako agad sa lowest numeric numbers ng paragraphs and sentences; used the heading, paragraph lengths to find the least number of the paragraph; from there, the number of sentences in a paragraph is reflected; question is quite easy; the familiarity with the question because this is the 3rd run with issues of connection
	How many sentences are in the longest paragraph?	0	6	2, 2, 3, 3, 4, 1	2.5	the list is not from shortest to longest until the end, so I needed to look for the biggest number of sentences, and not automatically choose the last entry; had to double check the list since it wasn't arranged in the frequency count (e.g. 1 paragraph with 20, 24, 12 sentences);	4, 1, 2, 3, 4, 5	3.2	wanted to make sure the answer was correctly encoded; it was a quick glance even if I had to double check; it was quicker than the first question because I had a better understanding of how it was stated; mas madali na kasi nakuha ko naman na iyong pattern ng number characters na lowest to longest;

					same strategy lang ang ginawa ko sa naunang tanong kung saan tiningnan ko lang iyong longest number character ng paragraph at ng sentences; difficulty ko lang kasi malabo ang mata, nakakaduling dahil sa maliliit ang "characters" kaya need ko pang titigan; got confused with the number of sentences and paragraph; question is quite tricky because there is a need to comprehend the question; the familiarity with the question because this is the 3rd run with issues of connection			need to reread the questions, and look at the SukatWika for the answer; a lot of item need to consider in analyzing the question; the familiarity with the question because this is the 3rd run with issues of connection
How many words are in the shortest sentence?	5	1	1, 1, 1, 3, 3, 1	1.7	looking for the least number of words was easy; looked at the number of words immediately and found 1 as the smallest quantity/ word; madali lang dahil sa number character pattern na longest to lowest; the numbers presented in the sentence lengths confused me; need to comprehend the question before answering; need to get the shortest sentence and identify how many words in that given sentence; the familiarity with the question because this is the 3rd run with issues of connection	5, 1, 1, 3, 5, 5	3.3	able to answer it fast enough because of the previous parallel question about the paragraph; understood how it was stated based on the first item checked in the previous section; madali lang dahil sa number character pattern na longest to lowest; I looked at the list from top to the bottom of sentence lengths. I analysed the difference between the first item and the last item; comprehend and analyze the question before giving the answer; the familiarity with the question because this is the 3rd run with issues of connection

	How many words are in the longest sentence?	0	6	1, 1, 1, 2, 1, 1	1.2	the question is parallel to the previous set of questions about paragraph length; looked at the number of words and disregarding the number of sentences; madali lang dahil sa number character pattern na longest to lowest; item list, from the category 1 sentence and the number of words, compared the number of words; the questions comes with pattern; the familiarity with the question because this is the 3rd run with issues of connection	4, 1, 4, 3, 5, 5	3.7	the list is longer and there are more numbers to choose from; looked at the keyword words and looked for the highest number/ quantity; madali lang dahil sa number character pattern na longest to lowest; medyo mabagal lang ako mag-type dahil matigas ang keyboard; it is not too difficult nor easy to find the items; question pattern is the key; the familiarity with the question because this is the 3rd run with issues of connection
Phoneme Counter	How many times does the most frequently occurring phoneme occur?	5	1	3, 2, 3, 5, 5, 2	3.3	needed to find out which part of the SukatWika page to get the answer from; had to look at the whole user interface/ page to check which one needed to answer the question, but once I found which section of the user interface/ page to check, it was easy to identify the answer because the frequency count was listed from the most number to the least number; medyo nalito ako sa Frequency of phonemes per word at sa phonemes present frequency pero ginamit ko na ang sa frequency of phonemes per word; confused because I do not know in which of the three boxes will I look; initially, based answer in Phonemes present; the need to unlock the definition of frequency: How frequent or how many times the occurring phoneme occur? had to double check my response	4, 2, 2, 2, 2, 4	2.7	figured out where the answer will come from, it was easy looking for the biggest number of frequency count; had to locate from the page which section needed to answer the question medyo nagtagal ako dahil nalito ako sa Phonemes Present Frequency at sa Frequency of phonemes per word; since there are more numbers and words presented in the screen, need to look on each in-detailed; the need to analyze the table first then the data before the answering the question; had to double check my response

