Research Committee Issues Brief: An Exploration of At-Risk Learners and Online Education

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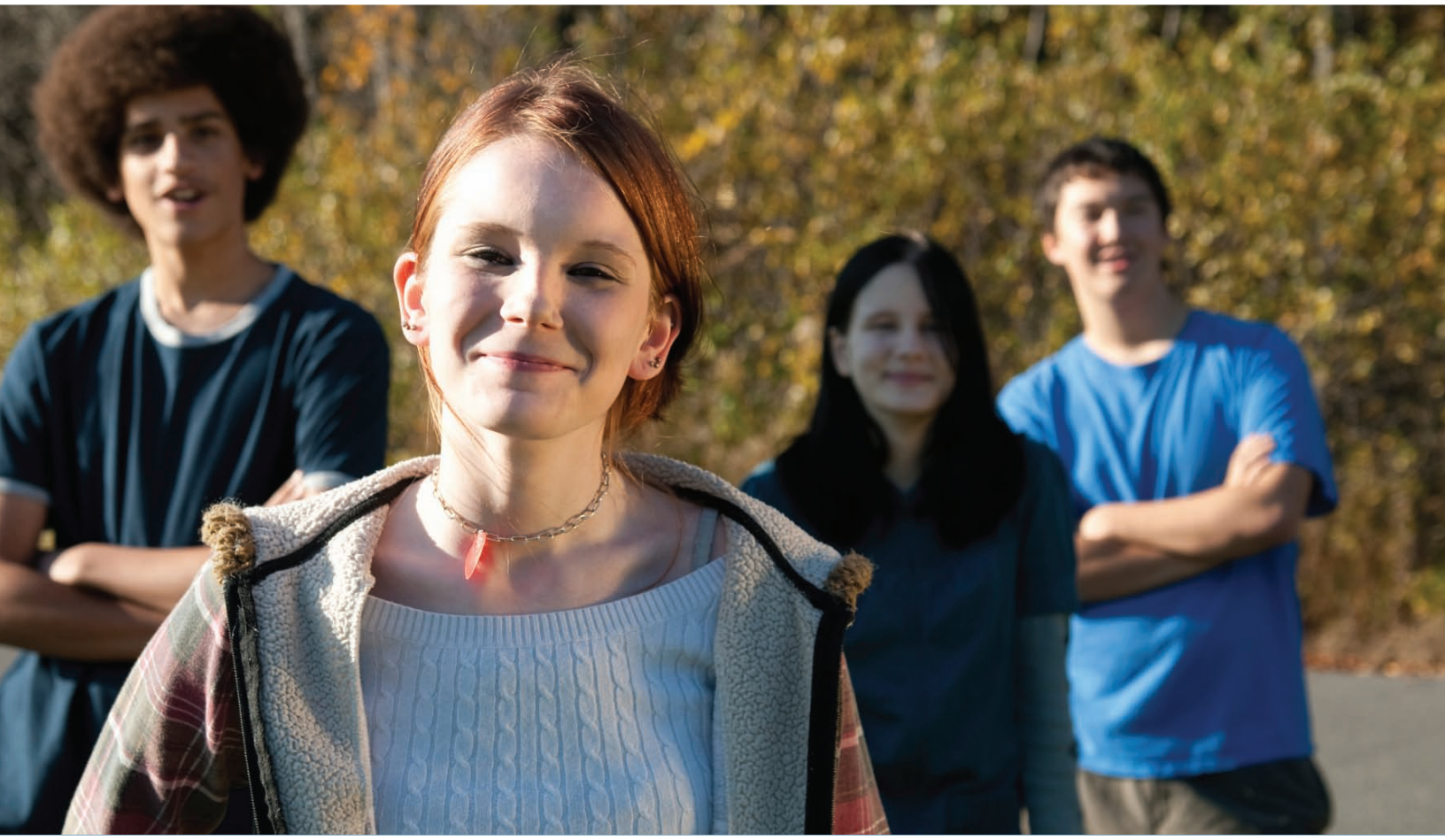
International Association for K-12 Online Learning



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In his article, "Today's student and virtual schooling: The reality, the challenges, the promise…," Barbour (2009) stated:

> *The majority of the literature may portray K–12 online learners as being primarily highly motivated, self-directed, self-disciplined, independent learners who read and write well, and who have a strong interest in or ability with technology. However, this is clearly not an accurate description of the entire or possibly even the majority of students attending virtual schools and, particularly, cyber schools. (p. 18)*

The group of students Barbour is referring to are those students who are often classified as at-risk. Students who may be "at-risk" are described this way for a variety of reasons, including those who have dropped out or have the potential to drop out of school or have repeated a course or grade (Rapp, Eckes & Plurker, 2006).

