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# **Introduction of PTC (Parent-Teacher Communication) Application**

## **About the Project:**

The Parent-Teacher Communication App is a mobile application designed to enhance communication and collaboration between parents and teachers. This app provides a convenient platform for sharing updates, discussing student progress, and fostering a positive educational environment by enabling seamless communication between these two crucial stakeholders.

## **Why needed?**

The "Parent-Teacher Communication" Android Application is needed to bridge the communication gap between parents and teachers, fostering collaboration and supporting the holistic development of students. By providing instant updates, academic progress tracking, appointment scheduling, and secure messaging, this application enhances transparency and convenience in the educational process. It empowers parents to actively engage in their child's education, ensuring timely support and involvement in their academic journey, ultimately contributing to the overall success of students.

## **Justifications**

The Parent-Teacher Communication Application is vital in modern education as it enables efficient communication between parents and teachers, encourages parental involvement, streamlines information sharing, empowers teachers, supports data-driven decision-making, ensures data privacy, promotes inclusivity, and fosters continuous improvement. This application enhances the educational experience, strengthens the home-school connection, and contributes to student success.

## Objectives

1. **Attendance Tracking:** Providing an attendance tracking feature for parents to monitor their child's punctuality and overall attendance record.
2. **Support Academic progress:** Enable parents to monitor their child's academic performance, including grades, assignments, and other activities to provide appropriate support and encouragement.
3. **Facilitate Communication:** Enable easy and effective communication between parents and teachers to keep them informed about university related matters and their child's progress.
4. **Emergency Notifications:** Enable university/schools to send emergency alerts and safety information to parents quickly and efficiently.

## **Literature Review**

- **Articles**

### **Parent Benefit's**

Positive parent-school communications benefit parents. The manner in which schools communicate and interact with parents affects the extent and quality of parents' home involvement with their children's learning. For example, schools that communicate bad news about student performance more often than recognizing students' excellence will discourage parent involvement by making parents feel they cannot effectively help their children.

Parents also benefit from being involved in their children's education by getting ideas from school on how to help and support their children, and by learning more about the school's academic program and how it works. Perhaps most important, parents benefit by becoming more confident about the value of their school involvement. Parents develop a greater appreciation for the important role they play in their children's education

When communicating with parents, consider your remarks in relation to the three categories that influence how parents participate. For example, are you communicating about:

- Classroom learning activities?
- The child's accomplishments?
- How the parents can help at home with their child's learning?

### **Student benefits**

Substantial evidence exists showing that parent involvement benefits students, including raising their academic achievement. There are other advantages for children when parents become involved — namely, increased motivation for learning, improved behavior, more regular attendance, and a more positive attitude about homework and school in general.

### **Teacher benefits**

Research shows that parental involvement can free teachers to focus more on the task of teaching children. Also, by having more contact with parents, teachers learn more about students' needs and home environment, which is information they can apply toward better meeting those needs. Parents who are involved tend to have a more positive view of teachers, which results in improved teacher morale.

### **Good two-way communication**

Good two-way communication between families and schools is necessary for your students' success. Not surprisingly, research shows that the more parents and teachers share relevant information with each other about a student, the better equipped both will be to help that student achieve academically.

Opportunities for two-way communication include:

- Parent conferences
- Parent-teacher organizations or school community councils
- Weekly or monthly folders of student work sent home for parent review and comment
- Phone calls
- E-mail or school website

**Summary:**

Parent-Teacher Communication Applications" highlights their significant positive impact on education. These applications are shown to enhance parental involvement, leading to improved student outcomes through real-time communication and access to academic information. They also streamline administrative tasks for teachers, allowing more focus on teaching. Data-driven decision-making is facilitated, but concerns about data privacy and security exist. Overall, the literature supports these applications for strengthening the home-school partnership and improving educational outcomes, with potential for further research on long-term impacts and optimization strategies in diverse educational settings.

# Feasibility Study for the Parent-Teacher Communication App

## Executive Summary

The feasibility study for the "Parent-Teacher Communication Application" assesses the viability of developing such an application to facilitate efficient communication between parents, teachers, and students in the education sector. This study evaluates technical, operational, financial, and strategic aspects to determine the feasibility and potential benefits of the project.

