

## I. EXECUTIVE SUMMARY

*“Reaffirming and strengthening America’s role as the world’s engine of scientific discovery and technological innovation is essential to meeting the challenges of this century. That is why I am committed to making improvement of STEM (Science, Technology, Engineering & Math) education over the next decade a national priority.” – President Barrack Obama*

Our nation needs a world-class STEM workforce to address the grand challenges of the 21<sup>st</sup> Century, such as discovering cures for cancer, reducing the dependence on foreign oil, developing clean source of energy, and revitalizing the weakened economy. A growing number of jobs in US require STEM skills. Success on these fronts will require improving STEM literacy for all students; expanding the pipeline for strong and innovative workforce; and greater focus on opportunities and access for groups such as women and underrepresented minorities.

The mission of Digital Arts and Technology Charter School (DigiTech K-12) is well aligned with the above goals, and it aims to provide an innovative, nurturing, and collaborative school environment which will cultivate the academic, social and character development of its students by emphasizing STEM education. With a special focus on digital arts program, DigiTech K-12 brings **creativity, imagination, and innovation** to STEM education. The digital arts provide us with new ways of thinking, new ways of creating connections, and help to maintain our competitive edge by engendering innovation and creativity.

DigiTech K-12 aims to develop responsive, productive, and civic-minded youth by inspiring them to follow their dreams while making the world a better place for themselves and others through creative use of digital arts and technology. DigiTech K-12 focuses on core knowledge and essential skills so that children may achieve the mastery upon which further learning will be built. We believe that digital arts education is a key to creativity; creativity is an essential component of innovation; innovation is necessary to create new industries in the future; and new industries, with their jobs, are the basis of our future economic wellbeing.

The specific goals of DigiTech K-12 to accomplish its mission can best be summarized as:

- Students will receive a thorough, comprehensive and balanced education, meeting and exceeding the New York State Common Core Learning Standards.
- All students will become computer and internet literate; they will master in use of cutting-edge technology and digital arts in advancing their education.
- Students will be mentored by university professors in science projects, and will participate in national and international competitions.
- Students will be given the opportunity to expand their knowledge in the subject of their interest beyond curriculum level.
- All students will be educated in an environment of mutual respect. Character education and leadership development will be provided.
- A large number of parents will be involved in the school activities through home visits and close teacher-parent relations.

Recent research on innovative education methods to improve students’ educational outcomes shows that the schools which focus on science, technology, and arts from the very early ages work most effectively. For this purpose, we emphasize integration of technology and digital arts into curriculum and constructivist learning, cross-disciplinary education,

and use of multiple intelligences in learning starting the elementary grade levels. We will provide Web-based training, examination and monitoring and encouraging student collaboration university professors in science projects. Digital Arts program will be integrated with technology at the school. Students will take classes in graphic design, computer animation, web design, multimedia, digital photography, video production, digital drawing, media arts, studio art, and other creative digital art technologies. *DigiTech K-12 aims to be a leader K-12 institution in incorporating digital technologies in the arts across its academic programs.*

DigiTech K-12 will bring the students in Buffalo City District the opportunities to work on projects that require cooperative teaching efforts in Digital Arts, Math, Science, Technology as well as Language Arts and Social Studies. Teachers will make cooperative lesson plans and student projects will consist of material covered in different subjects. We believe that future education as well as cutting-edge science moves towards cross-disciplinary boundaries.

Cooperation with area universities is an effective means toward enhancing the effectiveness of our education program. DigiTech K-12 is planning to partner and collaborate with SUNY-Buffalo, Buffalo State College, Erie Community College, and Niagara University to achieve its goals. Our students will be encouraged to work under the guidance of professors and researchers from these universities on cutting-edge projects and will participate in national and international competitions such as Science Olympiad, Robotics Competition, Math Counts, Science Bowl, Spelling Bee, Geography Bee, and Art Exhibitions.

DigiTech K-12 will be established and managed by a very strong, diverse, and well-qualified board of directors. The lead applicant, Dr. Tevfik Kosar, professor of Computer Science at SUNY-Buffalo, has served as the founding member and the president of two charter schools in Louisiana between 2005-2010. Among these charter schools, Abramson Science & Technology in New Orleans is honored as the charter school which showed the most performance improvement (more than 150%) in the state of Louisiana during last four years. Kenilworth Science & Technology in Baton Rouge was able win the state-wide Robotics competition in its second year of operation. Board Member Mrs. Kameylah Hakim, assessment specialist at SUNY Empire State College, has twenty years of experience working in elementary, high school and higher education settings as a tutor, counselor, teacher, and administrator. Mrs. Hakim has also served in another STEM based charter school in the City of Buffalo for the last several years. Board Member Dr. David Banks, professor of Anthropology at SUNY-Buffalo, is an expert on contemporary social and cultural identities and community structures. Board member, Dr. Yunus Kumek, adjunct professor of Literature and Instruction at SUNY-Buffalo, has extensive experience in comparative K-12 education and has published a book on this topic. Dr. Kumek has also served as the founding member and president of Buffalo Academy of Science Charter School between 2003-2008, when the percentage of 8<sup>th</sup> grade students who scored at or above level 3 in Math increased from 15% to 89%. Board member Mr. Mikail Kar, finishing his MA in Economics at SUNY-Buffalo, has solid background in non-profit finance and will be responsible for the financial oversight of the proposed school.

The board of directors of DigiTech K-12 will carry out its statutory responsibilities associated with operating the charter school in an efficient and ethical manner and in compliance with local and other applicable state and federal laws. The governing board's main goal is to ensure that all necessary resources are available to accomplish the mission and goals of the school. The DigiTech K-12 board will have the final authority for policy and operational decisions of the proposed charter school.