The U.S. Department of Education (1992) defined an "at-risk" student as one who is likely to fail at school. School failure is typically seen as dropping out of school before high school graduation. The Department of Education report examined seven sets of variables associated with at-risk students: basic demographic characteristics; family and personal background characteristics; the amount of parental involvement in the student's education; the student's academic history; student behavioral factors; teacher perceptions of the student; and the characteristics of the student's school.

The Southwest Educational Development Laboratory (Tompkins & Deloney, 2009) concluded that a number of variables, related to a student's family or background can contribute to an increased likelihood of the risk of failing at school. These variables include belonging to a single head of family household, low socioeconomic status, minority group status, being an English language learner (ELL) status, low educational attainment of parents, disabilities, psychosocial factors, or gender. In addition, family problems, drug addiction, pregnancies, and other problems can prevent at-risk students from participating successfully in school.

Nationally, about 9% or approximately 1.2 million U.S. students leave high school without obtaining a diploma every year (U.S. Department of Education, 2009). Traditional schools have been challenged to meet the needs of such populations. Recommendations for increasing graduation rates include implementing credit recovery programs, strengthening data systems, increasing engagement in learning, providing access to tutoring, establishing a stable school environment for mobile students, providing services for specific disabilities, and utilizing a variety of educational

media (Shore & Shore, 2009). Online schools also seek ways to reach out to struggling students to help ensure their success; some believe this delivery model is well positioned to directly address the needs of at-risk learners (Rose & Blomeyer, 2007).

The purpose of this issues brief was to obtain a better understanding of how online programs are dealing with students who have been identified as at-risk. The first section, *Strategies for Working with At-Risk Student Populations in Online Environments,* documents a sampling of K-12 online programs currently working with at-risk student populations by examining the strategies these programs were implementing. The second section, *Trends and Instructional Practices for Teaching At-Risk Students in Virtual Courses*, surveyed online schools to determine the online delivery and design methods employed to assist at-risk students. We conclude this issues brief with specific recommendations for future research into the experience of at-risk learners in virtual school environments.

Strategies for Working with At-Risk Student Populations in K-12 Online Environments

The purpose of this section is to document K-12 online programs that are working with at-risk student populations, the strategies they are implementing, their experiences, and recommendations in an effort to assist additional programs that are facing similar challenges.

Risk factors for students can be defined in a number of ways (Watson & Gemin, 2008; Hammond, Linton, Smink & Drew, 2007). Some are strictly academic in nature, including not meeting the requirements to advance to the next grade level. Others deal with personal/family circumstances, such as speaking English as a second language, moving frequently, having a teen pregnancy, or dealing with absentee parents. According to a recent report by the National Dropout Prevention Center, "students who drop out often cite factors across multiple domains and there are complex interactions among risk factors" (Hammond, Linton, Smink, & Drew, 2007, p. 2). Virtual school programs use a variety of methods to identify at-risk students including formal and informal assessments, self-reported academic data including grades, attendance history, and demographic data. In addition, some programs take a more holistic approach and rely on school-based team referrals from home schools, teacher initiated referrals/notification, communication between special education teachers and the program, administrators from other schools communicating with the program, and communication with community workers.

It is in addressing these risk factors that virtual schools have developed programmatic strategies for helping students succeed. These strategies include assigning faculty and staff to assist students in progressing through their classes, individualizing instruction through the affordances of technology, and developing specific instructional strategies that support achievement.

Methodology

To gather data concerning virtual programs that are working with at-risk populations, a web-based survey instrument was developed and reviewed by the Research Committee. Open-ended items centered on identifying those strategies and policies that have proven to be successful.

Questions on the survey included the following:

- How does your program identify students who might be considered "at-risk"?
- Please describe the current strategies used by your program to assist at-risk students succeed.
- What are some school-level interventions you would suggest be implemented in the future to intervene with at-risk students?
- What are your program-level policies for working with at-risk populations?
- How would you define "success" of a particular policy/strategy for working with at-risk students?
- What specific recommendations would you have for developing K-12 online programs that are also working with at-risk populations?
- Please share some positive experiences in which these strategies/interventions worked.
- What plans do you have to add or change your services for at-risk students?
- What challenges or concerns have you identified in your work with at-risk students?

This survey was sent via email to virtual programs that are members of the International Association for K-12 Online Learning. Twenty-three valid responses, representing 22 different programs were gathered. The majority of respondents represented various cyber-charter schools from across the United States and Canada, including fourteen different states and the province of British Columbia.