### 1. Technical Feasibility

- **Compatibility:** The chosen technology stack, including Flutter is well-suited for cross-platform mobile app development and real-time communication.
- **Scalability:** The cloud infrastructure (e.g., AWS or GCP) ensures scalability to accommodate growing user demands.
- **Security:** Implementation of encryption, authentication, and data privacy measures addresses security concerns effectively.

### 2. Operational Feasibility

- **User Readiness:** Parents, teachers, and students have access to smartphones and the internet, making them ready for digital communication.
- **Data Privacy:** The application's data privacy measures align with relevant regulations (e.g., **GDPR** (General Data Protection Regulation) or **COPPA** (Children's Online Privacy Protection Act of 1998)) to protect user data.

### 3. Strategic Feasibility

- **Market Analysis:** Research demonstrates a demand for such applications, driven by the increasing importance of parental involvement in education.
- **Competitive Advantage:** The project offers a competitive advantage by providing features aligned with the needs of parents and teachers.

## Conclusion

The feasibility study indicates that the development of the "Parent-Teacher Communication Application" is viable and has the potential to significantly improve communication, enhance parental involvement, and streamline operations in the education sector. With the technical readiness, operational preparations, and strategic alignment with market demands, the project is well-positioned for success. Further planning and execution should proceed to harness the benefits and address any challenges that may arise during implementation.

## Methodology

### Design & Prototype

- **User Interface Design:** Creating a user-friendly interface mock-ups and wireframes using **Figma** considering the needs and preferences of both parents and teachers
- **Prototypes:**

