

Impact of Whatsapp Mediated Learning Approach on Academic Achievement of Student Teachers

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1. INTRODUCTION:

The world is ever changing due to the advancement in the realm of science and technology. These days it seems hard to escape the presence of technology. Most people will praise the many technological gadgets that they use in their everyday lives. Many of us depend on it to get us through the day, to do our job, to get around, and to find certain things. Technology is evolving at a very fast rate, and what most people did not even think could be real a few years ago, is now becoming a reality.

In this present scenario where everyone is busy in their schedule, they often don't get time for their teachers, relatives, friends and family. But thanks to the technology that it helps to cut the distance between our relationships. If they want to talk with their loved ones they like to prefer chat on several applications which free of cost and just required minimum amount of internet package which makes life easier rather to pay high cost of calls and messages to telecom companies.

There are number of applications available in the market which people use according to their preference, WhatsApp application is one of them, an application which not only has function of chatting but also other very convenient functions. WhatsApp get famous worldwide with no age boundaries. But it is very popular amongst youth.



Fig - Smartphone's are one of the platforms used for mobile learning.

Mobile learning is a learning technology that uses a variety of learning approaches and methods across multiple contexts and social interactions (Vygotsky, 1978) with personal electronic devices (Crompton, 2013). The mobile devices provide students with the opportunity to learn anywhere and at any time (Crescente & Lee, 2011). Kukulska-Hulme and Traxler (2007) suggest that mobile devices used in distance learning are more suitable for informal learning than formal learning and are also suitable for situated, authentic and personalized mobile learning.

Gillingham and Topper (1999) suggest the positive impacts of collaborative learning through social networking (Facebook, WhatsApp, etc.) and its effects on the learning process.

WhatsApp instant messaging is a free application, which is advantageous. The WhatsApp instant messaging system is simplistic, intuitive, and very easy to use. Users have the chance to continue chatting with their buddies without slowing down the device.

Instant messaging through WhatsApp for academic purposes provides students with opportunities to interact together and to construct and share knowledge (Chan, 2005). Instant messaging is considered to be an effective tool for learning and teaching through social interactions (Gillingham & Topper, 1999).

In this system, students are quickly informed of every update and any message inserted by a member of the group. An easy to use user interface is important in helping orientate their attitudes toward this technology. In this respect,

WhatsApp instant messaging is very easy to use. The majority of students use this mobile system for academic and other purposes.

SIGNIFICANCE OF THE PRESENT STUDY:

Social constructivist learning theory seeks to improve social interactions between students and to construct and share knowledge (Vygotsky, 1978). The access to learning resources anywhere, anytime, and in various formats has the potential to enhance deep student learning capabilities and to allow students to construct their own knowledge.

Some researchers in this field indicate that social learning through discussion forums, mobile devices, and so on creates mobile learning communities (Bober & Paz Dennen, 2001; Browne, 2003; Bodzin & Park, 2002; Rich & Hibbert, 2004; Rogers, 2000). Online communication among students and their instructor create an affective learning and teaching environment (Zengin, Arikan & Dogan, 2011).

A well-structured learning environment must facilitate the user in connecting different tools to build, share and improve his/her level of knowledge with a variety of learning models (Rossi, 2006, 2010).

Learning is the outcome of social interactions between students in collaborative learning activities. Activities can include sharing through mobile devices, such as discussion forums (Chan, 2005), which can be used for knowledge construction sharing (Gillingham & Topper, 1999).

Face-to-face/traditional learning in the classroom is a formal academic learning process and used mostly to disseminate information to individuals rather than improve social interaction between students.

Learning is becoming more personal and is becoming increasingly based on online social interactions that enable collaborative, networked and portable processes. Learning is becoming ubiquitous, durable and increasingly at odds with formal education. Increasingly, different types of learning happen outside of the classroom through social cooperation collaboration between students to improve construction and knowledge sharing.

The WhatsApp mobile learning is a good solution to improving community level interaction and social presence among students.

