

Online Classes and its Effect on the Students of Public Universities in Bangladesh

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ABSTRACT

This study attempts to trace the effects of online classes on the students of public universities in Bangladesh. Through a quantitative research design, 500 university students who are currently studying in various public universities are selected conveniently, and through a qualitative research design, 50 students are selected purposively. A semi-structured questionnaire and interviews over the phone are used as tools for collecting data. Most of the tertiary level students attended classes from town and from their parents' houses but the matter of great sorrow is that due to network unavailability, some of the students have to participate in classes from the field or local markets. Most of the students attended online classes from town or metropolitan areas because of a lack of network facilities. The students from villages found it difficult to attend the online classes in most of the cases. Again, most students used smartphones to attend online classes though some have no smartphone or no laptop. Furthermore, this study also attempted to find solutions to mitigate the hindrance behind online classes – most of the respondents suggested making an emergency education policy framework to mitigate the challenge. Again most of the students feel consequences after attending online classes like neck pain, ear pain, shoulder pain, and blurry vision etc. Most of the students do not enjoy attending online classes. Most tertiary-level students think that it is more difficult to learn online than traditional learning. The most important thing is Government of Bangladesh should offer adequate and strong networking access along with device support to the students of all classes and races to make online classes effective and sustainable and also to confront the challenges created in this pandemic period.

Keywords: COVID-19, e-learning, Online classes, Students of the Public Universities.

Journal of Teacher Education and Research (2022). DOI: 10.36268/JTER/17101

INTRODUCTION

COVID-19 has spread worldwide and caused massacres all around the world. Like other countries, Bangladesh has also been victimized by COVID-19. The government of Bangladesh has been fighting COVID-19 along with the front warriors. Lockdown was imposed for numerous months. But now, all the offices are open, and people are suggested to maintain all precautionary measures to keep them safe from COVID-19. But educational institutions across Bangladesh have been postponed from March 17, 2020 to till date. At first, the government decided to close the educational institutions from March 17 to 31, and then after many instances, the government observed COVID-19 closely and extended the suspension till October 31.

The central and local governments have been monitoring that decision to ensure that it is appropriately implemented and, at the same time, advising all students to stay at home. Since then, educational institutions from primary to higher education have been taken online classes to keep the education process running.

As per UNESCO (2006), in developing countries, web-based learning has been established as a unique method of teaching and learning, hence making the proportion of prepared mentors towards negative headings. With the headway and approachability of progressions on fingertip (web association, LAN, WLAN, and IT Supports) in many developing nations, the utilization of web-based learning has been expanded with extraordinary movement (Williams et al. 2011:1-20). Nonetheless, still, a few difficulties win in developing nations. In developing nations, the energetic and participative understudies considered intelligent learning are minute, while educating and learning through traditional techniques are various (Andersson, 2009; 1-6).

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How to cite this article: Rabbi, M.F., Sarker, S., Smita, M.K. (2022). Online Classes and its Effect on the Students of Public Universities in Bangladesh. *Journal of Teacher Education and Research*, 17(1):1-7.

Source of support: Nil

Conflict of interest: None

Social collaborating education and e-learning are cast off as means of education. Social collaborating education is unstated as an old-style learning method where students and teachers have face-to-face contact. In contrast, e-learning or open learning is divergent from traditional education because it has a way between learner and teacher. Students who belong to distant ranges or have jobs can get instruction at their doorstep through e-learning education and boost their prerequisites at any period and any period old (Ansari, 2014).

In new age group deficiencies ingenuity because of admittance of copious technology. The collaboration between technology and learning is intimate within the 21st century. It's perilous to know the impression of technology in education which consequences in curiosity at school attendance and afterward to learning and originality. Children can aid each other in the practice of technology in accumulation as taught acquired in universities (Shafieiosgouei et al., 2018).

