USE OF USER TOUR, CONTACT FORM, AND ACCESSIBILITY PLUGINS IN ENHANCING A MOODLE-BASED VIRTUAL CONFERENCE EXPERIENCE

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ABSTRACT

Academic conferences have been conducted in an online or hybrid setup ever since the onset of the pandemic. Various virtual platforms have arised to address this need but most of them are costly and offer varying features. The use of Moodle as a virtual conference platform is now being explored worldwide. The University of the Philippines Open University has used Moodle together with user tour function and plugins such as contact support and accessibility for its semi-annual National Conference on Open and Distance eLearning this 2022. The purpose of integrating these features is to enhance a Moodle-based virtual conference experience. A survey was conducted at the end of the conference to measure the effectiveness of using these features. Results showed that using user tour, contact support and accessibility plugins significantly enhanced the Moodle-based virtual conference experience of the participants. The use of these Moodle features can also still be improved in the future as suggested by the participants.

INTRODUCTION

Millions of professionals attend costly traditional conferences every year (Anderson, 2010). However, after the declaration of Coronavirus disease 2019 (COVID-19) as a pandemic by the World Health Organization on March 11, 2022, virtual conferences gathered increasing importance and became the norm. International travel ban, measures for social distancing, growing need for knowledge exchange, academic cooperation and interaction have made virtual conferences a mandatory need and are embraced widely (Bhargava, S. et. al., 2021). Thus, academic conferences have been conducted in an online or hybrid setup ever since the onset of the pandemic.

Various virtual platforms have arised to address the need but most of them are costly and offer varying features. There are great variations on the price for hosted conference platforms depending on the size and length of the conference, the features included, and the services required. iCohere and Web Crossing are some of the companies which provide conference platforms and consultation services a few years ago (Anderson, 2010).

On the other hand, there are platforms available as freely as open-source software. Moodle, a learning management system, is the most commonly used open-source platform. The function of Moodle is the creation of Internet-based courses. The use of Moodle as a virtual conference platform is now being explored. (Bhargava, S. et. al., 2021). Many vendors offer services such as hosting, setting up and customizing Moodle for online conference use. However, there is an option to install the platform on an organizer's own server which is less costly (Anderson, 2010).

The Moodle platform has been repurposed for use in online conferences by changing the language used. One example of this is changing from 'student' to 'participant'. The platform provides many features such as being configurable in terms of look, feel and functionality, having a home/welcome page, profiles, member directory and search features, live conference room, discussion forums, live chat rooms, blogs, polls and surveys, wikis, document/resource library, evaluation/quiz tools, messaging system, content search and helpdesk (Anderson, 2010).

The University of the Philippines Open University, the pioneer in distance education in the Philippines, participates in different conferences both local and international. The role of the delegates includes being an organizer, guest speaker or presenter. In 2021, the International Conference on Distance eLearning was held using a virtual conference platform provided by a third party. The use of the virtual reality platform for a conference incurred high costs. In November 2022, the university held its

first virtual conference called National Conference on Open and Distance eLearning using Moodle as a platform and zoom as the video conferencing tool.

OBJECTIVE AND SIGNIFICANCE OF THE STUDY

This study aims to evaluate the effectiveness of using Moodle as a virtual conference platform in enhancing virtual conference experience during the National Conference on Open and Distance eLearning 2022. The main focus is the inclusion of user tours, accessibility and contact support plugins. It also aims to identify possible options for improving the Moodle-based virtual conference platform by using the experiences of the participants. The finding of this study shall serve as a contribution to institutions or organizations that are planning to use Moodle LMS as their virtual conference platform in the future.

