RELATIONSHIP BETWEEN PERCEPTION AND USE OF SOCIAL MEDIA IN DISTANCE AND OPEN LEARNING BY FACULTY OF UNIVERSITAS TERBUKA INDONESIA

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Abstract

The study aimed to find the relationship between the perception and use of social media towards the paradigm shift of teaching as design science for faculty of Universitas Terbuka, Indonesia. The descriptive and mixed design (both qualitative and quantitative) was used to conduct the study. A focus group with the faculty of Institute of Learning Material Development and Distribution, Examination, and Information System of Universitas Terbuka was conducted. Initially the nine faculty members were exposed to the concept of paradigm shift towards teaching as design science, social capital and design science both in English and Indonesian languages. The focus group discussion was followed by three interviews to triangulate the views and identify the indicators for the questionnaire. Afterward, a questionnaire to measure the social capital strengths in three dimensions (Relational, Cognitive and Structural) was designed on the basis of initially collected data. The reliability and validity of the questionnaire was assured through judgmental approach. A purposive sample of thirty faculty members was selected from the teaching faculty of the Universitas Terbuka. It was found that the perception of the Universitas Terbuka

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faculty members was positive towards the use of social media in their teaching- learning process. They were well aware of the potential of the young learners in the use of social media and are of the view that it may be utilised to reach the objective of optimization of the learners' achievements. The researchers recommended a dual cyclic model for the appropriate use of the social media for the purpose of teaching as design science.

Keywords*: Social Media, Distance Learning, Perception of Social media, Use of Social media, teaching as design science.*

Introduction

Challenges of today's teaching are more different than teaching a few decades ago, for example yesteryear's teachers were more concerned about motivation and the right selection of the material. Today's pedagogy involves a focus on learner-cantered activities. The instructor must design what students can do interestingly that will help them reach the objectives. This could be included in the process of composing the syllabus and assembling the exercises and quizzes, weighing the criteria for grades. Adjustment and acceptance of this paradigm shift are the problems of even the modern world of teaching. In distance mode of delivery these problems present a set of unfamiliar challenges because it demands creativity and imagination.

The major purpose of the teaching is to perform and to respond their audience to inspire the learner. The imperative for teaching as defined by Laurillard (2012) is that learners develop their personal knowledge and capabilities. Teaching is considered as an art, but according to Simon (1969), contrasting art with the sciences of the natural world. Art is concerned with how things are whereas the science aims to understand and explain the things, design on the other hand focus how things ought to be.

We can say that teaching is also a science, although its' not a theoretical science that describes and explains some aspect of the natural or social world. It is closer to the kind of science, like engineering, computer science or architecture, with the purpose to make the world a better place. Due to developments in the technology over the previous few decades it has become a design science. According to Laurillard (2012), teaching is more like a design science as it not only uses and contributes to theoretical science, but it builds design principles rather than theories, and the heuristics of practice rather than explanations, although like both the science and the art, it uses what has gone before as

a platform or inspiration for what it creates. Integration of the social media applications in the learning process and the prominence gained by the distance mode of learning, teaching as design science became more important for the instructional designers and the educators of distance mode of delivery.

For the distance learning designers, there has always been a strong relationship between education and technology. The advent of new tools and technologies, in their broadest sense, are important drivers of education, social media is more popular among the young generation. Therefore, there is a dire need to integrate these applications into teaching learning process; a careful design of teaching may help in this regard.

Revolution brought by advent of blackboard and chalk in teaching learning process cannot be forgotten, and currently the applications like Facebook, Twitter, Youtube, Skype and SMS etc need to be integrated. In an age of rampant technological invention, this becomes a critical issue.

The arrival of digital technology over the past three decades, increasingly impacting on work, leisure, and learning, has been a shock to the educational system that it has yet to absorb. In fact, the variety and power of digital technologies probably means they cannot be easily assimilated. The system will probably have to be adapted to embrace them fully. The concept can be operationalised by considering teaching as design science. The major question is whether the Universitas Terbuka faculty is ready to adopt paradigm shift from teaching to design science? The major objective was to explore the use of social capital towards the shift of teaching as design science by the faculty of University.

