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Perception of Elementary Student-Teachers towards Virtual Learning

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ABSTRACT

Due to the Covid-19 pandemic, the life of the world has been changed. During this period the education of the whole world was drastically affected. Pandemic forced the imposition of lockdown and accordingly the closure of educational institutions and this process led to thinking about the other mode of the teaching-learning process, which is adopted by many educational institutions during such period. The purpose of this study is to access the perception of student teachers toward virtual learning. In the present study, 95 student teachers of teachers training institutes participated and shared their perceptions of online learning through a google form. A survey method was used in the present study. To find out how students felt about their online learning, researchers used a self-made questionnaire about virtual learning. The results clearly depicted that the student teachers were immersed in a learning environment.

Keywords: Perception, Google form, survey method, virtual learning, student teacher, Covid-19.

INTRODUCTION

The global influence of the Covid-19 epidemic may be seen in various spheres of life. It causes a great deal of harm to our environment. It compels India, as well as the rest of the world, to impose a state of lockdown. All schools, colleges, and universities are shuttered due to the imposition of lockdown. The students' education is greatly influenced. This pandemic crisis is the ideal opportunity to deploy technology in the education sector, and many educational institutions have already done so. There are numerous roadblocks in its execution, but it continues and is well received

by our kids. Teaching faculties are attempting to entice students to this online class using a variety of new methods.

According to Allen and Seaman (2013), 7.1 million college and university students were drawn to online classes in 2013, up from 6.7 million in 2012, despite the fact that face-to-face classes are still quite important. This pattern demonstrates that online education has a solid foundation in our educational system. Many colleges and universities have also launched a number of online courses or programmes, according to reports (Christensen et al. 2011; Lee and Martin, 2017). Its main goal is to figure out how to give students with better education. During a pandemic, the education offered through this platform is extremely beneficial to students (Lee and Martin, 2017). It does not require that the class be run in physical mode; rather, anyone can attend the session from any location. It also allows for a wide range of participation in any conversation (Bonk and Khoo, 2014). It encourages students to reflect on a certain idea and to take their time in answering the question. Many studies also reported that online learning could not match the need of the student (Hew and Cheung, 2012; Lee, 2014, Hartnett, 2016). Many studies have found that students' benefit from both physical and online learning and that bended learning is a suitable option from an accessibility standpoint (McCarthy, 2010).

Students are drawn to virtual or online learning because of its convenience, according to studies. Learners can access online courses at any time and from anywhere, giving them the freedom to work at their own pace (Bolliger and Inan, 2012). Students also have more freedom in scheduling their sessions around job and family obligations because courses are accessible from anywhere (Bolliger and Inan, 2012; Hara and Kling, 2001). A number of studies that compared student learning in online and face-to-face classes found no significant differences (Bernard, et al. 2004; Russell, 1999). Despite these findings, the literature on online learning consistently suggests that online students have lower retention than their classmates in traditional face-to-face classes (Fetzner, 2013). Because an institution's student retention rate is often used to measure and appraise achievement, this has become a major concern among academic leaders (Allen and Seaman, 2013).

Students' attitudes regarding online classes are influenced by their past understanding of ICT (Wang et al., 2001), which contradicts Buzzetto-More and Sweat-Guy (2006), who found no link between the two. Paechter et al. (2010) discovered a substantial link between online class and subject attitude. It was also revealed that the students thinking positively were more interested in learning online (Zhu et al. 2013). Nachimuthu (2020) discovered that typical classroom methods have no impact on students' impressions of online classrooms in his research. In comparison to face-to-face learning environments, online learning situations are more effective (Rubin et al., 2020). According to Dumford and Miller (2018), maintaining student retention and attitudes toward online learning is a significant difficulty. Rather, Sheffield et al. (2015) confirmed the benefits of online learning and the students' favourable views, indicating that it improves topic recall. Some studies on online learning have had positive outcomes, and more are expected later (Joo et al. 2018; Huang et al. 2017).

Importance of the study

These studies virtually all show a favourable relationship between interest and attitudes toward online learning and positive outcomes, which has become critical in the current situation. Many teacher education institutions in Odisha used a variety of online platforms during Covid-19. For online learning, Google Classroom, Whatsapp, Facebook Live, Zoom, and Google Meet were used. For D.El.Ed. student teachers, various ways have been used to implement online classes. The current study will provide enough opportunity for instructors, students, and other stakeholders to discuss the various issues that arise in the virtual or online learning process, as well as the steps that should be taken to enhance it.

