

Assessing Lecturer's Perception on the Effectiveness of Moodle on Learning at the Corozal Junior College

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Abstract

This research paper consists of five sections: Introduction, Literature Review, Research Methodology, Data Analysis, Conclusion and Recommendations. The research was conducted to assess the lecturers' perception on the effectiveness of Moodle on teaching & learning at Corozal Junior College. The literature gathered was found on EBSCOhost Belize online library, providing a comparison of studies among different literature reviews that have been made on different countries that use Moodle for educational purposes. Quantitative methodology was used to conduct this study; 80% of the lecturers from Corozal Junior College were sampled using a non-probability sampling technique. E-questionnaires were distributed to each of the respondents. The gathered data was analysed and interpreted; we conclude that Moodle is very effective and efficient for both the lecturers and students, not only at Corozal Junior College but also at any educational level for online teaching. Additionally, we were also enlightened that whenever the world or a particular country faces any adversity; these ODL applications come in handy and meet all requirements to provide school material to students at their own convenience and comfort of their homes.

Keywords: Moodle, Corozal Junior College, Open distance learning, Online education, web-based course, pedagogical

Introduction

Moodle is a course management system that enables the delivery of online education. Web-based course management tools or presently known as Open distance learning (ODL) are the latest wave of technology-based pedagogical tools (Wernet, Olliges & Delicath, 2000). MOODLE stands for Modular Object-Oriented Dynamic Learning Environment. Its design is based on a socio-constructivist pedagogical philosophy that is discovery based and provides for collaborative activities (Dougiamas, 1999). Moodle has rapidly spread in the online delivery of courses globally. With a complete set of teaching and learning tools for course development, course delivery, and course management, MOODLE provides a system for student learning and an efficient solution for faculty of all experience levels. It allows educators to design the appearance of course pages; it provides a set of educational tools that can easily be incorporated into any course, and it provides a set of administrative tools that assist the educator in the task of course administration. In contrast to commercial software, it is open source with no licensing costs and uses PHP code. According to the Open Source Initiative website (2005), the major reasons for utilizing open source software include free to distribute and modify, cross-platform compatibility, universal accessibility and active collaboration to improve design. This courseware is also perceived as user friendly and technically easy to manage.

Goal of the Research

The main goal of this research is to assess lecturers' perception on the effectiveness of Moodle on learning at Corozal Junior College, and to know how lecturers benefit from the use of Moodle in their content delivery and student achievements. Also, looking forward to positive results regarding Moodle, so that it can be recommended to other colleges for the benefit of other lecturers and students in order for them to have progress in Open Distance Learning ODL education in Belize.

Objective of the Research

The main objective of this study is to benefit Corozal Junior College since this project was concentrated within that college with the collaboration of their own lecturers' subjective opinions. Also to benefit those educational institutions who use the Moodle platform for ODL delivery, because they will gain knowledge if the software is effective and efficient. Aiming that the results will also serve to the administration of the Corozal Junior College in determining which lecturers actively use Moodle in their delivery of course material, and also be able to give indication to see if more attention should be given to the program for further upgrading or improvements.

Summarized Research Questions

1. Corozal Junior College lecturers' background information.
2. What is the level of lecturers' engagement on the use of Moodle at the Corozal Junior College?
3. Use of prior Learning Management System (LMS) other than Moodle.
4. How effective and efficient is the use of Moodle while delivery course related material?
5. Which of the following best describe your experience with the use of LMS (Moodle)?
6. What is your perceived experience while delivering course material with Moodle?
7. Would you recommend Moodle or another LMS application to deliver your course related materials?

Literature Review

According to Kok (2008), Lu and Law (2011) and White (2010), the use of Moodle in the secondary and higher education is not a web page for listing information or current events from education institutions, but mainly a learning system that enables the participants; mainly lectures' and students to learn through virtual interaction, on the basis of the principles of social constructivism (Palinscar, 1998). Lecturers and Students create their own profiles, create websites and discussion forums, and post educational material. Therefore, each student learns from the rest of the participants and each reference to the student body receives a pedagogical (function or work of a teacher), since it may be absorbed by the other members as a newly acquired body of knowledge (Moodle Statistics, 2015). Social interactions within the educational institutes and now also with libraries improve the motivation to learn and advance the educational process taking place within the Moodle system.