REVIEW OF RELATED CONCEPTS

Moodle or Modular Object-Oriented Dynamic Learning Environment is a learning platform which can be utilized for designing, building and creating e-learning environments. It makes creating online interaction and having video conferencing possible. Moodle is downloaded, installed and run on any web server using PHP: Hypertext Preprocessor (PHP). An SQL database is supported. Moodle runs on several operating systems. Moodle has a mobile version that can be downloaded from theApp Store, Google Play, Windows Store or Windows Phone Store. This platform can be used on different devices, at different times, in different places. Through Moodle, we can browse the content of courses, receive messages, contact people from the courses, upload different types of files, and view course grades. Moodle enables building of personalized activities and resources. In Moodle, teachers are allowed to follow the progress of students and can assess and grade their work provided the students complete the activities. Resources in Moodle which are passive contents for students are not graded but teachers can see the last access of the participant on the course site. Another element to personalize the learning experience of students are badges. Badges are like homework rewards that are given to students upon completion of an activity or course. Badges can motivate young learners to study and complete the resources and activities. Moodle's interface is customizable in order to develop the look and feel required. An example of this is adding a logo of the school or institution to which the Moodle site belongs (Hillar, 2016).

Moodle has several built-in features and plugins that can be installed. Plugins can be downloaded from the Moodle.org website for free. Examples of features and plugins are the user tour, accessibility block and contact form.

User tours are step-by-step guides to various areas of Moodle. Tours can be displayed in different languages using the multi-lan filter. The user tour will automatically start to display once it is created and enabled and if it is the first time the user views a page that matches the tour's page settings. Each step displays the title and content including three options which are prev, next and end tor. Prev allows the user to return to the previous step. Next will bring users to the next step in the tour. End tour allows the user to exit the tour completely. The "Reset user tour on this page" link at the bottom of the page can be clicked anytime if the user wants to re-run the page's tour. (Moodle Docs, n.d.)

The accessibility block enables users to customize the Moodle platform according to their visual needs. Changing of text sizes and color schemes are supported. Customizations are saved to the session of the user thereby persisting between pages. Applying customizations permanently is also possible by saving it to the database. ATBar from Southampton University ECS' ATBar which provides extra tools and customization options is also integrated in the accessibility block. Dictionary lookup and text-to-speech are examples of these tools. (Moodle Docs, n.d.). However, the ATBar does not appear in Moodle version 4.0.

Contact Form is another Moodle plugin. Processing and sending information submitted through HTML web forms is allowed by this plugin. The content of the web form is sent to the site's support email address or primary administrator provided that the support email address is not defined. Some of the uses of the Contact Form plugin include support request form, request a course form, information request form, lead generation form and membership application form (Moodle Docs, n.d.).

METHODOLOGY

The National Conference on Open and Distance eLearning (NCODeL) committee made initial plans and assigned tasks for the conference to different sub-committees. One whole team composed of members of the Information and Communication Technology Development Office (ICTDO) of the UP Open University was in-charge of the conference platform. Moodle was the chosen platform by the NCODeL committee.

A cloud server which is Nanode 1 GB from Linode was acquired. The cloud server specifications were upgraded later since it is expected that about 300 users will be accessing the platform during the duration of the 3-day conference. The environment was then prepared by installing a web server (Apache) and MySQL database. The latest version of Moodle was downloaded from the Moodle.org website and installed on the server. Different themes were tested in the platform but the almond theme was chosen to be used for the conference because of its clean and easy to navigate user interface.

Sessions were added to the platform using course sites. One course site is equivalent to one session. However, several parallel sessions were contained in one course site. Course completion was set up in such a way that if the participant accessed the link of the Zoom meeting in a session, the course will be marked as completed. For parallel sessions, the participants need only to access at least one Zoom link. Badge Enrollment plugin was also installed and several badges were created. There are course badges, morning and afternoon badges, day badges, 3-day completed badge and survey badge. Day badges are given to participants who participated in at least one session in the morning and afternoon. Obtaining all day badges will grant you with the 3-day badge which will give you access to the survey badge. Upon completion of the survey, a survey badge will be awarded to the participant and will give them access to the certificate page. Certificates in PDF format can be downloaded on the certificate page.

Additional features including user tour, accessibility and contact form plugins were installed and or set up. For the user tour, steps were added in the frontpage and session pages. In the homepage the following steps were included: welcome, announcement, sessions, contact support, survey and issuance of certificates. In the session page, the accessibility option and zoom session were included in the steps.

The accessibility block plugin was also installed. Then the block was added on the right side of all session pages and a few of the custom pages.