How many words have two phonemes?	6	0	1, 1, 2, 2, 3, 1	1.7	the words of the questions are in the choices where the answer will come from; looked for the keyword 2 phonemes; it was easy to answer because it was first on the list; listed from the least number of phonemes to the most number of phonemes, but upon checking, it wasn't the case; noong nag-refer na ako sa Frequency of phonemes per word eh na-gets ko na rin agad; nag-refer ako sa number characters para mabilis ma-identify ang sagot; looked at the heading frequency of phonemes per word; the need to analyze the coding in each categories; the source of the answer is on top of the list	5, 1, 2, 2, 2, 5	2.8	the answer was easy to find from the page; had to look for the keywords 2 phonemes from the list of frequency of phonemes per word; mabilis lang malabo lang ang mata ko kaya need kong titigan ang characters para di maduling; looked at the items under frequency of phonemes per word; it helps to locate the answer; its easier; need to identify the identified category then analyze the question; the source of the answer is on top of the list
What are examples of words with four phonemes? List five words.	5	1	3, 1, 1, 2, 1, 2	1.7	the list of words by phoneme count is a little difficult to read because of layout and the single parenthesis; the label 4 phonemes are easy to locate in the user interface/ page; naka-section na kasi ang list of words by phoneme count kaya di naman na mahirap; maliit lang kaya need ko pang titigan para di maduling at mamali ng tingin at basa sa salita; the list are already given and presented in one box; just choose randomly these words; the need to analyze the categories then comprehend the questions; had to examine the source of the response	3, 1, 2, 2, 2, 4	2.3	wanted to counter check if the words in the list are correct; got confused with the inclusion of numbers and terms with a combination of numbers and letters; it has a proper label at the top and the list of words are listed under it; maliit lang ang word characters kaya need pang titigan para di maduling at mamali ng tingin at basa sa salita; the phonemes are already presented even these are combined with numbers; familiarize with the pattern; had to examine the source of the response

Word Length	How many syllables are in the shortest word?	3	3	1, 2, 1, 5, 2, 2	2.2	the question is parallel to the previously asked questions; looking at the word frequency counter tab at the bottom before the realization that it should be the fourth tab--word length counter; but once on the right tab, it was easy to spot the answer; madali lang po kasi nasa Word Lengths side naman ang summary ng words and syllables; the title word length counter (at the bottom) did not match the syllable (title) in Section 4 question 1; got confused with the number and letters in the list of words by syllable and frequency count; although, there are headings 1 syllable: 2 syllable: and alike, the words have a combination of numbers and words or numbers only or words only; the need to analyze the category then comprehend the question; a skill need to analyze the table is important; had to double check my response and the data source.	5, 1, 5, 1, 2, 4	3.0	the list under word lengths has the shortest word first; looked at the words with the least number of syllables from the list; mabilis na lang kasi sanay na sa mga naunang tanong; cannot find the answer; its easier this time since familiarization has been developed; had to double check my response and the data source
	How many syllables are in the longest word?	0	6	1, 2, 1, 2, 1, 1	1.3	it is easy to answer a parallel question; had to double check the answer, though the list was arranged from the most number of words to the least number of words, the number of syllables per number of words weren't arranged from the least number to the most number; madali na lang po kasi nasa Word Lengths lang titingin; moved the arrow side to see the 17 syllables; Word Lengths is explicitly emphasized under the category Word Length Counter;	4, 2, 5, 4, 1, 5	3.5	the list is short and the answer was easy to find; had to double check the number of syllables; checked the number of words instead of the keyword syllables; madali na lang po kasi nasa Word Lengths lang titingin; need to explore the application; familiarization is the key; it was easy to look for the response

