Undoing the Factory Model: A Practical Field Test in Blended Learning.

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Abstract

Merely, introducing new technologies into the classroom does little to address the needs of students – while it might create a welcome instructional environment for them, it does not address the compelling "elephant in the room." Being able to orchestrate a student-centered, technology-rich lesson requires much expertise on the part of the teacher and a system-wide universally acknowledged educational technology plan.[1] This study examines the paradigm shift required of teachers and the practical reality of adopting a blended learning environment to meet the needs of a diverse school district.

Introduction

Lawrence Public Schools serve approximately 11,000 students from pre-kindergarten through grade 12 in Lawrence, Kansas. The district is the seventh-largest in Kansas, with nearly 1,700 employees.

Within the district, there are twenty-one school campuses ranging from pre-K to high school. These schools span a wide variety of racially and socially diverse populations: 70% of the students are classified as White, while students of color make up the remaining 30% as follows: American Indian/Alaskan Native – 5.2%; Asian – 4.9%; Hispanic – 7.5%; African-American – 7.1%; and Multi-Racial – 4.8%. The district also services the needs of a student population that has Students with Disabilities – 12.2%, English Language Learners – 7.5%, and Economically Disadvantaged – 35.4%. Naturally, these statistics vary significantly in each individual school setting.

Statement of the Problem

The Lawrence Public School District (Lawrence, Kansas), like thousands of other schools districts across the nation, faces a number of ongoing challenges including: an achievement gap that persists between the performance levels of students of color and their white peers, schools that face increasing numbers of students from low socio-economic backgrounds, the need to steadily improve graduation rates for students of color, and the need to meet the full diversity that a university town brings. In addition, over the coming few years, the district must implement the Kansas Common Core Standards successfully, while increasing student engagement in classrooms at all levels.

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[1]Mills, S.C., & Tincher, R. C. (2003) Be the technology: A developmental model for evaluating technology integration. Journal of Research on Technology in Education, 35(3), 382-401.

Planning, developing, implementing, and evaluating the best blueprint possible for the use of technology in the district was the ultimate challenge, and so at the beginning of the 2012-2013 school, the Teaching and Learning division of the district was charged with the task of defining the future of the instructional model as it pertained to the use of technology and the implementation of the Kansas Common Core Standards. The field study developed, allowed for the collection of data regarding teacher readiness to adopt 21st century teaching methodologies, whatever that might be determined to be!

Objectives of the Study

There were multiple components to the Field Test developed, that were tested predominantly through the piloting of a blended learning environment at various levels across the district. The main objective was to determine how and if a blended learning approach could be used, and to see whether or not such an approach would be a feasible option for USD 497. There were several other objectives or questions that were areas of focus, most of which specifically pertained to whether or not a blended learning approach has benefits for student engagement, equity and/or academic achievement. Additionally, data was also collected on the teacher's abilities and feedback and the inherent skills required to be successful in such a model, and whether such a model was feasible given the dispositions of the teachers generally?

Research Design and Procedures

An elaborate selection of criteria was established to select the classrooms and teachers for the field study. A careful and well-detailed selection criteria was established for a variety of elements within the field study. The first of these, was the determination of the school site. While this was initially based upon a voluntary basis (only those principals who wished to be a part of the field study were considered), beyond this, schools were invited to participate based upon an authentic representation of the array of demographics including: size of school, existing programs in building, percentage of SES in each building, geographic location, grade level, and content area.

Beyond the school selection the selection of individual teachers was equally important. Once again, the initial selection was made based upon teachers volunteering and principals selecting who they felt would be the best for the field test. However, there were a series of other criteria that were taken into account when deciding upon the teacher and classroom selection including: race, grade level, number of years in profession, gender, core content area, established classroom environment, willingness to participate, commitment to dynamic instructional change, and observation of the established classroom environment.

The final selection that needed to be made prior to the beginning of the field test, was the learning management system that was to be used. It was initially decided to use one single universal system rather than a variety in order to maintain a consistent approach across grade levels. The team reviewed several potential platforms including: Blackboard, Moodle, Canvas, Edmodo, and Skyward. The learning management system selection criteria also included: open-source, cost, functionality, customizability, user-friendliness, IT compatibility, customer support, and responsiveness.

Surveys were offered to students, teachers and parents within the study at the end of each month in order for the data trend to be collected along with the individual, month-by-month collection. This data was collated as an averaged score as well as looking for differentiating factors in feedback over the course of the semester-long study. In order to ensure the data collected was truly useful, all participants voluntarily contributed to all surveys, and at all times anonymously. While some of the questions allowed the researchers to determine a little demographic information about the respondents, no questions were mandatory for the survey to be completed and participants were encouraged to answer only what they felt comfortable with.

