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Teacher Perceptions of the Effectiveness of a Blended Learning Program at a Public Charter  
Middle School (5<sup>th</sup>-8<sup>th</sup> Grade) In A Large City In Texas

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This research analyzed teacher perceptions of the effectiveness of a blended learning program at a public charter middle school (5<sup>th</sup>-8<sup>th</sup> grade) in a large city in Texas. The aim of the study was to highlight teacher opinion in order to gain insight into how effective the program was perceived in regards to academic growth and character development. Secondly, the study sought to gain insight into the underlying causes for that level of perceived effectiveness. Study results indicated that teachers believe that after the first two years of implementation, the program had a highly positive impact on student academic achievement, but only a somewhat positive impact on character development. Teachers reported specific recommendations for a more successful program, such as additional ongoing professional development, clear ownership and expectations for teaching digital citizenship to students, and better administrative support to address ongoing challenges.

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In an effort to meet the needs of the 21<sup>st</sup> century learner, researchers and educators have been rethinking the manner in which we provide education for our children (Downes & Bishop, 2012; Horn & Staker, 2014; Jacobs, 2010). They argue that schools are not designed for the student of today, but rather were designed for an industrial society that favored a factory model of organization. In an effort to accommodate increasing numbers of students and to prepare them for an industrial society, standardization and efficiency took root in the early 20<sup>th</sup> century and was largely successful at that time (Horn & Staker, 2014). However, as Horn and Staker (2014) stated, “[T]oday’s factory model of education, in which we batch students in classes and teach the same thing on the same day, is an ineffective way for most children to learn” (p. 8). Thus, reformers have attempted to argue for and to implement disruptive innovations for change within the current system.

More recently, many agree with Jacobs (2010) who aptly stated, “The concept of what a school is does not need *reform*—it needs *new forms*” (p. 9). The challenge has been in giving up the control that the traditional classroom offers in favor of an approach that recognizes the power of the availability of information at the fingertips of the “digital natives” in our classrooms.

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Much of the more current literature argues that since the students with whom teachers work are native to the digital world, meaning that they have never experienced a world without modern technologies, our teaching must necessarily adapt to changes in their needs and learning styles as well as 21<sup>st</sup> century educational goals (Bittman, Rutherford, Brown, & Unsworth, 2011; Downes & Bishop, 2012).

In education there seems to be an emphasis on the new “in thing” or “buzz word” when it comes to instructional innovations that aim to disrupt the status quo of teaching and learning. One of the more recent trends is in blended learning, a program model that has been controversial. What is blended learning? The Christensen Institute, pioneers in this field of instruction, noted the following on their website:

“Blended learning involves leveraging the Internet to afford each student a more personalized learning experience, meaning increased student control over the time, place, path, and/or pace of his or her learning.” (Clayton Christensen Institute, 2018, Blended Learning Section, “What is blended learning?”)

### **Statement of Problem**

The effectiveness of blended learning on academic success has shown mixed results and remains a subject of controversy. While the benefits of mindfully integrated technology in learning on cognition is well documented (Ching-Ting, Ming-Chaun, & Ching-Chung, 2014; Lopez-Perez, Rodriguez-Ariza, & Argente-Linares, 2013), the impact on standardized test scores has been less favorable (Lowther, Inan, Strahl, & Ross, 2008). Several studies focused on how well teachers integrate technology in their instruction, but few dealt with whether teachers believed that technology integration in the classroom has positively impacted student learning (Koh & Divaharan, 2011). The assumption has been that if teachers would only integrate technology more or in better way through better teacher training and the removal of barriers, then technological integration would be effective and therefore would begin to impact student achievement scores (Ertmer, 2005; Hilton, 2016; Yan, Ching Sing, Guo-Yuan, Joyce Hwee Ling, & Chin-Chung, 2015). This study sought to solicit perceptions of teachers, the adults who presumably had the most access to immediate quantitative and qualitative data reflecting the learning of students in their classrooms, as well as perceptions of effectiveness, both academically and holistically, of the blended learning approach being evaluated.

### **Research Questions**

Do the teachers at KIPP: Intrepid Preparatory School believe that blended learning has had an overall positive impact on 1) student growth and achievement and 2) student character traits and values, and to what degree?

### **Limitations and Delimitations**

This study is limited to the teachers at one middle school, in a large city in Texas, who agreed to respond to an online survey and, if applicable, an in-person interview. Only teachers presently employed by the school were surveyed or interviewed. The study focused on teacher perception only and does not attempt to provide an in-depth report on student achievement

measures or growth before or during the blended learning implementation.

This study and the results thereof apply only to the case study participants who work at one public charter middle school in a large city in Texas, a Title I school that was in year two of a blended learning implementation. The results are not meant to apply to all public, charter, or Title I schools in Texas or other locations, and will not apply to all schools that use blended learning. It is assumed that teachers spoke honestly and truthfully on surveys and during in-person interviews without bias or prejudice.

### **Importance of the Study**

Few studies have challenged the idea that technological integration is an important path, or even the *best* or *only* path, to boosting student achievement scores (Ertmer, 2005; Hilton, 2016; Yan, Ching Sing, Guo-Yuan, Joyce Hwee Ling, & Chin-Chung, 2015). This study sought to neither prove nor disprove that assumption, but rather to bring teacher voice about the *effectiveness* of blended learning to the forefront. Teacher expressions of their own attitudes, beliefs, and perceptions about the blended learning environment may shed light on new ways about what is working in blended learning and what isn't, and may begin to point educational leaders in a direction that leads to identifying the *right kinds* of obstacles to remove and *new ways* of thinking that can help better reach the end goal of holistic student growth and achievement.