Studies showed that web-based learning and its reception were broadly influenced by substitutes' qualities, which were significant in web-based picking up in developing nations (Bhuasiri

et al., 2012:843-855). These attributes comprise self-adequacy of the internet, involvement with PC and web, nervousness with PC convenience and approaches to internet learning (Chu, 2010:145-154). Understudies' perspectives are likewise affected via the greatness and effortlessness of utilizing courses of web-based learning, the convenience of online learning, and substitutes' level and aptitudes in PC (Aixia, 2011:264-268). Their computer encounters, which comprise obvious self-use, delight, and effectiveness and utilization of web-based learning, assume a prevailing job (Liaw, 2011:28-32). After all, positive perspectives of substitutes and practices concerning learning are significant and necessary towards the acknowledgment and appropriation of web-based learning (Selim, 2007:396-413)

RESEARCH OBJECTIVES

The research objectives of this study are as follows:

- To find out the current status of the students during online classes.
- To find out the medium and network facilities used by the students in the online classes.
- To find out the effects of online classes on the students.
- To explore the challenges and possible remedies to mitigate the challenges in online teaching-learning.

METHODOLOGY

The researchers collected data online from students of various public universities (University of Dhaka, University of Rajshahi, University of Chittagong, Khulna University, Bangladesh University of Professionals, Jagannath University) Bangladesh. All the students who are currently attending the online classes were the population of the study. Based on the convenience sampling technique for quantitative data and purposive sampling for qualitative data, the total sample size was 500 consisting of 280 males, 220 females from the selected public universities for quantitative data, and 50 students, of which 25 were male and 25 were female for qualitative data. The researchers collected data from primary sources through semi-structured questionnaires online and over phone interviews. This study is the outcome of mixed research, both quantitative and qualitative research methods, inferential statistical and descriptive tools had been used for data analysis. The data collection was conducted online from August, 2020 to April 2021.

RESULT

Research Objective I

Age

As the data were collected from public university students, Table 01 gives an idea about 'the respondents' age limit, where the researchers had found 47% from 17-20 years, 41% from 21 to 23

Table 01: Age of the respondents:

Age (in years)	Frequency	% of the Respondents
17-20	230	47
21-23	210	41
24-26	60	12
Total	500	100

Source: Authors Compilation Based on questionnaire, 2020-2021

years, 12% from 24 to 26 years. This table displays that the age group 17 to 20 years has the highest frequency in the sample.

Gender

Table 02 shows that the frequency of male respondents was higher than female respondents from the total selected sample. The percentage of male and female respondents was 56% and 44%, respectively.

Places for Attending Online Classes

Table 03 shows the frequency of places for attending online classes by the respondents. Most of the students (90% of the respondents) attend online classes from their parents' houses, and some students have to attend classes from the field/market.

Regions for Attending Online Classes

It can be easily explained by Table 3 below that most of the respondents attended online classes from outside the Dhaka division. 30% of students were from Chittagong Division, 28% of students were from Khulna, 22% of students were from Dhaka, 6% from Barishal, and 6% also from Sylhet, 4% were from Rajshahi, 2% from Rangpur, and 2% from Dinajpur.

Living Areas for Attending Online Classes

Table 05 explains that the researchers found that 56% of respondents attended online classes from town, 42% from villages, and 2% from cantonment areas.

Table 02: Gender of the respondents

Gender	Frequency	% of the Respondents
Male	280	56
Female	220	44
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-2021

Table 03: Places for attending online classes

Places	Frequency	% of the Respondents
Parents house	450	90
Relative's place	30	6
Field/ Market	20	4
Total	500	100

Source: Authors Compilation Based on a questionnaire, 2020-2021

Table 04: Regions for attending online classes

Regions	Frequency	% of the Respondents
Dhaka	110	22
Rajshahi	20	4
Barishal	30	6
Sylhet	30	6
Khulna	140	28
Dinajpur	10	2
Rangpur	10	2
Chattogram	150	30
Total	500	100

Source: Authors Compilation Based on a questionnaire, 2020-2021



Result Objective II

The Medium used for Attending Online Classes

Table 06 explains the media students used for attending online classes. Most of the students (76%) used smartphones to attend online classes, 12% use laptops for online classes, 8% had no laptop, and 4% had no smartphone.

Internet Connection used for Online Classes

Table 07 shows that most students used cellular data (70%) to attend online classes. 24% of the respondents used broadband, and 6% used wifi for attending online classes.

