

3rd Party Curriculum Provider Review

Since most cyber charter schools outsource provision of their instructional program to third party curriculum providers, we found it necessary to conduct an analysis of the most commonly used curriculum providers. We analyzed the following seven providers:

- Keystone National High School
- University of Missouri
- Class.com
- Virtual Classroom
- Calvert
- The American Education Corporation's A+nywhere Learning System
- K12 Software

For each provider we reviewed online two to four courses and interviewed the director of curriculum (or staff member(s) most familiar with the curriculum) to assess instructional quality, as defined in our approach. Our summary of this analysis is:

- PAVCS provides a high quality, interactive, family-centered instructional program.
- Cyber students are empowered to learn at their own pace, anytime, anywhere.
- Students may have the opportunity to take courses that are not offered at their prior schools (e.g., Japanese, business math).
- Some schools offer families multiple curriculum choices to better meet the needs of their child.
- Not all programs demonstrate alignment to Pennsylvania Commonwealth standards. Third party vendors indicated that it was cyber charter schools' responsibility to align third party instructional material to Pennsylvania standards. Based on KPMG Consulting interviews with cyber charters, only a few have systematically reviewed and adapted the curriculum of 3rd party provider courses to Pennsylvania standards. However all schools plan to do so.
- Most online assessment is objective multiple choice or true-false, providing a limited lens through which to view student achievement. Subjective assessment, such as essay writing is generally minimal and sporadic.
- Most third party providers give minimal personal feedback or adjust their courses based on student performance. It is up to the cyber charter to follow-up with its students, make sure they stay the course, and help to customize instruction to their particular needs. Some cyber charters have the staff to do this, others do not. Some

- cyber charters do not have staff in all core instructional areas to provide appropriate subject matter expertise to respond to student inquiries.
- Much of the instruction focuses on one learning modality that is text book based. There are limited synchronous and authentic (e.g., project based learning related to real life experiences) learning opportunities or those involving a high degree of online animation or interaction.
 - Most course providers do not currently offer opportunities for students to engage in teamwork and cooperative learning (i.e., online chats, threaded discussions, group projects).
 - Few cyber charter schools require school proctored mid-term and final exams.
 - Some cybers allow a parent to proctor their child's exams. Allowing a parent to proctor the exam could present a potential conflict of interest.

The detailed analysis of each provider follows:

Calvert School

Overview

Calvert School, a nondenominational elementary school founded in 1897 and located just north of the Johns Hopkins University campus in Baltimore, Maryland, provides a day school education to area boys and girls. At the same time, since 1905, the school has been offering an educational opportunity of similar quality to English-speaking children in grades pre-kindergarten through 8 around the world through its Home Instruction Department. Calvert School's motto is a promise to the home schooling parent, "Easier for you to teach. Easier for them to learn." This motto States the goals of the home schooling component of their program. It is highly structured and provides a traditional curriculum with instructional manuals that enable the parent to teach the material in a logical and sequential manner. The program is approved by the Maryland Commonwealth Department of Education and it is accredited by both the Commission of Elementary Schools (a division of the Middle States accrediting agency) and the Commission on International and Transregional Accreditation.

The Calvert program is accessed through registration by either the parent or the cyber charter school. Textbooks, manuals, along with some math manipulatives (depending on the grade level of the child), are mailed to the parent and the parent to be used to teach the child. Calvert's catalog states, "If you plan to teach your child at home, you should check with your Commonwealth department of education and comply with local regulations, as home-schooling laws vary from state to state." The parent generally determines the appropriate grade level for the child. Calvert does provide an optional placement test for all new students entering grades 4 through 8. This evaluation enables Calvert to send additional support materials to assist the parent. Parents then teach their children the lessons provided by Calvert.

Specific Criteria

Assessment

An assessment plan exists in each subject area that is both on going and connected with course objectives. It is provided through a series of assessment questions throughout each lesson and a set of printed questions contained in the grade level test booklet. For instance, the parent receives the third grade textbooks, materials and a booklet entitled, "3rd Grade Tests."

Each course contains eight sets of tests. Calvert also supplies an optional assessment component where each child is assigned an experienced Advisory Teacher who then grades the course work and returns the corrected papers with a letter containing helpful suggestions and comments. Parents or a cyber school may enroll in a program that is paper-based and handled through the mail or, in grades 5 through 8, they may opt for an online Advisory Teaching Service. If the parent or cyber school purchases this Advisory Teaching Service, an advisory teacher is assigned to the child upon receipt of the first set of completed tests. Regardless of whether or not a child is enrolled in ATS, all Calvert home learners use the same set of tests. Without ATS, the answers to the tests are not provided. Only 5th through 8th grade assessment instruments are

online. The questions are mainly objective type questions but there are opportunities for students to respond in writing.

Program assessments appear valid. They vary little and rarely reach beyond knowledge and comprehension levels of learning. Students must complete all subjects for a single grade level before they are allowed to move on to any subject in a high grade level. Cumulative record-keeping of ongoing quizzes are maintained by Calvert if the ATS is used. Otherwise, the parent administers and maintains all grades.

Quality of Content

Brief descriptions of the course content are available and are generally outlined and described in a clear manner. The Calvert scope and sequence recommends two and a half hours of daily instruction for kindergarten children, three hours for 1st and second graders, three hours for 3rd graders, four hours for 4th and 5th graders, four hours for 6th graders and five hours for 7th and 8th graders. In each of these grades, instruction is provided in reading/phonics/literature; spelling/vocabulary; writing/composition; grammar; mathematics; science; poetry; history; geography and art are also available.