## II. STUDENT POPULATION

### A. Student Enrollment

Grades	Projected Enrollment Table				
	2012-2013	2013-2014	2014-2015	2015-2016	2017-2018
<b>K</b>	40	40	40	40	40
<b>1<sup>st</sup></b>	40	40	40	40	40
<b>2<sup>nd</sup></b>		40	40	40	40
<b>3<sup>rd</sup></b>			40	40	40
<b>4<sup>th</sup></b>				40	40
<b>5<sup>th</sup></b>					40
<b>6<sup>th</sup></b>	40	40	40	40	40
<b>7<sup>th</sup></b>	40	40	40	40	40
<b>8<sup>th</sup></b>		40	40	40	40
<b>9<sup>th</sup></b>			40	40	40
<b>10<sup>th</sup></b>				40	40
<b>11<sup>th</sup></b>					40
<b>12<sup>th</sup></b>					
<b>Ungraded</b>					
<b>Totals</b>	<b>160</b>	<b>240</b>	<b>320</b>	<b>400</b>	<b>480</b>

### B. Target Populations

DigitTech K-12 will be located in the Buffalo City School District. According to New York State District Report Cards, the Buffalo City School District has been consistently one of the lowest performing school districts among 98 school districts in Western New York (eight county region).

2008-2009 New York State District Report Card states the student population in Buffalo School District as 32,732. In the Buffalo School District, 76% of the student population consists of minorities (with 57% African American student population leading, and 15% Hispanic student population following), and 81.6% of the students are coming from low-income families, eligible for reduced and free lunch. Both of these rates are well above the New York State averages, which is 47% for minorities and 46% for the students eligible for reduced and free lunch. The Buffalo City School District students are more economically disadvantaged than most of the districts across the state. Also, 8.5% of the students in the District have limited English proficiency.

Only 40% of the students in the Buffalo City School District were planning to enter a 4-year college in 2008-2009, and 43% were planning to enter a 2-year college. This indicates that the students need more awareness of future career and higher education opportunities. The Math scores of the students in the Buffalo City School District are especially low. The percentage of the students who can perform 85 and above in Math A is only 1%, and in Math B it is only 5%. The annual attendance rate in the district is 88%, with a very high (15%) suspension rate, and 8% high school drop-out rate.

The curriculum and education program of DigiTech K-12 is especially designed to address the above described student population in Buffalo City School District. DigiTech K-12 is

planned to start education in 2012-2013 school year with grade levels K-1 and 6-7. Each grade level will initially consist of 2 classes of 20 students. We aim to keep the class sizes small so that each student can get individualized education and more one-on-one mentoring. Each year, two new grade levels will be added (one to elementary and one to middle/high school section). After all grades are populated, the number of classes per grade in the middle/high school section will be increased to three. The total student population of DigiTech K-12 is expected to be 640 at its full capacity.

The **enrolment process** will be conducted in accordance with the school's enrolment policy that has been developed in full compliance with New York State laws and regulations. We will distribute the application forms via mailing to the addresses of the target populations. In addition, we will distribute the application forms during outreach programs. The applicants can also fill out the application on our website ([www.digitech-k12.org](http://www.digitech-k12.org)). Electronic and paper copies of the application forms will be carefully registered. We will have a rolling enrollment process throughout the year. The students who are in the waiting list for a particular grade will be enrolled in the case of a vacancy. DigiTech K-12 will not discriminate in student admission based on race, religion, ethnical background, or economic advantage. Students with disabilities will be especially welcome.

DigiTech K-12 will pursue a comprehensive **marketing** campaign to attract students to the school. We will mail the school brochure to the addresses of the residents at the target neighborhoods. The brochure will include the detailed information about the DigiTech K-12 education program and offerings. We will also post the flyers in English and Spanish to the public places including supermarkets, churches, and community centers. We will conduct open houses at public libraries, youth centers to give more information about DigiTech K-12. We will make presentations at public libraries, youth centers and community centers. We will use local radio, newspaper and television to make public announcements about DigiTech K-12.

**Students with Disabilities.** 17.2% of the students in Buffalo City School District has been identified as students with learning disabilities. According to the 2008-2009 New York State District Report Card, none (0%) of the students with disabilities were be able to perform 85 and above in Math A, and only 10% were be able to perform 65% and above. Only 13% of the students with disabilities were planning to enter a 4-year college, and 32% enter a 2-year college. 20% of the students did not have any post-graduation plans at all.

Special education programs and services at DigiTech K-12 will be provided in accordance with federal laws and regulations relating thereto, as well as the individualized education program recommended by the Committee on Special Education (CSE) serving Buffalo City School District. DigiTech K-12 will keep putting good faith efforts to enroll and retain the percentage of students with disabilities at a comparable or greater level than the Buffalo City School District.

DigiTech K-12 will actively seek out during open house recruitment sessions families who have children with disabilities. We will inform them of our programs offered for students with disabilities and qualifications of the instructors in detail during the enrollment process. We will make sure the students receive the required special education services through diligent contact with parents and the students' home school districts in a timely manner. We will make sure the regular classroom teachers are updated about the special requirements of the students with disabilities so that students with disabilities will feel comfortable to stay at DigiTech K-12.

DigiTech K-12 will hire staff as needed to meet the needs of its special education students.