Mobile Network Operator used for Attending Online Classes

Table 08 shows that most of the students used Grameenphone (32%) for attending online classes. 26% of the respondents used Airtel, 24% used Robi, 12% used Banglalink, 2% used Teletalk, and 4% used none for attending online classes.

Table 05: Living areas for attending online classes

Areas	Frequency	% of the Respondents
Town	28	56
Village	21	42
Suburb	0	0
Cantonment and others	1	2
Total	50	100

Source: Authors Compilation Based on a questionnaire, 2020-2021

Table 06: Medium used for attending online classes

Medium	Frequency	% of the Respondents
Smartphone	380	76
Laptop	60	12
Having no laptop	40	8
Having no smartphone	20	4
Total	500	100

Source: Authors Compilation Based on a questionnaire, 2020-2021

Table 07: Type of internet connection

Type of internet connection	Frequency	% of the Respondents
Cellular Data	350	70
Broadband	120	24
wifi	30	6
Total	500	100

Source: Authors Compilation Based on questionnaire, 2020-2021

Table 08: Type of internet connection

Network provider	Frequency	% of the Respondents
Grameenphone	160	32
Teletalk	10	2
Airtel	130	26
Banglalink	60	12
Robi	120	24
None	20	4
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-21

Reliable and Cheap Network Facilities Provided by Network Operators

Table 09 shows that most of the students used Grameenphone (32%) for attending online classes. 26% of the respondents used airtel, 24% used Robi, 12% used Banglalink, 2% used Teletalk, and 4% used none for attending online classes.

Type of Data During Online Classes

Table 10 shows that most students got a 4G network (56%) during online classes. 32% of the respondents got 3G, 8% got 2G, 4% got no network during online classes. It is recommended that for online classes 4G network is a must.

Network Availabilities During Online Classes

Table 11 shows that most of the respondents got a proper network at home (80%) during online classes. But 14% have to go nearby market/hut for network availability, and 2% have to go nearby schools, 4% have to go nearby 'friend's or 'relative's house for network availability during online classes.

Research Objective III

Having Previous Experience of Attending Online Classes

Table 12 explains that the researchers found that 16% of

Table 09: Type of internet connection

Network provider	Frequency	% of the respondents
Grameenphone	130	26
Teletalk	50	10
Airtel	130	26
Banglalink	60	12
Robi	130	26
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-21

Table 10: Type of internet connection

Data type	Frequency	% of the Respondents
2G	130	8
3G	50	32
4G	130	56
No network	60	4
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-2021

Table 11: Type of network availability

Network availability during online classes	Frequency	% of the respondents
Got proper network	400	80
Have to go nearby market for network connectivity	70	14
Have to go to nearby schools for network connectivity	10	2
Have to go nearby 'relative's/' 'friend's places for network connectivity	20	4
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-2021

respondents had attended online classes before, and 84% had no previous experience of attending online classes.

Having Previous Experiences of Attending Online Live Sessions in Any Platform

Table 13 explains that 14% of respondents attended online live sessions in any platform before, and 86% of the respondents have no previous experience of attending live sessions online.

Having Previous Experiences of Attending Training Platform

Table 14 explains that 6% of respondents attended Muktopaath, which is a local online training platform before, 6% of the respondents attended Coursera, 2% attended Udemy, and 2% attended Bohubrihi, while 84% had no previous experience of attending online training platform before.

Number of Teachers Conducting Online Classes

Table 15 explains that the researchers found that 42% of respondents said that 4-6 teachers were conducting online classes, 38% of the respondents confirmed that 2-3 teachers were conducting online classes, and 14% of the respondents said that 1-teacher was conducting online classes.

Platforms Used for Conducting Online Classes

Table 16 explains that the researchers found 74% of respondents online classes through Zoom, 6% of the respondents attended through Google meet, 10% attended through Google classroom, and 10% attended through Facebook messenger.