The courses provided by Calvert include basic written activities and focus on lower order thinking skills (i.e., knowledge and comprehension) with the opportunity for the parent to delve into higher order thinking skills as is appropriate to the learning level of that child. Enrichment opportunities are provided by way of a CD-ROM for each grade level and a variety of additional literature books or courses with textbooks (writing and grammar) or audio tapes (French or Spanish). Remediation is done mainly through adjustment of the pace of the course. If extra concentration is needed, each course includes special exercises to help the parent reinforce the concepts being presented. Purposes for activities are defined and clearly expressed written guidance to complete the activities is given. Limited written feedback is given as to whether or not the activity has been satisfactorily completed, unless the parent opts to use the ATS.

Flexibility of accommodating various learning styles is somewhat evident in the parent's ability to adjust the speed of presenting the course content. For example, parents may utilize special exercises to provide extra reinforcement, use the option to take more than 12 months to complete a course/grade or use enrichment courses such as "Melody Lane" or "Discovering Art."

Parents must be able to handle the course content in order to teach their child. If help is needed for the parent to successfully do this, he/she can access help through a phone call or email to Calvert Advisory Teaching Service. Student course material is written at a relatively low level where even weak readers should be able to deal with it with parent support.

On the whole, the skill taxonomy of each course is logical and is able to be connected to many of the PA standards.

Resources/Materials

Textbooks and printed directions are provided by Calvert to the parent. There are opportunities for the parent to connect with an advisory teacher if the parent or charter school opts to pay for the ATS. The textbooks selected appear to be at the "typical elementary reading levels."

Students participating in this program who have not achieved these levels must receive extra assistance through lessons supplied by Calvert or through their parent's instruction. CD-ROMs are available for some enrichment courses but there are few links to the WWW resources. Parents are supplied with a paper-pencil based curriculum and a limited number of math manipulatives.

Technical Considerations

The courses provided are primarily text-based and there is some asynchronous CD-ROM enrichment experiences are available for those who elect to purchase them. Since the courses involve only print materials and there is limited online testing, the bandwidth needed to download animation, movies, sound or synchronous, online activities does not impact the delivery of Calvert courses. Navigation throughout the site needed to access the online assessments for those in grades 5 through 8 is simple. No information is clearly provided on student data security or virus protection.

Class.com

Overview

Class.com originated out of the University of Nebraska which is a land grant college providing distance learning since the early 1900's. In 1996 the University received a five-year grant to develop 55 online courses and make them commercially available. Approximately 53 courses were developed. As of the 2001-2002 school year, there are 24 courses online with 19 listed as "coming soon." These courses are marketed by way of Class.com which operates cooperatively with, but independent of, the University since January 2000. These courses mirror typical courses offered throughout the nation to students in grades 9 through 12. The courses have been designed around the various national standards written for English, math and science, and a matrix has been developed showing where appropriate courses meet the PA academic standards. Any school contracting with the University is responsible to assure that the courses are appropriate for their Commonwealth. Class.com asks that students be placed carefully since it takes a special student to be successful in this type of program. Class.com CEO, Katherine Endacott, believes that student must be willing, able and have sufficient aptitude to deal with the material. The true test of the success of the school's selection process will be the completion rate. She also said that the caring adult will be key. Class.com is "like a textbook. It is not a substitute for a teacher," she said. She believes it is important that the student be checked on a daily basis by the person assigned as teacher. Every course presented by Class.com requires a responsible adult/teacher to be available as that student is learning. Class.com does not provide that responsible adult/teacher.

The greatest use of these courses has been to enhance a high school's offerings when the school cannot offer particular courses where a teacher in the "brick and mortar" school is available to the student as he/she is working on the course material.

Once the school assigns courses for the student, the student may access only those courses through use of a log in code and a password. All courses may be accessed online (with the exception of one German course). The student may progress at his/her own rate by reading the instructions, reading material online and completing the short-answer questions at the end of each mini-section. Both short answer and essay type questions are at the end of each unit of learning. Once the student has completed sufficient work, the student must complete unit exams that are made up of both objective and subjective types of questions. The student will receive all direct instruction or assistance from the cyber charter school teacher who has been trained by Class.com. This teacher may supplement the course work if it is found to be lacking by the cyber charter school teacher who will grade and give individual feedback to the student regarding the subjective/essay portions of the assessments. There are tools provided through Blackboard.com (supplemental to Class.com) where the cyber charter school teacher may set up messaging boards, email, virtual classes and discussion chat rooms. Course assessments vary in rigor. Some were created five years ago and able students may complete them on a fairly successful level through using good guessing techniques (Literature 1b). Others require online experimentation, data gathering and higher levels of analysis (Chemistry and Physics) or submission of audio tapes demonstrating language dialect and pronunciation (Spanish I).

Specific Criteria

Assessment

An assessment plan that is both ongoing and connected with course objectives can be identified for each course. Objective type questions are online and, upon submitting the answers to these questions, students receive immediate feedback. In a few cases there are online “activities” as in the Chemistry and Physics courses. All “major” tests include subjective portions that are to be graded by the cyber charter school teacher who will provide personal feedback to the student and will post the grade to the student’s Class.com grade portfolio.

Program assessments appear valid. Some vary little and rarely reach beyond knowledge and comprehension levels of learning while others require students to make complex connections (American History 1a). The subjective assessment questions allow the cyber charter school to delve into the development of high levels of learning.