In addition to the contracted special service providers, DigiTech K-12 will hire a certified Special Education Teacher as Special Education Coordinator (SEC). During the teacher orientation week every August, the SEC will hold training and review sessions to address areas of special education services. All DigiTech K-12 staff members will attend the training and review session. Dean of Academics will be present during the meeting to address any other issues raised connected to the education of students with disabilities.

DigiTech K-12 will comply with the federal **child find requirements**, which require schools to have in place a process for identifying, locating, and evaluating students with disabilities. Students enrolling for the first time in a New York public school will be screened by a team of teachers (including both regular and special education teachers) to identify any possible indication that the child may need a specialized or intensive education program, or referral to the student's home district CSE. Other students will be brought to the attention of the team if they are demonstrating any problems within the regular classroom environment.

**Students suspected of having a disability** will be referred in writing to the chairperson of the CSE of the student's district of residence, for an individual evaluation and determination of eligibility for special education programs and services. Referrals may be made by any professional staff member of the charter school. Such referrals will: (1) state the reasons for the referral and include as support any test results, records, or reports upon which the referral is based, if any; (2) describe interventions made to remediate the student's performance prior to the referral, including any supplementary aids or support services provided for this purpose; (3) describe the extent of parental contact or involvement prior to the referral; (4) once interventions have been attempted, and have not been successful, the referral will be sent to the school of residence following the guidelines set forth by the appropriate district. A copy of such referral will be sent to the student's parents.

All students at DigiTech K-12 are expected to take the mandatory New York State assessment exams. While administering the NYS **assessments to students with disabilities**, DigiTech K-12 will make arrangements for accommodation of the testing modifications specified in their Individualized Education Programs (IEPs). The IEP developed by the CSE of the student's district of residence for some students with disabilities may determine that such students cannot participate in regular state assessments. In these instances, the State Alternate Assessment will be administered as required by law. DigiTech K-12 also will present to and discuss with members of the district CSE each component of the school's assessment program, and will ask the CSE of the student's district of residence to make a determination about which, if any, of these various assessment measures would be appropriate to include in these children's IEPs.

If the CSE of the student's district of residence determines that none of the various assessments administered by the DigiTech K-12 are appropriate for a given student with disabilities, DigiTech K-12 may create individualized assessment instruments based on goals and objectives of a child's IEP and a thorough task analysis, which then will be submitted to the CSE of the student's district of residence for approval (or denial) to be included in the child's IEP. [Among the assessment instruments that may be used include those outlined in the following: for social skills, the Social Skills Rating System (Gresham & Elliot, 1990); for adaptive behavior, the Adaptive Behavior Scale (Lambert, Nihira & Leland, 1993); for life skills, Life Skills Instruction for All Students with Special Needs (Cronin & Patton, 1993).] Parents of students who have been identified with a disability and have an IEP will receive, quarterly, a report of their child's progress in meeting IEP goals.

**Students with Limited English Proficiency (LEP).** DigiTech K-12 will keep putting good faith efforts to enroll and retain the percentage of LEP students at a comparable or greater level than the Buffalo City School District. As an indication of our good faith efforts, DigiTech K-12 will actively seek out during open house recruitment sessions families who have children with LEP. We will inform them of our programs offered for LEP students and qualifications of the instructors in detail during the enrollment process. We will send DigiTech K-12 representatives to community functions of refugee groups and invite their children to attend DigiTech K-12. We will inform them of our small group tutoring services and college preparatory approach so that they will consider applying to obtain a better education. We will make arrangements to understand and respect the cultural differences of our LEP students by DigiTech K-12 staff.

Students at DigiTech K-12 with limited proficiency in English will achieve proficiency in the English language through the use of the school's services and teaching methods. DigiTech K-12 will ensure that LEP students not be excluded from curricular and extracurricular activities based on an inability to speak and understand the language of instruction, and also that LEP students will not be assigned to special education because of their lack of English proficiency. The specialist teacher will work in conjunction with classroom teachers to provide information on the linguistic, cultural, academic, and social adjustment of LEP students at all ages and grade levels.

DigiTech K-12 will directly provide or make referrals to the appropriate support services that may be needed by LEP students, in order to achieve and maintain a satisfactory level of academic performance. Such services may include individual counseling, group counseling, home visits, and parental counseling. Parents whose English proficiency is limited will receive notices and information from the school in their native language, so that we will be able to encourage the participation of all parents in the DigiTech K-12 community, regardless of their home language. Parents of LEP students will also be kept abreast of their child's progress in English language acquisition.

DigiTech K-12 will hire a teacher with ESL (English as a Second Language) certification, who will be the school's ESL coordinator as well as overseer of the education of LEP students. The ESL coordinator's duties include: assessing the need for ESL classes; training teachers to meet the needs of LEP students; training and assigning tutors to help LEP students reinforce their English language skills; and collaborating with the Special Education Coordinator to meet the needs of LEP special education students, who will receive ESL services in accordance with their IEPs.

The process of **identifying LEP students** is described below:

- a. The process begins with the Home Language Questionnaire to screen all new entrants—those students who have never attended any school in New York State before—for potential limited English proficiency.
- b. If English is the only language spoken in the home as indicated on the Home Language Questionnaire, then the screening process need not continue.
- c. If the home language is other than English or the student's native language is other than English, then appropriate school staff should informally interview the student and the parent/guardian in English, or when necessary in their native language.
- d. If the student speaks a language other than English and speaks little or no English, then the school should administer the Language Assessment Battery- Revised (LAB-R). A student who scores below the designated proficient level is limited English Proficient (LEP), thus eligible for ESL services. The LAB-R is administered only once to each incoming student.