For contact support, the contact form plugin was installed together with the filter code plugin. The default web form was used. The support email was then configured so that it will be received by the assigned mailer. All of these features were tested if they are functioning properly.

A survey page was created and contained two surveys: Evaluation on NCODeL 2022 and Experience about the NCODeL Conference Platform. The first survey was derived from another virtual conference done in 2021. The second survey on the other hand, used the System Usability Scale (SUS) for the questions. The participants were required to answer the two surveys in order to have access to their certificates. Summary of answers to the survey was downloaded and analyzed.

RESULTS AND DISCUSSION

User Tour

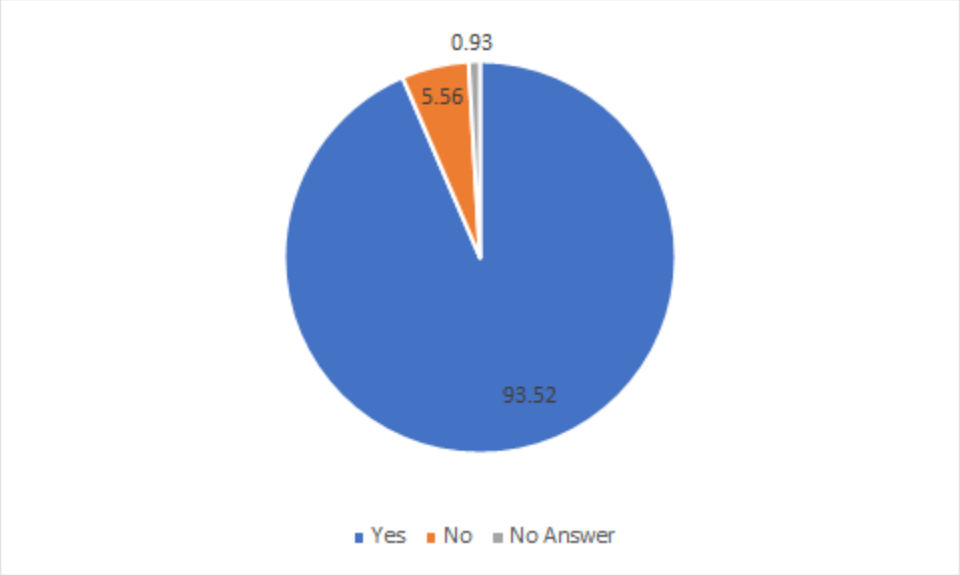

Figure 1. Percentage of participants who find user tour as useful, not useful and has no response

Based on the survey, 93.52% of the participants found the user tour useful. Only 5.56% answered that the user tour is not useful.

Keywords	Weight
informative	4
user-friendly	3
easy to use	3
helpful	2
convenient	1
good	1
great	1
nice	1
not yet explored	1
prototype	1
well-designed	1
buggy	1
interesting	1
needs improvement	1

Table 1. Keywords obtained from the participants' comments on the user tour

Figure 2. Word cloud of keywords obtained from the participants' comments on the user tour

A tally of the keywords contained in the comments/suggestions of the participants showed that there are more participants who found that the user tour is informative, user-friendly, easy to use and helpful.