Class.com can identify when a person is using a particular log on code and password and has data as to where that user has gone within the system. It is up to the cyber charter school teacher to track the “real” student use of the password and to determine if that student is making appropriate progress or if that student is personally completing assignments and tests. Class.com does not contact students if they are failing or are not using the system. It is up to the cyber school to deal with non-use or student failure of ongoing exams. There are no face-to-face exams provided through Class.com itself. Class.com depends on the cyber charter school teacher to assure that the enrolled student is the person working online.

Cumulative record-keeping of ongoing quizzes is utilized. These scores are combined by way of formula with the grade received on the “mid-term” and “final” exams to arrive at an “A,” “B,” “C,” “D” or “F” grade based upon 90 to 100% = an “A” type of grading system. In foreign language courses, students may tape their voices online and forward them to the teacher for assessment or feedback.

Quality of Content

Brief descriptions of the course content are available and are generally clearly outlined and described. Class.com has approximately 53 licensed courses available. 40 courses are offered online. It is up to the cyber charter school to determine the ability of the students to handle the course content, the required courses for each student and then assign students to those courses.

The courses provided by Class.com include basic written activities and focus on lower order thinking skills (i.e., knowledge and comprehension) than in the Literature 1b course and more advanced courses requiring higher level thinking skills as in the algebra, chemistry and physics courses. Some courses provide ample practice opportunities so that students are able to learn from their mistakes as in the Algebra I course. Others give feedback in terms of the number correct and the number wrong as with the Literature 1b course.

Purposes for activities are defined. Clearly expressed written guidance to complete the activities is given. Some feedback as to whether or not the activity has been satisfactorily completed or

how it may have been completed correctly is given via the database. This feedback is not personalized.

Flexibility of accommodating various learning styles is attempted as when the material in the American History course is pre-tested with a cause and effect chart requiring a different way of looking at the history of our country's independence or when students prepare voice "tapes" online and is then submitted to the instructor. While activities are connected to the course objectives, there are actually few evident provisions for adaptations for individual learners. It is expected that the cyber charter teacher would provide this. The course material is written at a level where weak readers would have difficulty successfully completing the course.

The Class.com skill taxonomy mirrors the taxonomy of the typical textbooks. On the whole, the skill taxonomy of each course is logical and is able to be connected to many of the PA standards.

Resources/Materials

All materials needed to complete the online courses can be found online. There are no opportunities to "meet" with the Class.com teachers because the Class.com feedback comes from the Class.com database. The Blackboard.com component of the Class.Blackboard.com package allows the cyber charter school teacher to communicate with groups of students if that teacher elects to do so. Students who have questions must present questions to the cyber charter school teacher. Links are contained within each course that allow the student to get further information by way of the World Wide Web and through Blackboard.com.

Technical Considerations

The courses provided are in an online, asynchronous format only. It is fairly easy to access all information needed to complete the course. Some courses involve animation, movies, sound or synchronous, online activities. Where more complex technology is required for an activity, the necessary software can be easily downloaded through the Class.Blackboard.com site. On the whole, this technology is relatively simple and does not allow synchronous discussion or real time activities. No information is provided on student data security or virus protection.

K12

Overview

The K12 Inc. curriculum was developed under the leadership of Dr. William J. Bennett, former U.S. Secretary of Education. This curriculum provided was launched in 2000 and to date has developed curriculum for use in grades kindergarten, one and two with an entire curriculum for grades K through 12 anticipated to be available by September 2004. Parents or a responsible adult caring for a child may access the K12 curriculum through agencies that are partnering with the K12 corporation. The parent then receives all required technical equipment, material resources and support needed to successfully teach their child how to read and compute. Each family is assigned a K12 support teacher who personally communicates with the parent during the set up period and continues that support on a biweekly basis throughout the traditional school year and into the summer. Each support teacher has a "homeroom." There may be 25 special

education children in that homeroom or in the case of non-special education children, there may be 50 students. On the whole, a family of children has one homeroom teacher. It is up to that teacher to work with the parents on an as needed basis. They send daily notes of encouragement or tips for success and they monitor each students progress on a daily level. If parents have questions or concerns, they are instructed to call their teacher. Teachers are required to call parents back within 24 hours during the week. Parents or a designated adult is responsible for working directly with his/her child on a daily basis following the K12 Inc.'s curriculum. In the event work is not being completed without prior notification, the child will be counted as absent. If this persists for three days, the child will be reported to the sending district as truant.

In Pennsylvania, the K12 curriculum is available through the Pennsylvania Virtual Charter School and will be available in Philadelphia and Pittsburgh at centers where parents may come with their children and use computers and the materials on site. The key to the K12 curriculum is the participation of the parent. All directions for the grade K through 2 portion of this curriculum are written for the parent and the parent will present to the student these lessons, with the written lessons and ample materials supplied by K12. The curriculum has had the input of hundreds of internationally known curriculum experts, artists, computer technicians, poets and teachers. The K12 corporation has defined clearly who their present kindergarten through grade 2 program accomplishes appropriate Pennsylvania standards for those grades. A minimum of two educational outings are planned each month so that students may meet with each other and learn from each other.

Specific Criteria

Assessment Component

There is ample evidence of a rigorous assessment plan that has a detailed set of core competencies. Program assessment includes applied writing, online activities, higher level thinking activities and some group projects. Students participate in field trips and educational outings to museums, libraries and other local points of interest.