- e. After placement into ESL services, student achievement or progress in the English language is measured annually (usually in April and May) with the New York State English as a Second Language Achievement Test (NYSESLAT) and the New York State English Language Arts assessment.
- f. NYSESLAT scores indicate the proficiency level the student has achieved each year, and whether or not the student's level of English proficiency is high enough to exit ESL services.

DigiTech K-12 will follow the freestanding ESL program as described in the Guidelines for Programs under Part 154 of Commissioner's Regulations for **educating the pupils with LEP**, published by NYSED. The goal of this program is acquisition of English language skills, so that the LEP student can succeed in an English mainstream classroom. All content area teachers will have specialized training in meeting the needs of LEP students. ESL teacher will have ESOL certification. NYSED publications, The teaching of Language Arts to Limited English Proficient/English Language Learners: Learning Standards for ESL and A resource guide for all teachers, will be extensively used in the school's ESL program as well.

LEP students will receive the same academic content as those students who are non-LEP students. All instruction will be in English; however, the level of English used for instruction--both verbal and written--will be modified for any LEP student, if necessary. Teachers will use physical activities, visual aids, and the environment to teach vocabulary for concept development in mathematics, science, social studies and other subjects. Grade-level appropriate low-level reading materials will also be provided to LEP students.

All DigiTech K-12 teachers will receive ongoing professional development training in working with LEP students. Professors from local universities and individual professionals will be invited for onsite workshops during the school professional development days, and ESL teachers will attend the BETAC (Bilingual Education Technical Assistance Center) workshops. DigiTech K-12's tutoring center will play an important role in the success of LEP students in their content area classrooms. LEP students will be strongly encouraged to attend tutoring sessions after school hours.

DigiTech K-12 will make sure a special classroom assigned for ESL education. The ESL room will be equipped with necessary books, audio-visual equipment and other supplies. DigiTech K-12 will ensure that a certified ESL teacher will be assigned to teach our LEP students in a free-standing ESL program. Assurance of provision of the appropriate staff, curriculum, other materials, and facilities will be submitted to local BETAC department in the format every year before the deadline. Dean of Academics will be the liaison between DigiTech K-12 and BETAC office, will submit and receive the approval for the plan annually.

The proficiency in the English language of **LEP students will be monitored** and measured at least annually using NYSESLAT to determine whether continued ESL services are warranted. The school will also evaluate each student's performance in academic content areas to measure the student's progress in core subjects. If a LEP student fails to show appropriate progress in these academic areas, as measured by the appropriate tests, and by teacher assessment of classroom work, modifications to the instructional program may be made for individual students. In addition, DigiTech K-12 will look at disaggregated data for LEP students as a group, to evaluate the progress these students are making in the acquisition of the English language and in core subjects. This data will provide information as to whether broader program modifications are necessary and whether additional professional development ought to be provided to our teaching staff. Upon reaching proficiency in the English language, LEP students will be exited from the ESL program.

**Talented and Gifted Students.** Due to its specific curriculum that is focused on digital arts and technology, DigiTech K-12 anticipates certain amount of highly gifted and talented students to be among its student population. DigiTech K-12 defines a “gifted and talented student” as one who shows the potential for performing at an advanced academic level and is identified by that student’s teacher as having outstanding potential for achievement. At DigiTech K-12 cultivation of future scientists and leaders requires each student to set high standards in academics and be challenged to the maximum of their potential.

Students performing in the top 10% of their class will be evaluated on the regular bases, and will be encouraged to aim for a higher level. Students who are assessed by their teachers consistently high in attitude, effort, task commitment, portfolio, grades, work completion, leadership, organizational skills, and study skills can be considered for the peer tutoring program and students in the lower grades, as well as the mentorship program.

In DigiTech K-12, all students will be entitled to equal access to exceptional learning and achievement. All students will be evaluated by the same set of criteria and any student who has meet the criteria will have access to additional learning opportunities afforded to the gifted. DigiTech K-12 will provide this access by placing exceptional students in the most enabling learning environment possible through special emphasis in the following fields:

- Emphasizing higher level critical thinking skills, problem solving techniques, and methods of inquiry.
- Planning assignments and activities that challenge the students to the fullest of their abilities.
- Providing in-class seminars for students to discuss topics and problems that they are pursuing individually or as members of a learning team.
- Working with individual students in some planning of their own objectives and activities for learning.

Students with special abilities and talents will also be encouraged to develop their abilities through extra-curricular activities such as participation in local, national, and international competitions such as Science Olympiad, Robotics Competition, Math Counts, Science Bowl, Spelling Bee, Geography Bee, and Art Exhibitions. Students who demonstrate exceptional achievement will participate in the regular coursework and be encouraged to pursue additional learning opportunities appropriate to their skill level and expertise. The regular visits to the research laboratories and colleges will provide them with the networking possibilities to explore and exploit their own potential.

**Students At-Risk.** DigiTech K-12 educational program will enormously benefit students at risk of academic failure in a number of important ways, including individual attention, extensive tutoring, participation in academic competitions, and personal education plans.

Each student has a potential to perform well. If a student is at risk there might be internal and external factors for certain behavior problems and academic failure. Each student will be evaluated with consideration of all the possible scenarios, with IEP team making adjustments to the student’s IEP.

To minimize risk of student failure, each full-time teacher will mentor a cohort of students, monitor their progress in each subject, and contact their parents regularly. Teachers will invite parents to the school and, if they cannot make it, teachers will visit them in their homes during scheduled visits when appropriately needed. This will be a unique way of

increasing parental awareness and involvement with school activities and their children's education.