WhatsApp Mediated learning is a mobile learning technology based academic learning process and that helps students to create a learning community, to easily construct knowledge and to share it with other members of a WhatsApp group through instant messaging. In addition to the social interaction between students in the group, we should not discount the interactions of students with their online instructor. The presence of the online instructor in the WhatsApp group has an added value in the learning process. The online instructor facilitates learning used mostly to disseminate information to individuals rather than improve social interaction between students.

By keeping these contexts researcher will be very curious to know the impact of this new approach in teacher education system. Hence he is intended to undertake the present study.

STATEMENT OF THE PROBLEM:

The researcher undertaken the study entitled **“Impact of WhatsApp mediated learning approach on academic achievement of student-teachers”- an experimental Study**

OBJECTIVES OF THE STUDY:

The following major objectives were designed by the researcher for the study;

1. To develop the resources/content for WhatsApp mediated learning approach.
2. To study the effect of WhatsApp mediated learning approach on academic achievement of student-teachers.
3. To compare the effectiveness of WhatsApp mediated learning and face-to-face/traditional learning methods in terms of achievement of student teachers.
4. To find out the effectiveness of WhatsApp mediated learning in terms of its user friendliness, usability, flexibility and acceptance by teacher educators.
5. To find out the effectiveness of WhatsApp mediated learning in terms of its user friendliness, usability, flexibility and acceptance by student-teachers.

HYPOTHESES OF THE STUDY:

The following major hypotheses were constructed by the researcher for the study;

1. There is no significant difference between the experimental group and control group with reference to the pre-test scores of achievement .

2. There is no significant difference between the experimental group and control group with reference to the post-test scores of achievement .
3. There is no significant difference between experimental group and control group with reference to the gender, locality, intelligence, SES, mobile literacy...etc
4. The CALP software is effective in terms of its user friendliness, usability, flexibility and acceptance by teacher educators.
5. The CALP software is effective in terms of its user friendliness, usability, flexibility and acceptance by student teachers.

OPERATIONAL DEFINITION OF THE TERMS USED:

Whats App:

WhatsApp is a 'cross-platform messaging app which allows users to exchange messages without having to pay for SMS' which include one-on-one chat, group chat, push notifications, sending and receiving both video and audio files.

Whats App mediated learning:

WhatsApp Mediated learning is a mobile learning technology based academic learning process and helps students to create a learning community, to easily construct knowledge and to share it with other members of a WhatsApp group through instant messaging.

Face-to-face learning:

Face-to-face learning in the classroom is a formal academic learning process and used mostly to disseminate information to individuals rather than improve social interaction between students.

Academic achievement:

Academic achievement is the outcome of education – the extent to which a student, teacher or institution has achieved their educational goals.

Academic achievement is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important – procedural knowledge such as skills or declarative knowledge such as facts.

Academic achievement is the success of bringing efforts of the students to the desired end. The degree of level of success attained by the students in specified area.

VARIABLES OF THE STUDY:

In present study, the following variables will be considered;

1. Independent variable - WhatsApp mediated approach and face-to-face learning approach.

2. Dependent variable- academic achievement and attitudes of students.
3. Intervening variables- gender, intelligence, locality, mobile literacy, ses...etc

LIMITATIONS OF THE STUDY:

The following limitations will be planned by the researcher for the smooth conduct of research work undertaken.

1. This study will be conducted in the context of only one learning area educational Psychology of the B.Ed. course.
2. This study will be limited to B.Ed student-teachers of Hyderabad Karnataka region.

2. REVIEW OF RELATED LITERATURE:

For the present study researches in the field of education focusing on the social media, social networking and ICT are reviewed. In addition the researches in the area of academic achievement are studied. Following are the some of the important reviews noteworthy.

1. Johnson Yeboah ,George Dominic Ewur (2010) "The impact of whatsapp messenger usage on students performance in tertiary institutions in Ghana" School of Business, Marketing Department, Takoradi Polytechnic, P.O box 256, Takoradi, Ghana.

The perceived high level of usage of social networking applications amongst students of tertiary institutions in Ghana is inevitable. However, little is understood from empirical viewpoint about the intensity, of usage of whatsapp messenger and its impact on the academic performance of students in tertiary institutions. This study seeks to empirically identify the impact of social network (whatsapp messenger) on the performance of tertiary students in Ghana from the perspective of the students. To achieve this, 50 students from five tertiary institutions were interviewed and 500 questionnaires were administered to students from same institutions.