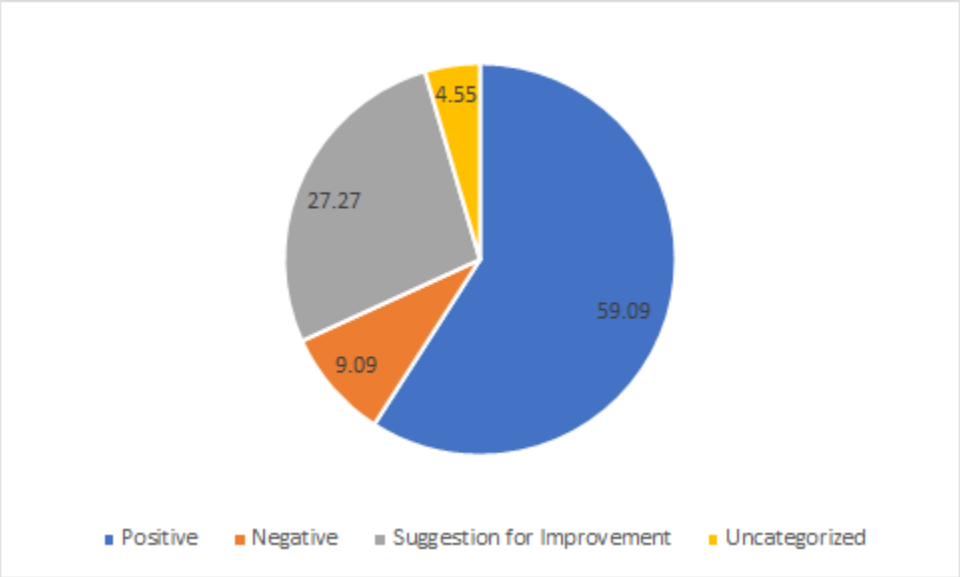

Figure 3. Categorization of comments/suggestions of participants on user tour

About 59.09% of participants' suggestions are categorized as positive. Only 9.09% are negative comments. While the suggestions for improvement garnered 27.27%. On the other hand 4.55% of the comments belong to the uncategorized.

Some participants suggested that there should be an early orientation regarding the user tour. Another suggestion is that it should be made more user friendly. Some mentioned that the user tour needs improvement. One even suggested including a panel where participants can take a photo so they can post them together with information of where they are located currently. It was also mentioned that a video can be added to help users navigate the platform. It was also recommended that the sessions should be placed on top instead of past NCODeL for easier navigation. One participant also mentioned that there should be an audio. Last but not the least, a participant noticed that the first page is too long which caused the participant the need to scroll more on the page.

Accessibility

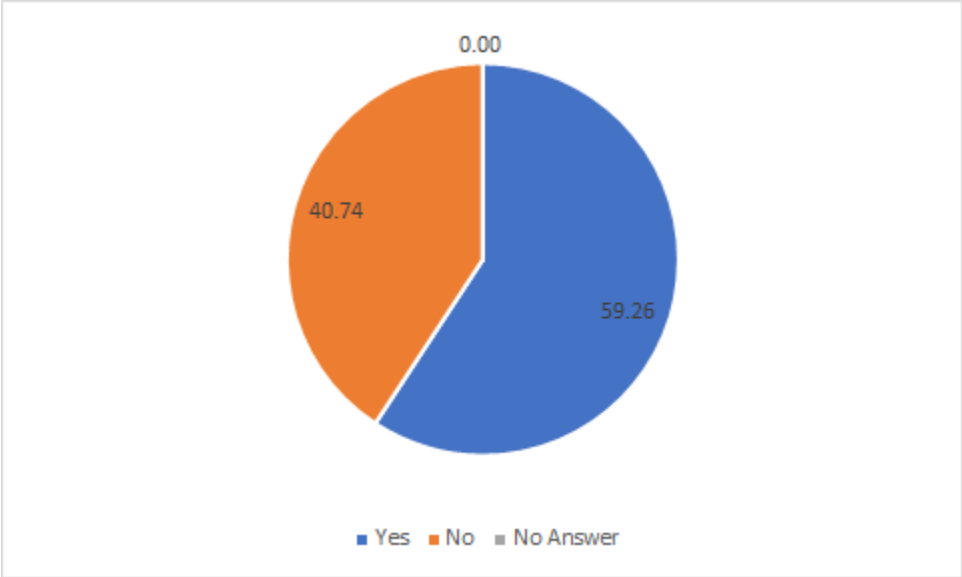

Figure 4. Percentage of participants who used the accessibility block

Only 59.26 % of the participants utilized the accessibility block. 40.74 % of them did not use the block.