Moodle Learning Management Systems are not always popular with the lectures' since they have the option to use other platforms for their own convenience. Some lecturers have reported that they experience difficulties such as technical issues (Weller, Pegler & Mason, 2005), lack of familiarity with the system (McGill & Hobbs, 2008), and discussion overload (Kear & Heap, 2007). However, in general, students express positive attitudes towards their intention to use Moodle for teaching and learning any subject field. Students can also perceive its usability in terms of the opportunities it can offer especially in adverse times. However, the relation between positive attitudes towards the system, its use and intention of using it, the perception of its usability and ease of use is affected on a large scale by other factors, like the need for free time, the general views on school reality and learning in school, the mentality and practices of most teacher (lack of experience, workload, etc.) and lack of team-working experience.

The Theoretical Roots of Moodle

All virtual learning environments (VLE) contain features that are designed to encourage lectures and student interaction, cooperation and participation as well as individualized learning i.e. students learning at their own pace and lecturer having convenient times for material delivery. The theoretical bases behind Moodle have constructed a Virtual learning environment explicitly built on an explicit learning theory which is called constructivism. The tenants of this theory are illustrated in five principles generated by Dougiamas (2006) are as follows:

- All of us are potential teachers as well as learners - in a true collaborative environment we are both.
- We learn particularly well from the act of creating or expressing something for others to see.
- We learn a lot by just observing the activity of our peers.
- By understanding the contexts of others, we can teach in a more transformational way (constructivism)
- A learning environment needs to be flexible and adaptable, so that it can quickly respond to the needs of the participants within it.

Dougiamas (2006) expands his view of the ways in which the designers and advocates of Moodle are consciously attempting to create and adapt the software to follow the needs of the learners and course material delivery. This educational philosophy means that Moodle is much less 'tool-centric' than other VLEs. For example, Moodle allows users to organize a course chronologically by week, conceptually by topic or socially with a 'big forum' as essentially a free format structure. There is much less emphasis upon static content and a correspondingly greater emphasis on tools for extending discussions and constructing artefacts. This can be shown as indicated by Cole (2005) when he compared Moodle with BlackBoard and WebCT. He found four more features in Moodle that do not exist in either BlackBoard or WebCT. These features are student peer review, self-assessment of submissions, student journals, and an embedded glossary. An important principle is that Moodle is Open Source Software. This means that the source code is freely available to be modified by end-users and there is a world-wide community to help solve problems and implementations. Colleges and universities are increasingly making use of this cost-effective solution.

Similarities

As noticed by the review of different literature, there is a wide connection that exists among the researchers that Moodle is very vital and important for the lectures' and students' education, and it also monitors the progress of performance. Lecturers and students can create their own profiles, create websites and discussion forums, post educational material, create student groups and assign projects, create, distribute and grade assessments. Each student learns from the rest of the participants and each reference to the student body receives a pedagogical (function or work of a teacher). It also includes a social interaction within the educational institutes and also with libraries that improve the motivation to learn and advance the educational process that takes place within the Moodle system.

Differences

Cole (2005) compared Moodle with BlackBoard and WebCT, and he found four more different features in Moodle that do not exist in either BlackBoard or WebCT. These features are student peer review, self-assessment of submissions, student journals, and an embedded glossary. Moodle is not a web page for listing information or current events from education institutions, but mainly a learning system that enables the participants; mainly students to learn through virtual interaction. Students and lecturers create their own profiles, create websites and discussion forums, and post educational material. With the differences of these two Moodle features is what makes it interesting to try out these amazing and easy and updated features that Moodle has from the other reviews researchers have noticed.

Moreover, other differences of Moodle are that some are mainly used as a communication channel between teachers and students and sharing of knowledge through this application software. However, some lectures use Moodle as a tool for Moodle will allow you to organize a course chronologically by week, conceptually by topic or socially with a 'big forum' as essentially a free format structure. Hence, this difference may be seen as the reason for Moodle to be used in the benefit of the lectures to get their lesson plans done much more efficiently and effectively.

