

Personalization in the Classroom: Using Technology to Increase Math Skills

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Introduction

Take a step into a classroom & chances are, this is what you will see - an enthusiastic teacher, who thoughtfully plans each lesson. An ELL student that is unsure of the concept being taught. A student with an IEP that is off task because they have lost focus during the long lesson. Two students are actively engaged in the lesson, raising their hands. Lastly, there are a few kids doodling in their notebooks, bored because they have already mastered the concept.

Background & Need

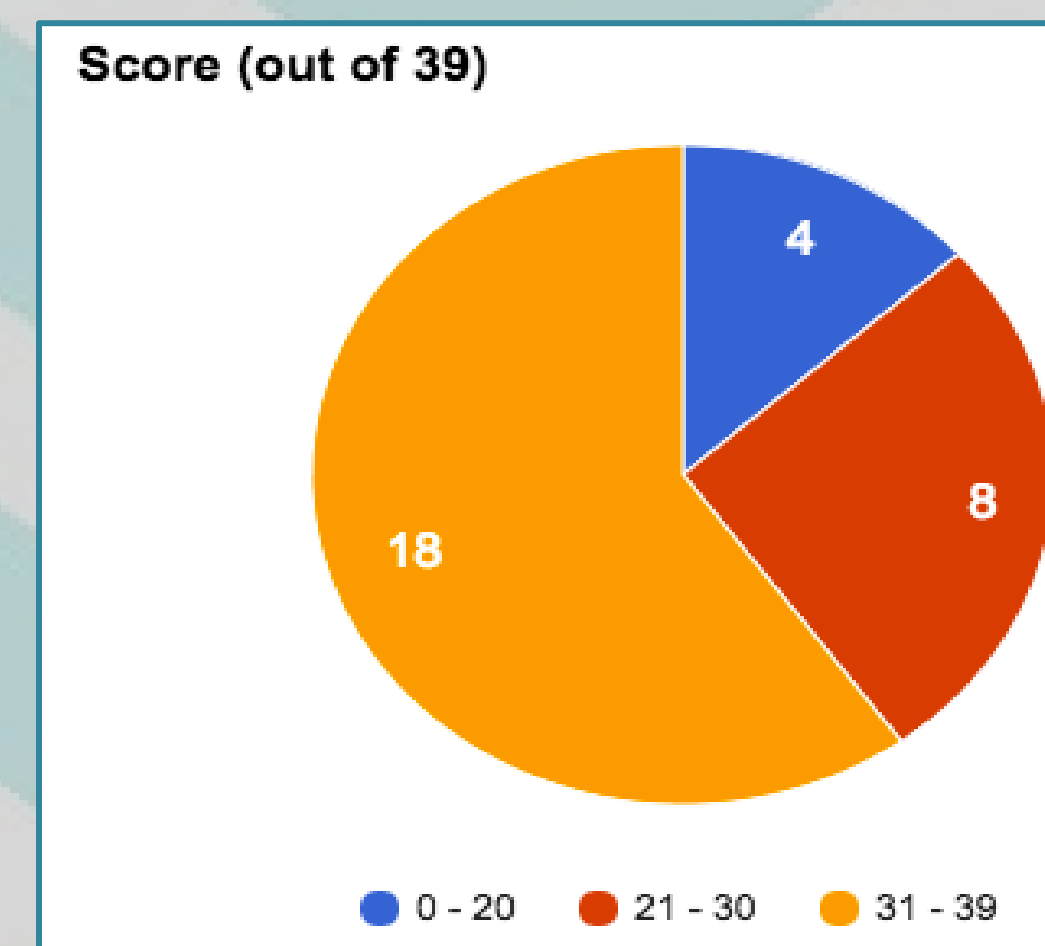
It is clear that every classroom is full of unique students, and though they are all different, they are all equal (Differentiation and diversity in the primary school, 1996, p. 3). Teachers need to realize they must address the differences among their students in order for them to all perform at their highest level (Tomlinson, 2005, p. 9).

With new technologies being invented everyday, it is important now more than ever that teachers prepare their students for the twenty-first century. In addition, teachers need to find a way to make the learning student-centered, letting the students be independent and discover the learning on their own.

Methodology

How can a math lesson/structure be created for a classroom that would best allow for differentiation of instruction?

