Proactive • Parent (P³): Portal to a Better Education

Abstract
Parental involvement in a student’s education can not only increase their performance, but also help in solving problems that may develop, whether it involves motivation or skill. Currently, there are systems in place that allow parents to monitor their children’s performance with progress reports and quarterly grades, however they lack in mobile, and classroom application, along with notification solutions. Our solution is an improved system that would allow for students, parents, and teachers to have an ability to access it on their mobile phone, maintaining student grades, assignments, and attendance. This solution would include grading in a percentile perspective, and warnings and notifications for attendance and assignments past due. In order to assure the effectiveness of our solution, we have interviewed the vice principal of DeMatha High School, William Clark, in which we discussed how these systems could benefit his school in particular. This solution will directly affect parents, teachers and students as they all will be able to keep track of important school related activities, and even use the system as a tool for maintaining contact with each other.

Introduction
According to “A New Wave of Evidence,” a report done by the Southwest Educational Development Laboratory, “When schools, families, and community groups work together to support learning, children tend to do better in school, stay in school longer, and like school more” [7]. The parental involvement in a student’s education serves many purposes, ranging from positive motivation to skill developing. By concerning themselves with their children’s education, parents have been shown to improve their student not only in the grade book, but in social skills and willingness to enroll in higher-level classes.[7] However, parental involvement can be negated by a lack of information caused by a faulty system. Parents are unable to spend the entire school day with their children, leaving them oblivious towards whether their student is attending class, paying attention in class, or just simply struggling. Often, this sort of information is given to a parent well after damage has already been done, such as a student missing an entire week of class because they were skipping.

In this project, we will strive to close this gap of information as to allow parents to have as much reason to be involved in their child’s education as possible. We will do this by creating an online portal that allows students, teachers, and parents alike to log on and check grades, attendance, assignments, and even communicate with one another. This solution will also include a mobile app that allows for the users to check the site from their mobile phone. This system will allow for parents to be able to ensure that their children are attending class and that, if they are struggling, they are able to find the correct solution to improve their student’s performance. The ultimate goal of this project is to ease the process for parents that want to get involved in their children’s education, and
also encourage other parents to get more involved. Every parent should have at least the basic knowledge that their children are attending class regularly and are putting in a good effort on their assignments.

While there are systems currently in place, our project will improve on aspects in which they seem a bit lackluster in. For example, many parents feel that they can’t get too involved in their children’s education because they are too busy with work or maintaining a household. Our application would make checking up on their children easy as it would allow for these parents to access their student’s information whether they are in the office, or at the grocery store. This solution would also come equipped with a notification system that would send alerts to a parents phone or email when their student has been absent from class for a set period of time, or their grades reflect that the student is struggling more than usual. Students should want to go to school and perform well, but there are times that parents need to intervene to ensure that they are still accountable for their actions, and this project will help greatly in that regard.

**Background / Review of Past Work**

Edline is not only the most widely used service in the Maryland school system, but also in the entire nation [8]. Although Edline is a very popular system, our review was able to highlight several flaws and disadvantages the system has for its users, especially parents. Edline allows schools to have their own custom websites. At first, this might seem like a good idea, but after our observations of user interactions we found that this is actually a flaw. We found that these websites were created without thinking about how the users would interact with the system. There were a few links that were labeled inappropriately, thus making it difficult for the user to navigate to his/her desired page. For example: In order to check her child’s grade Victoria Le, a parent, had to click on a link labeled “Private Reports.” This was after she had clicked several different links that took her to the wrong page [6]. There was also a significant lack of organization within the web site. In order to view her child’s grade in math, Mrs. Le had to sort through a whole list of links in order to find the link for that particular class [6]. The page also includes links to other pages that are irrelevant, such as a link to the Counselor’s page which is irrelevant when searching for grades [6]. Such a design could potentially discourage users from using this system. Most of the users of this system are parents and teachers who are older, and not all of them are going to be proficient with using a complex system.

In our other reviews we came across various problems that we could solve with our approach to this problem. We looked at Edvance Software System and we found that the interface used in this system is pretty outdated. It looks like something out of the 90s [5]. Here are two examples:
Edvance user interface [S]
Edvance user interface [5]

In the first screenshot we note the tabular structure of the whole application. Also note the buttons and drop down boxes which are styled according to the operating system (Windows XP in this case). This is important because with the method being used, these dropdown boxes and buttons would look different on different operating systems, leading to an inconsistent UI. In the second screenshot, we note the irregular height of the different rows of the table which makes it difficult to read.

In another example from Pinnacle Internet Viewer software we noted a convoluted and complex login URL [2]. In our application we propose a simplified “One URL for All” approach, where every parent goes to the same webpage and logs in with their account. The system knows about their children’s school and loads the correct page for the corresponding school for the user.
Pinnacle FAQ on how to log in [2].

During our review of another system, called Parent Connect XP, we found a lot to like, but there were still some problems with the interface [1]. Here is an example from its “general tab” page:
Parent Connect XP user interface [1]. We noted that the form fields are arranged haphazardly which makes the entire page difficult to read.

All the currently available interfaces seem outdated and something out of the Y2K timeline. In today's age people like to interact with the web in ways that a mouse and keyboard cannot do. A testimonial to the above fact is the exceedingly large number of smart-phone and tablet sales. The proof is in the fact that there were more smart-phones shipped in 2011 than client PCs [3]. In our app we bring these outdated interfaces to the devices people are going to be increasingly using.

