

CAMS FRAMEWORK TO DEAL WITH ABSENTEEISM PROBLEM

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ABSTRACT

The impact of social websites for education can be good but if we have a closer look on the real impact of social networks, today it is damage the future and career of students. The social networking websites are continuously distracting students from their studies. Majority of students use SNS during study, because most of the time student study alone and tend to use SNS as break or when they feel dullness, continues distraction from study may divert the student towards unwanted activities like cyber crime. Majority of students get absents from academic activities because they use the social networks late night.

Colleges located in Sangli district are concerned about irregularity of student attendance. How to engage students towards academic activities is a big challenge towards college administrators. Daily attendance in the class resolve subject related doubts along with increase the students understanding and concentration in the class which is helpful to improve learning ability and academic performance. As a result students automatically utilize their productive time for study instead of wasting time with SNS and chatting with virtual friends. It will reduce cyber crime and parent anxiety about adolescent career. Researcher has found that there is sufficient scope for study of CAMS framework to deal with absenteeism problem of college students in sangli district. Researcher planned to design CAMS framework for attendance management in which students daily attendance has been sent to the parents through SMS.

Keyword: ,CAMS, SMS API, CCTV, RDIF.

LITERATURE REVIEW

Bhalla, V., Singla, T., Gahlot, A., & Gupta, V. (2013) in their paper entitled “Bluetooth Based Attendance Management System” declared that, this system is created to install on teachers mobile phone which is enables to query student’s mobile phone via bluetooth

connection, if MAC address of particular students' mobile phone has been detected by teachers' mobile phone, then presence of the student can be confirmed.

Ayu, M. A., & Ahmad, B. I. (2014) in their article "TouchIn: An NFC Supported Attendance System in a University Environment" affirmed that, this system was based on Bluetooth and NFC technologies. It uses fingerprint & the Bluetooth address of the NFC enabled phone of the user to validate the uniqueness of every user in multiuser environment.

Rao, S., & Satoa, K. J. (2013) in their paper "An Attendance Monitoring System Using Biometrics Authentication" mentions that, this system was based fingerprint verification technique for employee. This system check individual templates of finger print with entire templates which is already store in proposed system, if correct matching found then attendance will registered. The results show that fingerprint biometric identifier was appropriate for the employee attendance management system.

Josphineleela.R, & M.Ramakrishnan (2012) in their paper entitled "An Efficient Automatic Attendance System Using Fingerprint Econstruction Technique" reveal that, proposed system based on Fingerprint recognition identification system which is designed for student identification. The main problem is that, it is very time consuming because it checks an entire template stored in the database. To avoid the problem of time consuming verification in biometric identification technique, researcher use many new algorithms to improve the fingerprint identification system for large use functioning.

Karthik Vignesh E, Shanmuganathan S, A.Sumithra, S.Kishore, & P. Karthikeyan (2013) in their study "A Foolproof Biometric Attendance Management System" Researchers has designed a module that contain of a fingerprint sensor work as Diagram print reader to manage the attendance. Insert a 9v battery into the module which will provide power to the module and can be taken to the class so that system can avoid the problem of waiting in queue for attendance.

K, M., & A, V. (2013) " Smart Application For AMS Using Face Recognition" Researchers proposed Attendance System based on Face Recognition. This system required a CCTV camera to be fixed at the entry point of an each classroom; CCTV camera automatically captures the image of the person and checks this image with the entire database which is already store in proposed system, if correct matching found then attendance will register.

Yuru, Z., Delong, C., & Liping, T. (2013) in their paper "The Research and Application of College Student Attendance System based on RFID Technology" Researcher has proposed RFID based Attendance System. The RFID sensor will detect the student in the college campus and enroll the attendance.

RESEARCH GAP

This literature observed various attendance management systems. This literature review found, Desktop based attendance system required human involvement for attendance tracking. Some systems are an offline system so attendance should maintain with standalone device like personal computer. Some system required NFC enabled mobile phone at student side for attendance monitoring process and some system required Bluetooth based mobile phone. Face Recognition system required expensive devices like CCTV camera to be fixed at the entry point of a classroom and RFID attendance system required RFID reader and RFID card for attendance tracking which is very expensive.