The study revealed that, whatsapp instead of making communication easier and faster thereby enhancing effective flow of information and idea sharing among students, rather has impacted negatively on the performance of tertiary students in Ghana. The study among other things unveiled the following: whatsapp takes much of students study time, results in procrastination related problems, destroys students' spellings and grammatical construction of sentences, leads to lack of concentration during lectures, results in difficulty in balancing online activities (whatsapp) and academic preparation and distracts students

from completing their assignments and adhering to their private studies time table.

2. Dr. Avani, Aanal Modi (2014), "Educating whatsapp generation through whatsapp" Department of extension and communication faculty of family and community sciences the maharaja sayajirao university of baroda, vadodara Gujarat.

To understand the usage of WhatsApp application and to impart knowledge amongst an action project has been conducted with 30 college going students of Vadodara city.

The findings of the Project revealed that high majority of the Quiz group members were using Mobile data connection for using WhatsApp application. Less than half of the group members were using WhatsApp application for 6 – 8 hours. More than half of the Quiz group members "monthly expenditure on internet usage was Rs. 100 – 200. Majority of them were agreed that they were WhatsApp addicted. Majority of Quiz group members were found to have more knowledge in Quiz of Vadodara and in Quiz of alcoholism. All the group members liked the performance of the Project worker, the Quiz format and the Quiz group which was formed on WhatsApp application. They also reported that they would like to join such group in future on WhatsApp application. This project shows that WhatsApp application can be used for imparting knowledge/ information for education purposes.

3. Aicha Blehch Amry (2014), "The impact of whatsapp mobile social learning on the achievement and attitudes of female students compared with face to face learning in the classroom" Department of Educational Technology, Faculty of Education, Taibah University.

The study seeks to explore the impact of using WhatsApp mobile learning activities on the achievement and attitudes of online students using mobile devices at the university. Researcher conducted an experiment in the 2014 academic year. Specifically, this study compares an independent sample of students in an experimental group (15 students) with a control group (15 students) from a university class. The e-learning process of the experimental group is based on WhatsApp mobile learning activities. The e-learning process of the control group is without WhatsApp mobile learning activities and receives only face-to-face learning in the classroom. A learning unit of the same course educational media is experimented with the experimental and control group. The t-test was used to compare the differences between the experimental and control groups. The results of the experimentation show

that there are real differences, at 0.05 alpha level, in the achievements and attitudes of the experimental group compared with the control group.

4. Richard Shambare (2014), "The Adoption of WhatsApp: Breaking the Vicious Cycle of Technological Poverty in South Africa" Tshwane University of Technology, South Africa.

Although research clearly demonstrates that consistent technology usage is correlated to socio-economic development, the Vicious Cycle of Technology Affordability and Non-adoption impedes the uptake of ICTs in many developing countries. In South Africa, however, one Smartphone messaging application, WhatsApp, appears to have broken this vicious cycle. This paper argues that, given that promoting the uptake of ICTs is a developmental imperative for emerging economies, studying the adoption and diffusion patterns of WhatsApp provides invaluable insights into ICT usage within the context of a developing country. This study modelled the factors influencing the adoption of WhatsApp among South African youths. Some 192 students participated in the study by means of a self-completion questionnaire developed from the Technology Acceptance Model. Structural equation modelling tested the proposed theoretical model. Results suggest that a combination of cost efficiency, simplicity, user-friendly features, and the ability to run on multiple platforms influences and promotes users' attitudes and behavioural intentions to adopt WhatsApp.

5. Cite as: Bouhnik, D., & Dshen, M. (2014). WhatsApp goes to school: Mobile instant messaging between teachers and students. *Journal of Information Technology Education: Research.*

WhatsApp is a Smartphone application for instant messaging. Lately the application's popularity has risen. One of the unique features of the application is its ability to enhance communication within a group. Classroom communication between teaching faculty and high school students using WhatsApp has not yet, to our knowledge, been researched thoroughly. Therefore, we have chosen to conduct an exploratory research project employing a qualitative method. Twelve half-structured interviews were carried out with teachers who use the application in order to communicate with their pupils.

