Online Teaching and Learning Activities of State Universities Under the UGC
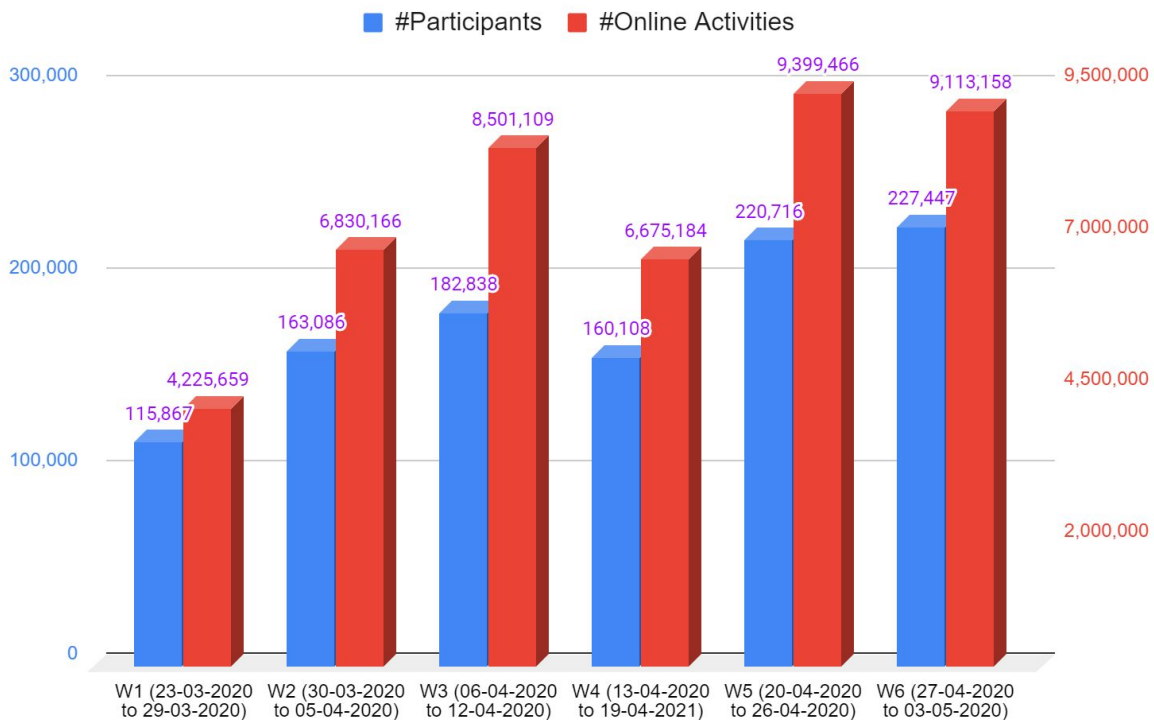
Sri Lankan higher education sector has fifteen State Universities that come under the University Grants Commission (UGC). Before the COVID19 pandemic, the majority of the State Universities practised blended learning using Learning Management Systems (LMS, i.e. Moodle). The LMS servers are connected through Lanka Education And Research Network (LEARN) through high-speed Internet. State University members had access to these servers on the LEARN network through public Internet facilities by using paid services of Internet Service Providers (ISPs) in Sri Lanka. Under the guidance of the President, and in collaboration with TRC and the ISPs, the UGC Chairman was able to obtain free data access to those servers in the LEARN network of Universities. This initiative motivated the Work From Home (WFH) practices of staff and students of the State Universities in the current situation.

1. Overall Online Activities

Accessing the Learning Management System (LMS) with free data provided has become the norm for asynchronous teaching and learning within the State University sector now. The last six weeks' usage statistics are below in the illustration.