The specific objectives of the study were to:

- Explore the perception of the faculty of Universitas Terbuka towards the adoption of teaching as design science.
- Investigate the use of social capital dimensions (Cognitive, structural and Relational) by the faculty of Universitas Terbuka.
- Investigate the relationship between use of social capital and the perception towards teaching as design science for the faculty of Universitas Terbuka.

Literature Review

The researchers have predicted that the inventions like Internet and social media will dramatically influence our way of living (Leudlow and Duff, 2009) which human beings are witnessing now. The basic components of internet and social media are communication and

collaborative technologies which include video, voice, content sharing technologies and social networking that have potential to give new dimension to teaching and learning by providing opportunities for students and teachers for teaching and learning. These technologies have changed the role of teacher form provider of information to facilitators of learning and have made students as centre of attention (Beldarrain, 2006; Gunga & Ricketts, 2000, Falvo and Johnson 2007).

Social media has been rapidly becoming the focus of new generation's attention. Facebook, Skype, twitter, mobile SMS and Whatsapp are the important "communication portal" for social networking, which have greatly changed the way people communicate. Mobile phones have become the crucial part of our life. They are used not only for messaging and making calls but also can be used in teaching and learning process. The applications of Facebook, WhatsApp, Skype, SMS and twitter are the most popular messenger applications among the college students (Jadhav, Bhutkar, & Mehta, 2013).

Students may be inherently motivated to feel connected to others within a virtual environment (Cheung & Lee, 2011). The intention of the creation of a virtual community of students is to improve the use of online learning technology. Social media are technologies that facilitate social interaction, make possible collaboration, and enable deliberation across stakeholders. These technologies now include blogs, wikis, media (audio, photo, video, text) sharing tools, networking platforms and virtual worlds (Guy, 2012). Social media can be beneficial in formal learning, especially in distance education, as well as informal and non-formal learning. Studies has already shown that social media help lessen the place and time barriers for learner-to-learner and learner-to-instructor interactions in distance education, enhance student reflection, increase student engagement and increase learners' motivation and discipline. Educators are using social media as an instructional means to blend informal learning into formal learning environments. Moreover, faculty are using social media to smooth the progress of a participatory culture among students as well as providing opportunities for self-expression, self-reflection, and social interaction in both traditional and distance learning environments (Guy, 2012). Based on students' responses, it is evident that using social media in distance learning environments allowed for increased collaboration, communication, and interaction through blogging, document sharing, networking, tweeting, and social bookmarking (Guy, 2012).

Educationists may resist the idea that because of new technologies students can do it for themselves instead they create an even more critical

role for the teacher, that is not simply mediating the knowledge already articulated, but is more deeply involved in scaffolding the way students think and how they develop the new kinds of skills they will need for the digital literacies (Säljö, 2004). The case of social media has been recognised as mentioned by Hernandez-Serrano (2011) that the pedagogical disciplines have begun to realise the potential of social media. Moving towards the design science and integration of the social media, they demand to assess the strength of the faculty in social capital. Many researchers (Brown, 2001; Jenson, 1998 and Jarvis, 2009) have addressed the implications of social media in education. While addressing the integration of social media the important aspect is social capital which is defined as "a set of social resources embedded in relationship" (Nahapiet & Ghoshal, 1998). Application of this concept may be witnessed in the management sciences but yet to be applied in education. In design science (teaching) social capital plays a vital role. There are three commonly known dimensions of the social capital namely structural, cognitive and the relational. These terms has been defined in literature with respect to the application being used, but for this study the terms will be used in the context of faculty of Universitas Terbuka. While designing teaching, one has to maintain the balance between all these dimensions. Therefore, the researchers conducted the study to find the relationship between the perception and use of social media for teaching learning process by the faculty of Universitas Terbuka.

Methodology

Research Design

The study was descriptive in nature and mixed design (both qualitative and quantitative) was used to achieve the objectives of the study. In this mixed approach, focus group was adopted to identify the construct, interview to triangulate the ideas across the different stakeholders and questionnaire for the overall perception of the faculty. A focus group with the faculty of Institute of Learning Material Development and Distribution, Examination, and Information System of Universitas Terbuka was conducted. Initially the nine faculty members were exposed to the concept of paradigm shift towards teaching as design science, social capital and design science both in English and Indonesian languages. The focus group discussion lasted for 110 minutes. The focus group discussion was followed by three sessions of interviews to triangulate the views and identify the indicators for the

questionnaire. One moderator also accompanied the interviewer to help in language and also to record the interviews.