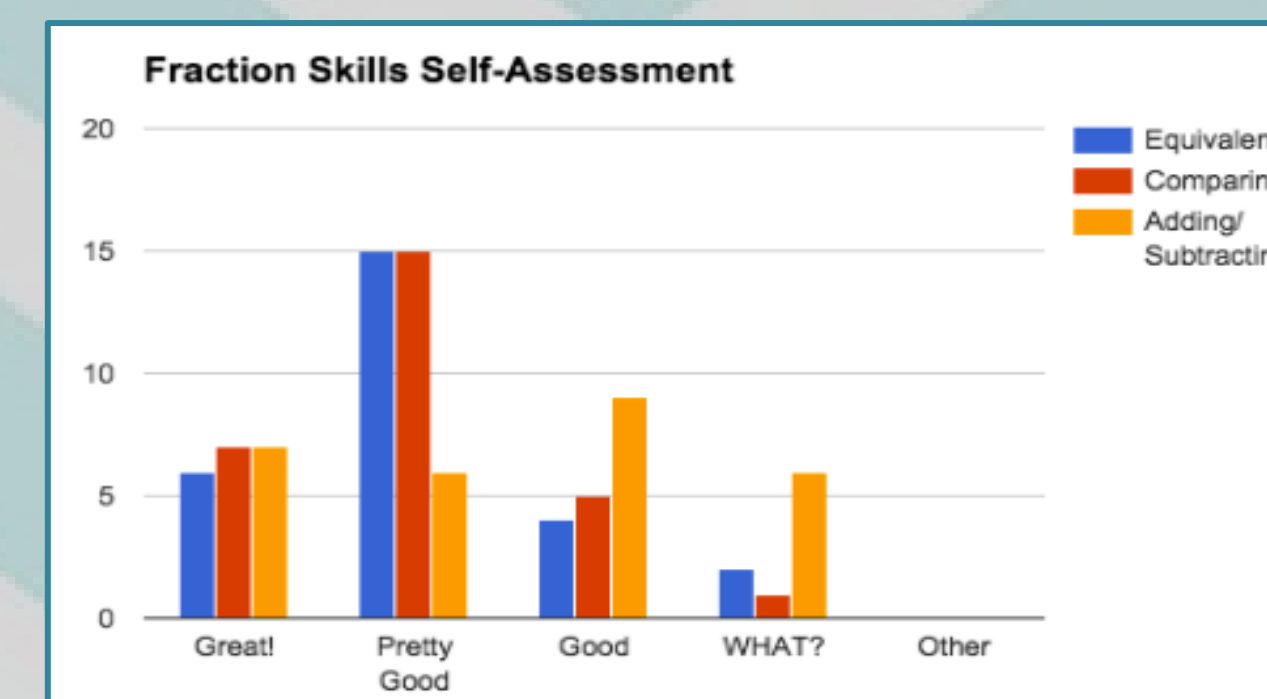
The purpose of this project was to inform educators how to use technology to best personalize their students' education. The study took place in a fourth grade classroom, in which the researcher was also the teacher. The sample size was thirty-one students in a school that has access to technology - as each classroom has approximately five iPads, as well smartboards, and the ability to sign up for a class set of macbook air laptops..



Post-Data collection.
Skills remained consistent,
attitudes improved!

Results

The hope of this study was that the students' fraction skills would increase while using a fraction app during math rotations. While the data shows that their skills did not dramatically change, it may be difficult to determine why this is the case. One possibility could be due to the fact that the teacher was not directly teaching fraction skills in their "teach" math center. Maybe it would be beneficial to use an iPad app as a reinforcement to go along with what is being taught. It is important to remember that the students took the pre-treatment assessment and self-assessment survey following a fraction unit. During the unit, the teacher explicitly taught equivalent, comparing, adding, and subtracting fraction skills. The teaching was mainly focused on the introduction of fractions, as well as fraction equivalence and comparing fractions.



Conclusion

While the data from the students' self assessment survey & math assessment shows that using the fraction app to teach specific skills did not have a significant impact on students' self perceptions and test scores, the students skills did remain consistent.

Literature Cited

- Bearne, A. (Eds.). (1996).
Differentiation and diversity in the primary school. New York: Routledge.
- Tomlinson, C.A. (2005).
Traveling the road to differentiation in staff development. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.471.6150&rep=rep1&type=pdf>

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For Further Information...

Please contact emoore@beniciaunified.org
More information about this and other related projects can be found at TILTnet.org