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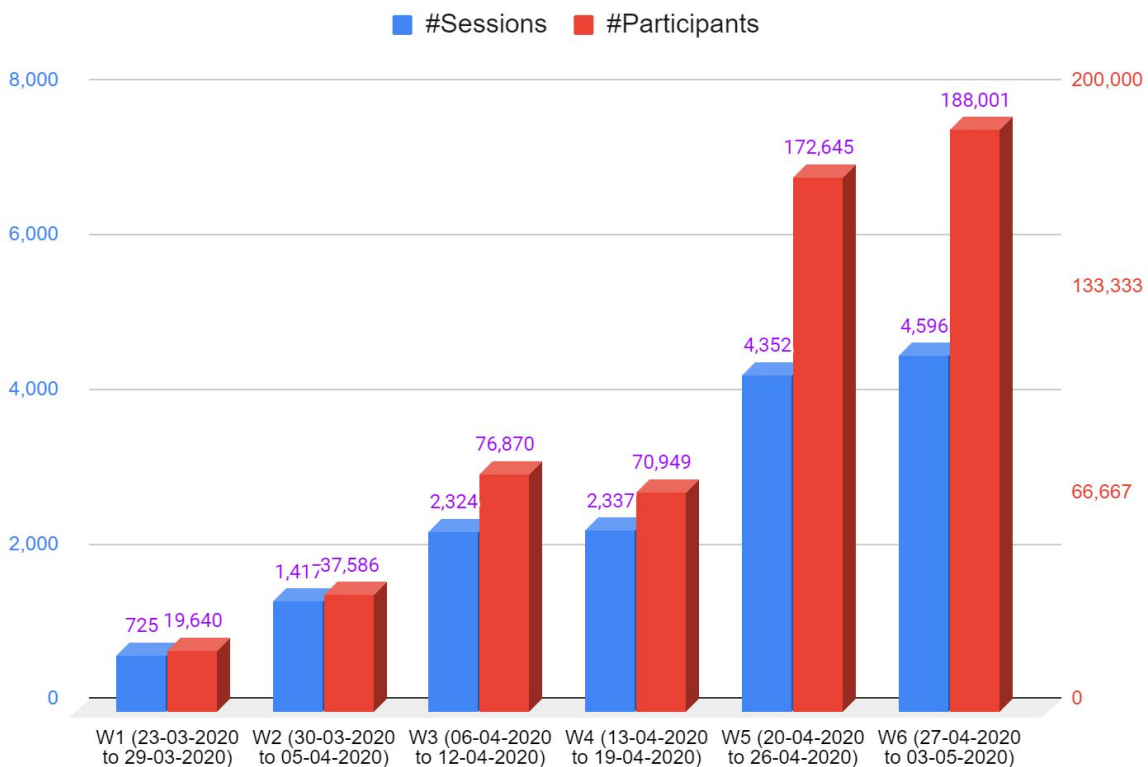
The graph presents two types of data, namely
1. **#Participants**: The number of users (teachers/students) who access the University LMS system on a daily basis, aggregated to a week

2. **#Online Activities:** The number of online activities performed by the users weekly; an activity could be accessing a reading material, following a lecture slide, attending an online quiz, etc.

As per the graph, the total number of users accessing the system has increased during the first three weeks, then dropped a little during the New Year week and again picked up in the last two weeks. The total number of activities performed by the LMS users from the State Universities is around *45 million* during the said six weeks.

For synchronous teaching and learning at State Universities, LEARN had a video conferencing solution (LEARN.zoom.us). During the present situation, LEARN set up its own media servers with its member network and provided a faster and cheaper solution to its members (teachers and students). As a result, it was possible to keep the video conferencing data traffic within the LEARN network saving international data bandwidth. The solution has become a livewire of the synchronous teaching method for the State Universities. The video conferencing activities illustrated here for the last six weeks is the evidence for the claim.

State Universities: Weekly Synchronous Activities (LEARN.zoom.us)

■ #Sessions ■ #Participants

Week	#Sessions	#Participants
W1 (23-03-2020 to 29-03-2020)	725	19,640
W2 (30-03-2020 to 05-04-2020)	1,417	37,586
W3 (06-04-2020 to 12-04-2020)	2,324	76,870
W4 (13-04-2020 to 19-04-2020)	2,337	70,949
W5 (20-04-2020 to 26-04-2020)	4,352	172,645
W6 (27-04-2020 to 03-05-2020)	4,596	188,001

Copyright © 2020 All Right Reserved, Lanka Education and Research Network (LEARN) - Updated on Sun May 10 08:00:00 +0530 2…