More research is needed to find out attendance management system which is less expensive, system which is without any external and expensive devices like CCTV, RDIF reader and RFID cared and system which is online.

IMPORTANCE OF THE STUDY

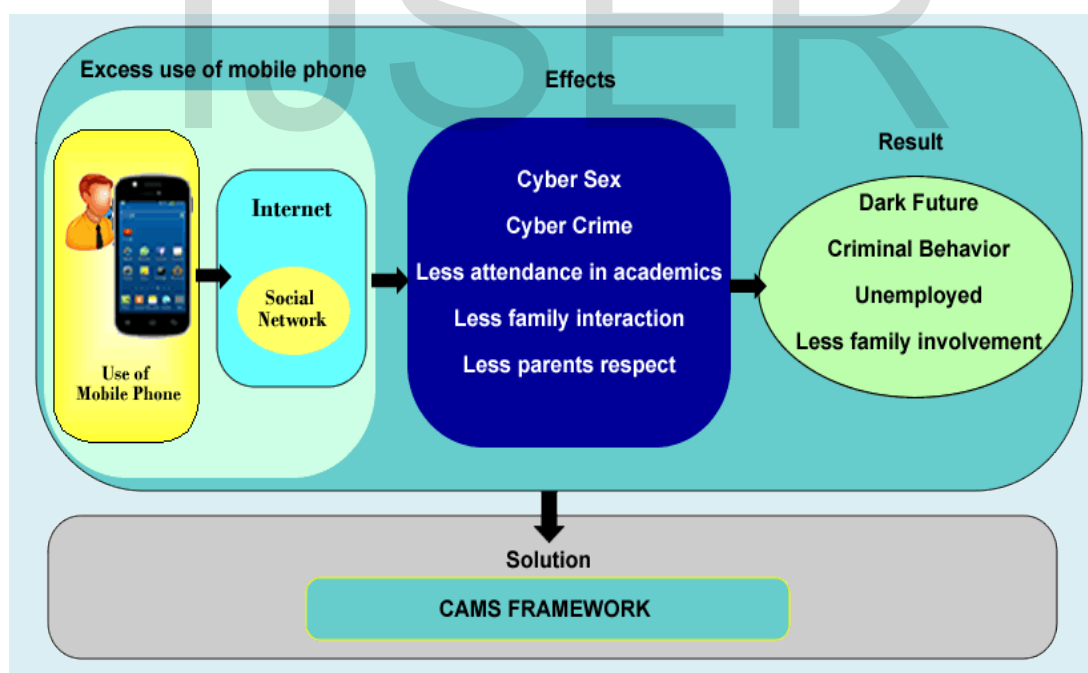


Diagram: 1 Effects and results of excess use of mobile phone and social network

Today's generation is totally depend on multimedia mobile having internet connectivity, they carry internet with them just as internet wallet. Excess use of such technology may pull down students' career in to shadows. Excess use of Social media is attracting the students towards

cyber sex and it causes cyber crime. They give less attention to their family and they didn't obey their parents. This may causes less academic performance and poor end result. The result is all in one that is dark future of students because of criminal behavior, unemployment and less family supports.

Researcher finds out CAMS framework for tackle with this situation as shown in Diagram 1. This study is significant to academicians and research scholars, for future research.

TECHNICAL CONTRIBUTION

The proposed CAMS framework

Parents of this study are worried about their children's excess use of mobile phone. From this study researcher found that, students are absent in the classroom because teachers doesn't allow the use of mobile phone in the classroom. One of the reasons is late night chatting with friends so they couldn't wakeup and get absent. Researcher found that colleges located in Sangli district are concerned about irregularity of student attendance. Majority of parents do not visit to college/ institute for inspecting performance of their son/daughter. Hence they expected that, college should inform about daily attendance of the students.

