

Action Research: Technology Integration in an Educational Environment

Alex Tuttle

TFT 250 Teacher Leadership Program

Instructor Dan Fray

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The Problem: New Generation, New Challenges

In the modern day classroom, many new challenges have crept in that traditional classrooms of the past had to deal with. With the dawn of the internet came a new generation of student that is always on. These students are raised in the digital age of evolving technology and are often referred to as digital natives. These students may not learn in a traditional way, and a new approach to teaching them may be needed. It is the teachers that have a greater learning curve when it comes to learning new technologies as well as ways to integrate them into their pedagogical approach. Since the COVID pandemic, schools have moved to a more digital approach to teaching and learning. Teachers had to learn new tech out of necessity. Problems such as access training and support came along for the ride.

The overlying question comes to the forefront: How are the significant challenges and/or barriers currently hindering all stakeholders (Teachers, Students and Families, Administration) in an educational setting affecting instruction in the modern day classroom? Is there any easy way for all stakeholders involved to avoid roadblocks in learning new technology. Students may learn it quickly, teachers may lag slightly behind, and administration could be flying in the dark because they aren't on the front lines of teaching on a daily basis.

In large urban districts, integrating new technology is no small task. According to Green (2014), there are trends in technology education that affect how technology is being integrated into the classroom. The blind

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acceptance of technology integration policy and the approach to teaching it can determine how effective teachers can be. (para p.37) In order for new tech to be effectively integrated into the daily lives of both students and teachers, a conscious effort must be made to use it as part of the daily routine.

Assumptions

In major urban districts, it is assumed that when there is a new technology, quality of life update or rollout that teachers will just assimilate to the new standard. Often times, these rollouts can be bumpy at best. Some would tout it and say that newer is better. That may not necessarily be true. As previously mentioned, the new generation of students are often labeled as digital native. That statements may put all students in a box, and may not necessarily be accurate. Kids come in all shapes, sizes and ability levels. Although, many students may be good at playing video games or using their phones, they may need some guidance in the classroom with new technology in order to have a sense of digital citizenship. They may need to be taught the general rules of being responsible and respectful online and using reliable sources for study.

One may assume that if a teacher is teaching in this modern environment, that they are comfortable using new technology or software as it rolls out. In reality, teachers may have a wide ranging understanding of technology, from novice to expert, yet they are all expected to use new technology equally. Veteran teachers may have the opinion that if it is not broken, don't fix it. They may be hesitant to stray away from their comfort zone.

Administrators have their own set of assumptions. Simply providing new devices to teachers will improve the quality of education. In reality, if an administrator implemented new devices, it may open up a can of worms that they need to address. They may need to offer proper training, technical support as well as a clear vision of how integrating this new technology will align with district curriculum goals. Simply integrating new technology may not solve all learning needs. Administrators would have to enforce that it is meant to enhance pedagogical practices, not replace them.

Research and Potential

In order to get a better understanding and challenge assumptions, a poll was issued to multiple schools. The information compiled gives a clear picture of how the current staff of a large public school. On its face, the information tells one story, however there are other factors that influenced the results. Factors that may increase teachers anxiety and willingness to use new technology may include, age, willingness to try it out, aptitude to learn the new tech, training, support and perceived relevance. The results from the poll may offer potential to give accurate overall vibe of the buildings which could help drive all stakeholders to provide the best possible outcomes.

Challenges

Aside from the previously mentioned challenges, there are a few more that have crept to the forefront of the discussion. First, time is probably one of the biggest barriers that teachers and administrators need to address in order to implement new technology with fidelity. There are so many hours in the day for teachers to sit down and master the new technology, plan effective ways to enhance their lessons with the new technology, and potentially collaborate with colleagues. Teachers may be expected to have mastery of the new tech, but they may fall short due to time constraints. One way to address this need is to make a school schedule that incorporates a common planning time for teachers.

In order to address teacher resistance or apprehension to adopting new technology, administration needs to be cognizant of the fact that teachers may have concerns about workload and time management. The administration should offer adequate support. During staff meetings, the administrator could share examples of how fellow teachers are having success in their classrooms with the new tech. Not only that, they could also acknowledge student success within the programs.

Data

A recent poll in a large urban district, teachers were asked questions involving their opinions on technology integration in the classroom. The data used a large enough sample size to where one could make some assumptions about the current state of this issue. As seen in Figure 1, most teachers agree that integrating new technology into the classroom enhances student learning. There was not one teacher polled that did not disagree with that assertion. Although 76% of teachers agreed that integrating new technology into the classroom is important, 65% were only somewhat comfortable while 11% were completely uncomfortable. The next question addressed technology support. The attitude about support was mixed. Just over half of the staff population feels like there are some supports. Conversely, 27% feel as if they are unsupported as a teacher.

Solutions

Only time will tell, when it comes to the adoption and integration of new technology in the classroom. There are a few potential solutions that can be used in order to help promote and facilitate new technology in the short term. First and foremost, in my opinion, it would be beneficial to have a dedicated person to work one on one with the teachers in order to break some of the barriers that prevent the use of new technology.

Staff Questionnaire: Technology Integration

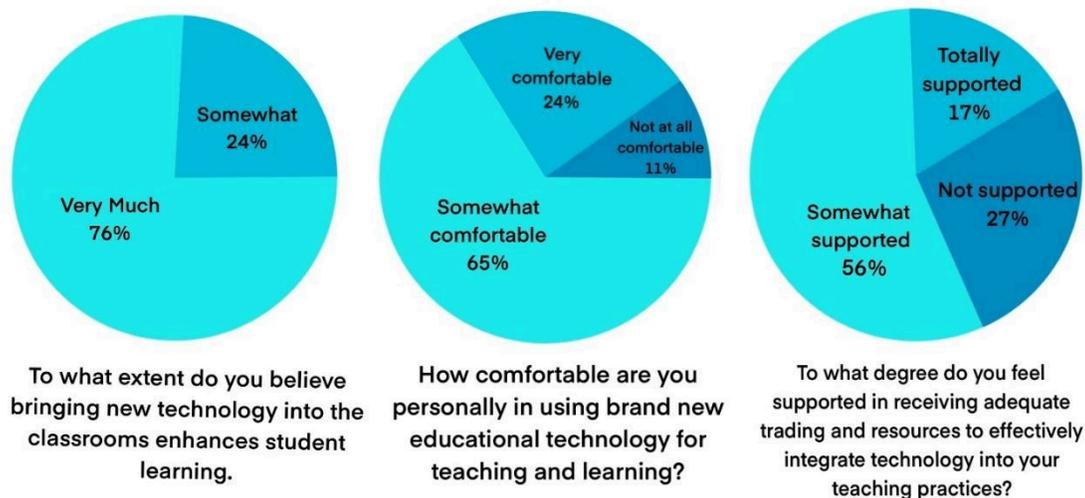


Figure 1

Next, the administration could give teachers some autonomy to make their own decisions on how they will integrate new tech into their teaching practices. According to Johnson et al (2016), it is extremely important to let teachers have a say in how they will integrate the new technology into their educational practices. This can help avoid the sense of frustration or discouragement. By empowering the teachers to have some choice in the matter, it will ultimately help them retain a sense of classroom control.

Another possible solution to help alleviate frustration is to have a place where the new technologies can be organized in a logical format. This would allow teachers to easily access programs that have been vetted by the district, that are compliant with all federal laws. Many teachers prefer a one stop shop for getting information. The more they have to hunt, the more likely they will be to just give up if they can find something.

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