K12, Inc. teachers check the progress of each child on a daily basis. Because 20% of the work is online each day, the K12 teacher can see what lessons were completed and how things appear to be going. All parents are obligated to inform K12 if they are going to be "absent" on a particular day. If no work has been completed and no prior arrangement has been made to make up the day of work, that child is marked as being absent. If absenteeism becomes a pattern, K12 invokes the truancy laws through the sending school.

The K12 program employs superior and balanced formative and summative assessment designs. Pictures are clearly focused and without distracters. Directions zero in on the skill to be acquired and do not deal with extraneous details. There are alternative assessment opportunities for students having difficulty. The K12 assessment taxonomy has a variety of meaningful assessments with a mix of objective and subjective, lower order and higher order measurements.

While parents are primarily responsible for students completing coursework, K12 acts as a proctor of all online work. The pattern of work completion and success or failure is monitored on a daily basis. The K12 teacher dialogues with the parent about the child's progress on a

biweekly basis. This degree of oversight should allow K12 to verify a student's true progress. Adequate and accurate student records appear to be maintained by K12 and be readily available to parents and are officially verifiable to the sending school district. Standard reporting mechanisms are available that allow aggregation and disaggregation of data for district use.

Quality of Content

Course content is systematically designed, clearly written, research-based and current. A complete and thorough course syllabus is available for review. Objectives and expectations are well defined. Correlations are made to the Pennsylvania Standards where appropriate. There are flexible accommodations for various learning styles. Enrichments and remediation opportunities are evident. Activities are appropriately designed for individual and group involvement.

Throughout the K12 curriculum, the material adapts to the student's background, language levels and developmental stages. The content of courses is based upon solid research and national and Pennsylvania standards and exhibits a logical hierarchy and sequence.

Resources and Materials

The breadth and quality of the resources and materials are extensive enough to support the goals and objectives of the course/program and provide for enrichment and remediation.

Print, audio, field trip, visuals and tactile resources are provided. These are current, of high quality and accurate. All supplementary resources required as part of the learning experience are given to the parent as part of that learning package. Reading levels of all resources are grade level appropriate. There are many hands-on activities built into the curriculum where children may literally handle a concept. Both online and print resources are provided on how to use the course materials. Phone assistance also is available to parents.

Where a parent may need help in presenting concepts, the K12 teacher is available to guide the parent. Both online and phone or home visit resources along with access to appropriate human resources are quickly provided and monitored. Speedy follow up to these resources also is provided.

Technical Considerations

The program uses a variety of asynchronous delivery systems (email, discussion threads, multimedia examples, audio support) to enhance and bolster instruction. The time taken to load any image, document or sound file exceeds expectations given the instructional purposes. Little time is needed for the parent to download activities. Navigation of the site is simple and very user friendly. The program was developed using professional quality design work. This design work contributes to the visual appeal and usability of the material. Assistance is provided to each parent who may lack the prerequisite technology skills needed to use the program. The system provides for data security, virus protection and data backup.

Keystone National High School

Overview

Keystone National High School was founded in 1995 by the experienced staff of the Learning and Evaluation Center that was founded in 1974. Drawing on 20-plus years of distance education experience as an accredited educational institution and more than 150 years of combined staff experience in the field of distance education Keystone National High School opened for enrollment in the fall of 1995 with its own certified faculty and staff in place to address the needs of incoming students. Keystone National provides a curriculum in the basic academic areas of English, Social Studies, Science and Mathematics. To date, Keystone has enrolled more than 1500 students with a continued student growth rate that remains steady between 90 to 100% per year. It is a nationally and regionally accredited program.

Keystone National High School can be accessed through a web site. Each student is given a program of studies through the cyber charter school which contracts with Keystone. The student may access only the courses assigned by the cyber charter school. Once students are registered, they are sent textbooks for each of the courses to which they have been assigned. The student may progress at his/her own rate by reading the instructions, reading material from the textbook and completing the short-answer questions at the end of each mini section and both the short answer and essay type questions at the end of each unit of learning. Once the student has completed three units of work, the student must complete unit exams that are made up of both objective and subjective questions. In order to complete the course, a student must be able to read and be self-directed. The student will receive a very limited amount of direct instruction, if he/she requests it. The student will receive some feedback from the Keystone instructor if the student elects to attend available weekly discussion hours with other "classmates." While there is extensive reading assigned to each student, the rigor of the assessment questions is low and an able student could successfully complete the course by answering the short answer questions correctly and reading little of the required material.

Specific Criteria

Assessment

An assessment plan can be identified that is both ongoing and connected with course objectives. Assessment instruments are online written responses with short answer questions making up ongoing mini-quizzes and a significant portion of the summary tests. A subjective section exists on all of the summary tests, except mathematics, where students respond in essay form or must complete a chart using comprehension skills.

The quizzes and tests can be copied and completed and then entered online. Program assessments appear valid. They vary little and rarely reach beyond knowledge and comprehension levels of learning. Keystone can identify when a person is using a particular log on code and password and have data as to where that user has gone within the system. Keystone cannot tell if the "real student" is working. It is up to the cyber school to access and use this information.

There are currently 11 teachers employed by the eSchool⁷⁰ while there are 21 that are employed by the traditional side. Teachers are paid on an hourly rated based upon the number of hours they work. Keystone teachers do not contact students if they are failing or are not using the system. It is up to the cyber school to deal with non-use or student failure of ongoing exams. There are no face-to-face exams provided through Keystone National High School itself. Keystone cannot assure that the enrolled student is the person working online. Students may not complete a year-long course in fewer than eight weeks. This assures students are not just rushing through the courses.