Research addressing teachers' perceptions of blended learning's effectiveness on student character traits and values is limited. Beyond basic questions about student "engagement" with the technology and ability to self-manage on the programs, information about the evolution of student character traits overall, as a result of blended learning, are quite limited. This study aimed to put forth an analysis of teacher perceptions of both academic achievement and character traits of students using blended learning. Moreover, the study sought to analyze the intersection of these two key components of the effectiveness of the blended learning approach.

### **Literature Review**

The question of whether or not modern technologies has a positive effect on children's development and learning outcomes has been a topic of discussion for quite some time. There have been numerous studies conducted, for example, on whether or not television has a positive or negative impact on students' literacy and character development (Bittman, et al., 2011; Ching-Ting, et al., 2014). The past two decades, however, have seen an increase in studies related to technology and cognition. This may have been due to unprecedented access to computers, the Internet, and mobile devices in schools (Ching-Ting, et al., 2014; Petrina, Feng, & Kim, 2008). Researchers, parents, and teachers alike seek to understand whether or not these technological resources are actually beneficial to students.

As our digital native students have never experienced a world without modern technologies, teaching methodologies must be adapted because these students will have different needs and learning styles (Bittman, et al., 2011; Downes & Bishop, 2012). Some, however, suggest this widely accepted perspective ignores intergenerational learning and has in general been exaggerated (Petrina, et al., 2008). The presence of changing technologies means educators need to re-think their approach to delivering instruction, noting that students have grown accustomed to the flashiness of gaming (Downes and Bishop, 2012).

Literature on technology and cognition has reported an overall positive impact of technology on learning with a few cautions. Researchers point out that technology provides important tools that enhance problem-solving abilities because the use of technology allows teachers to assign individually-tailored instruction and assessments (Ifenthaler, Isaias, Spector, Kinshuk, and Sampson, 2011). The ability to tailor instruction to individual or group needs is a recurring theme in regards to what technology can do to enhance the learning experience.

Another benefit often cited is in the social arena of modern technologies. Contrary to popular belief, modern technologies do not necessarily detract students from developing social skills, or at least they don't have to; in fact, they can enhance social skills through providing a space for students to collaborate and co-create (Ching-Ting, et al., 2014). Wikis and blogs are examples of tools that can enhance the social potential of Web 2.0 technologies. These tools are able to achieve this aim because they allow a platform for collaborative communication (Dror, 2011). Twenty-first century adolescents have the need to belong to a larger group and to have responsibility within a community. The right technological platforms can enable students to collaborate with their peers to co-create meaningful projects to share with their class and the world (Downes & Bishop, 2012).

One of the most significant positive impacts for students is overall improvement in school achievement with the use of technology. One study showed a positive relationship between technology usage and student performance (Ching-Ting, et al., 2014). Students show an increase in literacy development at early ages, demonstrate higher engagement, and higher overall grade point averages in higher-education (Lopez-Perez, et al., 2013).

### **The Blended Learning Model**

The Michael and Susan Dell Foundation (2014), in partnership with SRI, summarized this challenge well: "Since blended learning is an emerging field there are currently many different conceptualizations of what it means to "do" blended learning" (Murphy, Snow, Mislevy, Gallagher, Krumm, & Wei, 2014, p. 10). Most implementers and researchers now acknowledge that the "definition [...] has the following components:

- It involves teaching and learning within a formal education program
- Students learn at least in part through online delivery of content and instruction
- Students have some level of control over time, place, path, and/or pace of instruction
- Part or all of instruction is delivered away from home in a supervised, brick-and-mortar location (Murphy et al., p. 3).

Within these parameters, it is possible for schools to create a wide variety of models that would all be considered blended learning.

The Christensen Institute (2018) further explains the four different models of blended learning that a school or teacher has to choose from: rotation, flex, a la carte, and enriched virtual. In the rotation model, students may rotate through learning stations, some online and some not; they may also rotate through a computer learning lab, or individually to stations of their or the teacher's choosing. Another version of the rotation model is the flipped classroom in which the direct instruction takes place online at home, and the practice and feedback session occurs after that in the classroom under the guidance of the teacher. In the flex model, students engage in an online course with varying degrees of on-site teacher support. Students may have homework assignments offline or an offline activity directed by the online program, but the majority of the course is completed online. Choosing the flex model would not mean that all of a

student's courses would need to be done in this way; a school could choose, say, to use an online biology course for students that has been proved to be highly effective, and have a teacher rotate in to conduct labs with students. In the a la carte model, students do not go to a brick-and-mortar building for the learning, but do the course completely online. Finally, in the enriched virtual model, students are required to have some face-to-face learning sessions with the teacher of record, but complete the rest of their coursework online (Clayton Christensen Institute, 2018).

It is important to understand when looking at various research reports—even those that are meta-analyses—that the learning institution(s) under review may use one, several, or none of the models described above. Since blended learning can mean many different things, it can be extremely difficult to compare one program to another or to compare any program to “traditional” programs as a whole. In fact, some have suggested that the “blended learning vs. traditional learning” dichotomy is false and not helpful at all (Watson & Parker, 2016).