Participants

The teaching faculty of the Universitas Terbuka was considered as the population for this particular research. A sample of thirty faculty members was selected to respond the questionnaire by using purposive sampling technique.

Instruments

The focus group tool along with coding strategy was prepared by the researchers and validated by the experts. The researchers formulated the interview protocol to remain focused during the interview sessions. After analysis of the data collected during the focus group and interviews, a questionnaire to measure the social capital strengths in three dimensions (Relational, Cognitive and Structural) was designed. The questionnaire was validated by seeking the expert opinion of the three faculty members and then the revised tool was used for final data collection.

Data Analysis

The data collected during the focus group was analysed by using the qualitative techniques, initially the codes were identified and aligned with the themes already identified from the literature. After the focus group, series of interviews was conducted to triangulate the findings of the focus group. The final constructs for the development of the questionnaire sorted out. The analysis with quotes from the participants is being presented below.

Results

The researchers conducted focus group discussion with the nine faculty members of Universitas Terbuka. The coordinator and the moderators explained the purpose of the focus group, then defined the terms social capital and teaching as design science by providing the examples in both English and Indonesian languages. After having the overview of the terms and their utilization in the distance learning paradigm, the coordinator and the moderators coined the questions for discussion In response to first question "*Would you think this is time towards paradigm shift towards design science rather than teaching in the perspective of distance education?",* the participants were well convinced

that due to usage of social media by the young ones, it has potential to be help in teaching learning process, so we have to think well in time about its usage. *"We should plan its usage that may gradually increase the interest of faculty and the learners as well."* Emphasised by one of the participants and agreed by the others, but after a small pause the participants were discussing about the current usage of the smart devices by the young ones, they focused to transform it into learning paradigm.

The second theme under discussion was more focused to distance and open learning. The interest of the participants showed their attitude and the perception of social media usage in transforming their teaching; they were unanimously convinced that in future the distance learning may be utilising the social media and specifically the smart devices. In this regard, the faculty needs to have more skill in its usage. Increasing the awareness about the learning and teaching, use of social media may help to overcome the problems of conventional distance learning, by reducing the gap of interaction between the learner and the tutor. It also has a potential to increase the level of understanding the contents.

Third dimension explored during this discussion was about the usage of the social media tools (Facebook, Twitter, YouTube, Skype, WhatsApp, and SMS). The participants were using all these tools and were of the view that WhatsApp is cheaper and may be utilize more, as one participant was of the view that *"SMS is expensive and may not be utilise by all the teachers"*. But the other responded that all students may not have the smart phone so in this case SMS is more appropriate for reaching the goal off education. A very interesting point came from another participant was that *"I was thinking that we can use this social media only for the purpose of leisure, but after this discussion it comes to my mind that it can be utilized affectively for the purpose of learning and may play an important role in transforming the distance education."* This also showed the positive perception towards use of social media by university faculty.

The fourth dimension was about the transformation of the learning environment by social media. The participants were well aware of social media's potential and its future. They responded that social media has its own advantages over the traditional online learning (Moodle) as the participants were already using it. But free usage of the social media may not be beneficial. Most of the time, it is being utilised for the purpose of communication. One of the participants was not convinced about its usage, was of the view that *"due to more exposure of the instructional designers and the learners, it is distracting and may not help to achieve conceptual learning"*. Actually this participant was more serious about

the positive use of social media and was talking in the context of current usage of social media which is mostly used for relational purpose. The learners' training and motivation were identified as key aspects for the appropriate usage.

While focusing upon the usage, the next dimension explored was the structural and cognitive use of the social media by the instructional designers. In response to these questions, the participants showed very positive perception but were not sure about its usage for the teaching learning process. They stated that:

We are using the social media like SMS for managing the learning process, means for information purpose, but not sure about the discussion on the topics that which teaching strategy suits best in a particular situation, so far haven't utilised it, but will use after this discussion as I have recognised its potential.

Another participant responded in this way:

We are using it mostly for the communication, but not for the sharing of knowledge in the context of teaching and learning process, we normally use e-mail for this purpose, and I think it can be utilised as its simple and less time consuming than e-mails".