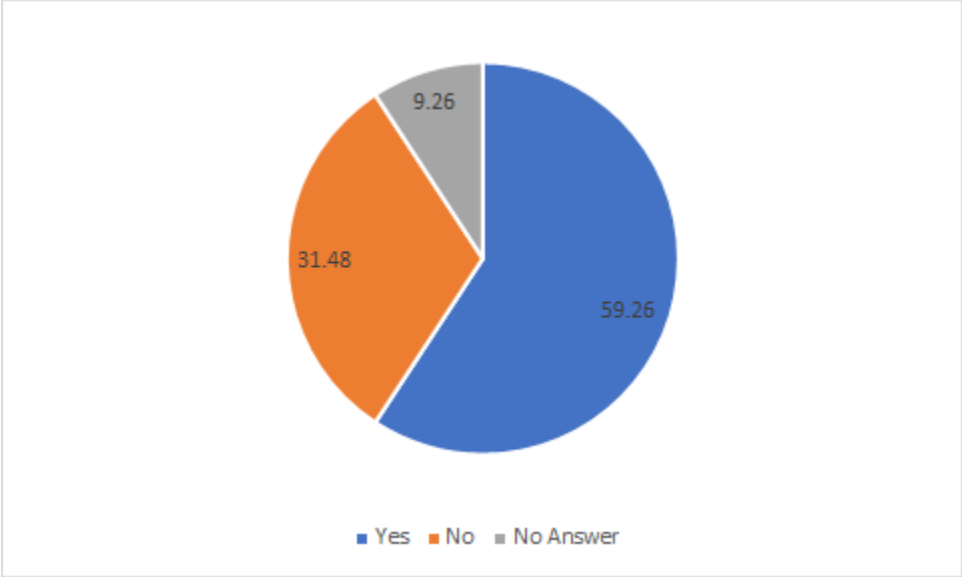

Figure 5. Percentage of participants who found the accessibility block useful

About 59.26 % of the participants who used the block found it useful. Only 31.48% thought that the accessibility block is not useful.

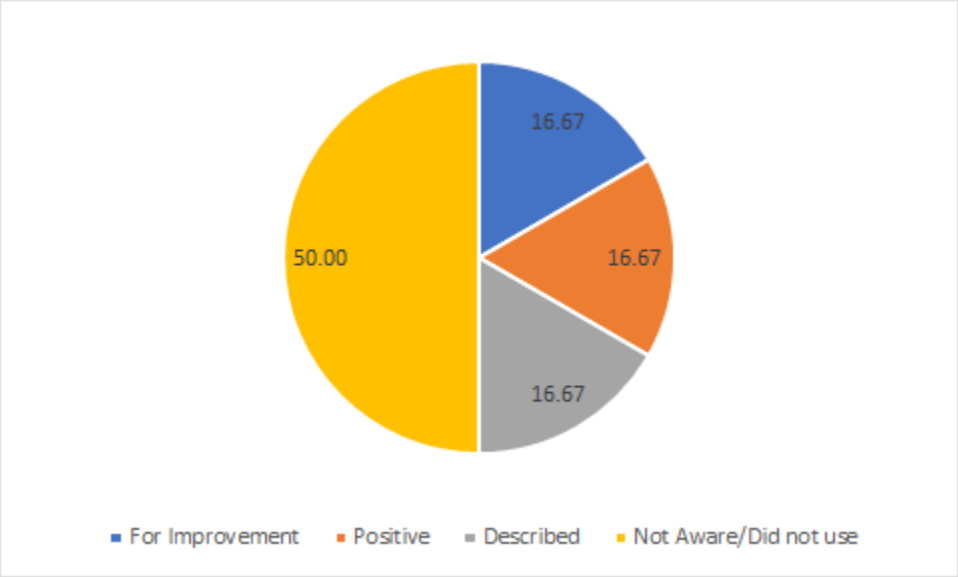

Figure 6. Categorization of comments/suggestions of participants on accessibility

Majority of the participants comprising 50% were not aware and or did not use the block. Comments and suggestions which are categorized under positive, for improvement and description all had 16.67% of the participants.

Figure 7. Word cloud of keywords obtained from the participants' comments on the accessibility block

Not able to use and not aware keywords are more prevalent among the comments and suggestions of the participants on the accessibility block.

There is also one participant who suggested that there should be more color themes and there is a need to enhance the accessibility block.