Results

Twenty-five percent of respondents reported that more than 75% of their enrolled students would be considered "at-risk," while 21% indicated that 51-75% of their students would be classified with this designation. Twenty-nine percent reported that at-risk students made up 26-50% of their student enrollments. Finally, 17% indicated that 11-25% of their student enrollments were "at-risk," and 8% reported that at-risk students made up less than 10% of their student population (Figure 1).

Figure 1. Percentage of Student Enrollments Considered "At-Risk"

Approximately what percentage of the students enrolled in your program would you classify as "at risk," given the following definition:

Students at risk of dropping out of school, who may be retained until graduation through virtual schools, including students with identified special needs, students in racial/ethnic minority groups (which may be proxy for low socio-economic status), students with high absenteeism, students with behavior problems, students with low academic skills, students with high residential mobility, students in larger families, students with convicted parents, students with low attachment to school or community, and/or students who are not native English speakers.

0-10% 11-25% 26-50% 51-75% > 75%

Responses to the open-ended survey questions were analyzed using open coding, noting relevant concepts and themes across programs (Strauss & Corbin, 1998). In addition, three specific cases were identified due to richness of their program descriptions, including identifying varying strategies employed to assist at-risk students.

The following section describes key areas found across programs that were useful in working with this population, including the importance of supportive faculty and staff as well as individualized instruction.

Use of Supportive Faculty and Staff

Several virtual programs, including LAMP Online High School, Shannon County Public Schools, Minnesota Services Cooperative Online Learning Program, North Carolina Virtual Public School Credit Recovery Program, Wyoming e-Academy of Virtual Education, and Primavera Online High School emphasize the need for ongoing communication and support from teachers, learning coaches, counselors, tutors, and special education coordinators. These adults take a direct role in overseeing student progress and success throughout the online programs.

As the Program Director from the LAMP Program described:

> *Each student in our program is part of an academic coaching team. This team consists of the student, the student's parent(s)/guardian(s), an academic coach assigned by the school (the students will have some input in the selection process), and anybody else the student designates as a member of the academic coaching team. These people help the student choose classes that are at the student's level and best fit the student's needs. The academic coaching staff hired by the school will provide positive feedback while also providing assistance and asking how they can provide assistance. Parents, guardians and other non-employees of LAMP are notified of student progress regularly and may choose how they will coach the student. Our academic coaching staff and each teacher communicate with every student regularly. Our curriculum program also assists our staff in helping our students succeed. Any time a student is showing signs of being academically at risk of falling behind or failing on even one minor assignment the program sends an instant alert to the teacher so the teacher does not have to wait to check the grade book on any assignments that the curriculum program itself grades…Our academic coaching staff gets to know students so we can get to identify and help them meet their learning needs.*

This approach to working with at-risk students using various adults involved in the learning process is consistent with literature describing effective strategies for working with at-risk student populations. According to Croninger and Lee (2001):

> *By being a reliable source of emotional support, guidance, and assistance to adolescents, teachers may bolster students' confidence and strengthen their ability to acquire a high school education, especially when students experience difficulties at school or elsewhere in their lives. (p. 552)*

Students who are able to create meaningful social connections that provide support from an emotional and academic level may be more likely to persist in their studies and therefore experience greater success.

Individualizing Instruction

Other virtual school programs find that taking advantages of the technology, various curriculum programs and being able to individualize instruction are effective strategies for meeting the needs of at-risk students. For example, HOLA described using one-to-one and small group direct instruction to remediate key concepts using the online curriculum, and investing in technology-based reading instruction applications including My Reading Coach and Lexia as helpful for addressing problems of comprehension and fluency.

Pennsylvania Virtual Charter School described implementing Title I and Step Up programs in order to provide intensive individualized support in both mathematics and language arts classes. Catholic Schools K12 Virtual Schools reported using individualized instruction, tutorials, scaffolding of curriculum, and varied technologies/media. As Slavin and Madden (1989) document:

> *Effective programs frequently assess student progress and adapt instruction to individual needs. Virtually all of the programs found to be instructionally effective for students at risk assess student progress frequently and use the results to modify groupings or instructional content to meet students' individual needs. (p. 11)*

Individualizing instruction has been an effective strategy in working with at-risk student populations, even in traditional programs.