The above graph presents two types of data, namely
1. #**Sessions:** the number of online sessions (lectures, discussions, meetings, etc.) weekly
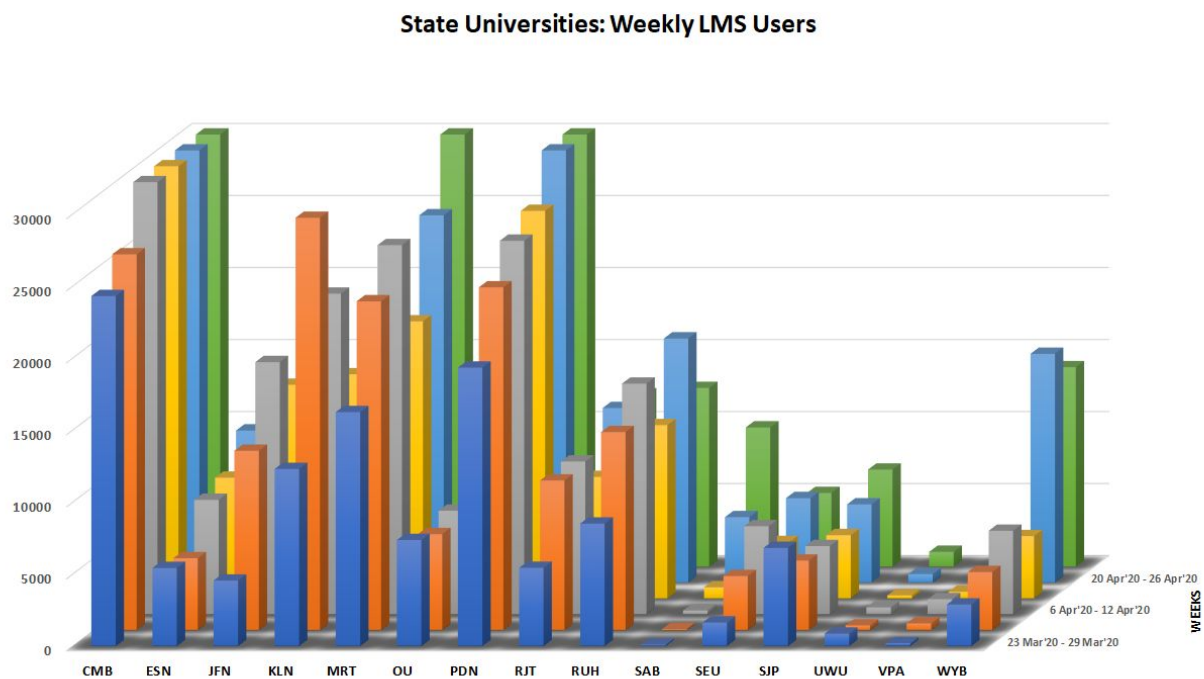2. **#Participants:** the number of participants attended such sessions weekly

As per the graph, both the total number of sessions per week and also the total number of weekly participants for such sessions has increased tremendously during the last six weeks. Although we see a small drop in week four due to the New Year, the numbers have again increased during the fifth week much more. It

further improved in week six. During these six weeks, the State University users had more than *15,000* sessions with a total of over *565,000* participants.

2. Institution-wise Online Activities

Similar measures that are used for the overall online performance of the State Universities are used here in this section for a comparison between the activities of the same institutions. It is worth noting that the data presented here are incomplete (as they are being collected) and also is not compared against the baseline data; that is, different institutions have different numbers of enrolled students and the number of teachers. UGC is working on providing the baseline data, which will identify the group of students who are expected to engage in online education in the said period.

The next figure depicts the number of online participants (as defined in Section 1) across 15 State Universities over the six weeks period.