### **Impact on Student Achievement**

There has been discussion over whether blended learning actually “works”. Many proponents of online education refer to the US Department of Education study published in 2010 which seemed to indicate positive outcomes from online learning. This meta-analysis concluded, “Students who took all or part of their class online performed better, on average, than those taking the same course through traditional face-to-face instruction,” with the most positive results coming from online learning environments with some face-to-face interaction (U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, 2010, p. xiv). However, this study cautions that, “The advantages observed for online learning conditions therefore may be the product of aspects of those treatment conditions other than the instructional delivery medium per se,” and that “[f]ew rigorous research studies of the effectiveness of online learning for K–12 students have been published” (U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, 2010, p. xiv). The U.S. Department of Education (2010) expanded on the trouble with the seemingly positive outcomes of this study: “Claims are made about the relative effectiveness of various blended learning models relative to more traditional forms of instruction, but thus far little evidence has been collected to back these claims” (p. 11). Those who would caution about these results point to the potentially major differences between students in higher education courses and K-12 students, highlighting that they may have different levels of focus and motivation when using online programs (Sparks, 2015).

Other reports seem to suggest positive results of blended learning programs. In a highly publicized report put forward by the RAND Corporation about an online Algebra course, significant improvement in test scores was cited for students who took the online course when compared to the control group (Pane, Griffin, McCaffrey, Karam, Daugherty, & Phillips, 2013, p. 3). However, it has been cautioned that this report reflects the impact of only one online program in one subject and cannot easily be generalized to all blended learning. In addition, the Bill and Melinda Gates’ Interim Research on Personalized Learning (2014) pointed towards some promising results: “Although results varied considerably among the 23 schools in this study, two-thirds of them had statistically significant positive effects on students’ math and reading scores on the Northwest Education Association’s Measures of Academic Progress (MAP) assessments” (Bill and Melinda Gates Foundation, 2014, p. 1). However, the National Education Policy Center summarizes where the debate lays today: “In sum, except for the recent

report by the Bill and Melinda Gates Foundation, 28 meta-analyses and comparisons involving multiple Personalized Instructional models offer little evidence that such technology improves learning outcomes” (Enyedy, 2014, p. 11). Clearly much further rigorous research needs to be conducted at the K-12 level, with an emphasis on what conditions allow the moderately positive results seen in a few studies and what conditions are leading to the poorer results.

### **Teacher Perspectives**

Teachers’ professional judgment of student academic performance can be a strong indicator of actual student outcomes on standardized tests of all kinds. Meta-analysis data indicate that teachers’ predictions of student outcomes are moderately to strongly correlated to actual outcomes (an average  $r$  value of .63) (Sudkamp, Kaiser, & Moller, 2012). When teachers indicate levels of student academic achievement, even when the actual achievement outcomes are not present, it may be assumed that teacher judgment, if not entirely accurate, may at least point toward trends in achievement.

Various studies have focused for years on assessing the likelihood that a given teacher will be successful at implementing blended learning in the classroom, using either the SAMR (Substitution Augmentation Modification Redefinition) or TPACK (Technological Pedagogical Content Knowledge) models (Ertmer, 2005; Hilton, 2016; Yan, Ching Sing, Guo-Yuan, Joyce Hwee Ling, & Chin-Chung, 2015). These two models provide scales to rate levels of teacher proficiency in use/implementation of technology in the classroom. Utilizing the rating scales, the focus of these studies has been to determine what necessary qualities, beliefs, attitudes, and skills teachers need in order to successfully integrate technology and/or implement a fully online or blended approach to teaching and learning. The overarching thought was that if teachers could reach the “redefinition” phase of the SAMR model in their instruction and/or attain a high level of knowledge in the three domains of TPACK specific to their context, then the implementation could be considered effective and would lead, presumably, to high levels of student achievement. The underlying assumption of these models was that blended learning would be highly effective if implemented correctly. Studies such as one conducted by Canbazoglu, Guzey, and Yamak (2016) focused on how a teachers’ TPACK strongly correlated to their “effective” implementation of technology in the classroom, and the need to boost skills during pre-service training. These studies rarely sought to evaluate whether or not an increased integration of technology in fact had a positive impact on student outcomes. The focus, rather, remained on increased and better training for teachers with more refined models and rubrics to assess implementation.

Fewer studies have focused on teacher assessment of student progress with the implementation of a blended learning environment. Those reports revealed mixed results. According to the Dell Report (2014), “Teachers reported that blended learning benefits students’ procedural skills development more than higher order thinking,” and also that, “students’ readiness for self-directed learning may vary by their academic preparation” (Murphy et al., p. 20-21). There was great variance with how teachers at different school sites rated their school’s blended learning program. According to the survey conducted for the Bill and Melinda Gates’ Interim Research on Personalized Learning (2014), “Teachers [. . .] are optimistic about the prospects of personalized learning and its impact on student achievement and the broader school community” (p. 2). Teacher perceptions in this report reveal insight into the outcomes of the program in more than student academics, mentioning an overall shift in school culture as well.

During a pilot study in Oakland conducted by SRI (Woodworth, Greenwald, Tyler, & Comstock, 2013), teacher perceptions of the effectiveness of the blended learning model in year one of implementation was mixed. According to the study, close to half the teachers agreed that student outcomes had improved with the program, although there were some significant variations by school location (Woodworth et al., 2013). Of note in the same study, “most teachers did not see learning gains translating to improved performance on benchmark testing” (Woodworth et al., 2013, p. 41). Issues related to implementation, training, school leadership, tech support, the quality of the programs themselves, and the academic and social readiness of students to benefit from the programs are all issues often cited by teachers as important factors that contribute to either the success or poor outcomes of the program.