Objectives of the study

The researcher's goal in this study is to learn about D.El.Ed student teachers' perceptions towards virtual learning in the pandemic hour. It also focuses how this influenced their learning

process, as well as how student teachers felt about the benefits and drawbacks of online teaching classes.

METHODOLOGY

In Odisha, 68 elementary teacher education institutes are run by the state government of Odisha. Out of which, there are 30 DIETs, 04 BIETs, 31 Govt. ETEIs, 02 Government Elementary Teacher Education Institutions (SC & ST Development) and 01 Non-Government Aided Secondary Training School managed by Minority community of the State. The education of all of these institutions has been affected by the impact of the pandemic. Due to the impact of Covid-19, the teaching-learning process is taking place in virtual form for fast intervention. The student teacher's perspective on this learning process was accessed using a qualitative online survey. The student teachers of two DIETs were taken as the population of the present study, one from eastern Odisha and the other from western Odisha.

In this study, 100 student teachers were randomly selected from two DIETs: DIET, Bhadrak (50), and DIET, Sonepur (50). However, only 95 student teachers answered to the questionnaire, making 95 as the sample size for this study. The questionnaire was filled out by first- and second-year student teachers. After developing the questionnaire on Google Form, it was delivered to the students in their Whatsapp group. The survey was completed in 10 minutes and submitted by the participants. The participants' responses were kept private. All information was gathered only via the use of the internet.

Except for basic information such as name, gender, caste, class, age, qualification, and so on, the Google form questionnaire comprises 34 questions divided into five categories. The first segment has ten questions and is based on information about the effectiveness of online education. Section two contains sixteen questions about the virtual platform, while sections three, four, and five have three, two, and three questions about satisfaction, advantages and disadvantages of online classes, and improving virtual classrooms, respectively. The researchers employed a five-point Likert scale questionnaire and invited student teachers to fill it out during the month of November 2021. Following receipt of the data, it is transmitted to SPSS for statistical analysis. There is a link between demographic characteristics and the effectiveness of online classes, as well as satisfaction.

The researchers were also able to get the sample size in a timely and cost-effective manner by using the convenience sampling approach (Marshall, 1996). The findings, however, cannot be extended to the entire population due to the small sample size and uncertainty regarding what population size would be representative (Bryman, 2004). However, the current study provides clear information about student instructors' perceptions of online classes, as well as their satisfaction, which will assist others in taking the appropriate steps for their future action.

RESULTS

Quantitative data was collected and analysed in the current study. The e-questionnaire was administered on 95 student teachers for this study and their demographic information had been mentioned in Table 1. The table clearly demonstrated that the questionnaire was completed by fifty-two female student teachers and forty-three male student teachers (Table-1). The participants' average age is 22 ± 2.7. When it comes to the participants' qualifications, the majority (62.1%) finished their graduation, followed by intermediate (27.3%) and post-graduation (10.5 %). Arts participants account for 41% of the total, while science participants account for 55.8% of the total. The student teachers who took part came from a variety of backgrounds. The majority of student teachers (32.6 %) fall into the SEBC category, while 22.1% fall into the General category, with 17.9 % and 16.9 % falling into the ST and SC categories, respectively. The demographic data clearly showed that the majority of student teachers were continuing their teacher education courses after graduation. The majority of the student teachers have scientific background.

Table1: Demographic characteristics of the respondents

Sl. No.	Demographic profile		N (%)
1	Gender	Male	43 (45.3%)
		Female	52 (54.7%)
2	Age		22 + 2.7
3	Qualification	Intermediate	26 (27.4%)
		Graduation	59 (62.1%)
		Post-Graduation	10 (10.5%)
4	Stream	Arts	39 (41%)
		Science	53 (55.7%)
		Commerce	1 (1.1%)
		Engineering	1 (1.1%)
		Others	1 (1.1%)
5	Category	General	21 (22.1%)
		OBC	10 (10.5%)
		SEBC	31 (32.6%)
		SC	16 (16.9%)
		ST	17 (17.9%)

The student teacher's responses to the e-questionnaire were divided into five sections, such as information on effectiveness, information on online platform, information on satisfaction, advantages and disadvantages, and regarding the positivity of the programme. Each section had also been divided into subsections. The majority of the questions use a five-point Likert Scale, with a handful using a two-point scale. There are ten questions in the first segment.