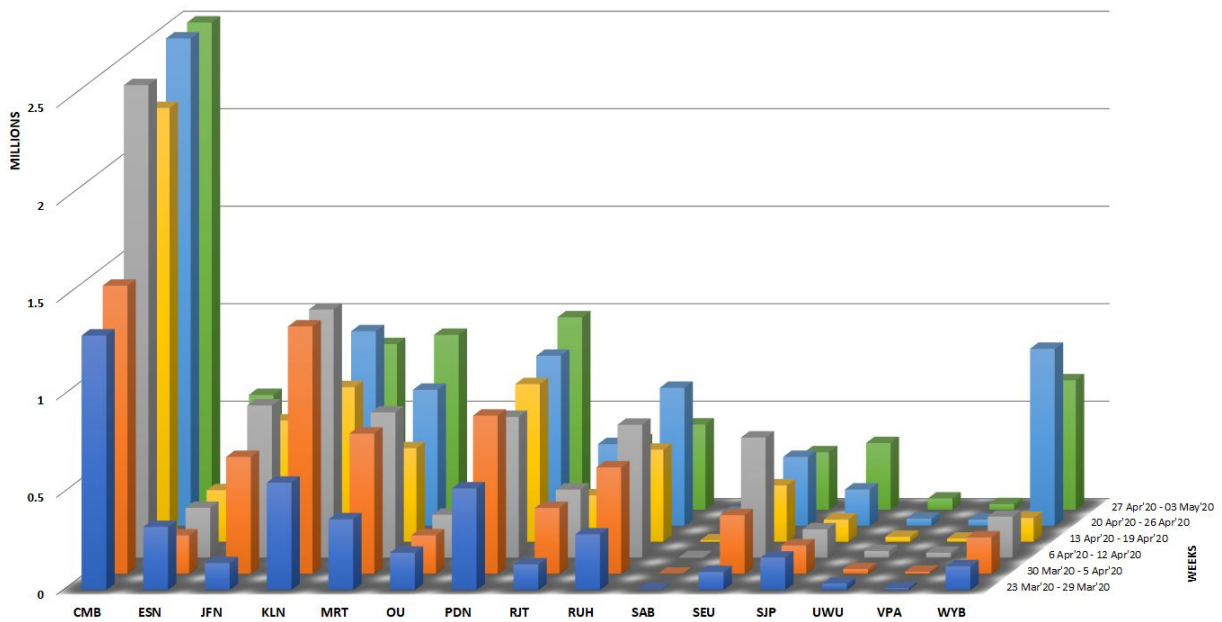**State Universities: Weekly LMS Users**

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The number of participants for LMS systems is in the rise in each and every institution. During the sixth week, the highest numbers are reported from University of Colombo (CMB), University of Peradeniya (PDN), University of Moratuwa (MRT) and University of Kelaniya (KLN) and the lowest numbers are reported from South Eastern University (SEU), Uva Wellassa University (UWU) and University of Visual and Performing Arts (VPA).

The number of LMS activities performed by the users from the 15 State Universities over the six weeks period are reported in the next graph.
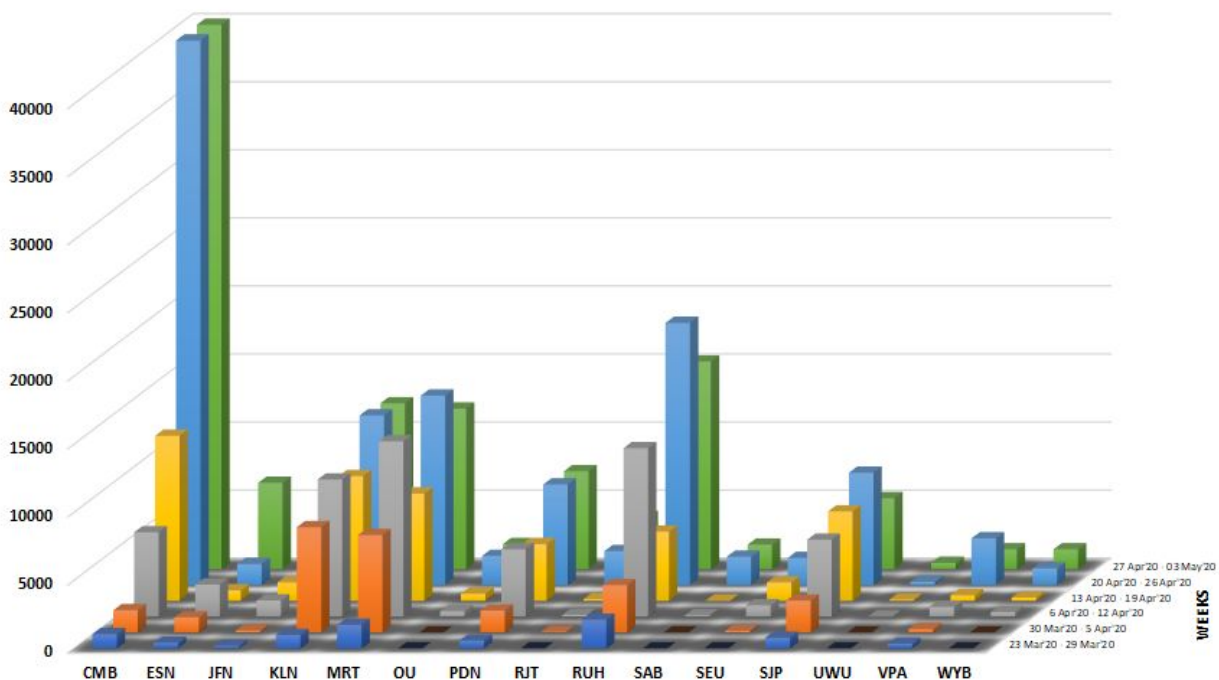
State Universities: Weekly LMS Activities