## **Methodology**

This mixed methods study was designed to ascertain teacher perceptions of the impact of a blended learning program on student academic achievement and character strengths and values. Participants were asked to respond a 21 question online survey that included multiple-choice and open-ended questions aimed at their perceptions of how the blended learning program at their charter middle school in a large city in Texas affected students both academically and holistically. Questions regarding character skills were based on the Elite 8 Character Strengths that the KIPP Schools network teaches (Grit, Hope, Love, Self-Control, Gratitude, Humor, Social Intelligence, and Zest). In addition, three teachers were interviewed in person for a more in-depth account of their experiences with and perceptions of the impact of the program.

## **Participants**

The survey was sent to 27 teachers, teacher residents, and administrators (all of whom also teach at the school). Fifteen responses were received (56% response rate). All participants teach at KIPP: Intrepid Preparatory School, a charter middle school in the East End, Houston, Texas that opened in 2008. Ninety-nine percent of the students at the school are Latino/a, over 80% qualify for free or reduced price lunch, and 30% are English Language Learners. The participants were not required to self-identify, but most chose to do so. The respondents were from diverse racial/ethnic and socio-economic backgrounds. Of the respondents, 13.3% have taught for 1-2 years as full-time K-12 educators, 33.3% for 2-4 years, 6.7% for 4-6 years, and 33.3% for more than 6 years, with 13.3% who preferred not to respond, as shown in Figure 1. As shown in Figure 2, 13.3% of respondents have worked at KIPP: Intrepid for 0-1 years, 26.7% for 1-2 years, 33% for 2-4 years, and 26.7% for more than 4 years.

As shown in Figure 3, 40% of teachers who responded taught 5<sup>th</sup> grade, 46.7% taught 6<sup>th</sup> grade, 33.3% taught 7<sup>th</sup> grade, and 53.3% taught 8<sup>th</sup> grade, with 13.3% serving in administrative roles in addition to their teaching responsibilities (note that some teachers taught multiple grade levels and subjects). 31% taught ELA classes, 31% taught Non-Fiction Studies (history, writing, and non-fiction reading), 18.8% taught math, 6.3% taught Enrichment classes, 0% were science teachers, and 6.3% preferred not to respond.

**For how many years have you taught full time as a K-12 educator?**



Figure 1

**How long have you worked at KIPP Intrepid?**



Figure 2

**What grade level(s) do you teach?**

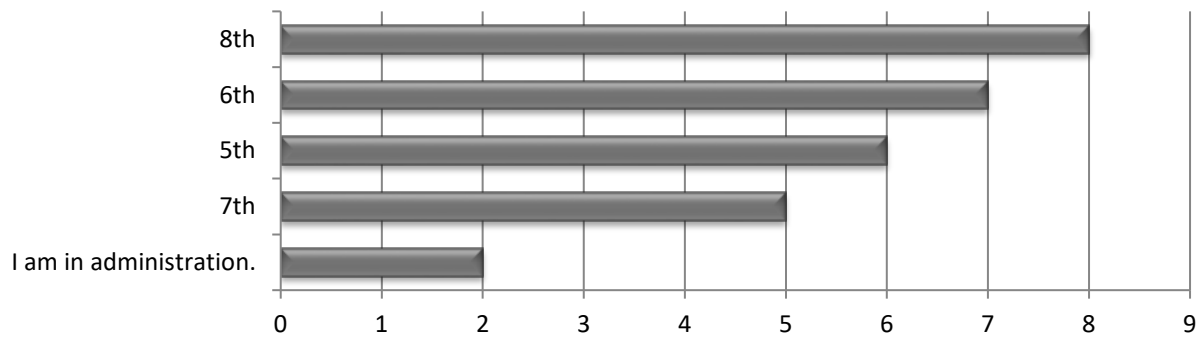


Figure 3



**How would you rate your skill with educational technology BEFORE working at KIPP Intrepid during the blended learning program?**

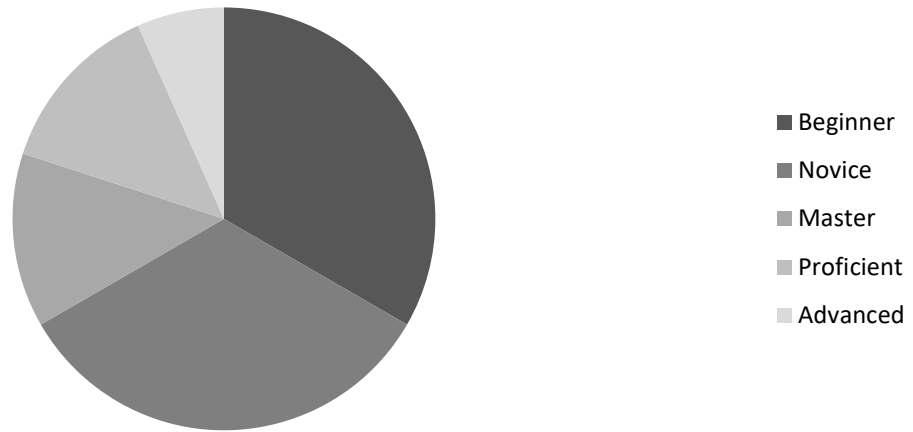


Figure 4

**How would you rate your skill with educational technology NOW?**



Figure 5

The participants’ self-identified skill with educational technology before and after the implementation of the blended learning program is summarized in Figures 4 and 5 above. Demographic (self-identification) questions also reveals that the participants who were interviewed all taught at the school; one was an ELA teacher, one was an Enrichment teacher who taught all grade levels, and one was an elective teacher who was also in administration.