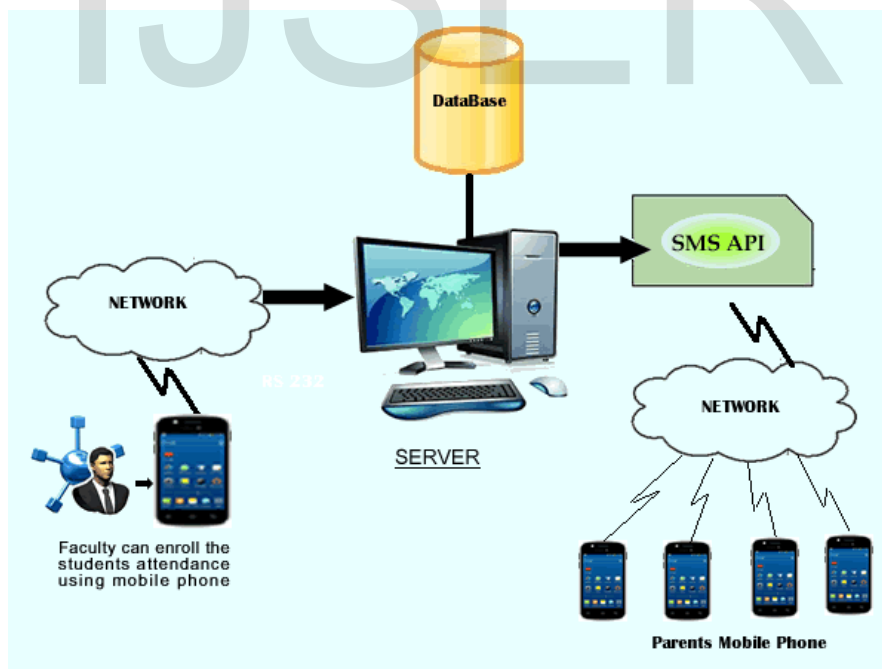


Diagram: 2: The proposed framework of CAMS

Diagram 2 shows, the proposed CAMS framework. Which is online, less expensive without any external device like CCTV, RDIF reader and RFID card.

The proposed CAMS framework made up in PHP, is an online system. In this system, faculty regularly enrolled the student attendance through any internet access device i.e. mobile phone or desktop computer. Students' attendance is stored in database and if anyone is absent then SMS is send to parents through SMS API. It is very essential to every parents should know about their sons/daughters.

The objective of proposed system is to improve the attendance in the class and improve the physical concentration on the lecture to improve the learning abilities of the students. It will brighter the future of students, reduces criminal behaviour and unemployment of Indian youth.

The proposed CAMS framework not only help to compulsion student to attend class on time, improve learning efficiency, increase learning grade, and thus entirely improve the education level of the colleges, proposed system is better because first it saves time that could be used for teaching . CAMS will be environment friendly, reduces paper works and other resource requirements. It will helpful to improve college-parents relationship which is leading to a feeling of calm and trust.

POST DEPLOYMENT ANALYSIS

After post deployment analysis, researcher found some advantages of CAMS framework as listed below.

1. This system is fast, fully automated, flexible, reliable and accurate.
2. Reducing paper based work.
3. Saving the time of attendance call.
4. With this system, percentage of student attendance will increase.
5. Mobile technology saves considerable amount of time consumption in data entry and greatly improves the operation efficiency.
6. Easy way to let parents know if a son/daughter is attending college or not.
7. Simple in use and potential to grow to add new and innovative features.

After post deployment analysis, researcher also found some limitation of CAMS framework as listed below

1. This system is created in PHP such as web application, so it is online system.
2. This system send attendance SMS for only absent students.
3. This system uses SMS API which does not worked without internet connection.