This showed that the faculty of Universitas Terbuka, Indonesia has positive perception about the usage, but need proper protocols and standards for the cognitive and the structural use of social media towards the transformation of teaching as design science.

Finally the relational aspect was explored by coining some more questions. The participants expressed that they are mostly using the social media for relational purpose and the young ones of this era have more competence and skill in its usage. Therefore there is a dire need to transform their skills to be utilised for the learning purpose. One of the respondents were of the view that:

"I recognised that usage of social media helped us to increase our social capital, and if we utilise this social capital then can achieve more regarding the enhancement of learning achievements".

Another participant extended these words as:

We are mostly using the social media as relational purpose but this usage is important as it mediate the use of social capital for structural and cognitive purposes. So I can say that I have lot of social capital and will increase as I may use it.

Overall we enjoyed this session which was of almost 110 minutes, usually the longer and we are now excited to use our social capital for the

instructional purposes. Further they suggested that careful consideration of the social media applications and its implications may be discussed while planning the teaching material or we can say for designing instruction, we need to know the science and philosophy behind it usage. The focus group discussion was followed by the series of interviews to triangulate the views and identify the indicators for the questionnaire. The interview responses are summarised as under.

The first interview was conducted by the coordinator and the counterpart in the office of the interviewee, initially the interviewee explained the functions of the university. After shedding some light upon the importance and the significance of the distance education, we entered into the core questions of the interview. The interviewee was much interested in the use of online learning as was of the view that

> *"Future of the education across Indonesia is in online learning, our regional campuses have almost transformed the system to make it compatible with the online education provisions."*

This showed the willingness to the adoption of online learning. Furthermore, the questions related to the social media usage revealed the following facts that usage of the social media may enhance the capability and the scope of distance and open mode of education. The important thing highlighted by the interviewee was:

> *Use of Moodle is a good thing but when we try to involve learners in discussion and chat forums, they are passive, to make them active and motivate them, the social media like Facebook, Twitter etc. may help as students are already familiar with these applications, therefore, I suggest that social media may be integrated in Moodle, the interviewee quoted by emphasizing the integration approach.*

The second interview was also conducted in the office of the Vice Dean in Academic Faculty of Social and Political Sciences .He welcomed the coordinator and the counterpart. After the explanation of the purpose and the operational definition of the terms, the interviewer imposed questions in a sequence and then recorded the answers, whereas the counterpart wrote the responses in the bullet form. As the interview was in the national language of the interviewee, so counterpart transcribed and extracted the major points as listed below in the accumulated list of focus group discussion and the interview data. The important quote extracted from this interview was:

> *We are talking about the utilization of the social media and its integration into Moodle; also the students are capable to use this. I think our faculty may also, but the problem is whether we have considered the capacity of our hardware and the software devices. It's a big factor to consider.*

This interview opened another horizon and in the next interview, the interviewer and the counterpart focused more on the capability of the students and faculty for hardware and software applications.

The last interview was with Vice Dean in the Faculty of Basic Sciences and mathematics. This was also conducted in the office of the interviewee. She welcomed and after the brief introduction the interviewer coined a question about her perception towards the use of social media for academic purpose. She was quite prone to use it as the students and the faculty have a skill and motivated towards its use, but she quoted that:

> *The contents of the courses like mathematics and the statistics are not aligned with the applications of the social media; here we have to explain the concepts, which may not be possible by the utilization of the learning process in basics sciences.*

She was of the view that the capability of the students, their skill and the specification may be a hurdle in proper utilization of the social media. She also added that yes in future we may utilize it and the idea of short lecture video may serve the purpose, but we need preparation in this regard, like training of teachers, students and the media experts. The extraction of the responses of the interview is added in the comprehensive list below.

The following key points and indicators were identified by the university faculty during the focus group and interviews for future utilisation of the social media for the teaching learning process.

1. Need of social media integration
2. Prioritization of social media applications
3. Skill of learners in use of social media
4. Skill of faculty in social media use
5. Hardware and software specifications
6. Redesign of the contents
7. Skill of the faculty for development of material as per distance learning philosophy
8. Training of Faculty
9. Orientation of students, may be online module

The qualitative data analysis revealed that faculty has a positive perception about the potential of the social media to be integrated in the learning management system. They are well aware of its possible benefits. Regarding use so far, they are using individually and not having any comprehensive mechanism. Therefore there is a need to incorporate trainings and they are already motivated to these trainings.