Again, University of Colombo (CMB) is having the highest number of activities followed by Universities of Peradeniya (PDN), Moratuwa (MRT) and Kelaniya (KLN). The lowest numbers are reported from the University of Visual and Performing Arts (VPA), Sabaragamuwa University (SAB) and Uva Wellassa University (UWU) during the said period.

The next figure shows the Video Conferencing sessions, expected to be synchronous teaching sessions, conducted at the 15 institutions over the six week period.

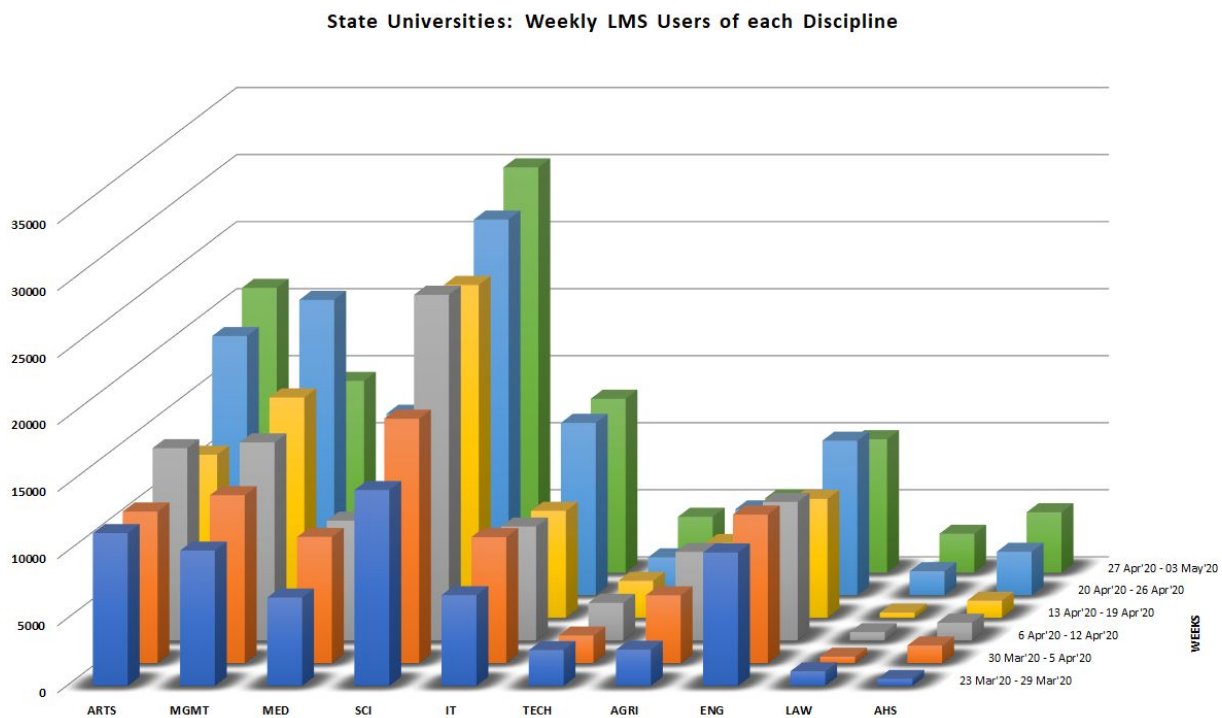## State Universities: Weekly VCon (LEARN.zoom) Participants