ADVANTAGES OF PROPOSED CAMS FRAMEWORK

1. CAMS framework is online system created in PHP.
2. Fingerprint, iris and face detection attendance management system is very time consuming system, it checks one template with the entire pattern stored in the database. But in CAMS framework, data has been stored in varchar data type, so it is less time consuming for checking from entire database.
3. In biometric attendance system like finger print, iris and face detection system, all students of every class has to stand in a long queue to make attendance. But CAMS framework is provided hassle free attendance system in which student doesn't want to stand in a long queue.
4. Bluetooth based attendance management system is depends on Bluetooth technologies, in which both faculty and student's phone is required for attendance. If student didn't carry their mobile phone with them, then presence will not measure without mobile phone. But CAMS framework required only faculty mobile phone with internet access to enrol the attendance.
5. Fingerprint, iris and face detection attendance management system required expensive reader, But CAMS framework does not required any kind of biometric reader. Thus it is less expensive.
6. RFID based attendance management system required a RFID reader and RFIC card which is act as ID card of individual students. In this system students should bring their RFID card with them for enrol the attendance. In this system anybody can bringing multiple cards to enroll fake attendance of their friends and beloved. In Cams framework, there is no possibility of fake attendance because attendance has been taken by teachers only through their mobile phone. After completion of attendance process, an absent message has been send to the parents of absents students.
7. Fingerprint, iris and face detection attendance management systems work within small distance. But CAMS framework doesn't have limitation of working distance.
8. This system is installing on web server so teachers can access it on their mobile phone through internet connectivity. Attendance on mobile phone not only saves our expenses for implementation of pricey resources like RFID reader, Fingerprint reader, Iris / Face detector and CCTV camera, but also enables the user to get easy, effortless and interactive access to the attendance system.

CONCLUSION

Researcher found 3 most important problems from Sangli district that are, 1.Poor attendance of students, 2.Excess use of social Networking sites, and 3.Parents anxiety about adolescent career. As shown in Diagram 3. As a system analyst and developer researcher works on the solution to produce better outcome and finally develop a CAMS framework in which student's daily attendance has been send to the parents through SMS. The proposed CAMS framework automates the student attendance regularly and sends SMS to their parents through SMS API (Solution for parents). Researcher found that, proposed CAMS framework has improved the students attendance (Solution for college administration). Daily attendance in the class resolve subject related doubts along with increase the students understanding and concentration in the class which is helpful to improve learning ability and academic performance (Solution for students/parents).

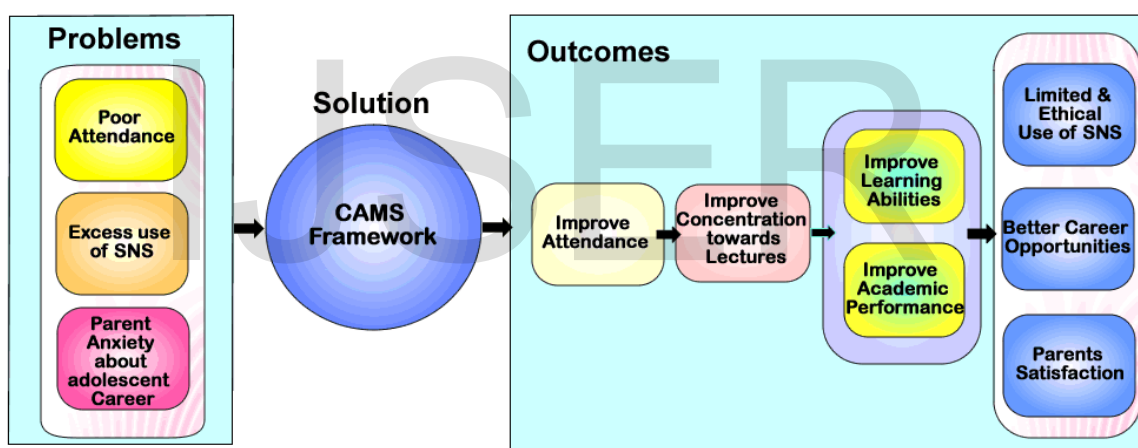


Diagram: 3 Problem, Solution and outcome of the study

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