Cumulative record-keeping of ongoing quizzes is utilized. These scores are combined by way of formula with the grade received on the “mid-term” and “final” exams to arrive at an “A,” “B,” “C,” “D” or “F” grade based upon 90 to 100% = an “A” type of grading system. At the end of each lesson, students practice their learning by submitting responses to objective questions to the data base. They then quickly receive their score which they may copy for their records. At the end of a unit of learning, students respond to both objective type (i.e., true false or multiple choice) questions and subjective type questions (i.e., essay or filling in a chart with opinion responses). Students submit responses to objective questions and immediately receive their score from the data base. The responses to the subjective questions will be returned within 72 hours after submission.

Quality of Content

Brief descriptions of the course content are available and are generally clearly outlined and described. Keystone has six English, seven math, six science, seven social science and seven elective courses available. The elective courses include: Health and Physical Education, Art and Music Appreciation, Driver Education, Spanish I, Spanish II, Introduction to Technology and Introduction to Computer Technology. It is up to the cyber charter school to determine required courses and assign students to those courses. The courses provided by Keystone include basic written activities and focus on lower order thinking skills (e.g., knowledge and comprehension). Limited enrichment or other opportunities for remediation are provided. The math offerings span Pre-Algebra through Pre-Calculus. Consumer Math and Refresher Math are the two courses available for the students having problems with math.

Purposes for activities are defined. Clearly expressed limited written guidance to complete the activities is given. Limited written feedback is given as to whether or not the activity has been satisfactorily completed. Flexibility of accommodating various learning styles is not evident. While activities are connected to the course objectives, there are no evident provisions for adaptations for individual learners.

The course material is written at a level where weak readers would have grave difficulty successfully completing the course. Some courses (e.g., Geometry) rely solely on the textbook with an introductory three or four sentence paragraph. The Keystone skill taxonomy follows the

⁷⁰ The eSchool offers coursework and assessment over the Internet while the traditional side of Keystone offers a curriculum that is completely off-line. 21st Century, SusQ, WPCCS all use curriculum from the eSchool side of Keystone National High School.

taxonomy of the textbook selected by Keystone for use with each course. On the whole, the skill taxonomy of each course is logical and is able to be connected to many of the PA standards.

Resources/Materials

Textbooks and printed directions found online are the basic resources available to the learner. There are opportunities to “meet” with teachers and other students for one hour each week. This is done by way of “chat-rooms.” Students who have questions may send written messages to the Keystone instructors and will receive a written reply or phone response within 24 hours. The textbooks selected appear to be at the “typical secondary reading levels.” Some links to web resources are sporadically provided but are not integral parts of each course; students may view them at their discretion.

Technical Considerations

The courses provided are in a text-based, asynchronous web format only. Since the courses involve only print images, the lack of bandwidth needed to download animation, movies, sound or synchronous, online activities does not impact the delivery of Keystone courses. Navigation throughout the site is only easy after one has made multiple practice attempts to use the various options available at the web site. No information is clearly provided on student data security or virus protection.

University of Missouri

Overview

The University of Missouri cyber curriculum has been developed out of the University of Missouri and is still directly connected with that institution’s extension division. The University of Missouri is a land grant college providing distance learning since the early 1900’s and a high school program since 1913. Their high school diploma program has available since 1999 and their elementary program was made available in 1998. They have approximately 50 courses available for students in grades 3 through 8. They have approximately 150 additional courses available for students 9 through 12. The grade 3 through 8 courses are textbook oriented courses where unit progress reports use objective type questions only, up to 6th grade. For students in grade 3 through 5, there are no exams. These students submit the end of lesson objective questions and their grades depend on a compilation of the correct responses versus the incorrect responses. For grades 7 through 12, there are objective components to all courses and subjective components to most courses. The objective component is scored through the University of Missouri’s database while the subjective portion is scored by a University of Missouri instructor assigned to that course. There are many written optional activities available for students in grades 3 through 8 that are not required to be submitted for assessment.

The grade 3 through 8 courses are based on a home schooling model where the parent is expected to act as the instructor and Parent Teaching Manuals are provided. These courses have no instructor-teacher or instructor-parent interaction with the exception of the grades 7 and 8 composition courses that do have an English instructor complete assessments of written work. There is no tutorial supplied for students that have difficulty with a concept. They must get this

help from someone outside of the University program. When the child has completed certain sections of work, the parent mails those sections to the University (or in grades 5 through 8 this work may be done online. Certified teachers from the University score that work and keep the records. If the parent scores the work, the parent keeps the records.

The 9-12 courses are semester, textbook oriented courses that span the four core disciplines (English, math, science and social studies). There are also agriculture, business education, driver education, computer science, family and consumer science, music, art, French, German, Spanish, Japanese, industrial technology, health and physical education. Of these offerings approximately 11 are online. No parent manual is provided for these courses. The student uses the accompanying textbook, completes assignments and submits them by mail or in some cases, online. Each of the courses have a proctored midterm and final exam. The student must get 60% of the proctored portion of these exams correct in order to have any of the other work count as part of his/her cumulative grade. These exams may not be proctored by any relative no matter what the educational qualifications. The University of Missouri is allowing Western PA Cyber Charter School to use the student parent as proctor for the first administration of the midterm and the final exam. If the child fails the exam the first time it is given that “retake” exam must be taken at the WPCCS center.