It turns out that class WhatsApp groups are used for four main purposes: communicating with students; nurturing the social atmosphere; creating dialogue and encouraging sharing among students; and as a learning platform. The participants mentioned the technical advantages of WhatsApp, such as simple operation, low cost, availability, and immediacy. They also referred to educational advantages, such as the creation of a

pleasant environment and an in-depth acquaintance with fellow students, which had a positive influence upon the manner of conversation. The participants also indicated academic advantages such as the accessibility of learning materials, teacher availability, and the continuation of learning beyond class hours. Nevertheless, there are also challenges and problems. Firstly, there is the technical difficulty that not all high school students possess a Smartphone. Secondly, teachers are apt to be annoyed by the flood of irrelevant and nonsensical messages. Also, educational difficulties may arise, such as incompatibility of language between students and the students' assumptions that their teachers should be available on a 24/7 basis.

6. Cheung et al (2008) in their research related to social interactions between online communities in online learning through mobile devices, have found social presence to be a principal factor influencing students' motivations to engage in social interactions for constructing and sharing knowledge. The study confirmed the importance of an online social presence in helping students become more engaged.

7. Online learning through discussion forums (Chan, 2005) improves the effectiveness of learning, solves learning difficulties and enables the faster construction and sharing of knowledge. They are considered effective tools for learning (Gillingham & Topper, 1999), both for developing an understanding of a concept and enhancing the cognitive performance of the students.

8. Yalcinalp and Gulbahar (2010), articulate the value of these applications as follows: encourage learners to learn by anticipating needs, make collaborative learning efficient and effective, build a relationship that stimulates learner-to-

learner for consistent and progressive learning. Despite the aforementioned academic incentives offered by these technologies, limited research has been conducted to determine the comparative advantages and disadvantages of the use of the application and students performance at the tertiary education in Ghana.

3. METHODOLOGY/DESIGN OF THE STUDY:

3.1- METHOD USED:

For the present study the New Product Development (NPD) design will be adopted by the researcher. This process will be as follows;

- I. Development of content /resources
- II. Internal validation of content developed
- III. External validation
- IV. Field absorption capacity

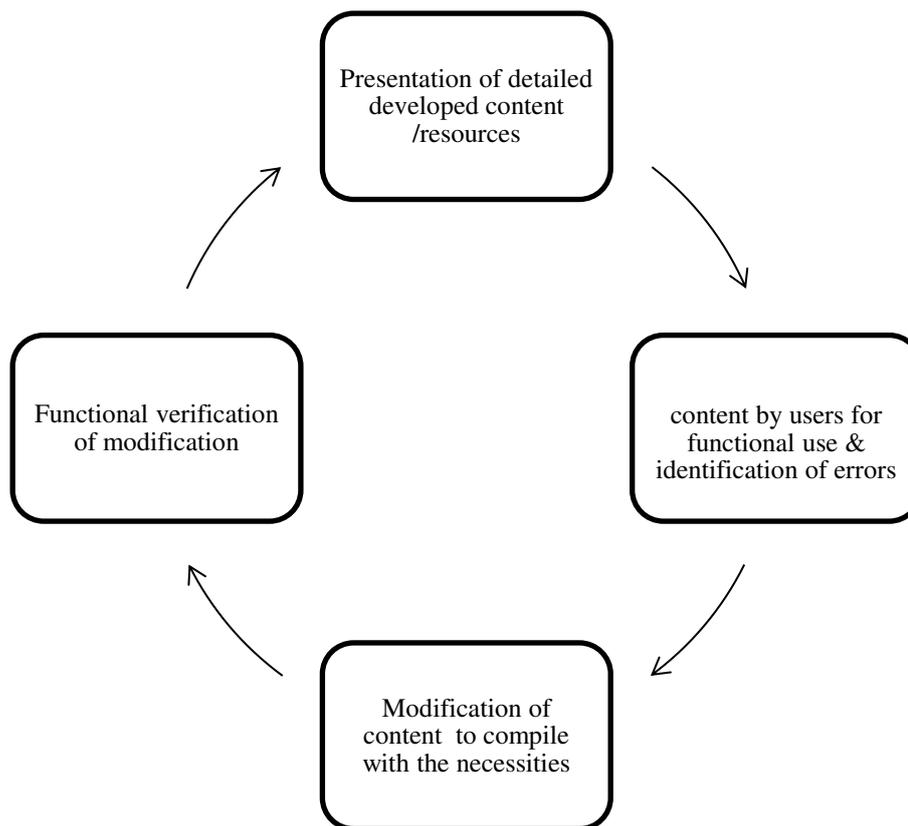
3.1 .1- PHASE-1: DEVELOPMENT OF CONTENT/RESOURCES:

During this first phase, with reference to the needs and references, researcher will make a systematic plan for the development of the content/ resources like documents, literature, audio, video, voice clips and pictures..etc for intended What'up mediated Learning.

3.1.2-PHASE-2: INTERNAL VALIDATION OF CONTENT DEVELOPED:

In this phase, the internal validation of developed content / resources will be done against teachers, teacher educators, educational experts' and scholars so as to find out the errors and required necessities in modifying the content.

Detail of internal validation process:



3.1.3-PHASE-3: EXTERNAL VALIDATION OF WHATSAPP MEDIATED LEARNING (WML):

During this Phase the researcher was focused on the External validation of Whatsapp Mediated Learning. For checking external validity researcher will follow the following steps;

A) DEVELOPMENT OF TOOLS:

1) Tools development for co-variable measurement:

In the first step researcher will planned to use the following co-variable tools to equate the groups in the experimentation process. They are:

1. **Multiple Intelligence (M.I) Test - (Howard Gardeners')**
2. **Mobile Aptitude Test - (Self developed)**

2) Tools development for dependent -variable measurement :

The study required a set of tools as dependent variable measuring important determinants that affect the study. A set of tools will be prepared. Three rating scales will be to collect the opinions regarding WML and its effectiveness as listed below;

- A) Student-Teacher reaction scale/Opinionnaire

- B) Teacher educators reaction scale /Opinionnaire
- C) In service Teacher reaction scale/opinionnaire

B) EXPERIMENTATION :

1) Experimental Design:

In this study experimental design that is parallel group design will be adopted for the smooth conduct of experiment.

2) Experimental treatment:

Population for experiment:

Colleges with ICT facility, Teacher-educator and student-teachers with smart phone facility are an essentiality to validate the WML. Two colleges of education with such facilities will be selected. Initially the programme will be limited to Teacher-educator with positive attitude towards social mediated learning along with their student-teachers were target population.