Another difference on the five reviews is that Moodle has been used in different manners. It has been used in the manner to strategically create lessons for students, while others used it to virtually just assess work that must be submitted at a specific time. While other lectures use Moodle to keep track of their students and how they are academically doing. To better explain it the lectures tend to use Moodle as a supervising way to be up to date on how their students are doing and to show them if they are ready to move on with other topics. This benefits both lecturers and students because they have the opportunity to make sure both are fulfilling their objectives.

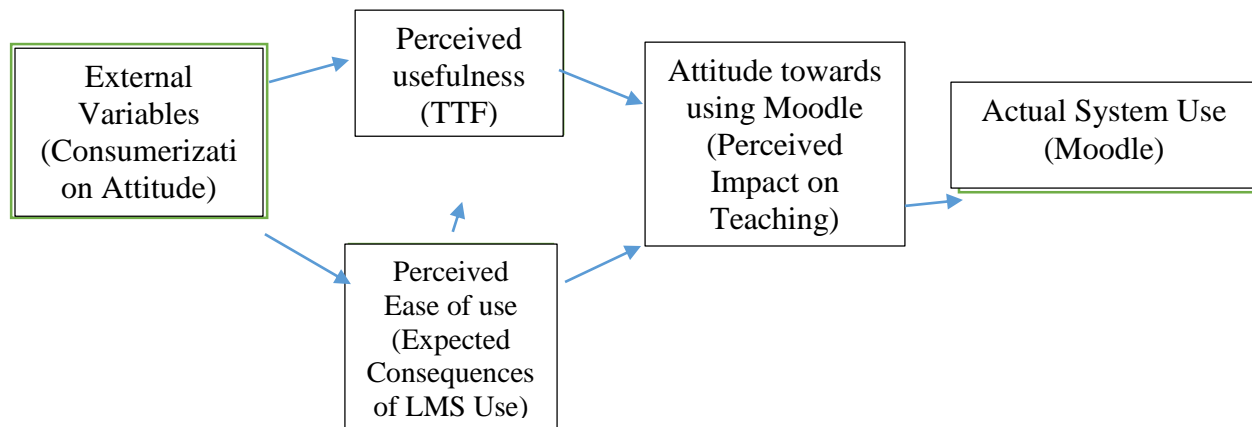
Gap

In this paper, the group found that there has not been any research carried out at Corozal Junior College that assesses lecturers' and students' perception on the effectiveness of Moodle on learning. Therefore, this paper will be the first to investigate lectures' and students' level of experience, engagement and satisfaction with the use of Moodle.

Research Methodology

In order to conduct this research project, quantitative research was used to determine the impact on Task Technology Fit of Moodle on lecturers at Corozal Junior College. Whilst it was noted that on previous literature reviews, TTF had positively impacted students on other parts of the word while using this approach. Our research methodology differs from previous researches because our methodology gathered current involvements that the world is facing due to covid-19 effects; the responses are more objective and certain than previous researches which provided subjective interpretations. research findings were manipulated numerically based on the lecturer's reply and were grouped in several categories which forms the research model. TTF research model incorporated with Technology Acceptance Model (TAM) was chosen due to concentration on the particular topic, also because of time constraints and technology

convenience. In previous research it is assumed that TTF positively impacted lecturers and students and also aided them with flexibility and convenience in doing their work and studying at self-pace. To my personal opinion and based on other research, it's just an assumption because there are quite number of lecturers' that still have preference over other ODL systems other than Moodle.



Model 1. Similar to TTF this advance phases in Technology Acceptance Model (TAM) was used as our guide to determine our above methodology and structure our questions to gather the necessary data from lecturers' at Corozal Junior College who use of Moodle for online teaching.

Sample Population

To conduct this research project, 80% of C.J.C lecturers were administered an e-questionnaire. The questionnaire administered was distributed among the lecturers without any specific gender base. Due to time constraint and availability of lecturers, the questionnaires were distributed on a convenience sampling technique, collecting data from any gender but not being misled with the sole purpose of this research document.