						his is kind of similar to the earlier question			
	Give three words with three syllables from the text.	4	2	3, 1, 1, 2, 1, 1	1.5	the number and the dash symbol written before the words are confusing; the list of the words are clearly listed and properly labeled; mabilis lang po kasi naka-column table naman; text as a story, however, the list of words by syllable was the guide to answer; not too difficult; the need to explore the sulatwika; familiar with the data source	3, 1, 5, 5, 1, 5	3.3	trying to figure out what the dash and numbers before the word mean; the label and the list are clear; mabilis lang po kasi naka-column table naman; it is easy to locate; comprehension and analysis is the key; familiar with the data source
Word Frequency Counter	Which word/s occurred the most frequently in the text?	6	0	1, 1, 1, 1, 1, 3	1.3	the answer was first in the list; it was listed from the most number to the least number of frequency; mabilis lang kasi na-ka-arrange naman na by column ang word and frequency; it is in the top on the list; not difficult; the familiarity in the system is the key to understand; the data source list is long	5, 1, 5, 5, 1, 3	3.3	the answer is first on the list; the list is clear and easy to understand; mabilis lang kasi na-ka-arrange naman na by column ang word and frequency; it is in the top on the list; familiarity on the system; the data source list is long
	Which words occurred the least frequently in the text? Write the first two only.	0	6	1, 2, 1, 2, 1, 1	1.3	needed to look for the least number in the list; had to scroll down a bit further and locate the first two instead of just writing randomly any 2 words from the words with 1 frequency count; mabilis lang kasi na-ka-arrange naman na by column ang word and frequency; need to scroll down to finish the task; not difficult since the familiarity on the system is acquired; familiar with the data source already	3, 3, 5, 4, 1, 5	3.5	the computer was scrolling slow, and needed to find the first 2 words with the least number, it took time to find the words; it was a long list to scroll down and locate the first 2 words of 1 frequency count; mabilis lang kasi na-ka-arrange naman na by column ang word and frequency; I just moved the cursor; it's easier; the system provided the data to analyze; familiar with the data source already

Word Searcher	What three-syllable words begin with “ta?”	6	0	1, 1, 1, 4, 2, 2	1.8	the search boxes made it easy, (the number of words being asked though is silent); just typed in 'ta' on the search bar, input 3 on the # of syllables, and choose start of the word from the drop down option; it was easy to use; mabilis lang kasi L1 ang Filipino/Tagalog; difficulty moving the cursor because the list is too long; the need to analyze categories and analyze the question; need to carefully study the data source list	5, 1, 5, 3, 2, 4	3.3	the result from the search boxes gave the answers; the tabs at the top part of the words searcher are easy to understand; mabilis lang kasi L1 ang Filipino/Tagalog; just use the cursor to look for the answer since it is alphabetically arranged; the need to comprehend the question; need to carefully study the data source list
	What are two-syllable words that end with “in?”	5	1	1, 1, 1, 3, 1, 1	1.3	the help of the search boxes (the number of words being asked though is silent); same with the previous question, it was easy to search; mabilis lang kasi L1 ang Filipino/Tagalog; somewhat easy to find the answer; the need to comprehend the question; need to carefully study the data source list; getting the hang of this	4, 1, 5, 3, 1, 5	3.2	got confused about the number of words being asked; easy to type in the words you are looking for; mabilis lang kasi L1 ang Filipino/Tagalog; somewhat easy to find the answer; familiarity on the system; need to carefully study the data source list; getting the hang of this
Output Saving and Retrieval	How do you save the output?	5	1	5, 2, 1, 5, 1, 1	2.5	looking for the word "save" from the program; had to check all options for saving. the only option is to export as .csv; select next/sumunod lang; cannot find it; analyzes the system on how to save the data in the system in 5 seconds; need to locate the button	1, 2, 5, 1, 1, 4	2.3	trying to click different buttons from the program; not familiar with windows and it is not own laptop, so locating the saved file was a bit of a challenge; select next/sumunod lang; can't find the word save. Is it the same as export save? easier to save since the respondent is familiarize with the system; needed to wait while the draft was saving