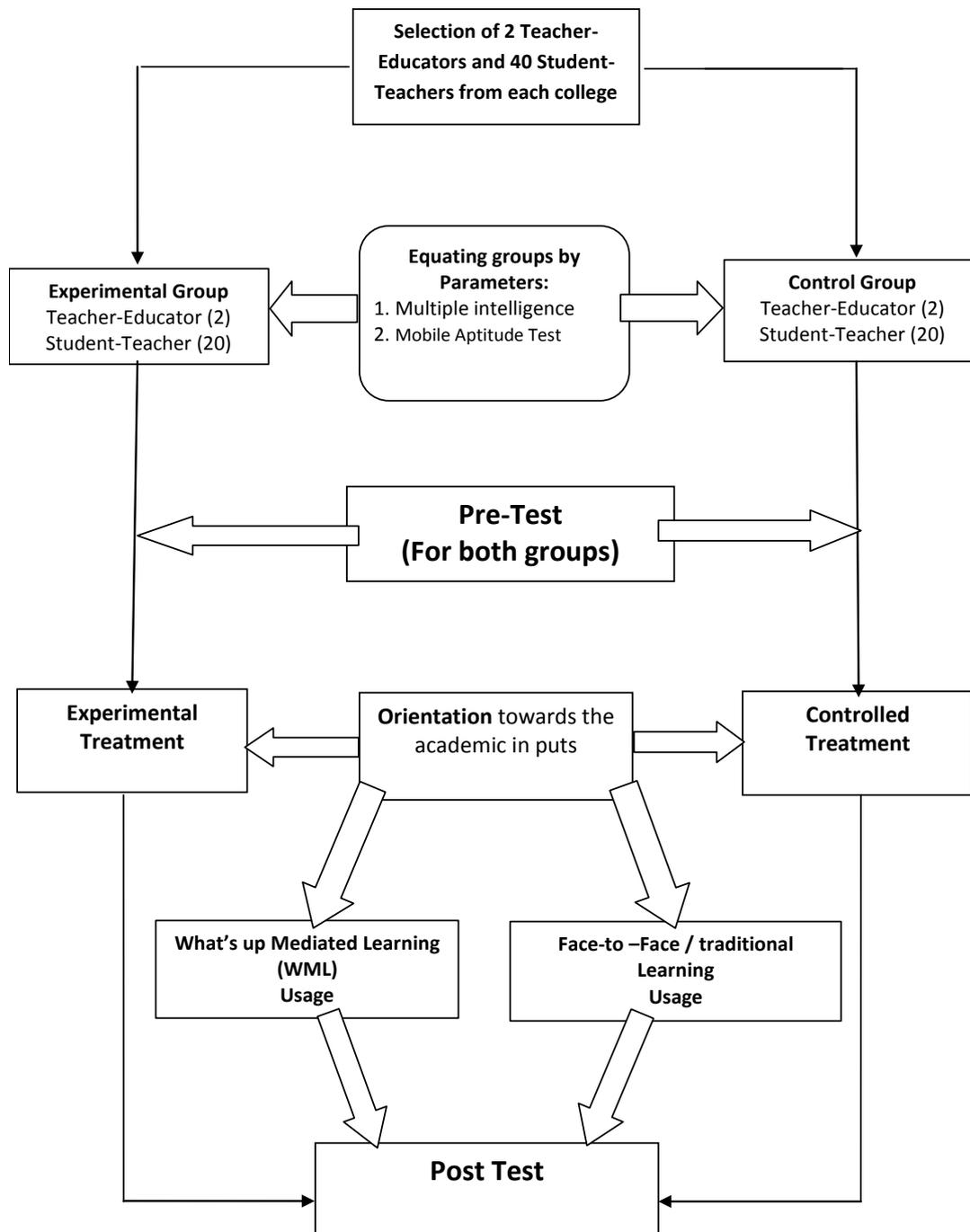
Sample:

Teacher-educators with specified quality as in population will be identified and required for their interest to participate in use of the WML. Among the interested list of Teacher Educators, 4 teacher educators with their 80 student- teachers will be the sample for

the study. The study is designed with the purposive sampling based validation.

Detail of the experimental procedure is as follows;

EXPERIMENTAL DESIGN:



3.1 .4 - PHASE- 4: FIELD ABSORPTION CAPACITY

After experimentation the researcher will be interested to conduct field absorption capacity of the WML. For this purpose researcher will administer three tools (reaction Scales) already prepared and orientation to the Teacher-Educators, Student-teachers and in-service Teachers.

Administration of tools:

Later the researcher will present the WML demonstration to the student-teachers, teacher educators and in-service teachers. The presentation will be followed by the discussion. The reaction scale prepared for the purpose will be administered and data will be collected.

3. PROCEDURE FOR DATA ANALYSIS:

In present study, the dependents variables are (Score of students and attitudes) and independent variables are (the WhatsApp mobile learning activities and the face-to-face learning activities in the classroom). The data obtained on various tools will be treated quantitatively. Basically computation of mean testing and testing the hypothesis will be the t-test; ANOVA will be used for various variables. Percentage analysis and graphical representation will use with all other types data.

4. EXPECTED OUTCOMES:

The study will provide a well tried out WhatsApp mediated academic learning process which helps students to create a learning community, to easily construct knowledge and to share it with other members of a WhatsApp group through instant messaging. Study will also be helpful to understand various dimensions of WhatsApp mediated learning approach, creating academic WhatsApp group, the social interactions in the group, utility, feasibility... etc.

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