When a student identified "at-risk" of not completing their education based on factors such as poor school performance, poor attendance, behavioral difficulties, and economic or environmental disadvantage, that student will be referred to the SEC. The SEC will recommend additions to the student's individualized education plan, which will be specifically designed to provide appropriate interventions, such as, but not limited to, one-on-one tutoring, counseling, mentoring, apprenticeship programs, and family outreach. The school's counselor and the SEC will be available to students and their families to provide appropriate services. Referrals to outside resources will be made on as-needed basis to address more complex and difficult issues. Each student, including students with significant deficiencies, will benefit from the school's extensive individualized instruction, as explained previously.

### III. SCHOOL DESIGN

DigiTech K-12 will aim to achieve the following school design goals:

#### **a. Increase student achievement and decrease student achievement gaps in reading/language arts and mathematics**

The greatest challenge that the proposed school will face is to raise the student achievement and close the achievement gap between the subgroups, especially in reading/language arts and mathematics. This will be the main focus of DigiTech K-12 for the first year and afterward. The school will meet and exceed the New York State standards.

DigiTech K-12 strives to lead each and every student to develop into responsive, productive, and civic-minded individuals by using enhanced delivery of the New York State standards (NYSS), which is essential to future success in school and at work. NYSS are reinforced and reviewed to prepare students for New York's rigorous accountability (e.g., LEAP, GEE). In DigiTech K-12, for all K-12 grades, preparation and after school instruction will be provided to ensure a higher level of achievement for each student. The No Child Left Behind (NCLB) Act of 2001 will serve as one of the guidelines in our commitment to educate every student to his or her fullest potential. As part of the NCLB Act, instruction at proposed DigiTech K-12, instruction will be research-based and it will be evaluated frequently to drive student achievement.

Analyses of frequent assessment of student learning will drive activities and teacher development will be a continuous process, never losing sight of the schools' emphasis on Adequate Yearly Progress of each student. Every effort will be made to humanize and personalize the environment in which students learn, and to maintain a friendly and wholesome atmosphere that encourages creative expression and a desire for knowledge. The emphasis of the entire instructional program is aimed at meeting the individual needs of students in order to allow children to develop to their fullest potential.

DigiTech K-12 will establish an atmosphere in which students develop abilities to generate new thoughts, to think analytically, to draw logical conclusions and to express thoughts effectively in written and spoken form. It is a function of the school to develop the well-rounded child by fostering aesthetic as well as academic growth through increased awareness and appreciation of the arts and sciences. DigiTech K-12 will provide an

environment upon which students' experiential knowledge is built. Understanding how those experiences plays a larger role in the community in general and in a democratic one in particular, DigiTech K-12 will strive to increase student awareness of accountability not only to self, but to others.

The target population of DigiTech K-12 will be minorities and economically disadvantaged students who are interested in science, mathematics and technology in Buffalo. DigiTech K-12 will be an option for the parents who are interested in alternative, successful, and innovative school models. We emphasize the integration of technology into curriculum and constructivist learning, cross disciplinary education, use of multiple intelligences in learning and the use of digital arts in education. We also provide Web-based training, examination and monitoring and encouraging student collaboration with universities to participate in national and international science competitions.

**b. Increase high school graduation rates and focus on serving at-risk high school student populations (including re-enrolled drop-outs and those below grade level)**

The Educational Planning and Assessment System (EPAS) was developed in response to the need for all students to be prepared for high school and the transitions they make after graduation. It establishes career and educational goals, determines courses needed to fulfill plans, and evaluates the educational/career progress of students from 8th to 12th grade. EPAS focuses on a number of key transition points that student face: 8th/9th grade (preparing for high school studies), 10th grade (planning and preparing for college and the workplace), and 11th/12th grade (being ready for life after high school). Student achievement is assessed at these three key transition points in EPAS so that academic progress can be monitored to ensure that each student is prepared to reach his/her post-high school goals.

DigiTech K-12 will use only three component programs of the EPAS: EXPLORE, PLAN, and ACT. The EPAS has been chosen because, in addition to the Stanford 10, it will enable us to monitor each student's progress from year to year. Because it is a complete system that prepares students to reach their post high school goals, it is in line with our mission of career-oriented college preparation. Research shows that students, especially underrepresented students, who use EXPLORE and PLAN in educational planning are more likely to take rigorous college preparatory coursework in high school, particularly in math and science. Also, higher percentages of students who use the EPAS in their educational planning seek higher education. The system also provides information in Spanish about students' career and college options, which will serve our minority parent population.

In order to move students toward grade level performance, the proposed school will design and implement additional instructional strategies for those high school students being retained. The purpose of the additional instructional strategies is to move the students to grade level proficiency by providing focused instruction in the subject area(s) on which they scored at the unsatisfactory level.

**c. Focus on academic achievement of middle school student populations and preparation for transition to high school (if applicable)**

DigiTech K-12 will evolve to serve students in grades K-12, and students who have been continually enrolled at the school are expected to benefit from the full expression of the Expeditionary Learning School model (EL), and to therefore be reaching high levels of academic achievement. EL is a comprehensive school reform and school development model for elementary schools and middle and high schools. It provides a framework for

designing school structures that help assure the best possible opportunities for students to engage in rigorous, compelling learning.

Through active pedagogy, long-term interdisciplinary –learning expeditions, and a strong focus on developing a positive school culture, Expeditionary Learning’s partnership with DigiTech K-12 will permeate every aspect of school life. Thus prepared, DigiTech K-12 students will not only achieve in middle school, but be exceptionally well prepared for the rigors of high school—including project work, independent research, group assignments, and interdisciplinary studies. The inquiry-based education offered at DigiTech K-12 creates habits of mind and approaches to challenges that will stand students in good stead throughout their academic careers and beyond.