Annex F. Ilokano Text - Results

ILOCANO TEXT									
Section	**Question**	**# of Correct Responses**	**# of Incorrect Responses**	**Difficulty Rating (5-most difficult)**	**Ave. Rating**	**Difficulty Rating Explanation**	**Speed Rating (5-fastest)**	**Ave. Rating**	**Speed Rating Explanation**
Paragraph and Sentence Lengths	How many sentences are in the shortest paragraph?	1	1	2, 3	2.5	limited choices make it somewhat easier to choose	3, 3	3.0	limited choices make it somewhat easier to choose
	How many sentences are in the longest paragraph?	1	1	3, 2	2.5	only have 3 options to look for	2, 4	3.0	it is easier to look for the answer
	How many words are in the shortest sentence?	1	1	2, 3	2.5	look at the heading and study the items below sentence lengths	2, 3	2.5	studying its heading to look for answers
	How many words are in the longest sentence?	1	1	2, 3	2.5	the answer is in between the list of sentence lengths	1, 3	2.0	somehow it is easier to locate the answer
Phoneme Counter	How many words are in the longest sentence?	1	1	2, 2	2.0	not difficult; the answer can be easily seen since it is on the top	4, 4	4.0	the answer can be seen at the top
	How many words have two phonemes?	2	0	2, 2	2.0	I study the frequency of phonemes	4, 4	4.0	the answer is in the frequency of phonemes per words
	What are examples of words with four phonemes? List five words.	2	0	2, 2	2.0	the phonemes are present and it has titles, ex. 4 phonemes	4, 4	4.0	easy to look at
Word Length	How many syllables are in the shortest word?	0	2	2, 2	2.0	hindi mahirap; looked at the word lengths	4, 4	4.0	mabilis; looked at the word lengths title
	How many syllables are in the longest word?	2	0	3, 4	3.5	hindi mahirap; looked at the word lengths title	3, 4	3.5	mabilis; it can be easily located at the screen
	Give three words with three syllables from the text.	2	0	3, 1	2.0	madali lang; 3 syllable word list are already present	4, 5	4.5	mabilis; it is already there

Word Frequency Counter	Which word/s occurred the most frequently in the text?	2	0	4, 1	2.5	kailangan pang hanapin or iscroll down; it is first at the list	2, 5	3.5	kailangan ko pang hanapin or iscroll down; it is easier to locate
	Which words occurred the least frequently in the text? Write the first two only.	0	2	2, 2	2.0	mabilis lang; need to scroll the cursor to find the answer	4, 5	4.5	madali lang mahanap; scroll the cursor
Word Searcher	What three-syllable words begin with "ta?"	1	1	5, 2	3.5	kailangan hanapin; wala kong nakitang syllable	3, 2	2.5	hindi masyadong mabilis wala akong nakita
	What are two-syllable words that end with "in?"	2	0	2, 3	2.5	kailangan hanapin at basahin; kailangang isa-isahing mabuti para makita ang sagot	2, 3	2.5	kailangan hanapin at basahin; babasahing mabuti para makita ang sagot
Output Saving and Retrieval	How do you save the output?	1	1	3, 5	4.0	madali lang; hindi ko mahanap	5, 1	3.0	madali lang mag save; hindi ko makita ang save