Duration of Online Classes

Table 17 explains that the researchers found that 44% of respondents said that they attended online classes for more than 50 minutes, 38% of the respondents confirmed that they attended online classes for 40-50 minutes, 16% of respondents attended

Table 12: Having previous experiences for attending online classes

Having previous experiences	Frequency	% of the Respondents
Yes	80	16%
No	420	84%
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-2021

Table 13: Having previous experiences of attending online live sessions

Having previous experiences	Frequency	% of the Respondents
Yes	70	14
No	430	86
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-21

Table 14: Having previous experiences of attending online training platforms

Name of the platform	Frequency	% of the Respondents
Muktopaath	30	6
Udemy	10	2
Bohubrihi	10	2
Coursera	30	6
None	420	84
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-2021

online classes for 30-40 minutes, 2% of the respondents attended online classes for more than 60 minutes.

Teachers' Enjoyment in Conducting Online Classes

Table 18 explains that 56% of respondents were confused about whether their teachers enjoyed their classes, 30% were confident and sure that their teachers enjoyed online classes. 14% of the respondents confirmed that their teachers didn't enjoy taking online classes.

Students' Enjoyment During Online Classes

Table 19 explains that the researchers found that 36% of respondents enjoyed their classes, and 34% of the respondents didn't enjoy online classes. 30% of the respondents were confused about whether they enjoyed or not during online classes.

Physical Consequences Like Neck Pain, Ear Pain, Body Pain, Eye Pain After Attending or During Online Classes

Table 20 explains that 62% of respondents were affected by physical consequences like neck pain, ear pain, eye pain, or body pain during

Table 15: Number of teachers conducting online classes

Number of teachers	Frequency	% of the Respondents
2-3	190	38
4-6	210	42
1	100	20
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-2021

Table 16: Platforms used for conducting online classes

Name of the platform	Frequency	% of the Respondents
Zoom	370	74
Google meet	30	6
Microsoft team viewer	00	0
Googe classroom	50	10
Skype	00	0
Facebook messenger	50	10
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-2021

Table 17: Duration of online classes

Duration	Frequency	% of the Respondents
More than 50 minutes	220	44
40-50 minutes	190	38
30-40 minutes	80	16
More than 60 minutes	10	2
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-21

Table 18: Teachers' enjoyment during online classes

Teachers' enjoyment	Frequency	% of the Respondents
Yes	150	30
No	70	14
Confused	280	56
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-21



or after attending online classes, 28% of the respondents didn't feel any physical consequences during or after online classes. 8% of the respondents were confused about whether they felt consequences or not, and 2% of the respondents always felt consequences or physical pain during or after online classes.

Students' Concentration During Online Classes

Table 21 explains that 44% of respondents could concentrate during online classes in full class duration, 36% of the respondents could concentrate for 10 minutes, 6% of respondents could concentrate for 5 minutes, 6% of respondents could concentrate for 20 to 25 minutes and 8% respondents could concentrate 30 to 40 minutes during online classes.

Online Classes Could Supplement Traditional Face to Face Classes

Table 22 explains that 50% of respondents disagreed that online classes could supplement traditional or face-to-face classes, and 12% agreed online classes could supplement traditional classes. 26% of the respondents were confused about whether online classes could supplement traditional classes or not. 12% of the respondents assured that online classes could never take over traditional classes.

Difficulty in Learning in Online Classes Rather Than in Traditional Classes

Table 23 explains that the researchers found 50% of respondents agreed that learning is difficult in online classes rather than traditional classes, 8% of the respondents strongly agree that

Table 19: Students' merriment during online classes

Students' enjoyment	Frequency	% of the Respondents
Yes	180	36
No	170	34
Confused	150	30
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-2021

Table 20: Physical consequences during or after online classes

Physical consequences	Frequency	% of the respondents
Yes	310	62
No	140	28
Maybe	40	8
Always	10	2
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020-21

Table 21: Concentration of students during online classes

Duration	Frequency	% of the respondents
Full class duration (40-60 minutes)	220	44
10 minutes	180	36
5 minutes	30	6
20-25 minutes	30	6
30-40 minutes	40	8
Total	500	100

Source: Authors compilation based on the questionnaire, 2020-2021

learning is difficult in online classes rather than traditional classes, 16% of respondents were neutral about the difficulty in learning in online classes, 8% of the respondents disagreed, and 18% of the respondents strongly disagreed that learning is difficult in online classes rather than traditional classes.