No guarantee is given that any course or array of courses meet the PA academic standards. Any school that contracts with the University is responsible to assure their governmental agency that the courses are aligned with those standards.

Specific Criteria

Assessment

The assessment plan for students in grades 9 through 12 is clear and connected with course objectives. The grade 3 through 8 assessment program has a variety of progress questions. A set of these questions is submitted to the University at the end of each unit. Those questions submitted are all objective questions. The elementary student’s grade is determined by his/her response to these objective questions.

There are ten lessons in the grade 3 Language Arts Part One curriculum. Information regarding the ten lessons is expected to be submitted unless a parent opts to do all of the assessment of the lessons. There are no exams for this course. Three textbooks are recommended for this course with one being devoted to writing and two related to literature. In the case of the online 9th grade math course, there are ample practice opportunities similar to those found at the end of each chapter of a standard math text. Course assessment is based upon 1,000 points of which more than 500 are assigned to the combined midterm and final proctored exams. The student must achieve 60% of the combined value of the midterm and final exams for that student to be able to have chapter work completed added to the total grade. Secondary program assessments appear valid. They vary and do reach beyond knowledge and comprehension levels of learning. Elementary assessments of language arts and reading do not seem valid to assess development of language and reading abilities.

The University of Missouri does not contact students if they are failing or are not using the system. It is up to the cyber charter school to deal with non-use or student failure of ongoing quizzes. There is a face-to-face midterm and a face-to-face final exam for secondary students, but there are none for elementary students except in 7th and 8th grade language arts. If the student fails the proctored exam the first time, he/she may take it a second and last time. These exams are corrected by the University of Missouri which keeps the records unless the parent has opted out of this process. Cumulative record-keeping of ongoing quizzes is utilized. These scores are combined by way of formula with the grade received on the “mid-term” and “final” exams to arrive at an “A,” “B,” “C,” “D” or “F” grade based upon 90 to 100% = an “A” type of grading system.

Quality of Content

Brief descriptions of the course content are available and are generally clearly outlined and described. The University of Missouri has traditional elementary grade 3 through 8 programs available. Textbooks and manuals are provided to parents. Assessments in these grades may be completed online. It is up to the cyber charter school to determine required courses and assign students to those courses.

The University of Missouri has approximately 150 textbook driven grade 9 through 12 courses available. The student receives textbooks or and printed instructions as to how to approach the text and complete assignments. The courses provided by the University include basic written activities with assessments that focus on lower order thinking skills (i.e., knowledge and comprehension) although there are opportunities for parents of children to supplement these programs. Limited enrichment or other opportunities for remediation are provided.

Purposes for activities are defined. Clearly expressed written guidance to complete the activities is given. Feedback is given by way of the database as to whether answers submitted are correct or are incorrect.

Flexibility of accommodating various learning styles is not evident. While activities are connected to the course objectives, there are no evident provisions for adaptations for individual learners. The course material for grades 9 through 12 is written at a level where weak readers would have difficulty successfully completing the course. The University of Missouri skill taxonomy follows the taxonomy of the textbook selected by the University for use with each course. On the whole, the skill taxonomy of each course is logical and is able to be connected to many of the Pennsylvania standards.

Resources/Materials

Textbooks and printed directions found online are the basic resources available to the learner. There are no opportunities available for students to meet with the University of Missouri teacher or with other students to discuss the content. Students who have questions may send written messages to the University instructors and will receive a written reply, although the University informs the students that there is no tutorial available through this program. The textbooks selected appear to be at the “typical secondary reading levels” although many students participating in this program have not achieved these levels.

Technical Considerations

The courses provided are in a text-based, asynchronous web format only. Since the courses involve only print images, the lack of bandwidth needed to download animation, movies, sound or synchronous, online activities does not impact the delivery of University of Missouri courses. The University of Missouri web site is easy to navigate but a new student does require some one-on-one instruction as to how to proceed into the course format. No information is clearly provided on student data security or virus protection.

Virtual Classroom

Overview

Water Street was founded in 1991 as an educational products and services company specializing in mathematics for primary and secondary school students. The Company's original product, Math In a Bag® (Math for Talented (Or Just Plain Curious) Kids) won numerous design awards and sold successfully in retailers as diverse as F.A.O. Schwarz, The Smithsonian Institute and TJ Maxx. Beginning in 1993, WaterStreet used online technologies with its public school clients to prepare students for success in the Maryland Commonwealth Performance Assessment Program through its World Class Kids® program, which by 1998 included over 2,000 students in ten schools. This experience provided the background for the company to develop real time online instruction for individual students in their homes.

WaterStreet's Virtual Classroom curriculum provides real time, online instruction to elementary, middle and high school students who do not attend a traditional school program. These youngsters are in an online (cyber) charter school program or are chronically ill, emotionally disabled, suspended for disciplinary problems or educationally displaced. Through online technologies, WaterStreet provides professional teachers in all disciplines for over 800 students in twenty-five school systems. The director and developer of its programs and procedures is James King who has a twenty-four year educational career preceding his involvement with WaterStreet. He managed two independent schools, headed three others and started the Brownstone School in New York City for at-risk youth. He holds a BA and MAT (MEd) from the University of Delaware in mathematics and education where he was a DuPont Scholar and National Science Foundation Fellow.