Sampling Technique

The sampling technique that was used in this project is convenience sampling. This strategy saves us time and money since all questionnaires were electronically distributed via email. The sample population concern in this study is the lecturers from Corozal Junior College. Nevertheless, a sample of at least 80% of lecturers was chosen for this sampling in order to gather all necessary data for the completion of this research project.

Population Size

As mentioned in the sampling technique we were able to gather a population size of 80% of the lecturers due that the reset of the lecturers' were either busy or not interesting in participating in this research.

Margin of Error

There was no margin of error found in this research, in fact it was very interesting to know that the majority of lecturers and as well students found Moodle very important to use in this time of the pandemic or any adverse situations yet to come.

Research Instrument

In order to collect data, a questionnaire was utilized to carry out the research. We issued e-questionnaires to the sample at least a population of 80% and waited for the respondent to be completed and return the results instantaneously. A copy of the questionnaire is attached and can be found in Appendix 2.

Main Focus Research Questions

1. Corozal Junior College lecturers' background information.
2. What is the level of lecturers' engagement on the use of Moodle at the Corozal Junior College?
3. Use of prior Learning Management System (LMS) other than Moodle.
4. How effective and efficient is the use of Moodle while delivery course related material?
5. Which of the following best describe your experience with the use of LMS (Moodle)?
6. What is your perceived experience while delivering course material with Moodle?
7. Would you recommend Moodle or another LMS application to deliver your course related materials?

Data Analysis

Information for data analysis was generated using Microsoft Excel. After all the data was entered into the Microsoft excel system, a descriptive analysis was conducted. The information was summarized based on values and percentages. Both values and percentages were employed to obtain the information. Graphs were also generated using Microsoft Excel on figures that were extracted. The data that follows has been analysed and organized in accordance with the original research questions conducted on the lecturers' at Corozal Junior College.

From the sample population only 24 of the 30 questionnaires were answered, resulting in a response rate of eighty percent which was our main focus.

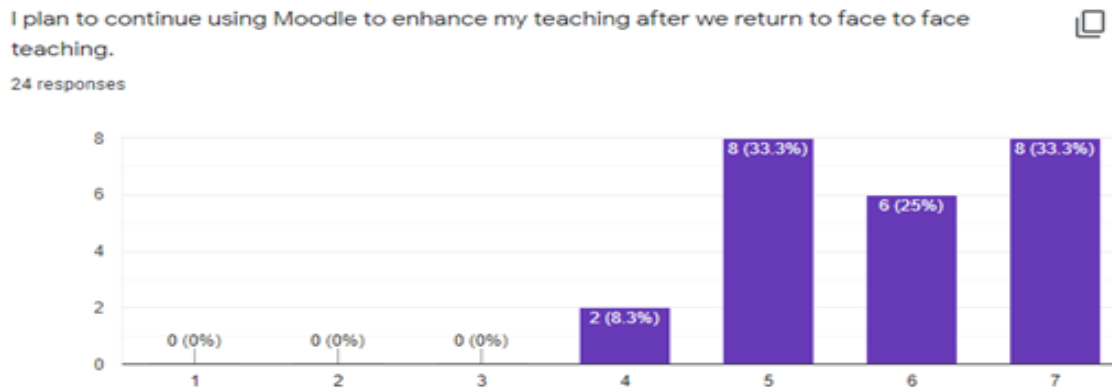


Figure 1: Illustrates the number of lecturers that will continue using Moodle

Whilst reviewing the results obtained from the questionnaires it was observed on the bar graph one that the majority of the lectures at the Corozal Junior College will continue to use the Moodle platform when face to face classes resume. While the minority of two lecturers' replied that they have no plans to continue using Moodle as their ODL choice.

How many semesters have you taught using an LMS other than Moodle.