Contact Support

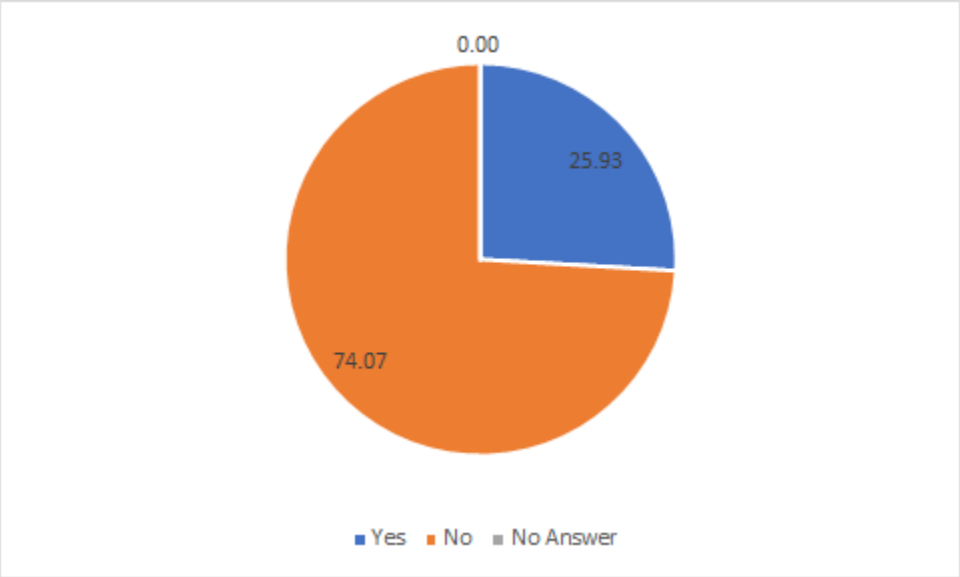

Figure 8. Percentage of participants who used the contact support

Only 25.93% of participants have used the contact support form. Majority comprising 74.07%, did not use the contact support.

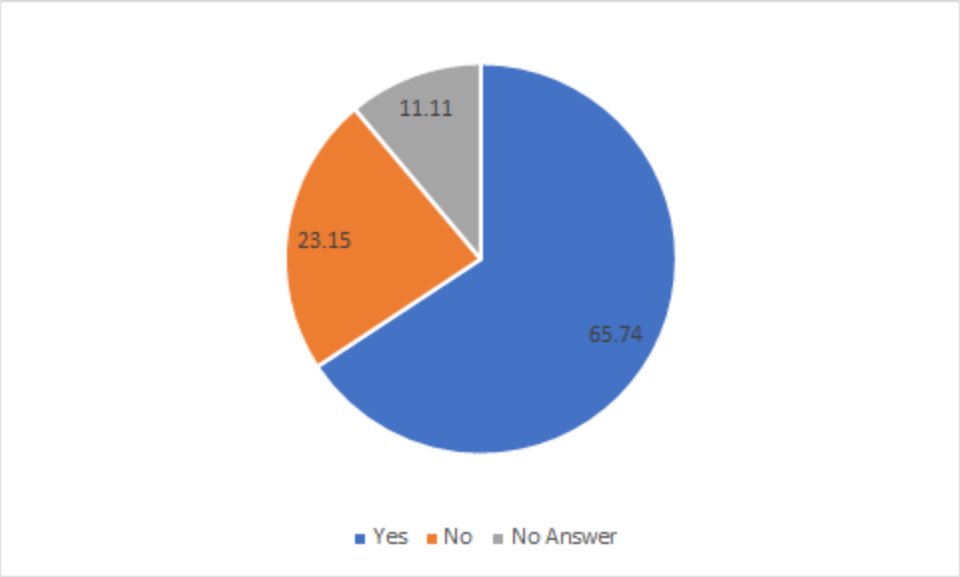

Figure 9. Percentage of participants who found the contact support useful

Among the participants who have used the contact support, 65.74% found the form useful.