The program is delivered in classes of four to six students. This small class size allows each child to receive individual attention, to achieve academic success and to assume leadership and responsibility. Classes meet with the Virtual Classroom (VC) teacher online for a minimum of ten hours per week and for an additional ten hours per week of supplementary activities. Students and the teacher share through voice streaming technology and the use of whiteboards where they can synchronously hear and see each other's work. This curriculum is comprehensive and offers a core of academic subjects comprised of mathematics, language arts, social studies and science augmented by experiences in the arts and foreign language. Classroom teachers instruct in the core subjects and specialists teach the enrichment classes. Literature is selected to inspire young readers, and classes emphasize verbal and written skills

through daily journals, language experience stories, beginning research and creative story writing. Literature study groups are scheduled twice a year to give the children special experiences with classic or specialized material. The mathematics program uses textbooks and online materials. Children are provided with opportunities for individual and cooperative problem solving and for developing and strengthening critical thinking skills.

The arts are introduced informally through art, drama and music. Courses in Fine Arts include introductory offerings in drama, drawing and digital photography are required of all students. Students may receive credit for music lessons taken in the home. A class in music theory is available online for those students who have begun the study of a musical instrument.

Foreign languages (French, Latin, and Spanish) are offered in grades 7 and 8. In grade eight, classes may be taken for high school credit. Students in grade 9 through 12 may continue or begin foreign language study and may select from an array of courses (three art offerings, one drama, one musical theater, four years of three languages in addition to the core subjects) to complete the diploma requirement of the sending school.

Specific Criteria

Assessment

An assessment plan exists with a clear set of core outcomes. The assessment component relies mainly on the end of chapter tests or other tests presented by the book publisher. The interaction between student and teacher allows for differentiation of assessment modes to assure the learner success at his/her level. Through synchronous instruction and the Centra technology, teachers interact verbally with each student for a minimum of ten hours per week and ten additional supplementary hours as needed. The one-on-one voice time allows the instructor to verify “real” student participation and performance.

There is a superior balance of ongoing objective and subjective assessment through the personal interaction of student via voice streaming and whiteboards. A variety of meaningful assessments are evidenced with an appropriate mix of objective and subjective, lower order and higher order thinking skill measurements.

Extensive procedures are clearly established for monitoring students during participation, performance and assessment phases. Teachers are meeting with no more than six students for approximately two hours per day during which time they are monitoring learning and giving feedback to learners as individuals or as a group.

Records are maintained by WaterStreet and are readily available to the sending district or to the students on an as-needed basis.

Quality of Content

While course content is overwhelmingly text based, the selection of the textbooks has been done to provide quality literature, arts, science and mathematics experiences. The course content is clearly outlined and described. A course syllabus is available for review. Objectives and expectations are clear.

The courses use a variety of approaches including multi-media, designed to accommodate the needs of learners with different learning styles. Activities are appropriately designed for individual and group involvement. The VC teacher is expected to adapt the material to the student's background and appropriate learning and language levels.

The course content and hierarchy of skills are connected to the Pennsylvania standards and are also comparable to the level that textbooks commonly used in local school districts that are tied into the standards.

Resources and Materials

A variety of text-oriented resources and materials are provided to support the goals and objectives of each program. Resources and materials provided are current and accurate. Resources have appropriate reading levels for the targeted student population. Where students have difficulty with reading, the VC instructor will provide additional support. Both online and print resources are provided in how to use the course and materials. Phone assistance is also available to students along with ten hours per week direct instruction and ten hours per week of supplementary small group assistance.

Online access is at times immediate (during the ten hour per week instruction period) or is provided on a consistent basis (within 24 hours of the student contact). Timely feedback is provided and monitored.

Technical Considerations

The program or courses use a variety of both asynchronous and synchronous delivery systems to enhance and support instruction (e.g. asynchronous and real-time discussion forums, email, multimedia, web casting, television and CD-ROM). At the specified minimum bandwidth (19/5) the time taken to load any image animation, or sound file exceeds expectations given the instructional purpose. While the actual text of the course content is contained within the covers of a printed book, the use of whiteboards and the Centra software allows high visual appeal because of real time sharing of work and materials. The prerequisite skills needed to interact throughout the course are contained on a CD-ROM that provides training for parents and students as to how to use technology they may never have used before this. A combination of quality methods for data security, virus protection and back up is used.

The American Education A+nywhere Learning System

Overview

The principle business of the American Education Corporation (AEC), founded in 1981, is the development of educational computer software with a focus on helping students improve their standardized testing scores through its assessment, curriculum, and management tools. They supply educators with standards-based curriculum, the ability to create individual lesson plans, system usage monitoring, and class and student reports. Over the years, AEC has purchased a number of educational software, textbook and electronic publishers and has developed a variety of products. AEC's product lines include the A+nyWhere Learning System™. This is an internet-deliverable, standards-based assessment and curriculum for grade levels 1 through 12, with more than more than 2,500 lessons, over 61,000 exercises and up to 5,100 hours of instructional software. There are lessons in mathematics, reading, language usage, vocabulary and science. There are also scheduled releases for courses in writing and social science. The product was released in March 2001. Since then, they have installed it at 77 school sites. Of these sites, 16 are using it online. Of the 77 sites installed, 16 sites are charter schools, both brick and mortar and online. The program was designed to be a supplementary program to help students with drill and practice concepts after they have receive individual instruction in that content. Some schools are using it as the total "teaching" program. Since it is only in use since March 2001, there are no data to support it effectiveness.