24 responses

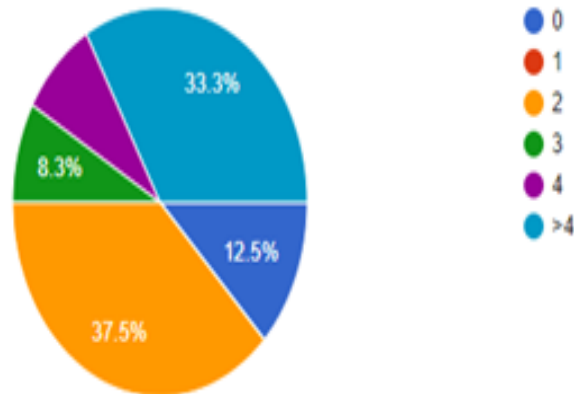


Figure 2: Illustrates the number of semesters lecturer’s used an LMS other than Moodle

It was noted from above pie chart that the majority of the lectures have used other Learning Management Systems other than Moodle for just two semesters. Only 12.5 % of the sample population have not used other LMS other than Moodle to assist with the course they instruct. These reponses clearly depicts that lecturers’ at CJC uses Moodle more frequently than other LMS.

Can you provide information that seems to be just about exactly what your students need with Moodle?



24 responses

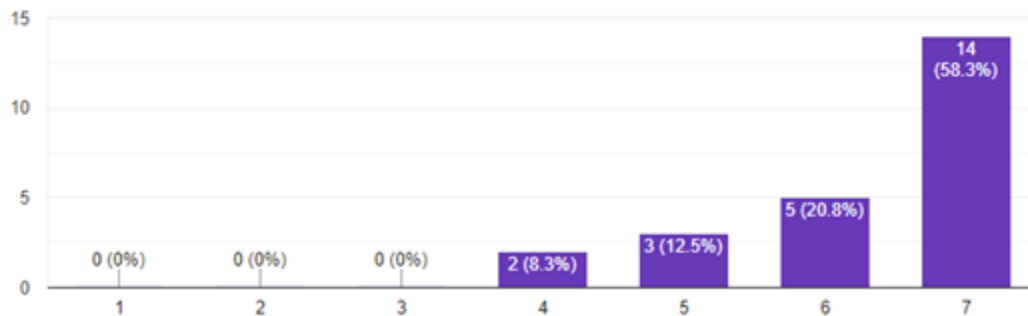
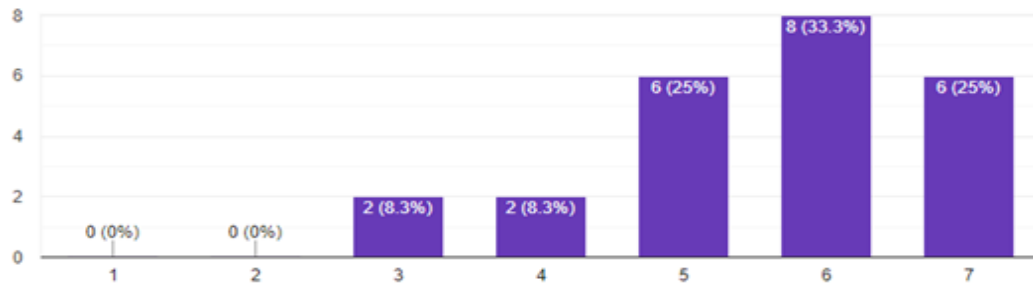


Figure 3: Illustrates if Lecturer’s can provide necessary information in Moodle

Above graph shows results of 58.3% of the sample population strongly agreeing that all information that their students need can be sent through Moodle platform.

Moodle fits well with the way I like to teach online.

24 responses



Moodle is compatible with all aspects of my online teaching.

24 responses

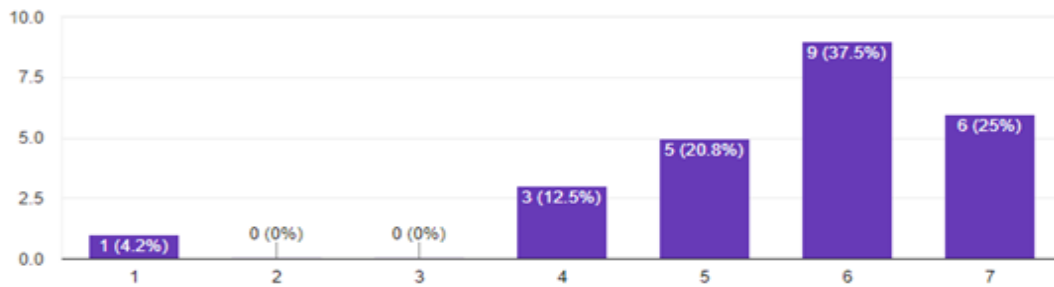


Figure 4: Illustrates how effective and efficient is the use of Moodle

33.3% and 37.5% of the sample population claimed that Moodle fits well with their online teaching and as well it is compatible with the way they teach – this is illustrated respectively on both bar charts in figure 4.