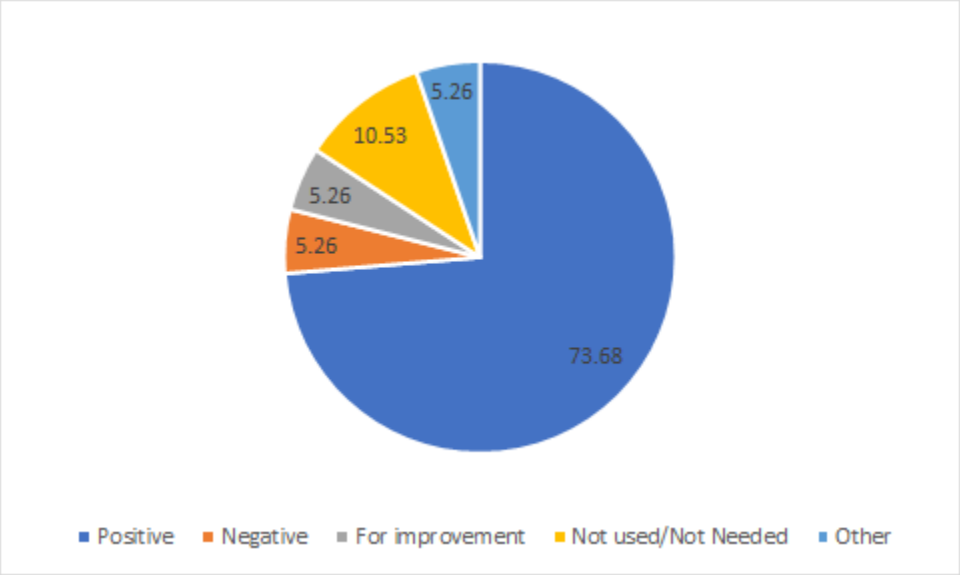

Figure 10. Categorization of comments/suggestions of participants on contact support

Majority of participants, 73.68%, have submitted positive comments/suggestions. Both negative, for improvement and other comments categories received a 5.26%. On

the other hand, 10.53% of participants found the contact form not needed and did not use it.

Figure 11. Word cloud of keywords obtained from the participants' comments on the contact form plugin

Majority of participants commented that the contact form is accessible, did not have to use it and was helpful.

Then there is one comment that suggested adding contact support by phone or chat. The participant wants something similar to a Genius Bar appointment for iPhone, iPad, Mac and more.

Overall System Evaluation

For the evaluation of the NCODeL platform, the System Usability Scale which was created by John Brooke in 1986 was used. This tool consisting of a 10 item questionnaire is reliable for measuring the usability. Respondents can choose from the five options from Strongly agree to Strongly disagree. Evaluation of a wide variety of products and services, including hardware, software, mobile devices, websites and applications can be done using this SUS which has already become an industry standard. SUS has a lot of benefits since it is a very easy scale to administer to participants and can be used on small sample sizes with reliable results. Moreover it is considered valid as it can effectively differentiate between usable and unusable systems (Usability.gov, n.d.).

For the evaluation of the platform, 106 participants answered the survey where in the System Usability Scale was used. A score of 70.14 was obtained which has an equivalent interpretation to Good. The SUS score indicates your usability performance in the aspects of effectiveness, efficiency, and overall ease of use.

SUS Score	Grade	Adjective Rating
> 80.3	A	Excellent
68 – 80.3	B	Good
68	C	Okay
51 – 68	D	Poor
< 51	F	Awful

SUMMARY AND RECOMMENDATIONS

This study has evaluated the effectiveness of using Moodle as a virtual conference platform in enhancing the virtual conference experience during the National Conference on Open and Distance eLearning 2022. The inclusion of user tours, accessibility and contact form plugins was proven effective in improving the experience of the participants of the virtual conference.

Addressing the comments and suggestions of the participants may also raise the SUS score of the platform. Notable comments include requests for user interface improvements for easier navigation of the platform. A pre-conference survey may be done beforehand to deduce the information that the participants will most likely look for during the conference. This survey may help shape the user interface of the platform into one that the majority of the participants may consider excellent.

Another significant suggestion is the production of a video tutorial on the usage of the platform that users can easily follow. This may lead to less confusion to the users and subsequently less technical support requests. A video tutorial may also indirectly introduce some of the lesser known features of the platform, such as the Accessibility block.

The findings of this study shall serve as a guide and prepare institutions or organizations who want to conduct a virtual conference using Moodle as a platform.

In the future, other plugins and features of Moodle can still be explored for use in virtual conferences.

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