The number of participants attending the video conferencing sessions increased exponentially during the first five weeks and further improved in the sixth week. Universities of Colombo (CMB), Ruhuna (RUH), Kelaniya (KLN) and Moratuwa (MRT) are at the top of the list and Universities of Uva Wellassa (UWU), Visual and Performing Arts (VPA), Wayamba (WYB) and Sabaragamuwa (SAB) are at the lower end of the list during week six.

3. Discipline-wise Online Activities

LMS users and activities are considered in this section for a comparison between the online performance of different disciplines within the State University system. ***Some universities maintain a single LMS for multiple disciplines, thus we cannot differentiate the usage and activities into disciplines***. Please make a note that such information is not considered for the analysis.

The next figure illustrates the number of online participants (as defined in Section 1) across ten disciplines within the State university system over the past six weeks period.
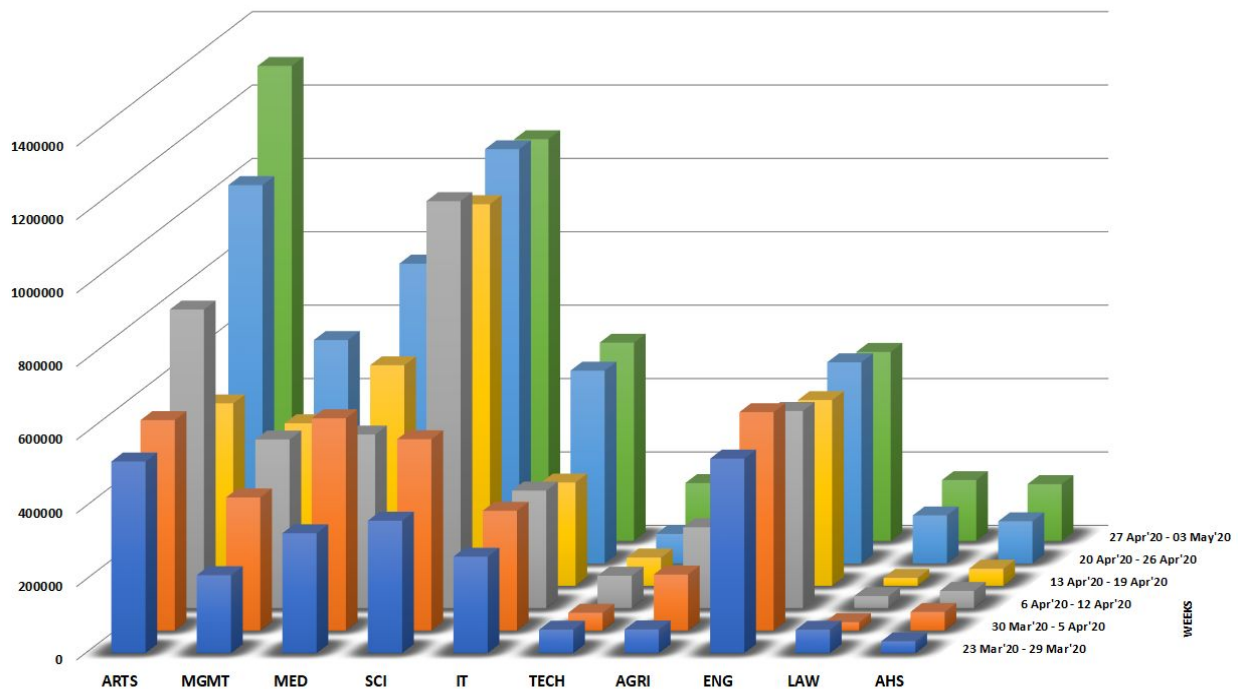

Some Universities maintain a single LMS for catering multiple disciplines, thus are not considered for this comparison

We can observe that the number of LMS users of most of the disciplines increased gradually through these six weeks even though it shows a small drop around the fourth week due to New Year. This implies that most of the disciplines are adapting to online teaching and learning to face the crisis. Science (SCI) recorded the highest number of users logged in to LMS systems during the six weeks followed by Arts (ARTS) and Management (MGMT), meanwhile, Law (LAW), Technology (TECH) and Allied Health Sciences (AHS) recorded the least.