**Target Users**

The system which we are proposing is primarily intended for parents, students as well as teachers. Education is one of the biggest problems we are facing today, particularly for young adolescents. In order to make things better, not only do we need to improve class transparency and accountability but also improve parent-teachers as well as parent-child relationship. According to a research done by the Michigan department of education, lack of parental involvement is the biggest problem facing public schools [9]. The Commonwealth foundation is a foundation that operates and supports educational programs and projects assisting undeserved children and youth. It’s Program Manager, Jean Togbe, suggested that the system most schools use today present parents with the results and the consequences rather than involving the parents into the process from the beginning. DeMatha Catholic High School, as most High Schools in the nation uses Edline’s school system. It’s vice principal, William Clark said in an interview that teachers usually get in touch with parents via Edline once every two or three weeks [4]. According to him, High School students are in a phase where parents do not need to inquire, or be aware of their children’s whereabouts or activities on a daily basis. He inferred at that point of their life, students are young men preparing for maturity and that he would not be inclined to monitoring them constantly [4]. Jean Togbe has a slightly different opinion. He wishes that there were a more proactive approach to knowing what goes on in the
student’s life, rather than a passive one [10]. Mr. Togbe stated that most of the schools his foundation works with fail to notify the parents about a significant matter on time. He suggested that a lot could be achieved if some parents were involved right at the beginning of the process [10].

**Scenario Walkthrough**

**Scenario 1:** It’s 2pm on a school day. Marie, a stay at home mother of two middle school children, is out shopping for groceries when she gets an alert on her smartphone notifying her that the grades of the last weeks assignment have been posted. She gets a link in the alert, that takes her to the mobile-optimized web app and logs into the Proactive Parent app (P²) software and looks at how her kids performed in that assignment. Then she rushes home to meet the fifth and seventh graders’ buses. But in the hustle bustle of tumbling backpacks and serving snacks, Marie refrains from the traditional after-school inquisition: What did you get on the test? Did you skip class?

Thanks to our web app P², she already knows the answers to these questions. So she skips to the important parts and asks the children the reason for the bad grade. If Marie so chooses, she can easily click a button next to the grade, and schedule an appointment with the teacher to discuss her children’s grades. Marie can also check in what percentile her children are placed in class.

**Scenario 2:** John comes home from school. As he enters the house, he sees his parents waiting for him. Thanks to P², the parents know that John has not been to class for the past three days and missed the on-time and late due date for his math assignment. Thanks to the configurable triggers which allows different parents to choose how much monitoring they need in their children’s lives, John’s parents set a trigger in P² that alerted them after three days of missed class and also a missed late due date for assignment.

**Scenario 3:** Maria is a single woman with two sons. She has always raised her sons by herself and wants them to have a good education. Her sons are enrolled in a public High School and Maria is working most of the time. She leaves the house early in the morning and comes back late at night when her sons are usually asleep. She works every day of the week except from Sunday. She doesn’t always have time to check on her sons’ school work and seldom makes it to the Parent Teacher meetings. But Maria has a smart phone, as most Americans do today. With the mobile platform flexibility that our system is proposing, Maria will be able to access any information about her sons work and progress in school whenever she wants to. Whether it is when she comes back from work at night, or at work, she will be in permanent communication with the school and will have the chance to be involved in her children’s education whenever she wants.
References

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2. Calvert County Public Schools. Pinnacle Internet Viewer: A guide for Parents and Students.


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Appendix

Parents have an equal, if not greater responsibility than teachers in their children’s education. Intense parental involvement has proved to improve a student’s grades, school attendance and motivation. And, it has also shown to decrease the use of alcohol and drugs [1]. In 2010 over seventy percent of 8th graders weren’t capable of reading at grade level [2]. One of the worst case scenarios from the lack of parental involvement is a student dropping out of high school. This scenario could have other undesirable consequences that follow. It is a well-known fact that people without a high school education have a very difficult time finding a job and they are more likely to take on a degenerative course in life.

Being involved in their child’s education is a difficult task for a parent. It requires cooperation and good communication between them, the student, and the teacher. Often, it is the case that one of them fails to meet this requirement. Parental involvement can be significantly improved by making parents aware of their children’s day-to-day school activities and making them a bigger part of their children’s education.

In our project, we will develop a portal system on the Internet that is accessible to the parents, the students and the school. The system will allow parents to view the assignments, projects and tests for each of the classes their child is enrolled in. It will also allow the teachers to update the completion status of these assignments. Another part of the system will make important data such as test scores, and their child’s current grades readily accessible to the parents. In addition, the system will track each student’s progress through the school years, and will generate data about this progress. The content of the data will yield information such as a student’s weaknesses and strengths, the areas of improvements, the area where improvement is needed, and a chart that compares the performance of their child with the other students in the school. This system will also allow parents and teachers to communicate directly with ease. This system will not only provide information on a student’s performance, but also a school’s performance, and as a result increase their accountability. The system will also be capable of providing information like what kind of meal the school is providing for lunch. This will be part of increasing accountability on the school’s part and it will help parents know if their children are eating healthy meals at school.

For our final proposal we decided to follow a more concrete idea of developing a web application that will be named Proactive Parent (P²). It will be based on HTML5, CSS3, and JavaScript which will make it platform independent. This web application will provide a native user interface for mobile devices such as smartphones and tablets. This will serve our fundamental goal to bring these interfaces up to date with the modern times. More importantly, our design will take into consideration the way users interact with these interfaces. They will no longer be used to just simply check on a student’s grade every two to three weeks, but to keep up with assignments and to interact with other students and teachers. It will also come included with a notification system that will allow alerts to be sent to a parent’s phone or email based on specifications set by the user. To arrive at this final proposal, we conducted research on existing school platforms, interviewed with different day to day
users that interact with the current systems implemented throughout schools. We gathered input from parents, school officials as they were essential for understanding what the current systems lacks.