**Instrument**

This research study used a mixed methods approach with a quantitative and qualitative survey for participants and a qualitative interview with three of the 15 respondents. The survey

was developed by the researcher and asked self-identification questions; for example, “What subject(s) do you teach?” with the option not to respond; Likert scale questions; for example, “In your opinion, how has student academic achievement been impacted by blended learning at KIPP: Intrepid?” with options to select from ranging from “very positively affected” to “very negatively affected”; and open-ended questions that asked respondents to expand on their answers with specific examples while refraining from using student names.

Interviews followed a similar pattern to the online survey, but probed for more information about these teachers’ individual experiences before and after the implementation of the blended learning program. They were asked about the impact of the program inside their own classrooms pertaining to academics and character, as well as their thoughts and ideas about the impact on the school as a whole.

## Procedure

A convenience sampling was utilized, as potential participants were selected based on whether they work directly with students using blended learning. The number of respondents was based on those who chose to respond to the survey. A link to the survey was sent by e-mail, and participants completed it within a three-week period of time that the survey was available towards the end of the school year. The survey was created using a Google Form, and data was collected and analyzed using that program as well as in an exported Excel spreadsheet. Three participants were selected to be interviewed based partly on interest and availability while also ensuring a limited level of variety (i.e. more experienced vs. less experienced, teachers of different subjects, and including one administrator). Confidentiality was assured.

## Results

### Impact on Academic Achievement

Teachers reported that they believed the blended learning program had a positive impact on student academic achievement. Across grade-levels, subjects, years of experience, and mastery of educational technology, teachers believed that there was a positive impact on academics through this program. 53.3% of participants responded that student academic achievement was *positively affected* at KIPP: Intrepid through the blended learning program, 40% stated that it had been *very positively affected*, with 6.7% responding *not affected/neutral*, and with no *negatively affected* or *very negatively affected* responses, as shown in Figure 6. Teachers cited the reasons for this positive impact as the ability to differentiate, enabling students to work at their own pace, the help of progress monitoring to adjust instruction and give more feedback to students, increased ability to work with small groups while other students were engaged in online work, more exposure to the world and different perspectives/21<sup>st</sup> century learning, and the increased amount of student motivation and academic engagement through the use of the programs available online. Teacher A stated, “Students are able to work at their own levels, and it has improved achievement,” and Teacher B stated, “Teachers are able to differentiate instruction; it is easier to do small groups and students can move at their own pace.” In terms of motivation and engagement, Teacher A stated, “Students enjoy the autonomy and that programs are academically accessible,” and Teacher B stated, “The use of technology is a motivating tool to keep students engaged in 21<sup>st</sup> century learning.” There was also mention of

**In your opinion, how has student academic achievement been impacted by blended learning at KIPP Intrepid?**



Figure 6

different levels of learners, with six respondents mentioning the benefits for lower-level learners, two teachers who discussed the benefits for advanced learners, and one mentioning that teachers could do a better job challenging the advanced learners with the blended learning program.

**Impact on Character Strengths and Values**

Overall, survey participants somewhat positive about the impact of the blended learning program on student character strengths and values, with some apparent trends according to how teachers self-identified. As shown in Figure 7, overall, 46.7% of participants responded that character strengths were *positively affected* by the program, with 6.7% stating the impact had been *very positively affected*, for a total of 53.4% of respondents in the positive range. 33.3% of respondents responded *not affected/neutral* and 13.3% responded *negatively affected* with no one responding *very negatively affected*.

**In your opinion, how have student character strengths and values been impacted by blended learning at KIPP Intrepid?**



Figure 7

For the Elite 8 Character Strengths that the KIPP Schools network teaches (Grit, Hope, Love, Self-Control, Gratitude, Humor, Social Intelligence, and Zest) that were the most positively affected by the blended learning program, respondents cited Grit as the character strength most positively impacted (46.7%), followed by Self-Control (a student’s ability to delay gratification) (26.7%) and None/No others (26.7%) and Hope (20%), as seen in Figure 8.

**What two Elite 8 character strengths have been MOST POSITIVELY affected by the blended learning program at KIPP: Intrepid?**

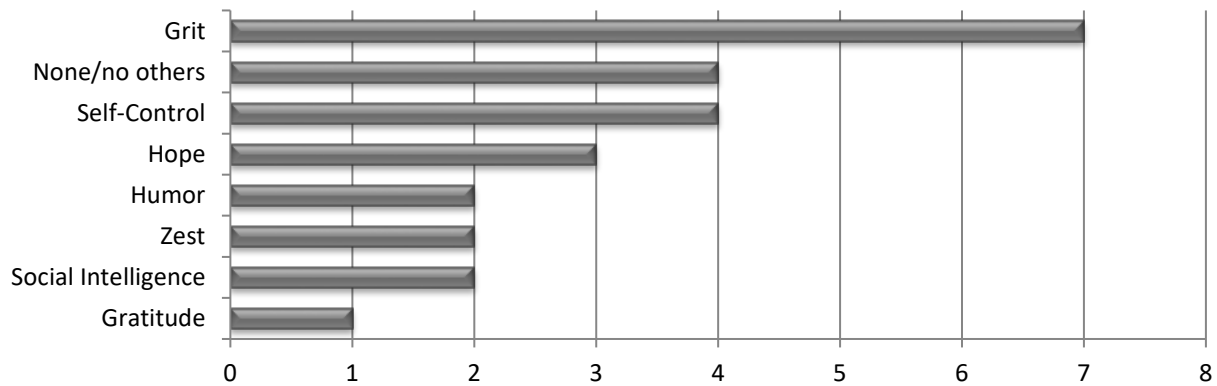


Figure 8

For the Elite 8 Character Strengths most negatively impacted, respondents cited Self-Control most often, with 60% citing it, followed by None/no others at 46.7% and Social Intelligence at 40%, shown in Figure 9.