Specific Criteria

Assessment

The ALS system is very focused on assessment. The teacher may assign an almost unlimited number of objective questions to the student to assess whether or not the student has grasped a very discrete nugget of content. The assessment plan can be identified but it lacks rigor and variety. For instance, a third grade child is asked to "identify the middle consonant" when presented with a picture of the corner of a window that has on it a large spider web and on that web is spider. It could potentially take the child a long time to figure out first which word is the target word, window, pane, web or spider. If the student gets the answer correct, there is a big splash of red with the words "All right" on the screen and a voice that should say "All right." The audio portion of the system is unreliable. If the student responds incorrectly there is a picture of the words and a voice that says definitively, "We disagree." While numerous reports can be generated regarding student progress with an almost infinite number of question opportunities, they are of little value when the questions being asked are not instructionally valid and reliable questions.

The system cannot verify student participation beyond the log on code and password used. The system does record how may questions the student answered according to the program code for right or wrong. Many reports can be generated through the database regarding correct and incorrect answers.

Assessments used for each course are based on the objective questions posed to the child. Many distracters are embedded within the elementary assessments making the unreliable. Feedback as

to whether or not answers were correct was erratic for the secondary algebra program leaving. This could leave the learner unsure of how to proceed with the next operation.

With the primary grade curriculum, there are essay opportunities with each concept. These should assess higher order thinking skills but they are inappropriately complex. One example: The essay portion for the concept of “consonants” asks the child to “Write a story about the Old West. Use at least five words with consonant blends or consonant digraphs.” Beside the space to write is a picture of two men on horses at what looks like a rodeo. Recall and comprehension based assessment overwhelmingly make up the secondary curriculum with some degree of application of concepts.

Procedures exist within the program to monitor individual performance but there is no proctoring of the student to assure the “real” student is completing tasks. The sending school is ultimately responsible for determining student authenticity. Numerous reports and records of student progress can be retrieved from the system. These can help verify that the student completed the assignments.

Quality of Content

The content of these courses is not sufficient to count as grade level or course level instruction. The ALS program is a supplementary program and could support actual instruction. The content is sequentially developed by topic as is a table of contents of a book. The content presented for the biology course section on the nervous system presents the concept of reflexes in seven sentences and one static diagram. When a child uses the system as their primary means of instruction, they could be very confused about the concept they are supposed to learn or how they are to answer a question because of the pictures and vocabulary used to discuss the topic. A third grade student is asked to “Choose the answer that shows this word divided correctly.” With the possible choices given as: sm-arter and smart-er. It is possible that this would be confused with the concept of division which is also a part of the third grade curriculum; division occurs when the point is placing the accent on the correct syllable and should focus on where you hear the accent. The audio portion is unreliable so the student does not always hear the content and must rely on the print on the screen.

A complete list of topics to be presented is available for review. Objectives for courses (e.g., Biology or third grade language arts) are not as clearly defined. The instructor presenting the program to the student has the opportunity to increase or decrease the time needed to spend on studying a topic, the number of practice questions, the number of test questions and the number of essay questions. This may be done to attend to individual student learning styles (more writing with fewer objective questions) or to adapt to the student’s learning and language levels.

The reading levels of the content on the screen exceeds the grade level at which the primary students are working. The audio portion is very unreliable, therefore the child must read the screen. ALS has present information assuring that the program is correlated to the PSSA in reading and math but does not provide information as to whether it meets the PA Standards.

While the course topics are presented in a logical fashion, the content within the courses is not presented in an educationally sound manner.

Resources and Materials

Poor quality resources and materials are provided to support the goals/objectives of the course or program. The system is slow and can hinder learning. A student may have to wait for the system for ten seconds to one minute. A student may enter this program through use of a login code and a password. This individual is standing in front of an old fashioned schoolhouse. After clicking on the entrance to the schoolhouse, the child is greeted by an older woman who is supposed to be the teacher. The child is then greeted by a depiction of a balding male person at a desk piled with textbooks. The overall focus of the activity is on a large book placed behind this character and the student is asked to pick an activity from a list on the opposite side: STUDY, PRACTICE, TEST, ESSAY. The child selects and does as much work as has been electronically assigned by the teacher from the cyber school. The same process is followed by the older student but the character depictions are eliminated. The student is immediately presented with one or two sentences of information followed by an objective question on the material. The student is then presented with further questions. The response or feedback system is not obvious. At the end of the submissions a total of correct and incorrect is given.

Few resources or materials support the course or program. In the section on the nervous system, approximately 100 very simple sentences and 30 pictures were used to cover that material. If the audio is not working for the primary program, the vocabulary presented is above grade level and that is all the student has to use for large portions of assignments. The primary program uses complex educational terms in the assignments (“Write a story about the Old West. Use at least five words with consonant blends or consonant digraphs”).

Multiple resources/materials are available to the cyber school instructor as to how to use the program. Feedback is given in terms of a repetitive Statements such as “All right” or “We disagree.” There is no further feedback as to why the answer is wrong or where you can go for further help. There are help buttons within the program that present logical explanation at an adult reading level. These buttons are related to system operation and do not give the student further help.

Technical Considerations

The provider has tried to enhance the program and course through the addition of basic graphics and visual appeal. In some instances, these visuals are confusing and have the potential interfere with learning. The delivery of the program is slow. There are long waiting periods for the system to “think” about what has been submitted or to download a visual or to move onto the next question. The text of the program or courses is of legible size, appropriate fonts are used and surrounded by enough space. Basic design elements were used in the creation of the course. The system is generally user friendly although very slow. Students must be prepared by the cyber charter facilitator but the training process is supported by ALS technical people. The ALS server has a combination of methods for data security, virus protection, and back up. There are times when the back up is not reliable.