It is easy to get Moodle to do what I want it to do.

24 responses

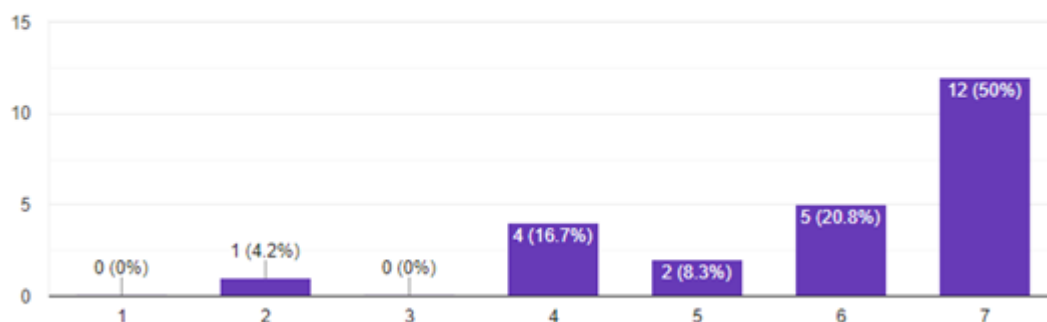


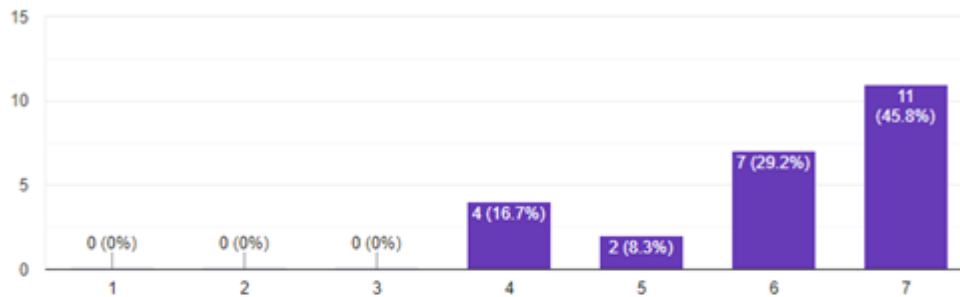
Figure 5: Illustrates Lecture’s opinion if Moodle does want they want it to do

The graph illustrates that 50% of the sample population strongly agreed that it wasn’t complicated for them to get Moodle to do the work that is instructed to do.

Can you provide accurate information to your students with Moodle?



24 responses



Can you provide up-to-date information to your students with Moodle?

24 responses

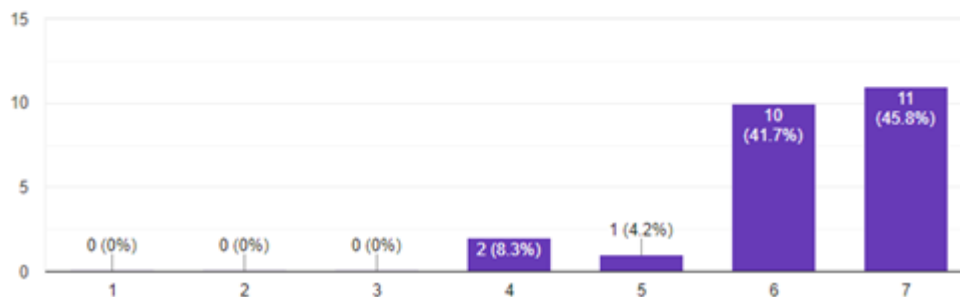


Figure 6: Illustrates Lecturer's experience with the use of LMS Moodle

45.8% of the sample population claimed that they can provide students with accurate information with the use of Moodle. The majority of the population strongly agreed with the question that was asked. The second graph had the majority of the sample population (45.8%) agreeing that the students were receiving up to date information through Moodle and that they were very satisfied with the outcome provided by Moodle.