On a question, 'have you ever heard online teaching before covid-19?' majority (68.4%) of the students favor the question. Only thirty student teachers stated that they had never heard of online education before to the Covid-19 pandemic. During the lockdown as a result of the outbreak of Covid-19, student teachers are experimenting with virtual learning across the states. However, the majority of student teachers (86%) are dissatisfied with this kind of instruction. There could be a variety of reasons for this, but student teachers prefer the offline class. The use of online learning is an instant step toward overcoming or mitigating students' learning gaps from afar, but it does not satisfy student teachers.

On the matter of effective way of learning, a smaller percentage of student teachers prefer virtual learning. They choose this medium because it provides an interactive style of education, allows for studying at any time and from any location, aids in the development of internet skills, courses are simple to navigate, and provides opportunities to learn through practical work. The majority of student teachers choose an offline learning technique for teaching learning process. This is because it is necessary for them to feel linked to their institute, to boost relationships between classmates, to receive real-time feedback on questions, and to be in a classroom atmosphere that supports their learning. Perfect computer and internet abilities are also required for online teaching. It is more costly than standard education. Student teachers also believe that internet connectivity, as well as the speed with which it is available, impedes their learning methods. Again, the availability of electricity, as well as the ability to charge and maintain a mobile phone, impedes their ability to learn. They were also irritated by the fact that they had to sit in front of a gadget for such a long time to attend their lesson, and they preferred offline classes to virtual classes.

More than half of student teachers prefer offline mode of teaching over virtual mode of teaching when it comes to the efficiency of practical classes. Only 36.8% of student teachers believe that online learning aids them in overcoming academic challenges, while 34.7 percent believe it may

be beneficial, and the rest disagree with the question. The majority of student teachers (33) believe that online teaching does not improve their educational quality. Only 32 student teachers favoured online learning as a means of obtaining a high-quality education, while 30 student teachers were undecided. They are unsure whether online learning contributes to high-quality education. Online learning, according to the majority of student teachers (57.8%), does not give the same benefits as traditional training. Rather, it is accepted that traditional teaching is the best way to acquire skills. On the topic of 'How effective has remote learning been for you?', eighteen student teachers indicated that it has not been effective for them, while 24 percent said it has been effective, followed by slightly effective (18.9%), moderately effective (15.7%), and neutral responses (13.6 %). Despite advances in technology, it is clear that e-learning/ virtual learning is not a productive teaching method for students.

There are sixteen questions about the virtual platform in the information section. The majority of student teachers (33) found the style of delivery during online learning to be fascinating, while twenty-nine found it to be uninteresting, followed by inability to express themselves (24). When asked if they have access to a gadget for online study, the majority of student teachers (80) said yes. Although the student teachers have access to their online learning, network challenges (40 %) have been identified as the most significant obstacle to their online learning. For their online classes, the majority of student teachers (93) used smart phones. Teachers supplied a variety of e-resources for student teachers during the online learning process, which they utilized at home. The majority of student teachers (45.2 %) benefit greatly from these tools. In this regard, 25.3 % of student teachers have benefited much from these tools. For their online learning, more than 63% of student teachers spent one to three hours every day. According to the opinion of student teachers, majority of teachers (98.9%) used Google Meet for virtual classes. Student teachers are attending their virtual classes on a regular basis, and the majority of them are enjoying themselves. However, they are dissatisfied with the classroom transaction. The online classroom transaction was rated as average by 39 student teachers. Through the use of the internet, teachers were able to answer student teachers' questions (85.2%). During the classroom transaction (64.2%), the teachers clarified the student teachers' doubts. Teachers have access to student teachers' performance through Google Forms (33.7%) and Testmoz (69.4%). Teachers encouraged students to actively participate in the online class (91.6%) by asking questions (62.1%) and using their real names (23.2 %) and the use of discussion forum.