The tool was developed by using the construct and the indicators identified during the focus group discussion and the interviews. After writing the initial pool of statements, it was presented to experts for validation; observations were incorporated to revise the tool. The final tool comprised of 31 statements, measuring perception and use of social media in three major dimensions (Structural, Cognitive and Relational) was translated in Indonesian language also. Bilingual tool was used for the final data collection from the faculty members of the Universitas Terbuka. Data collected through researcher designed tool were analysed using Pearson "r" value. Quantitative analysis is presented below.

There were 17 statements to measure the overall perception of the faculty towards the use of social media and 14 for the measurement of current use of the social media. Thirty respondents returned the questionnaire. To find the relationship between the perception and use, Pearson correlation statistics was applied. The summary of the statistics is given in table 1.

Table 1
Correlation between overall Perception and Use of Social Media by Faculty Members of Universitas Terbuka

Categories	N	Mean	Pearson "r"	Significance
Perception		72.2	0.778	.000
Use	30	55.6		

**Correlation is significant at the 0.01 level (2-tailed).

The table 1 shows the strong positive relationship (r=0.778) with p=0.00 and 0.01 level of significance. It revealed that the faculty has positive perception towards social media and its use.

There were three dimensions of social capital, structural being the first one. For this dimension, six statements were framed to measure the structural perception and five for structural use. For the purpose of relationship between these two indicators of structural dimension, correlation statistics revealed the facts summarised in table 2.

Table 2
Correlation between Perception Structural and Structural Use of Social Media by Faculty Members of Universitas Terbuka

Categories	N	Mean	Pearson "r"	Significance
Structural Perception		25.57	0.52	.003
Use Structural	30	19.67		

*Correlation is significant at the 0.05 level (2-tailed).

The second table indicated the positive relationship (r=0.52) between perception and use for structural purpose, but not as strong as overall relationship between perception and use of social media.

The second dimension was cognitive, for this dimension six statements were framed to investigate perception cognitive and five for cognitive use of social media. For the purpose of relationship between these two indicators of cognitive dimension, correlation statistics summarised as in table 3.

Table 3
Correlation between Perception Cognitive and Cognitive Use of Social Media by Faculty Members of Universitas Terbuka

Categories	N	Mean	Pearson "r"	Significance
Cognitive Perception		25.6	0.61	.03
Cognitive Use	30	20.4		

*Correlation is significant at the 0.05 level (2-tailed).

Third table highlights again positive relationship (r=0.61), that revealed faculty members' inclination towards cognitive perception and use of social media. This relationship is stronger than the structural perception and use.

The above table was about relational use and perception .There were four statements for relational use and five for relational perception of the social media by the faculty members of Universitas Terbuka. The relationship statistics is given in table 4 below.

Table 4
Correlation between Perception Relational and Relational Use of Social Media by Faculty Members of Universitas Terbuka

Categories	N	Mean	Pearson "r"	Significance
Relational Perception		21.0	0.61	.02
Relational Use	30	15.5		

*Correlation is significant at the 0.05 level (2-tailed).

The fourth table summarised the positive relationship (r=0.61) between perception and use for relational purpose. And surprisingly the strength of relationship is same as that of cognitive use.

Conclusions

Overall the perception of the Universitas Terbuka faculty members was positive towards the use of social media in their teaching learning process. They were well aware of the potential of the young learners in the use of social media and are of the view that it may be utilised to reach the objective of optimization of the learners' achievements. The quotes from the focus group discussion and interviews helped to reach this conclusion are presented as an example.
One respondent was of the view:

"We should plan its usage that may gradually increase the interest of faculty and the learners as well." The other said: "I was thinking that we can use this social media only for the purpose of leisure, but after this discussion it comes to my mind that it can be utilized affectively for the purpose of learning and may play an important role in transforming the distance education." One important quote was showing the emphasis and thinking about its usage in future "We are talking about the utilization of the social media and its integration into Moodle, also the students are capable to use this, and I think our faculty may also, but the problem is whether we have considered the capacity of our hardware and the software devices. It's a big factor to consider".