In addition, the founding members of DigiTech K-12 have teaching, research, and administrative backgrounds in both K-12 and college level education. Therefore, this experience in preparing students for different transitions elementary-middle school, middle-high school and high school-college levels places these educators in an ideal position to guide all DigiTech K-12 students into competitive universities.

**d. Utilize a variety of high-quality assessments to measure understanding and critical application of concepts**

Performance assessments - also known as "alternative" or "authentic" assessments - will augment norm-referenced multiple-choice tests in all grade levels. Our school will have an intensive monitoring and reporting structure at the school, board, and parent levels. A needs assessment will be conducted at the beginning of the first year, and then at the beginning of every school year thereafter.

School Improvement Plan will be compiled accordingly with teachers, administrators, and parents. This is a school wide planning activity. Our educators will be aware that there are many kids who get lost in the cracks of the system. In order to prevent this from happening we believe that we have to monitor each and every child individually. Therefore; DigiTech K-12 will conduct diagnostic evaluations and implement research-based interventions to minimize the number of students at-risk of academic failure. Both qualitative and quantitative measures will be considered in designing programs for this vulnerable population.

At the beginning of each school-year, DigiTech K-12 will administer both standardized achievement and ability tests. Students’ standardized scores, percentile rank, and grade equivalency scores in Reading, Language, and Mathematics domains of achievement test will be reviewed carefully. Students demonstrating a significant discrepancy in their grade equivalency scores will be monitored carefully. Once students’ achievement level will be determined, students will be assigned to sections.

DigiTech K-12 will take necessary steps to involve the parents in implementation of programs as well. Aligned with the State standards, the school will create a test pool that contains an adequate number of questions to be given to the students in three separate sessions. (We will use different resources to increase the number of possible test items in this pool. There are vendors that have question pools aligned with State Standards as in the form of web sites or booklets. In the upcoming years, the question banks will be enriched with our teachers test items). There will be monthly practice tests to determine the names of the students that will attend intervention programs that will reinforce necessary skills needed to be academically successful. These programs are explained below.

DigiTech K-12 will fully implement several new programs starting with the first year that

specifically address instructional strategies and content. These programs include, but are not limited to,

- intensive small group tutoring after school
- intensive small group tutoring on Saturdays
- non-core class pullouts
- summer enrichment program

The summer enrichment program is designed for students who are more than two years below basic level. These programs will be available to ALL students and required for those students that do not score at the basic level or above. We will also continue our supplemental support programs such as home visits, student mentors, and after-school clubs aimed at keeping students in safe, education-friendly environments for extended hours. The principal will have monthly meetings with all teachers and analyze the results of practice tests with them. This will help monitor each individual child's improvement. The system will be flexible and adjustments will be made appropriately. Technology will be used to display those statistics in form of graphs and item analyses. Departments will have biweekly meetings to discuss students learning, vertical and horizontal alignment of classes, technology implementation, and other related issues. Administrators will be attending those meetings in rotation. These meetings will help to correct the missing parts in the implementation process promptly.

Parents are also very important in this process. They will have access to the test records of their student on the school's web site. Those reports will be mailed to parents as well, in case they do not have access to the Internet. After every practice test, the school report card will be prepared grade by grade, subject by subject for all subgroups. This will show the staff any underserved subgroup explicitly. Teachers will have these reports on sub sections as well. These reports will direct us to the target. As an example, if the item analysis of a test says that most of students have not been able to answer a specific question in a given subject, the teacher needs to go back and teach that part to all students one more time using a different method or approach. There will be a report prepared for the School Board each month to show the improvement and the areas where we need to concentrate more. Board of Directors will be informed every month with this report and their suggestions will be taken into account.

There will be State tests administered on specified dates. School Report card and student test results will be provided to parents. After the first year of operation it is going to be easier to follow and improve those steps. We would like to enhance the system of monitoring, and reporting continuously. At the end of every year cumulative changes to the system will be made by teachers and administrators. Students will be monitored over the years as well.

**e. Increase implementation of local instructional improvement systems to assess and inform instructional practice, decision-making, and effectiveness**

DigiTech K-12 is committed to the use and analysis of data to assess and inform instructional practice, decision-making, and effectiveness; it will employ data-driven decision making at the board, administrative and classroom levels.

The educational content and pedagogical approach of DigiTech K-12 will be developed based on the needs of the target student population and the mission and vision of the school. Accordingly, the educational content and pedagogical approach emphasizes the

math, science, and technology facilitated college preparation and intends to provide academic tools necessary for achievement of low performing students. The educational approach requires teacher-student-parent triad where student achievement is intended to be increased gradually with the help of feedback from these three sources. In order to meet state and federal performance targets, students will have Individualized Educational Plans based on their performance results and teacher evaluations.

Assessment of academic success of the students will be performed by teachers and the results will be monitored by The Dean of Academics and the School Director. The coordination will be realized by regular meetings with teachers and school governance units. Student performance evaluation exams such as The Terra-Nova, EPAS, SAT, and State exams will be the basic tools of assessment of student academic success. The Director, the Dean of Academics, and the Dean of Students will be responsible for searching best practices in education in order to ensure that the school continues to offer the best available pedagogy and materials to its student.

The operations of the school will be aligned to support instructional goals and student achievement. Effective policy making, on-target staff professional development, and team work of teachers and school governance will facilitate the alignment process. Accountability Plan and Individualized Educational Plans will ensure the continuity of this process.