The number of LMS activities performed by users from each discipline over the past six weeks period is reported in the next graph.

State Universities: Weekly LMS Activities of each Discipline

*Some Universities maintain a single LMS for catering multiple disciplines, thus are not considered for this comparison
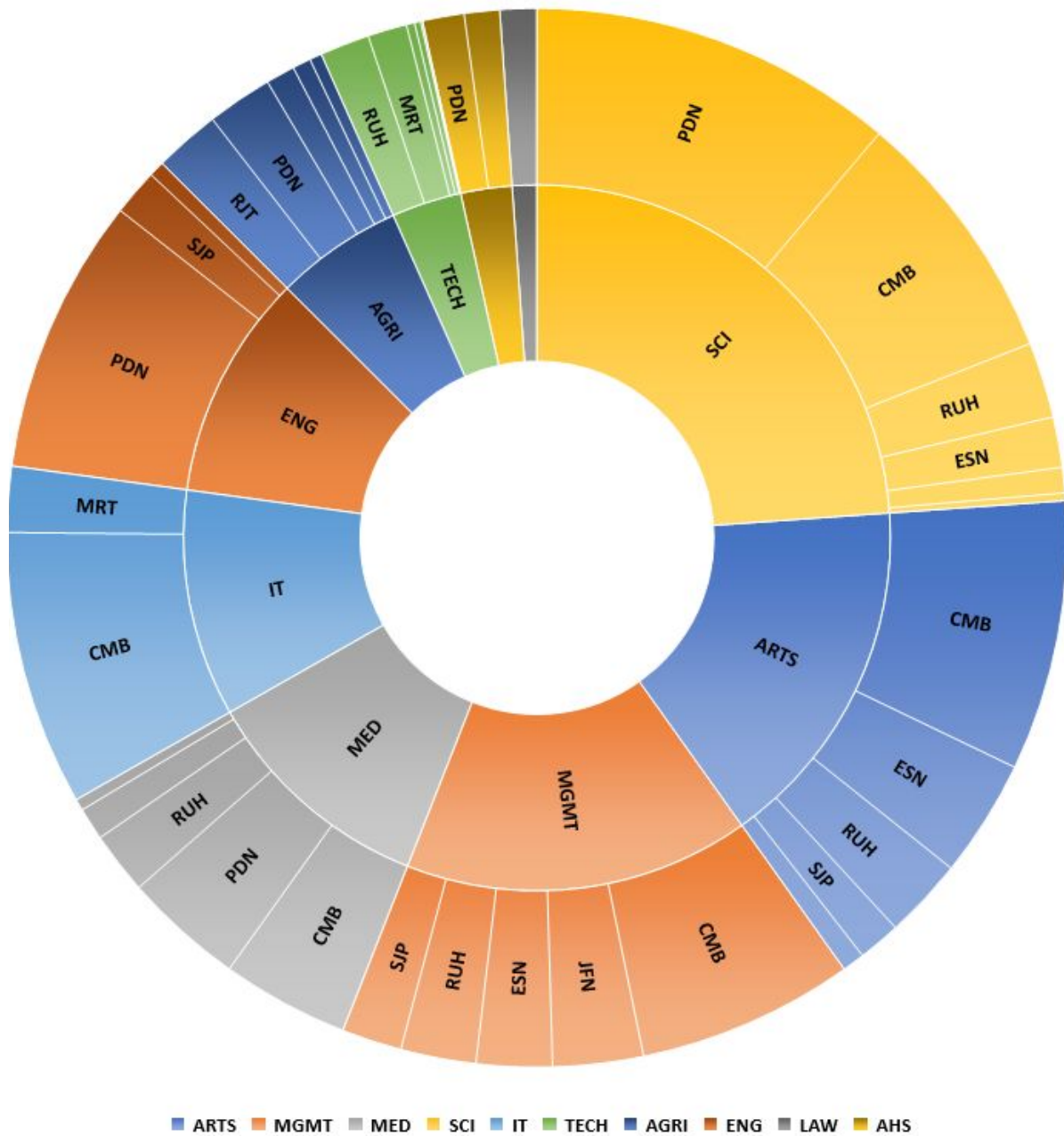
Arts (ARTS) reports the highest number of engagements during the last six weeks followed by Science (SCI), Medicine (MED) and Engineering (ENG). The lowest number of activities are recorded by Technology (TECH), Law (LAW) and Allied Health Sciences (AHS) disciplines. These data are not compared against baseline data as mentioned at the beginning of Section 2. This might be a reason why we observe huge variations between the number of activities performed by different disciplines.