Information regarding satisfaction, there are three items. The majority of student teachers (70.5%) are satisfied with virtual learning. This is due to the ease of online teaching (57.9%), availability to information and learning materials (65.3%), opportunity to connect with classmates (55.8%), ability to understand the concept presented in the topic (66.3%), and supplementation of face-to-face tutorials (52.6 %). Student teachers are dissatisfied with the virtual learning class because there is insufficient opportunity for peer support, they are not confident enough to handle difficult tasks in the virtual mode, it is difficult to apply concepts learned in the subject, and there is insufficient opportunity to discuss with teachers.

The ability to stay at home (70.5 %), the ability to record a meeting (51.6 %), the flexibility in time and space (64.2 %), the increase in your technological literacy (75.8%), and the fact that there are technologies available to enable one to teach online are all reasons for the benefits of virtual classes (82.1 %). Reduced interaction with the teacher (63.2 %), technical problems (73.7 %), lack of interactions with classmates (72.6 %), poor learning conditions at home (66.3 %), and technological illiteracy (42.1%) are the reasons for the disadvantages of online classes, while 37.9% are neutral on technological illiteracy.

The majority of student teachers (71.6 %) believe that virtual learning is not superior to traditional instruction. Because of technical issues (80%), lack of practical experience (72.6%), insufficient confidence to handle difficult tasks with online learning mode (60%), poor learning conditions at home (62.1%), and insufficient opportunity to establish peer support, online classes are not better than offline or face-to-face teaching classes (60%).

Table-2 shows the relationship between demographic characteristics and other components of virtual learning that was found in this study using SPSS. It was discovered that there is a strong association between gender and mode of instruction (Table-2). It has also been discovered that there is a positive association between the manner of instruction and the age, qualification, and stream of the student teachers. A negative link between qualification and online learning has been discovered, indicating that online learning is an effective method of learning. A negative association was also discovered between age and virtual education. Again, there was a negative association between practical efficacy and gender and qualification. Gender has a favourable relationship with satisfaction; however, age, qualification, and stream have negative relationships. Table 2 also demonstrates the negative relationship that has been associated between all of the variables.

Table 2: Correlation between demographic characters and effectiveness, platform and satisfaction of online learning

		Mode of teaching	Online teaching is an effective way of learning	Effectiveness of practical class	Overcoming the difficulties of learning	Improving quality of education	Gaining more skills than offline class	Mode of delivery	Offering resources	Enjoyment	Classroom Transaction	Satisfaction
Gender	Pearson correlation	.054	.066	-.109	.102	.160	.019	-.025	.011	-.088	.100	.075
	Sig. (2-tailed)	.601	.525	.294	.323	.122	.856	.813	.912	.394	.335	.470
	N	95	95	95	95	95	95	95	95	95	95	96
Age	Pearson correlation	.145	-.092	.020	-.006	-.367	-.128	.195	-.141	-.086	.065	-.192
	Sig. (2-tailed)	.160	.374	.844	.954	.000	.216	.058	.173	.405	.529	.169
	N	95	95	95	95	95	95	95	95	95	95	95
Qualification	Pearson correlation	.320	-.015	-.070	.014	-.250	-.056	,208	-.039	-.199	.125	-.211
	Sig. (2-tailed)	.002	.886	.502	.893	.015	.587	,044	.706	.053	.227	.040
	N	95	95	95	95	95	95	95	95	95	95	95
Stream	Pearson correlation	.117	.126	.168	.062	.026	.246	.125	.087	-.087	-.098	-.067
	Sig. (2-tailed)	.261	.225	.103	.549	.805	.016	.228	.403	.403	.342	.522
	N	95	95	95	95	95	95	95	95	95	95	95

The Chi-square test was also used in this investigation and the results are shown in Table-3. The Table clearly depicted that the majority of demographic parameters have no correlation with the various educational features of virtual learning. However, there is an association between manner of teaching and qualification ($p=0.001$) and stream ($p=0.005$). Once again, there is a connection between certification and online learning efficacy ($p=0.026$). The Table also clearly depicted that strong association between quality of education with other demographic characteristics had been noticed, i.e., with age ($p=0.029$) and qualification ($p=0.011$); category and gaining skills ($p=0.50$); and age and manner of delivery ($p=0.010$). There is no correlation between gender and online class, as reported in Table 3.