Conclusion

The study described in this paper investigated the lecturers' perception in the effectiveness of Moodle on learning at the Corozal Junior College. Due to the COVID-19 pandemic it has forced all educational institutions worldwide to replace face-to-face classes with online learning. Students and lecturers had to adapt to this new change and at first it was difficult for them but found it very convenience and flexible for both the lecturers and students. The research was conducted with e-questionnaires; which the lecturers from Corozal Junior College responded in order to gather all necessary data for this research to be a success. After taking a look at the results obtained, it can be concluded that Moodle has a large positive impact on the effectiveness and productivity of the majority of the lecturers, and it has improved the quality of their online teaching. It was also gathered that Moodle is a very excellent and effective management system that enables the delivery of online education at a flexible and convenient time and setting for both the lecturers and students. The goal and objective of this research was accomplished, Corozal Junior College now has knowledge that Moodle is an effective management system and most lecturers are satisfied and plans to

continue with the use of Moodle as their preferred LMS. By the positive results and previous research findings in regards to Moodle, we can now have recommended this LMS to other educational institutions for the benefit of their lecturers and students to have progress in Open and Distance Learning ODL education in Belize and that it do fit the task technology demanded in today's modern technology.

Limitations

While carrying out this research some limitations were encountered. The main one was time limitation to carry out the research to its best ability. Another one was that the availability of a detailed number of lecturers at Corozal Junior college was not available or interested in participating. Another obstacle encountered was that not all lecturers responded to the questionnaires and it took long for some of them to respond to it; causing a delay in the interpretation of data. Even though challenges were encountered along the way the research was accomplished with positive results and can now serve as recommendation for other institutions and even other entities with large group of human resources.

Recommendations

One recommendation that the institution can make Moodle more applicable to all the lectures; is finding a way for it to be more applicable to the departments that have difficulties is by educating them more in how the system/platform operates. Maybe seminars of Moodle can be given to them to have a better understanding in how to command the features to perform certain action. For some of the lecturers it's easier or simple for them to be teaching since they don't have to use different apparatuses or different types of instruments that the students might not or would not have access at home. This would apply to the lectures from departments like science, arts, physical education etc. If the school would find a way to make the website more compatible with these departments and make it easier to lecturers it would be left oblivious to the reason as to why certain steps would be more practical than others. In addition, it would be better if the website provides multiple different platforms that the lecturers could use to livestream or display their work, this would be so that they could use the platform that they are most comfortable with. where they know they could execute their lesson to the best of their abilities.

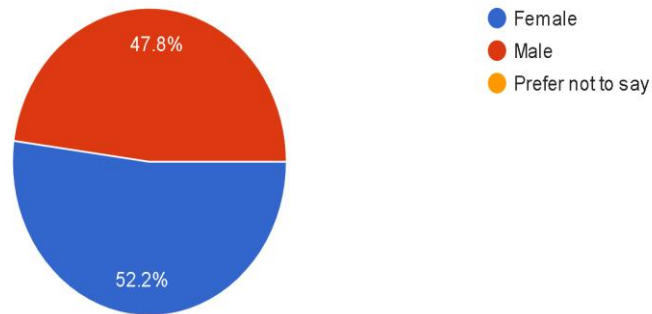
Appendices

Appendix One: Graphs Depicting Socio-Demographics

Graph 1: illustrates the sample population that was used in the research project

Please indicate your gender:

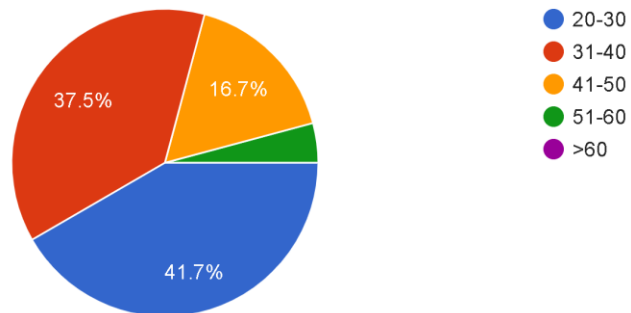
23 responses



Graph 2: Illustration of the sample population ages

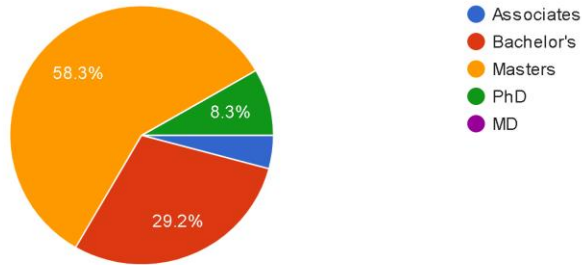
Please indicate your age range:

24 responses



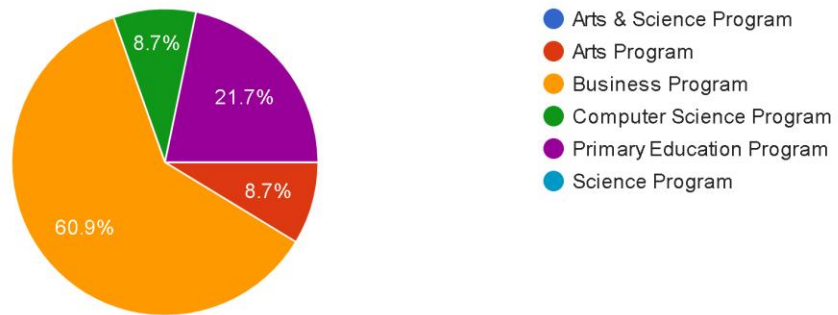
Graph 3: Illustration of Level of Degree of the sample population

Please indicate your highest degree attained:
24 responses



Graph 4: Illustration of field of study of the sample population

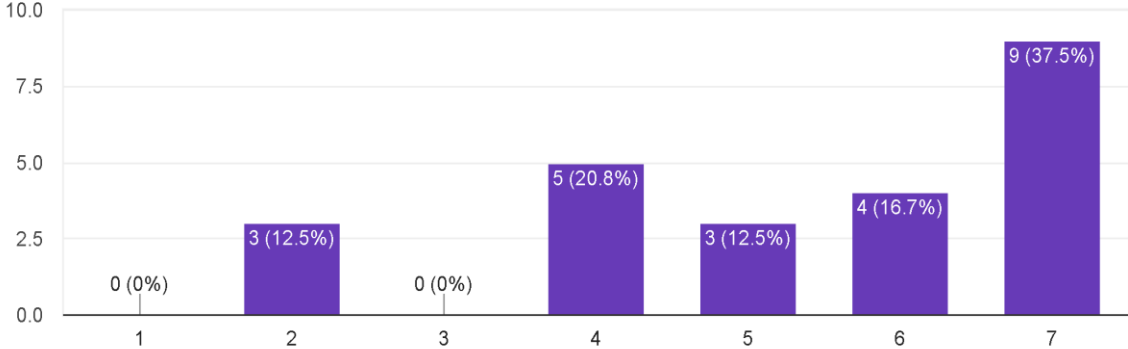
Please indicate the faculty you teach in:
23 responses



Graph 5: Illustration of the sample population prefers face to face teaching rather than online

I prefer teaching face to face rather than online.

24 responses



Appendix Two: Research Instrument (questionnaire)

Greetings Lecturers of Corozal Junior College,

We are currently enrolled in the Management Information System and are carrying out research to assess Lecturers perception on the effectiveness of Moodle on teaching/learning at the Corozal Junior College. Kindly complete this questionnaire, and feel confident that all your responses will be kept anonymous and confidential.

https://docs.google.com/forms/d/1gALBVrXP8Y8gEl-qlQMKptHJ_bYhtXjXeW6rmScBpeY/edit?usp=sharing

Thank you for your kind cooperation.

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