**What two Elite 8 character strengths have been MOST NEGATIVELY affected by the blended learning program at KIPP Intrepid?**

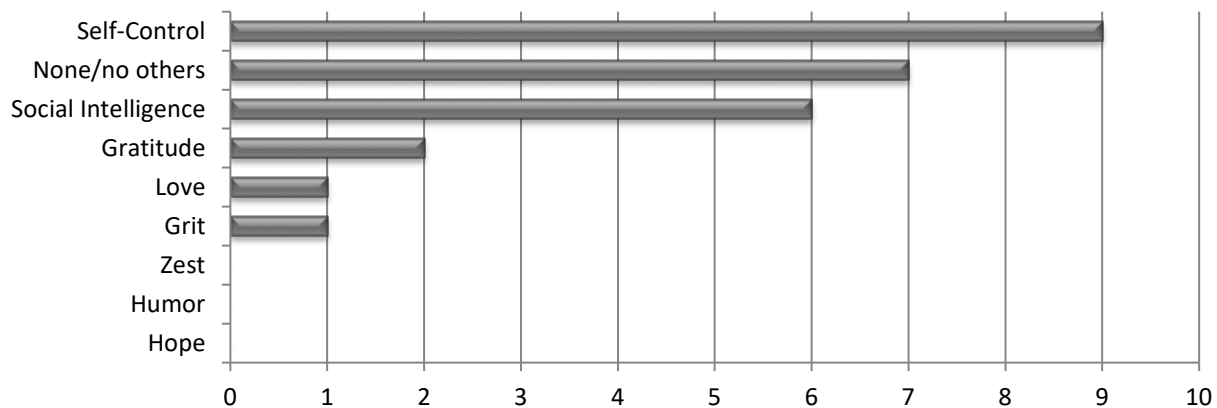


Figure 9

Related to the positive impact on character, seven respondents mentioned increased student engagement in their learning, with comments such as, “Overall I feel students work harder when technology is at play,” and “Students have definitely become much more engaged in the learning

process. They are excited to play online review games or watch educational videos in class.” Three respondents did not think it played a significant role or did not think it had much of an impact as reflected in their statements, “I have not observed an impact on character strengths,” and “I don’t think it plays a significant part.” Five respondents mentioned negative impacts of the blended learning program on student character strengths. All of these comments related to student misbehaviors while accessing online programs, including being off task, not completing assignments, and accessing content that they should not with inadequate teacher or parental supervision. One teacher summarized this sentiment in saying, “[T]here has been a serious decline in accountability of students as a result of the accessibility of the technology. Students are able to access a plethora of information that they should not have access to at such an early age as a result of the technology being taken home and not being well supervised at school.”

Teachers’ perceptions of the impact of the blended learning program on character strengths may have been related in some instances to the content/subject areas taught. All three math teachers responded *not affected/neutral*; for ELA teachers, 60% responded *positively affected* while two responded *not affected/neutral*; three NFS teachers also responded *positively affected* with two responding *negatively affected*; and one Enrichment teacher responded *very positively affected*. There may have been some trends related to the programs each subject uses, but with such a small sample set for each content area, these trends could be related to something else and further research would need to be conducted. There was no trend observed for the amount of time respondents had either been a full-time K-12 educator or for how long they had worked at KIPP: Intrepid Preparatory School. There is a possible trend to be explored between respondents who identified as highly skilled with educational technology versus less skilled. Seventy-five percent of respondents who rated themselves at the “Master” level of technology use reported a positive impact on character strengths, while the one teacher who rated himself/herself a “Beginner” reported a negative impact. However, “Advanced” respondents gave a 75% neutral or negative response. The correlation seems weak and would require further investigation.

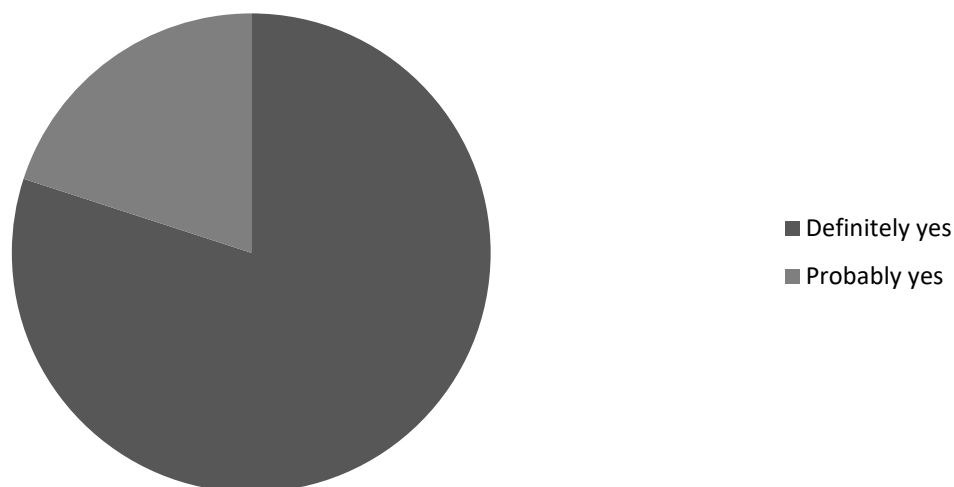
A trend may have been observed according to the grade level that the respondents taught. Seventh and eighth grade teachers were largely positive about the impact on character strengths, with 67% of respondents reporting a positive impact, and 33% reporting a neutral impact. Only 44% of fifth and sixth grade teachers reported a positive impact, while 56% reported a neutral or negative impact. Sixth grade teachers gave the most negative overall report, with no one who teaches sixth grade reporting a positive impact of blended learning on student character strengths. Further research would be needed to draw conclusions from this trend.