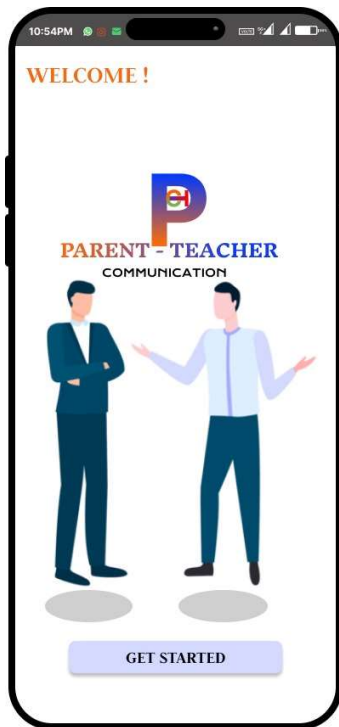


Figure no. 1



Figure no. 2

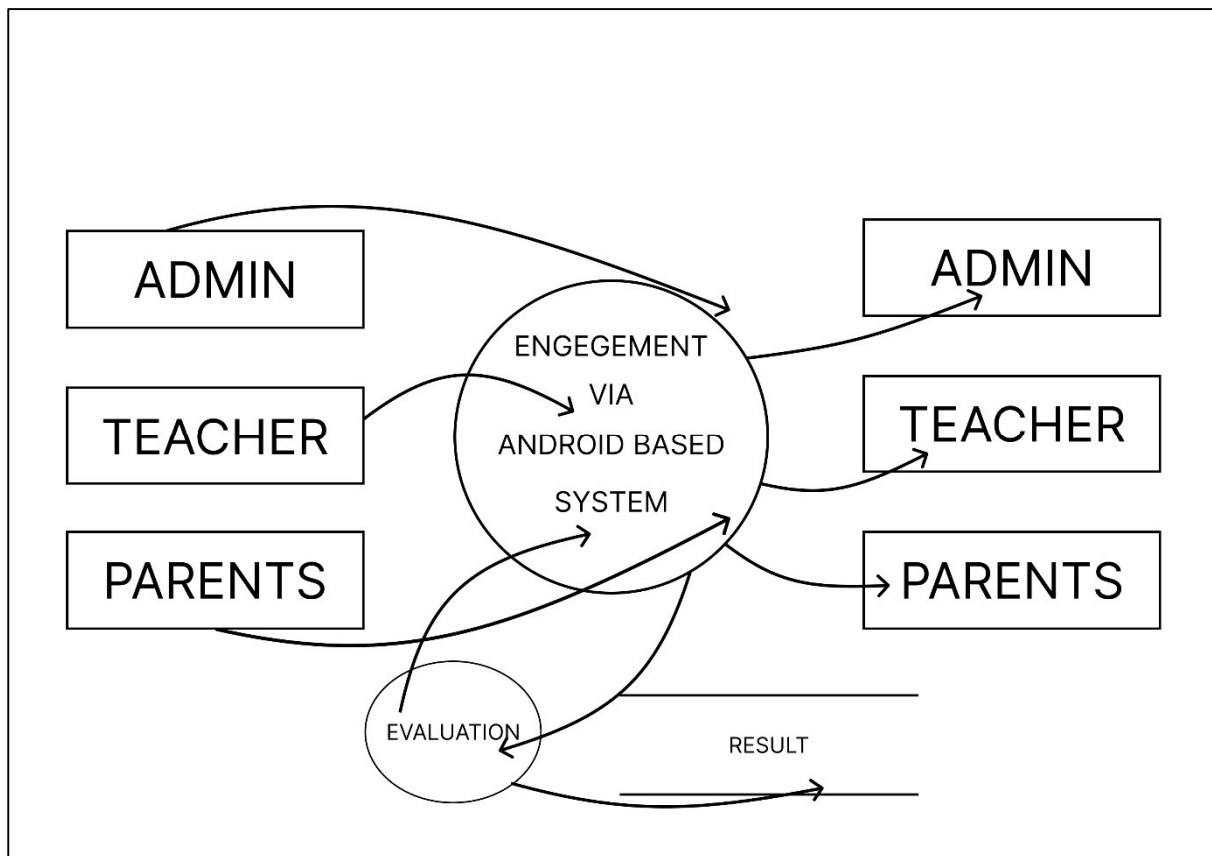


Figure no. 3

### For Development

- ❑ **For Frontend Development**
  - ✓ Flutter
  - ✓ Dart
- ❑ **For Backend Development**
  - ✓ Node.js
  - ✓ Python
- ❑ **For Database Management**
  - ✓ MySQL

## Data Flow Diagram





## Technology Used

### Software Requirement

- ☐ **For Frontend Development**
  - ✓ Flutter
  - ✓ Dart
  - ✓ Integrated development environment (IDE)
    - Android Studio
    - Visual Studio Code
- ☐ **For Backend Development**
  - ✓ Node.js
  - ✓ Python
- ☐ **For Database Management**
  - ✓ MySQL
- ☐ **For Testing**
  - ✓ Emulators & Simulators
- ☐ **Version Control System like GIT**
- ☐ **For UI (User Interface)**
  - FIGMA
- ☐ **Others Technology** may be used during development phase.

### Hardware Requirement

- ☐ A Computer with minimum 2.0 GHz Processors & 8 GB RAM
- ☐ Database server
- ☐ Storage Device
- ☐ High speed internet connection

## **Outcomes**

### **Better student development**

When teachers and parents are aligned, they can focus on the overall development of students. Moreover, it also motivates students to remain more invested in their classroom goals and perform better in all activities. when students have set clear expectations for themselves, they can score better marks, feel more confident, and excel in their academic performance.

### **Decision Making:**

Both parents and teachers can make informed decisions about a student's education by accessing academic data and insights through the application. This supports collaborative strategies for improving student performance.

### **Enhanced Parent-Teacher Communication:**

The application provides a direct and efficient means of communication between parents and teachers. Parents can easily reach out to teachers, ask questions, and receive timely responses, fostering a stronger partnership in a child's education.

## References

<https://scholarworks.calstate.edu/downloads/1z40kt190>

NA

<https://www.readingrockets.org/topics/parent-engagement/articles/building-parent-teacher-relationships>

NA

NA

[https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.scirp.org%2Fjournal%2Fpaperinformation.aspx%3Fpaperid%3D117856&psig=AOvVaw1oP-5dMWfWIKC1s5TTOTOG&ust=1694803220609000&source=images&cd=vfe&opi=89978449&ved=0CBAQjRxqFwoTCIDy7Y\\_gqoEDFQAAAAAdAAAAABAJ](https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.scirp.org%2Fjournal%2Fpaperinformation.aspx%3Fpaperid%3D117856&psig=AOvVaw1oP-5dMWfWIKC1s5TTOTOG&ust=1694803220609000&source=images&cd=vfe&opi=89978449&ved=0CBAQjRxqFwoTCIDy7Y_gqoEDFQAAAAAdAAAAABAJ)

NA

<https://blog.teachmint.com/importance-of-communication-between-schools-parents/>