Annex G. Sinugbuanong Binisaya - Results

SINUGBUANONG BINISAYA TEXT									
Section	**Question**	**# of Correct Responses**	**# of Incorrect Responses**	**Difficulty Rating (5-most difficult)**	**Ave. Rating**	**Difficulty Rating Explanation**	**Speed Rating (5-fastest)**	**Ave. Rating**	**Speed Rating Explanation**
Paragraph and Sentence Lengths	How many sentences are in the shortest paragraph?	2	0	3, 2 (average: 2.5)	2.5	familiarity of the system; second try, familiar with the system	4, 4 (average: 4.0)	4.0	the process is simple; second try - familiar with the system
	How many sentences are in the longest paragraph?	2	0	4, 2 (average: 3.0)	3.0	none; familiar with the system	4, 4 (average: 4.0)	4.0	it provided fast results; system familiarity
	How many words are in the shortest sentence?	1	1	4, 2 (average: 3.0)	3.0	accessing the text; familiarity		4.0	access is easy; getting use to it
	How many words are in the longest sentence?	0	2	4, 2 (average: 3.0)	3.0	familiarity with the system; access		4.0	familiarity with the system; accessibility
Phoneme Counter	How many times does the most frequently occurring phoneme occur?	2	0	4, 2	3.0	navigating; familiar with the system	4, 4	4.0	familiarity with the system; familiar with the system
	How many words have two phonemes?	2	0	3, 2	2.5	can't locate the total number of phonemes immediately; second time	3, 4	3.5	difficulty in accessing the data; familiar with the text
	What are examples of words with four phonemes? List five words.	1	1	3, 2	2.5	access to the file; familiar	3, 4	3.5	no summary of the data; my second time
Word Length	How many syllables are in the shortest word?	2	0	3, 2	2.5	access to the file; familiar with the system	4, 4	4.0	familiarity with the system; quite fast
	How many syllables are in the longest word?	2	0	4, 2	3.0	familiarity to the system; familiar	4, 4	4.0	familiarity to the system; familiar
	Give three words with three syllables from the text.	1	1	3, 2	2.5	familiarity to the system; familiar	4, 4	4.0	access to the file; cool

Word Frequency Counter	Which word/s occurred the most frequently in the text?	2	0	2, 2	2.0	familiarity with the system/program; familiarity	4, 4	4.0	familiarity with the system; familiarity
	Which words occurred the least frequently in the text? Write the first two only.	0	2	2, 2	2.0	getting used to the system; navigating	4, 4	4.0	getting use to the system; familiar
Word Searcher	What three-syllable words begin with "ta?"	0	2	3, 4	3.5	system familiarity; all my suggested words were not found	3, 2	2.5	system familiarity; finding the desired words
	What are two-syllable words that end with "in?"	0	2	3, 2	2.5	familiar with the system; words easily found	3, 4	3.5	use to the system; easy access of word search
Output Saving and Retrieval	How do you save the output?	0	2	3, 2	2.5	mali ang napuntahang page; familiar with the process	3, 4	3.4	hindi familiar sa location; accessibility

Annex H. Suggestions for Improvement of SukatWika 1.0

FEATURES

1. I think it would be good for the next iterations of SukatWika to have syntactic complexity, cohesion, accuracy, and lexical sophistication measures. The ability to sort out the data will also be useful for users interested in specific information.
2. In loading the Word file: Under the ""Select language"" prompt, include an instruction for users to match the language of the document selected with the options in the prompt.
3. If it can be done offline once installed and have a continuous updating once loaded online and if this can be used in other devices other than the desktop.
4. In my opinion, SukatWika could have the ability to search things and filter them out so it was easier to look for words.
5. It might help to have a feature that gives the first time user a visual orientation of the different features such as the tabs and the dashboard.
6. Option to re-order the list from highest to lowest and vice versa.
7. The current search feature is at the word level. Is it possible to have this beyond that?

CONTENT

1. What is the behaviour of SukatWika for documents that contain 2 or more languages?
2. Simplify instructions with example for user like me.