By determining a benchmark for measuring growth at the beginning of the school year; then developing an individualized learning plan for each student; continually assessing students' attainment of the standards throughout the course of the school year; and assessing student performance at the end of the school year—schools can continually measure the “effect” of their educational program—including the effective use of technology--on students. Upon delegation by the Board, the Principal will have the instructional leadership role and will report directly to the Board in that role. The Principal will bear chief responsibility for implementing the school's education program; attaining the school's objectives for high student achievement; managing, evaluating, making recommendations regarding promoting and releasing school personnel; creating a school culture that is disciplined, orderly, and conducive to learning; and nurturing a strong relationship among the School, the parents, and the community.

#### **f. Partner with low-performing, local public schools to share best practices**

DigiTech K-12 will partner with low-performing, local public schools to share best practices. DigiTech K-12 has a strong educational program, with innovations not found in the local district's traditional public schools. This program will be administered on less funding per student than the traditional public schools, and will operate in an educationally and fiscally sound manner. Thus, it is anticipated that charter school will have a positive programmatic impact on the local school district: its unique program fills a need of demonstrated demand; and the implementation of the program in a more cost efficient measure provides the district with a source of “best-practice” examples it is free to replicate.

The board of DigiTech K-12 strongly believes the importance of partnership with the existing local public schools to share best practices with the shared goal of improving the student outcomes in Yonkers. We believe that DigiTech K-12's comprehensive educational design could serve as a prototype for whole school change. We will encourage the local public and non-public schools to visit and observe our school operations on a consistent basis. We expect to create and maintain a professional working relationship with other local public schools. The respectful competition to serve a similar student body should have a positive programmatic impact on the district's schools – and on area nonpublic schools, too

– causing the district to refocus on its mission, its programs, and how better to serve the children remaining in its school buildings. We will also seek to work with and learn from leaders and staff of the existing local public schools, and to be available to show district officials the programs and features of the charter school. We hope our close operation with the school district will foster a dialogue of effective reform initiatives in which both parties can benefit.

**g. Demonstrate the ability to overcome start-up challenges to open a successful school through management and leadership techniques**

The school has a sound plan to minimize the start-up challenges and maximize the sound school management during the academic year. Some of the founding members are involved in different committees that has been working on the planning of the charter school. This committee involves educators from computer science, educational leadership, anthropology, and finance backgrounds. There are parents among them as well. This committee meets weekly to investigate the problems of Buffalo students, discuss their needs, and provide solutions accordingly. The committee meets with the founding members biweekly for planning, discussion and writing. Some board members and planning committee members continue to be in close involvement with all level students in Buffalo; therefore, they are in touch with the families and the community.

**h. Demonstrate the support of the school district of location and the intent to establish an ongoing relationship with such district**

DigiTech K-12 members will meet with the Superintendent of the Buffalo City School District and with their respective administrative staff to get their support for the new proposed charter school, as well as the opportunity to work together to share best practices and improve student outcomes. DigiTech K-12 founders are pleased to create a public charter school in such a supportive environment. Cooperation between charters and traditional districts is essential not only for matters of student transportation, student records, Committees on Special Education, textbook aid, etc., but also so that successes and lessons learned can benefit all students. Innovation can balance with experience: agility can be weighed against economies of scale.

**i. Provide access to viable education alternatives to students in regions where there are a lack of alternatives**

The founders of DigiTech K-12 school strongly believe that there is a lack of alternative for a similar school to DigiTech K-12 in Buffalo school district. DigiTech K-12 promises to use innovative and effective instructional methods in order to increase student learning and prepare students for higher education. The teaching methods will provide a rich and interactive learning environment which will enhance academic, social, and emotional functioning of the students. These methods will foster positive relations between students and teachers and will provide interactive learning and effective communication for both sides.

The school proposes to introduce the latest technologies into the education system including computer based math and science instruction, a Personal Response System (PRS), to promote participation in the learning material, and also a web-based system that will help parents to monitor their child's improvement. PRS is a wireless electronic student response system (SRS) in which each student will be able to select an answer by using pocket-sized transmitters, to the multiple choice questions asked by the teachers in class; the answers will be collected through a portable receiver. The received answers will appear

on the teacher's computer with the help of Windows based software. The advantages of using PRS will be to (1) promote active learning, (2) encourage the participation of each student to answer the questions and (3) provide immediate feedback for the teachers. The PRS allows students to answer the questions anonymously, which ultimately increases the attention to the course material. The teachers can also keep a record of attendance through the PRS.

We also propose to establish a web based information system to maintain the records of each student. This web-based system will enable the parents to monitor the grades, attendance and homework assignments for their children.

**Exemplary Computer Enhanced Support.** There are a number of studies indicating that computer enhanced education is important to support thinking processes, stimulate motivation and self esteem, promote equity, prepare students for the future, and explore technology capabilities. It has been proven that computer based instructional materials have a positive effect on student performance.

At DigiTech K-12, computer technology will become a prominent part of the classroom; with the help of the computer, learning will become more interactive, with responsibility shared among teachers and students. Students play a more active role in their own learning while the teachers become facilitators of learning.

We will promote the use of computers in the classroom whenever and however it is appropriate and efficient. We consider the computer an educational tool that should be used in the classroom wherever it fits into the curriculum. As appropriate, teachers will use a computer's unique features to combine different media, such as sound, animation, color, picture, interactivity etc., in one environment so that they can create presentations that are visually appealing to students and capable of illustrating ideas, knowledge and skills from different perspectives.