Findings

Predominantly, the feedback collected from the vast majority of participants was overwhelmingly positive. Both the student and teacher survey feedback showed there to be a significant and tangible improvement in the engagement of the students in the field study classrooms. Teachers were unanimous in their feedback that students were more engaged in their learning when in a blended classroom. These results were mirrored by the student responses (88%). Students also believed their peers were more engaged in the learning process (75%). Students also indicated that learning in a blended classroom had a positive impact upon their attitude to the class (70%). Student preparedness for learning was also regarded to be significantly different throughout the field study. Across the district teachers (75%) indicated they believed students were more prepared when in class, and this was echoed by the students (80%). Interestingly these positive numbers were not evident when parents were asked the same question, where 40% of parents did not agree with such a statement.

The most apparent "shift" in instructional style is the amount of, and attitude towards collaboration within the learning process. Of all the survey questions asked of students, the discussion regarding the ability for them to collaborate and learn with and from other students, generated the strongest of all positive reactions. Equally compelling was the data collected from the teachers regarding the collaboration between students. Again, the emphatic nature of the answers speaks to the universality of the collaboration. It should be remembered, given the fact that all teachers responded positively, it did not matter whether or not the students are in Kindergarten or high school the results were the same. At every level, and at all grade levels surveyed there appears to be an increase in collaboration within the learning process.

Teachers reported that the use of blended learning allowed them to spend less time involved in direct instruction, and that this change in role in the classroom allowed them to have more time to work with individual students during class time. Teachers and students indicated that the use of a blended approach helped in the speed of feedback (teachers - 100%; Students 80%). Teachers also appeared to feel that time has been freed to give more individual attention to students, and that this flexibility of time translates into students receiving feedback in a more timely manner. It is not surprising, therefore that a large amount of students (88%) indicated that they enjoy the classroom environment established in a blended learning model.

Access to learning tools was also evaluated, but was not a problem from a student perspective where the vast majority of students reported that being able to access blended resources at home was working well for them (77%). They also responded positively when asked whether or not they could access "flipped" content easily at home (83%). Interestingly, this view was not shared by parents who took the survey (39%). While this was not the majority of respondents, it still represented a significant number of families especially if the field study was a microcosm of the broader district community.

The perception of most participants is that the field study produced some excellent results in regards to improved student learning. Parents were broadly complimentary of the blended learning classes (78%). The teacher responses were far more cautious, though did suggest a positive trend. While no teachers indicated a negative reaction to the prompt that student achievement has increased by measured assessment, only 37.5% were comfortable agreeing with the statement. Although this was the case when reflecting upon the students as a whole, teachers were far more positive in the data collected about how blended learning had been a positive influence upon students with disabilities (100%). It was also noticeable that when asked, 100% of the teachers also felt that a blended classroom was a more equitable approach than the traditional classes that they were also teaching.

The student feedback was a little more mixed in its response. In each of the questions asked, the majority of students certainly responded positively, but does not negate the fact that 1 in 4 students did not indicate a positive reaction to blended learning. Most students (71%) did believe they had learned more in the class because of blended learning, and similarly most students (72%) also reported, they believed that blended learning had helped them learn more than if they were in a traditional room. Nevertheless, it must be remembered that more than 20% of students did not feel blended learning was a positive experience for them.

Summary

Based upon the early data from the district field study, blended learning can be a powerful tool in the armory of teachers attempting to actively engage all students in the classroom and genuinely differentiate learning. It is interesting that the majority of negative feedback derives from students who are already successful in a traditional format. It is understandable, upon reflection, that students who have enjoyed significant success in a traditional setting are less likely to be eager to adopt a change as readily as those who might be looking to find a different approach in the classroom.

Certainly the biggest stumbling block to a broad adoption of blended learning remains the paradigm shift required on the part of the teachers. Teachers must enter into blended learning understanding that the amount of planning and preparation will actually increase, but this will, in turn, give more time for teachers to be able to engage with students in the classroom. The end result of this is that the needs of students can be met in more depth, and the differentiation becomes a fundamental component of the classroom.

For parents, the concept of blended learning remains a mystery for the most part. So far, removed from their own educational experience, and so closely linked with a level of technology that is not always understood or appreciated, most remain somewhat indifferent to the experiment. While many welcome the excitement and engagement that they witness in their own student, others remain skeptical of a learning style that does not always use a teacher and face-to-face instruction, which has been their only educational experience.

Even though blended learning is not predicated upon the use of technology, it must be recognized that the need for a solid infrastructure and working hardware is critical to successful implementation in the classroom. One of the most significant frustrations of the teachers who have participated in the field study has been, that when the technology is not functioning, the time taken to get it back online is a major distraction to all concerned. Similarly, students have an expectation for devices to work at all times, and the level of patience when it comes to dealing with non-functioning technology is surprisingly low.

As with all educational models, time will tell as to whether or not blended learning is here to stay. There should be little doubt, in theory, with the right technology, a well-trained and motivated teacher and student who are eager to find a system that meets their individual needs, there is huge potential. In truth, however, whether or not the theoretical model can be turned into a practical reality remains to be seen. The experiment in Lawrence is to be continued on a significantly larger scale (from 8 classroom to over 50 classrooms district-wide) throughout the 2013-2014 school year; it will be interesting to see whether or not the results yield the same results on a far broader scale.

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