Table-3: Chi-square test between demographic characteristics and different aspects of online learning

		Mode of teaching	Online teaching is an effective way of learning	Effectiveness of practical class	Overcoming the difficulties of learning	Improving quality of education	Gaining more skills than offline class	Mode of delivery	Offering resources	Enjoyment	Classroom Transaction	Satisfaction
Gender	Pearson Chi-square / Df / Asym. Sig.	.281 / 1 / .596	.585 / 1 / .746	4.565 / 4 / .335	4.658 / 2 / .097	2.561 / 2 / .278	.042 / 2 / .979	1.462 / 3 / .691	3.389 / 4 / .495	.742 / 1 / .389	1.458 / 4 / .834	1.105 / 3 / .776
Age	Pearson Chi-square / df / Asym. Sig. (2-sided)	3.790 / 3 / .285	7.462 / 6 / .280	11.502 / 12 / .486	4.316 / 6 / .634	14.046 / 6 / .029	3.586 / 6 / .733	21.713 / 9 / .010	4.704 / 12 / .967	3.588 / 3 / .310	12.064 / 12 / .441	4.269 / 9 / .893
Qualification	Pearson Chi-square / Df / Asym. Sig. (2-sided)	13.461 / 2 / .001	11.027 / 4 / .026	11.306 / 8 / .185	3.097 / 4 / .542	13.008 / 4 / .011	5.112 / 4 / .276	10.346 / 6 / .111	5.868 / 8 / .662	4.146 / 2 / .126	7.405 / 8 / .494	7.365 / 6 / .288
Stream	Pearson Chi-square / Df / Asym. Sig. (2-sided)	15.064 / 4 / .005	10.799 / 8 / .213	18.906 / 16 / .274	8.336 / 8 / .401	7.182 / 8 / .517	13.569 / 8 / .094	16.327 / 12 / .177	16.962 / 16 / .388	2.749 / 4 / .601	9.469 / 16 / .893	2.798 / 12 / .997
Category	Pearson Chi-square / df / Asym. Sig. (2-sided)	.874 / 4 / .928	9.884 / 8 / .273	9.083 / 16 / .910	9.764 / 8 / .282	4.595 / 8 / .800	15.518 / 8 / .050	14.834 / 12 / .251	23.265 / 16 / .107	4.400 / 4 / .355	19.506 / 16 / .243	12.063 / 12 / .441

DISCUSSION

Virtual learning has a number of advantages. Participants do not have to be at the same physical area. But it can also help students to save money by removing the need for travel and other out-of-pocket expenses connected with in-person classes, as well as allowing them to continue their education full-time or part-time (Fedynich 2014; Yilmaz 2019; Kim, 2020). Virtual learning can also be a handy approach for students and teachers to communicate because they do not have to meet in person. In virtual learning, too much preparation is not necessary if a teacher wants to take class lightly. But proper planning and various e-resources are required to make the virtual learning interesting and effective. The teacher has to aware about the synchronous and asynchronous approaches and tools to be used during the virtual learning.

In the present study, it was reported that e-learning is not a productive teaching method for student teachers. Though there is advancement of technology, but the use of technology in an immediate approach may the reason for such distraction among student teachers towards the e-learning or online learning. Due to pandemic not only the student teachers, but also the students of all categories of different age groups are forced to join the online learning. The other reasons for such distraction may be lack of knowledge among the student teachers and teacher educators along with parents regarding the use and importance of online learning. Lack of technological knowledge among all stakeholders, access to the internet, non-availability of android mobile phones may force the student teachers to responding like such statement.

There are some constraints for both teachers and student teachers on the use of virtual learning tools for the class purpose. All student teachers have no equal access option. They joined the class through their mobile phones and some are joined through their laptops or computers, which may be a cause for learning access of the student teachers. Again, most of the teachers or student teachers are also faced problems conducting online class due to lack technical knowledge (Fedynich, 2014; Wedenoja, 2020). Time management, internet connectivity, battery used in mobile phones, is another constraint for this process. It is, nevertheless, well-known among student teachers who want to improve their concentration and learning through more hands-on activities.