Research Objective IV

Challenges Emerged in Online Classes

- *Device Issues, Network Issues, Data Issues*

Many students face common problems like device issues and network and data package issues. Some of the public university students are very poor and have no smartphones or laptops. So, they can't attend online classes without having those devices. Again, some students have a device but inadequate mobile network facilities at their locality. It is recommended that 4G network is a must for online classes as video streaming is mandatory there. The cellular network providers charged a lot of money for data packs, so it is difficult for lower-income students to purchase these expensive data packages for online classes.

- *Due to Having No Laptop, Lack of Exposure in Online Activities*

Some students have no laptop or smartphone, and "that's because they don't have exposure to the internet and online activities. So 'it's a challenge for them to cope with online activities.

- *Size of Curriculum*

The size of the curriculum of the tertiary level in our country is bulky. That's why it is difficult to cover the whole curriculum in online classes within the given time.

- *New experience in using Teaching-Learning Software*

It's a new experience for all students and teachers. Using software; like-Zoom and Google meet takes time to cope with, and again there was no training to use that software for both teachers and students. Senior professors find it very difficult to operate that software. The challenge will be to understand & learn from the online course.No

Table 22: Online classes vs traditional classes

The online class could supplement traditional classes	Frequency	% of the Respondents
Yes	60	12
No	250	50
Maybe	130	26
Never	60	12
Total	500	100

Source: Authors Compilation Based on the questionnaire, 2020

Table 23: Learning difficulty in online classes vs. traditional classes

Learning difficulty in online classes	Frequency	% of the Respondents
Agree	250	50
Strongly agree	40	8
Neutral	80	16
Disagree	40	8
Strongly disagree	90	18
Total	500	100

Source: Authors compilation based on the questionnaire, 2020-2021

one is familiar with this new process, so everyone is having a hard time with new technologies, devices

- *Parents are not Aware of Online Learning*

A large number of parents are not very appreciative of this system. Some parents have the ability to purchase a laptop or smartphone for their children, but they are not very appreciative of online classes, and that is why they do not want to purchase laptops or smartphones for their children.

- *Possibility of Misusing the Situation by the Students*

Students being unfamiliar with the process and having a chance of getting out of the rigid classroom environment often misuse the situation. Ex-bullying teacher, disturbing the session by intentional noise-making or screen sharing, cheating on exams, assignments, making fake excuses, etc.

- *Physical problems due to the Long Duration of Online Classes*

Students often face eyesight problems, neck pain, back pain, etc., during online classes, because they have to look at the screen for a long time, and they have to sit in the same posture for a large amount of time. 'That's because the students face these physical problems after participating in online classes.

- *No possibility of Doing Lab/ Practical Work*

Online classes could minimize the gaps of theory classes, but it is not possible to conduct lab or practical classes online. So, it is difficult for science students to minimize this gap.

- *Lack of students' concentration*

Students could not be able to concentrate in full class duration during online classes. They made their video off for having a good conversation between students and teachers. But by making their videos off, they sometimes engaged in other works. If teachers asked questions when they muted their audios and made their videos off, they could not respond in most cases.

Possible remedies to mitigate the challenges of online classes:

- *Proper plans are needed*

Educationists, policymakers, and technologists should be altogether to develop a proper plan because this pandemic has undoubtedly stopped our educational flow and shown us the opportunities to explore a new era of building a technology-dependent, student-centered, learning outcome-based education system. Because the whole world is slowly going towards a more challenging life. Our fight becomes harder being a developing country with a larger population size and lower education rate our fight becomes harder. So we better have plans.

- *An emergency Education Policy is Needed*

In Bangladesh, we do not have any policies regarding emergencies. So, an emergency education policy framework is needed for the betterment of education in the future. COVID 19 has shown us the importance of having an emergency education policy.

- *Reorganization of Curriculum*

Our curriculum is bulky. So, we should realize the importance and meaning of proper education and cut off the unnecessary parts of the curriculum and tests. The curriculum should be concise and short at this moment.