The finding is aligned with the Hernandez-Serrano (2011) that the pedagogical disciplines have begun to realise to reflect on the potential of social media and they are inclined to collaborate with each other and interact with students through social media. Therefore, it's time to utilize the motivation of the faculty and plan the trainings for appropriate use.
The strong relationship between the perception and the use of the social media by the faculty members of the Universitas Terbuka was found. Which is an indicator towards the success regarding the implementation of the social media integrated learning environments as indicated by number of researchers (Brown, 2001; Jenson, 1998 and Jarvis, 2009).

There was again a strong positive relationship between relational perception and the use, and also between cognitive perception and use of social media .This indicated that the faculty members have positive perception and they are using social media for these purposes, but the qualitative data revealed that there is no such established mechanism integrated with social media. So, it can be concluded that faculty is using on their own at individual places, this is also a good indicator towards the standardised and established use of social media for learning purpose. It also highlighted the strength of the social capital the faculty has, which may be utilised.

The structural use and perception were ranked low, so there is a need to develop some mechanism for the enhancement of structural use.

Recommendations and Future Plan

- It is unanimously agreed fact that future is of social media and near future the Universitas Terbuka has to utilise the potential of its applications, but the faculty at this time is bit reluctant to adopt it as sole media for learning. Therefore, the researchers recommend that social media may be used as an integrated approach.
- Use of Moodle is a good thing but when we try to involve learner in discussion and chat forums, they are passive. To make them active and motivate them, the social media like Facebook, Twitter etc. may help as students are already familiar with these applications. Therefore, researchers suggest that social media may be integrated in Moodle due to its potential of involvement.
- The researchers have identified the need for development of standards for integration as many of the faculty members were not in favour of open use of social media as it may be destructive and time consuming in achieving educational purposes.
- There is a significant positive relationship between relational perception and use of social media. Also significant relationship between the cognitive perception and use by the faculty members. Therefore, it is recommended that this potential may be utilised as it mediates the structural use.
- The nature of the contents varies across the disciplines, therefore the need for redesigning of the instructional material and integration of the social media was identified.
- Some of the faculty members need the training to write the material as per philosophy of the distance and open learning, so a joint training may be scheduled and a memorandum of understanding (MoU) may be signed between the AIOU and UT to utilise the services of experience distance educators.
- A team comprising the content knowledge expert, distance learning educator and the social media instructional designer may be helpful to reformulate the course designs. As only the content expert may not able to integrate the social media as per philosophy of distance education.
- Social media integration projects may be assigned to the masters, M.Phil and PhD level research students. In this regard in future AIOU, Teacher Education and UT Teacher Education faculties may collaborate for joint supervision of the research.
- Comprehensive and continuous training is recommended. The following dual cyclic model may be utilised with adaptation as per requirement need of the context.
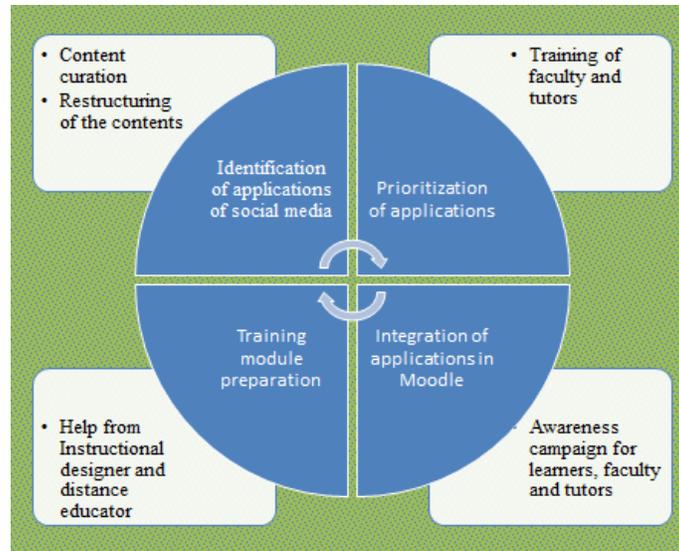
The model is based upon the major cycle for the integration of the social media, major work to be done by the instructional designers, whereas the second cycle is towards the actual application of the idea of integration of the social media, here the key persons are the subject experts. All the indicators are clear and easy to be utilised, the instructional and social media experts may consider its applications.

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