FORMAT AND LAYOUT

1. I understand SukatWika is still in its early stages of development and cannot think of anything to suggest to the whole structure of the program as I think it is well designed and actually is serving what is intended to do. However, if I may suggest that the display or presentation of the results can use a bit of improvement, especially on the paragraph and sentence length counter.
2. Have option for larger fonts to accommodate easier viewing/font can be bigger.
    - Malabo ang mata ko at mabilis ako maduling kapag maliliit ang characters kaya sana mas lakihan ang font size, maganda rin kung may color coding and legend
    - Bigger font for the buttons, labels of categories and data
    - How to enlarge the font size of the output/list of words and numbers/frequencies
3. Layout can be improved, especially for pages with more than one source of answer.
4. Layout of the list of words can be improved to make it easier to read.
5. It was good that the list is arranged from the most number to the least. But for those with the same number of items and then another criteria (e.g. 1 paragraph with __ sentences), it would also be helpful for the user if it also arranged from the most number to the least
6. The arrangement, may be the arrangement will be from paragraph to phoneme counter (bottom part). The phoneme part, there were three boxes. Is it possible to do hyperlink for each box so that one section can be presented one at a time? For list of words by phoneme count, there are two many symbols that can be confusing.

7. Align data in the columns in the ""middle"" of the cell."
8. Ilagay sa taas yung tabs, maglagay ng search function sa every tab.
9. Would there be another way of presenting the examples of the phonemes under each category without enclosing each example in an apostrophe symbol? For me, I understand that it would differentiate the word from the phoneme, but the many apostrophe symbols look very distracting on the screen.
10. Sa Ilocano version, naunawaan ko na kung bakit 3 boxes, complementing the items in each boxes. Since these have few words, answers will be located easily.

OUTPUT SAVING

1. Exporting the results: Explicitly indicate that the button will save the results as a .CSV file.
2. Change the button name ""Export as .csv"" to :Save as .csv"" perhaps so the user will recognize the saving function of the app.
3. Add an obvious "SAVE" tab
4. In exporting outputs, if possible to narrow down only to the data needed
5. Additionally, since the result in SukatWika are under tabs, the developers may look into being able to export into a .XLSX file so that the results are in sheets named ""Paragraph and Sentence Length Counter"", ""Phoneme Counter"".. and so on.
6. The saved files should be easily accessible. Perhaps location can be in My Documents or desktop.
7. Option to save the output in other file formats (e.g., Excel, Word)

OTHERS

1. No further suggestions as of this moment. The need to triangulate with other pax that tried it.
2. To show us later on the results of the study.
3. Explainers video on the use, before the practice
4. Include identifying the lexile of certain grade level which will help us create text with exact readability level of a certain grade level

Annex I. Suggestions for Improvement of the Google Form

ORDER OF SECTION/TASKS

1. I noticed that questions on frequency and phoneme counter is interchanged. I'm guessing that the questions were arranged according to the tabs in the application. I understand that this may just be an oversight. But if this is part of the design then I stand corrected.
2. The section on word frequency counter (section 5 of this form) should come in first than the word length counter section (section 4 of this form) since based on the tab of sukat wika, it comes in first.

METHOD OF ASSESSMENT

1. If more than one answer in asked (like the words), giving a specific number is suggested.
2. The range of numbers for ""fast"" can be qualified (descriptive).
3. Maaaring automatic na click na lang ang numbers na 1-5 tapos para direct na lang po sana na mai-type iyong mga pangungusap na mga sagot. Maaari kasing makalito iyong 1-5 na pinakamadali sa pinakamahirap kung pagbabaliktarin ang descriptor nila, na sa una ang 1 ang pinakamadali tapos sa susunod na tanong magiging pinakamahirap nang descriptor ito.
4. "The shift in the meaning of 1-5 rating (5 as most difficult then later as fastest) confused me at first. Perhaps rephrase?
5. The shift from ""How difficult to get to the answer"" and then ""How fast to get to the answer"" can be confusing. Perhaps rephrase?"
6. Maybe re the likert scale used. 1 was the easiest but 5 was the fastest. My mind had to shift for both. I was already on some parts when I realized they were polar opposites and had to review.
7. It's easier to answer Likert-type scales in a horizontal format, not vertical. :)
8. Probably to give clearer instructions on the the primary material to use? Some concepts like phonemes are not too familiar with subjects like me.
9. For quick response, it would be better if the options indicate a descriptor e.g. most difficult for 1

OTHERS

1. Explainer video
2. None/none so far
3. The repetitive nature of the questions on the form helps develop familiarity with the form.

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