- *Devices Support for Online Classes*

Devices like- smartphones, laptops should be provided to the students who 'don't have the ability to purchase them. Without these devices' support, online classes are not possible. Again we have to ensure 100% attendance to ensure equal opportunities for education. Otherwise, there will be a class difference.

- *Proper Mapping of Networking and Building a Strong Network*

Due to weaker network facilities, many students are unable to attend online classes. Proper mapping of network facilities can help a lot. Building a strong mobile network all around the country as a first step and then gradually making internet /mobile data facilities more available to people could be very effective.

- *Teaching methodology adopted by the teachers*

Teachers should go for-

- easy-to-go teaching-learning methods
- student-centered approaches
- easy assessment systems rather than traditional systems
- learning outcome-based teaching-learning (cover the parts which are essential for basic learnings and skill achievements)

- *Supervision of the Students is Needed*

Supervision of the students and regular engagement is necessary at this moment. Because of no work and by staying at home, some students had lost their mental wellness. So many suicidal events took place during this pandemic period among tertiary-level students.

- *Financial Support to Students*

It is tough to deal with poverty while doing online classes. So, financial support should be provided to the students who are poor, who 'can't buy internet packages. It could be a loan or stipend for the students who 'don't have the ability to purchase devices, internet packs.

- *Dealing with Mobile Operators for free Data Packs for the Students*

The government of Bangladesh should make deals with mobile operators for free data packs only for the students. If it is not possible, then the data packs should be cheaper for the students to use the data packs during online classes.

DISCUSSION

Students between the ages of 17 and 20 mostly participate in online classes at the tertiary education level. Moreover, boys are more likely to attend online classes than girls. Although most of the respondents attend their online classes from their parent's house, it is a matter of great regret that some respondents also try to attend online classes from the field or market places due to the unavailability of a mobile network at their home. It is further found that due to the good network facilities in the town than village or suburb, most of the students in the town participate in online classes. Because smartphones are very accessible and have many advantages to use, most of the students in Bangladesh attend their online classes through smartphones.

From the details review above, key findings emerge that the main effects of online classes on students are- device issues, network issues, data packs issues; larger size of curriculum, lack of enjoyment by the teachers and students in online teaching-



learning, difficulty in learning in online classes, students failed to concentrate in the whole class duration, physical problems emerged in students for having a longer duration of online classes, lack of training for conducting online classes etc.

Although there are some online class activities even before the start of this pandemic, the scale of these online class activities has multiplied and will increase day by day due to the demand for time after the beginning of the pandemic. Online learning or e-learning is now a very emerging issue all over the world because of this COVID-19. For those who cannot receive or are deprived of face-to-face learning, education is now provided in an online medium so that they can receive their desired education.

The study will help the government and tertiary education providers take various steps to make online classes more effective and a pathway toward an effective teaching-learning system.

CONCLUSION

From the above discussions, to confront this COVID-19, the students must stay at home. Because if COVID-19 infects one student, then there is a possibility of infection among the whole institution. So, the government of Bangladesh has made the right decisions by shutting down educational institutions and continuing virtual education. But the problem is online learning or e-learning is entirely new to us, and we did not have any planning or policies towards facing any educational emergencies. Again, most of our country's people are not capable of purchasing the devices needed for online teaching-learning. The government has taken so far many initiatives, the government has made a deal with zoom so that the university faculties can use it for free with premium features available again for the students, the government has made a deal with Teletalk which is a national cellular operator. But the thing is Teletalk has low network facilities. So, the up-gradation of network facilities is a must. We do not know yet when we will be get rid of COVID-19. So, until then, we have to continue online teaching-learning. So, many measures are to be taken to make it effective and ensure education for all. A strong network, device support, financial aid, and presize curriculum are needed for effective online teaching-learning.

ACKNOWLEDGEMENTS

The authors express their sincere gratitude to the students of the public universities of Bangladesh (the University of Dhaka, University of Rajshahi, University of Chittagong, Khulna

University, Bangladesh University of Professionals, Jagannath University).

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