### **Overall Assessment and Recommendations**

Despite some less favorable responses towards the program with regards to the impact on character strengths, overall teachers overwhelmingly chose to recommend a blended learning program to other middle schools with 80% saying that they would definitely recommend it, and 20% saying they would recommend it, with no one saying they would not recommend the program, as shown in Figure 10.

Teachers cited the need to expose students to technology to be prepared for the world they live in as a primary reason for recommending the program, despite any challenges that may accompany its implementation, i.e.: “Technology is the future and kids need to be able to use it effectively,” and, “In the advanced world of technology today, it does our students a disservice if

### Would you recommend blended learning to other middle schools?



*Figure 10*

they are uncomfortable with tech.” Three respondents offered cautions about the implementation, stressing that teachers need to be well trained and prepared to hold students accountable.

Respondents cited good training and implementation, adequate supervision and monitoring, tracking systems/progress monitoring, and the enabling of differentiation as the primary enablers for a successful program, with additional mentions of supportive leadership and willing/committed teachers. The main hindrances cited were inadequate monitoring/supervision at home and at school stemming from a lack of clear expectations being reinforced with regards to student accountability, and difficulty with managing the devices/responding to challenges with students not having their device, etc. The largest concern (six respondents) related to a lack of support or ongoing professional development with regards to responding to the challenges of a blended learning program (i.e. managing the devices, holding students accountable, accessing more resources): “A hands-off administration,” “Laissez-faire approach to implementation,” “lack of support and professional development,” and “not having a back-up plan when computers don’t work”.

Suggestions for improvements related to needs for better training for students on digital citizenship and proper use of tools (nine related responses), i.e. “Students [need to] have a technology class that focuses on digital citizenship”; not allowing students to take Chromebooks home (eight related responses), i.e. “I feel 5<sup>th</sup> and 6<sup>th</sup> grade is too young to take computers home”; improving monitoring and supervision (four respondents), i.e., “I think we need stronger structures and supports to empower our students but help guide them so they are not accessing information they are not ready for”; and increased training/professional development for teachers (three respondents), i.e., “More continued professional development.”

### **Educator Interviews**

The first teacher interviewed, Teacher A, was an experienced teacher who taught Enrichment to students grades 5-8. The teacher had worked at KIPP: Intrepid for four years

without the blended learning program, and for the past two years with the program. The biggest benefit cited of the program was how it helped the teacher to differentiate for all of her students. The teacher also mentioned that it took less time to prepare materials because she could easily find many more online activities to assign to students. In addition, Teacher A mentioned specific programs the ability to locate and targeted different needs and the ability to organize a progression of difficulty to lead students to mastery. When other students were engaged in their own activities online, Teacher A was able to work with small groups of students. Overall, Teacher A saw that more students were able to learn more efficiently and mastered more concepts overall. The challenges noticed related to students who were not as motivated to begin with—they did not do as well with the self-pacing of the online programs and would sometimes miss deadlines or not put in good effort with the programs. Teacher A said it is a lot harder to monitor students on Chromebooks. Teacher A had to be strategic about how to check in on what each student was doing, but this was admittedly very difficult. Teacher A recommended that for the age level of students needed a lot more targeted and uniform expectations and teaching across the board on digital citizenship.

The next teacher interviewed, Teacher B, has worked at KIPP: Intrepid for the past three years as an upper-school ELA teacher, for one year without blended learning, and for two years with the program. This teacher basically had only positive things to say about the blended learning program and how it impacted teaching and student outcomes in very positive ways. One of Teacher B's favorite parts of the program was the differentiated texts the online resources afforded students and the ability of students to self-pace. Teacher B also loved the ability to monitor students' progress easily in order to adjust instruction and target specific students, and the ability to share data with students, which was very motivating for them because they could see how their efforts in class were paying off. Teacher B did not see any downsides to blended learning as far as an academic tool. The teacher did caution that monitoring could pose a challenge, but was able to overcome some of those challenges by strategically arranging the class and by consistently checking up on the websites students were visiting. Teacher B thought that not all teachers had mastered those skills, nor did they all use the programs with the same regularity or same degree of effectiveness, and as such more ongoing professional development was probably needed.

The final interview was with an administrator at the school. Administrator A has worked at the school for the past four years, the last two with the blended learning program and as an administrator. The administrator taught a couple enrichment courses, and served mainly in an administrative role. The administrator first mentioned not utilize blended learning as effectively as the administrator would have liked. The administrator had a harder time holding students accountable to staying on task and meeting deadlines, and lamented having less teacher-to-student interaction. As far as the impact of the program on academics overall, Administrator A said noticed a lot of improvement in the data across the board on state and national tests since implementing the program. The administrator was not sure the academic improvement was due to the blended learning program itself, but rather the focus of the school as a whole on academics. The administrator also reported a lack of focus on (character strengths) and character strengths not only did not improve, but actually declined significantly. Administrator A felt that students should not be allowed to take Chromebooks home at first, and that privileges with their devices should be earned by students over time. Finally, Administrator A recommended strategic and ongoing professional development for teachers with differentiated support, clear ownership for the program on the administrative team, and a strong plan for who would teach

digital citizenship to students and when.