Teachers' technological competence is required for effective management of online learning. It is simple to teach student teachers in a face-to-face mode environment, but online learning requires more energy and competence in the case of a teacher, as shown in the above results. If they wish to teach online, they will have to take additional responsibilities (Kalogiannakis, 2010). It's probable that teachers will struggle to integrate technology into their lessons (Konca et al. 2016; Lindahl and Folkesson, 2012; Yurt and Cevher-Kalburan, 2011). As a result, well-designed programmes can ignite instructors' attention and inspire them to incorporate new technologies into their classrooms (Chen and Chang, 2006; Kerry and Farrow, 1996).

According to the findings of this study, student teachers believe that virtual learning cannot replace the offline classroom. But student teachers are comfortable in online classrooms and get proper support from teachers, according to Kulal and Nayak, (2020). They do not believe, however, that online courses will ever be able to replace traditional classroom teaching. According to Kulal and Nayak (2020), the effectiveness of online classrooms is substantially limited by technological issues, which is also observed in this study. The primary purpose of online learning is to disseminate subject knowledge (Yildiz and Işman, 2016), which was also observed in this study.

In this study it was discovered that some student teachers are dissatisfied with the design of the course for virtual classes. They felt boring during the theory classes taught to them. They responded that there was no wide scope for them to discuss in such case through virtually. They preferred more interactive classes and in reality, that type of class must hold them seat in front of the camera for a longer period of time. Classes include discussion forum, brainstorming, quizzes etc are more than the normal class through virtual mode. Though they are satisfied with the manner they taught, appropriate planning is required to incorporate some technical features in to the teacher education course. Understanding how to effectively teach young student teachers via online programmes has not been a key element of teacher education courses (Kim, 2020). COVID-19, on the other hand, may indicate that greater thought should be paid to develop acceptable methods and procedures. Early childhood educators may be needed to teach online in the future, therefore regular classroom communication of teacher education programmes may need to be evaluated in light of new techniques, talents, and understanding (Kim, 2020; 2017).

Student teachers are quite open about their emotions and views with their classmates. This is not possible, however, when studying virtually. Hands-on activities are important for student teachers' learning, but they can be challenging to incorporate into a virtual environment. The student teachers took part in activities such as singing and dancing, cutting from a handout and constructing a pattern, painting drawings on a topic, and making an instrument out of recyclable materials (Kim, 2020). Learning by doing different activity is more fruitful than simple learning, which was revealed during the online classroom teaching practices. Though activities can be done through online but it is not according to the face-to-face mode type. This study clearly depicts that ample scope must be provided to the students to design different activity according to the need of the content and can able to learn through it.

Receiving comments from student teachers in a regular class is fascinating. It provides adequate opportunity for all student teachers in the class, not just the specific one. By asking student teacher a simple inquiry, everyone can clear up their uncertainties. However, with an online class, this is not a problem. Some student teachers have also been observed leaving the classroom when they believe the next question would be posed to them or remaining silent or not replying to the questions.

In this regard, proper care and management are required for the student teachers ICT tools growth throughout online learning. This conclusion is likewise consistent with Louwrens and Hartnett's findings (2015).

CONCLUSION

Although virtual learning is not a new notion, it provides us with new hope in the field of education amid the Pandemic. It is the finest extra or alternate technique to reach the student teachers during this time. It instils new hope in us. Both the teacher and the student teachers get benefit from it. The advancement of technology and its use has given education a new lease on life. Even so, the internet facility remains a challenge for online education. Although the student teachers in this study have a positive attitude toward virtual learning, more attention should be paid to the utilisation of activity scenarios during virtual transactions. It was discovered in this study that both qualification $(p=0.001)$ and stream $(p=0.005)$ have an association with modality of instruction. Once again, there is a link between certification and the effectiveness of virtual learning $(p=0.026)$. There is also a link between improving education quality and age $(p=0.029)$ and qualification $(p=0.011)$; category and gaining skills $(p=0.50)$; and age and manner of delivery $(p=0.010)$. There is no correlation between gender and online class, as seen in Table 3. It is also too difficult for everyone to sit for lengthy periods of time in front of a network for the goal of studying. For practicum reasons, proper preparation and guidelines are also essential and to be finalized by the educational experts. It may play an important part in the field of education in the future, but it will never be able to replace the offline or face-to-face style of instruction. We must consider the difficult aspects of virtual learning and the essential actions to be made in order activate the virtual learning approach.

Acknowledgements

Conflict of Interest

There is no conflict of interest.

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