One of the concrete applications of computer support in curriculum will be the use of interactive computer software programs designed to teach and emphasize the material. Our students will use and explore appropriate instructional software programs in and out of the classroom to expand their knowledge and skills, and have a better grasp on the objectives in specific areas or topics in DigiTech K-12.

**Project Based Instruction.** Project based learning is an instructional approach to engage students in sustained, cooperative investigation. Within its framework students collaborate, working together to make sense of "what is going on". Additionally, project based instruction emphasizes students' own artifact construction to represent what is being learned. DigiTech K-12 will facilitate project based instruction in the classroom with:

- A "driving question" that is anchored in a real-world problem and ideally uses multiple content areas.
- Opportunities for students to perform active investigations that enable them to learn concepts, apply information, and represent their knowledge in a variety of ways.
- Collaboration among students, teachers, and others in the community so that knowledge can be shared and distributed among the members of the "learning community".
- The use of cognitive tools in learning environments that support students in the representation of their ideas, such as computer based laboratories, hypermedia, graphing applications, and telecommunications.

Project-based Instruction method will improve student performance in the following ways: students will be asking and refining questions, debating ideas, making predictions, designing plans and/or experiments, collecting and analyzing data, drawing conclusions, communicating their ideas and findings to others, asking new questions, and creating artifacts.

**Contextual Learning (Real-life Context).** According to constructivist learning theory, learning occurs when students process new information or knowledge in such a way that it makes sense to them within their frame of reference. This approach to learning and teaching assumes that the mind naturally seeks meaning in the context where the person is located, and that makes sense and appears useful. In contextual learning, students carry out activities and solve problems in a way that reflects the nature of such tasks in the real world.

DigiTech K-12 will rethink curriculum and instruction under the light of contextual learning. Whenever appropriate, DigiTech K-12 will modify traditional methods and disciplines to teach material in a meaningful context. More specifically, in designing real-life context in the DigiTech K-12 classrooms: (a) Artificial distinctions between actual applications and academic studies will be eliminated, (b) Students will be provided with hands-on experiences in which they learn about and participate in the workplace.

**Direct Instruction.** Direct Instruction, the classical teaching method, is based on the notion that learning can be facilitated through clear instructional presentations that rule out likely misinterpretations and generalizations. As a teaching strategy, it is a systematic and highly structured instructional process that focuses on teaching and practicing basic skills and knowledge to prepare students to advance to higher-order skills. DigiTech K-12 will use Direct Instruction by:

- **Motivating Learners:** Gaining learners' attention and maintaining that attention throughout the lesson.
- **Informing Students of Objectives:** Telling learners what they are about to learn.
- **Helping Students Recall Prerequisites:** Helping students retrieve memories that are necessary or helpful in achieving new objectives, and making sense of new information to relate it to something they already know or something already experienced.
- **Presenting Information and Examples:** Stating, describing and explaining information that students will be learning, presenting relevant examples.
- **Providing Practice and Feedback:** Giving learners adequate, relevant practice and corrective feedback.

Direct Instruction method is compatible with the other methods in the sense that each method will be used according to the objectives of the class and the topic. Since each class has different topics and each teacher has unique educational goals for each subject, appropriate methods will be chosen to better serve the needs of the teacher and the students.

**Higher Order Thinking.** Higher Order Thinking is thinking on a higher level. It is to understand information, connect it, categorize it, manipulate it, put it together in new or novel ways, and apply it as we seek new solutions to new problems.

DigiTech K-12 will teach students how to learn, how they learn themselves, and how others learn and can learn from them. Students will be offered problem-solving models and will be

challenged to use a number of different approaches to solving real problems. By explaining to students how to make decisions based on organization and interpretation of data, students are encouraged to create and present original works through writing, graphics and by analyzing information and making evaluation, supported by well-reasoned arguments.

Higher-order Thinking will have the following improvement on students: the method will link information new to students to already learned information; will give support, reinforcement as students try new approaches to problems; will give complex tasks to students so they will be forced to consider multiple tasks; will offer models of how to solve problems and plan out loud with them; will give feedback about how to think or operate differently to solve the problem; will help students plan their approach to solving problems; will give students reasons to engage in higher order learning; will allow students to peer monitor, peer tutor and peer evaluate solutions using a rubric, which they understand and commit to; will compile information about solutions, and about important problems that our society and our world face, from a variety of sources for students.

**Parental Involvement.** We strongly believe that family involvement is an important component for our student success. A strong continuing family and community involvement in all aspects of school programs and activities provides support for measurable improvement in student achievement. The parent involvement creates a positive bond between the home and the school. Therefore we will create a more responsive and inviting school climate to increase the level of family engagement.

DigiTech K-12 commits to building involvement capacity in: communication, parenting across the grades, volunteering, at-home learning, decision making, collaborating with the community, and advocacy. Upon approval of this charter proposal, board members of DigiTech K-12 will hold several open houses. In these open houses, the new administrative team will provide power-point presentations regarding our proposed programs and school expectations from its parents and students. Following these presentations, parents will be asked to form various committees (i.e., PTO, LEP, Family-School Action Team, School Improvement Committee, Parent Advisory Committee, fundraising committee, etc.) in conjunction with faculty and staff.

DigiTech K-12 will annually hold a public meeting for and with parents, family, and school community members to inform, explain, and discuss yearly school and student progress data and school program plans, including financial program information. Parents, families, and school community members will annually assess the effectiveness of its school program, including the family and community engagement component.

Parent-teacher relationship will be further improved by family visits. Teachers will be urged to visit students at home to inform the parents about the school and student's progress, while the parents have an opportunity to provide the teachers with feedback and input.