4.   Comparison of Online Activities of the Similar Disciplines from Different Universities

The number of users logged into the LMS and the number of activities performed by them during the six weeks of the lockdown is considered here in this section for the comparison of online teaching and learning activities of similar disciplines within the State University system. As mentioned in the previous section *some universities maintain a single LMS for multiple disciplines, thus we cannot differentiate their usage and activities into disciplines.* Therefore, those institutes which are using the same LMS for multi-disciplines are not considered in this analysis.

The number of users logged into the LMS systems of similar disciplines from different State Universities over the last 6 weeks is represented in the graph below.

State Universities: Comparison of Number of LMS Users of the Same Disciplines from Different Universities

ARTS ■ MGMT ■ MED ■ SCI ■ IT ■ TECH ■ AGRI ■ ENG ■ LAW ■ AHS

As the graph depicts, during the six weeks time, University of Colombo (CMB) has recorded the most number of LMS user logins under Arts (ARTS), Medicine (MED), Management (MGMT), Information Technology (IT) and Law (LAW) disciplines. Meanwhile, University of Peradeniya (PDN) has recorded the most number of LMS user logins under Science (SCI), Engineering (ENG) and Allied Health Sciences (AHS) disciplines. Rajarata University of Sri Lanka (RJT) has recorded the most number of LMS user logins under Agriculture (AGRI) discipline and the University of Ruhuna has the highest numbers under Technology (TECH) discipline.

As mentioned in the previous section, the number of users logged on to the LMS system and the number of activities the undergraduates have performed rely on the base numbers with regard to that

institution/faculty/department. We are working along with UGC to obtain the baseline data in order to provide a better analysis/comparison.

The number of LMS activities performed by similar disciplines from different State Universities over the last 6 weeks is represented in the graph below.

State Universities: Comparison of Number of LMS Activities of the Same Disciplines from Different Universities

■ ARTS ■ MGMT ■ MED ■ SCI ■ IT ■ TECH ■ AGRI ■ ENG ■ LAW ■ AHS

Some Universities maintain a single LMS for catering multiple disciplines, thus are not considered for this comparison

As per the chart, University of Colombo (CMB) has recorded the most number of LMS activities under Arts (ARTS), Science (SCI), Medicine (MED), Information Technology (IT) and Law (LAW) disciplines.

Meanwhile, University of Peradeniya (PDN) has recorded the most number of LMS activities under Engineering (ENG) and Agriculture (AGRI) disciplines. The University of Ruhuna (RUH) has the highest numbers under Technology (TECH) and Allied Health Sciences (AHS) and Management (MGMT) disciplines.

5. Summary

Despite the sudden downward trend during the fourth week which is due to Sinhala and Tamil New Year vacations, almost all the numbers with regard to online teaching and learning within the State University system have displayed upward trends throughout the six week time period. During the six weeks, around 50 million LMS activities were carried out by users logging in one million times, and 15 thousand video conferencing sessions averaging an hour each were conducted with over half a million participants.

This report is prepared by Lanka Education and Research Network (LEARN) on the request of the University Grants Commission of Sri Lanka. Updated on the 10th of May 2020.

LEARN Lanka Education and Research Network
National Research and Education Network of Sri Lanka