### Discussion

Teachers at KIPP: Intrepid Preparatory School had overwhelmingly positive things to say about the impact of the blended learning program on student academic achievement. They believed that students were more engaged with their academic work through online programs and that because they were better able to differentiate their lessons and monitor student progress, students of all ability levels had been successful, though some felt that they could still better target more advanced learners in better ways.

When it came to student character strengths and values there were more mixed reviews. Although a majority of respondents still thought the impact was positive, a large number thought there was no impact/neutral impact, and a few thought there was a negative impact. Respondents cited Grit, Self-Control, and Hope as character strengths that were the most positively affected, while the most negatively impacted character strengths were cited as Self-Control (a student's ability to delay gratification) and Social Intelligence. Teachers discussed the challenges of monitoring student activity on Chromebooks and a lack of student skills pertaining to handling the distractions on their devices. They also felt that more support was needed from the administration in terms of training and help with the challenges of implementing the program, including responding to issues such as students losing their Chromebooks as well as students themselves not having the in-depth and continuous training they need on digital citizenship.

Overall, even with the challenges, 100% of teachers said they would recommend blended learning to other middle schools and felt that teaching students to learn using technology was necessary for their success as 21<sup>st</sup> century learners. They recommended increased training for students so that they could be more responsible on their devices, keeping Chromebooks at school instead of letting them go home with students, and increased ongoing professional development for teachers.

Differentiation has been emphasized as a to be a key best practice in teaching at the campus. Several teachers mentioned the ability to target individual students' needs, and the ability to provide more students with instruction and practice time at their level, increasing time spent on task in students' zone of proximal development. The other top-cited enablers—increased time for small group instruction, progress monitoring/data-driven instruction, frequent feedback for students, and increasing student engagement through lessons students find engaging and relevant to their lives. Teachers' perceptions of the blended learning program at this particular school indicated that there was more access to resources that enabled them to implement the small group instruction, progress monitoring, and to provide feedback with more regularity and efficiency.

With regards to character strengths, the school's implementation did not stress how the program would be utilized to help students' holistic development. Less research has been done with regards to how blended learning programs impact student character strengths and values versus academics, and most if not all implementation guides have not provided guidance for how to make the explicit connection between learning with technology and building student character. Some teachers in this study even responded that they themselves did not see this connection at all, or had a harder time seeing it. Based upon teacher comments regarding student behavior, students have more opportunity for distraction with online resources. Therefore, a plan for implementation might include a stronger focus on developing the character and values students



need to overcome those challenges. Access to online resources likely did not *cause* students to have less self-control, for example, but did give students more opportunities to be off-task, and thus to be successful, students needed more self-control and perhaps more specific guidance in digital citizenship in order to truly thrive. In addition, with the access to more specific, individualized data, blended learning affords more opportunities to develop character through self-reflection, as well as an opportunity to learn how to utilize self-pacing and self-accountability to manage projects over longer periods of time. Through making the explicit connection to these unique opportunities through the program during training, teachers might better plan their lessons in a way that incorporates building those strengths through more regular data sharing and self-reflection tools and through introducing project management tools to students. The program was originally presented and implemented as a way to improve academic outcomes and ensure equity for students through access to the same resources as students at most high-income schools. The KIPP educational program is 51% character and 49% academics. Yet the blended learning plan for implementation did not explicitly address how character might be impacted and therefore those opportunities were not capitalized on.

In order to better impact academic outcomes and especially character strengths, more could be done in the planning stages for the implementation of a blended learning program at a middle school to make the explicit connection to holistic development for students. Comprehensive plans with clear ownership for implementation should be made for teaching digital citizenship alongside the curriculum in all classes, with common expectations and character lessons to support them. Once clear academic and character goals for the program are established and link to all aspects of the school's vision, a year-long plan for implementation and training should be developed in order to reach those goals. Finally, teachers should receive more ongoing professional development. Professional development should include sharing of best practices and resources, as well as challenges, so that challenges can be addressed through a more clear feedback loop with administration throughout the year.

### **Implications for Future Research**

Further research is needed to determine which trends, if any, in the way a teacher self-identifies (by subject or grade level taught, level of mastery with educational technology, and/or teaching experience) truly affect teacher perception of student academic and character strength outcomes. More research also needs to be done to determine how child and adolescent development impacts the success of blended learning programs with regards to meeting their social-emotional needs. It would be useful to replicate this research at additional middle schools to determine trends among this age group and best practices in implementation, training, and driving both academic and character outcomes. Furthermore, it is recommended that future studies into blended learning programs aim to determine teaching practices that are enabled or hindered through specific programs. Given the amount of variability among blended learning programs, it is not useful to combine all programs together into one since the averages of their outcomes do not tell the whole story. In order to determine if specific best practices are enhanced, each individual program should be carefully considered. Teacher voice relating to the outcomes of their particular program will prove extremely valuable moving forward, as their insights often relate to clear underlying causes and, therefore, tailored solutions for individual contexts. The body of research on the importance of teaching character strengths may be expanded to include digital learning in a way that explores how character education might be

impacted by blended learning models. This intersection between blended learning, holistic growth (academics and character), teacher skill and perception, and child/adolescent developmental needs should be explored in a way that results in a more holistic theoretical model for the design, implementation, and ongoing development of blended learning programs.

### Conclusion

Results of this study indicated that teachers at this middle school perceived that blended learning had a positive effect on student academic achievement, while their beliefs about the impact on character strengths and values were mixed with approximately half seeing a positive impact and half seeing a neutral or negative impact. Overall, the teachers would still recommend blended learning to other middle schools with the caution that there would need to be a strong plan for implementation, support from administration, a clear focus on digital citizenship for students, and ongoing professional development for teachers.

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