Instructional Strategies to Support Achievement

Certain programs, such as Brady Exploration School and North Carolina's Virtual Public School Credit Recovery Program, highlighted the use of specific instructional strategies, such as mastery learning to ensure student success. Mastery learning is a classic pedagogical approach dating back to the 1960s and 70s that focuses on learning rather than performance (Block, 1980; Block & Burns, 1976). Assessment strategies are directed toward understanding. Students are provided with the opportunity to revise their work based on specific feedback until they meet the targeted outcomes. For example, students from Brady Exploration can only receive grades of A, B, or C. This approach positions at-risk students for a successful education experience through the dedication of teachers and staff who provide students with ongoing feedback. While the amount of feedback and number of individual interactions required of a mastery approach may be overwhelming to some, it can serve as an effective strategy (Slavin, 1987), especially when working with populations that may be at-risk. While traditional instruction assumes that students' performances are based on time and effort, mastery-based instruction assumes that mastery is the result of teacher effort and guidance, both of which are central to successful online programs. Online courses offer flexibility to students who need expanded learning time to master complex content, an approach that has shown success in innovative classroom-based and online schools (Cavanaugh, 2009).

Successful Results for Programs

Due to the strategies implemented by virtual schools working with at-risk student populations, programs mentioned higher graduation rates as one of the positive outcomes. Minnesota Services Cooperative Online Learning Program reported that they had 82 seniors graduate from their respective schools this year who otherwise may not have completed successfully. North Carolina

Virtual Public School Credit Recovery program also experienced a similar outcome; they "have many situations where students who were not successful in the face-to-face are now successful and on track for graduation because of our Credit Recovery program."

In addition to graduation benefits, some programs believe that by investing in at-risk students, positive affective results are observed. According to the response received by Infinity Online, "the students have developed a very close relationship with their teachers and have grown and flourished through one-on-one tutoring sessions and the support of the teachers who have encouraged them throughout the year." This sense of getting to know students in a more personal, one-on-one manner was another benefit of working with students. Still other programs, such as Wyoming e-Academy of Virtual Education indicated that the flexibility of their program resulted in positive outcomes for students "If students drop out in November or March, once they realize they can't earn credit in their current school for whatever reason, they don't have to wait until the new semester to come back to school. They can start in our school at anytime." It is evident from these experiences that virtual programs working with student populations who may be at-risk are experiencing positive outcomes as a result of their efforts.

Suggested School Level Interventions for At-Risk Student Populations

Online programs that have experience working with struggling students have specific recommendations for other virtual schools seeking school-level interventions for their own at-risk students. Many of these programs reported increased contact and communication between teachers/mentors/learning coaches and students/families. For example, Visions in Education K-12 Public Charter School suggested early direct services and communications with students and families to explain program benefits and responsibilities, specific clarification to ensure that students understand expectations, more teacher-student contact to support struggling students, and full accountability for teaching staff to ensure they provide excellent service to students. This theme is echoed throughout many of the responding programs, including LAMP Online High School, Minnesota Services Cooperative Online Learning Program, and North Carolina Virtual Public School Credit Recovery program.

Another strategy is to identify students who may be at-risk as early as possible to ensure that they receive the necessary attention and support needed for their success. The program coordinator for Kirkwood High School Distance Learning suggested that it would be helpful for online programs if they were working with at-risk students to be aware of that information so that the program is able to implement ideas from the onset. Likewise, Primavera Online High School believed that better diagnosis of student skill levels would be beneficial so that adaptation of instruction to the appropriate levels could be implemented. They also describe the importance of identifying and addressing student expectancies to emphasize instructional goals and correlations to employment opportunities.

Other strategies include school specific implementation of online curricula and scheduling. Shannon County Public Schools suggested a combination of approaches: allowing for flexible site access, one-to-one daily support, year-long registration for classes, the possibility for accelerated course completion, in addition to program staff and personnel taking responsibility for student success. In fact, rolling enrollment is a strategy suggested and used by many of the reporting programs. Along

these lines, Catholic Schools K-12 Virtual School believes in the importance of using multimedia to engage students in the instructional process and to differentiate instruction to meet the needs of each individual student. Online materials present unique challenges for students with disabilities, requiring attention to web accessibility and universal design for learning principles (Keeler & Horney, 2007).

Finally, some programs, including Chicago Public Schools Virtual High School and Idaho Virtual Academy highlight the need for professional development of teachers, mentors, and staff, and suggested better training for on-site mentors who need to know how to manage the classroom, find resources to assist students, and coordinate the services of a reading specialist. In their evaluation of the ACCESS Alabama program, Roblyer, Freeman, Stabler and Schneidmiller (2007) found that school-based teachers or "facilitators that are directly working with students day by day are key to the success of the [K-12 online learning] program" (p. 11). The school-based teacher or facilitator was first formally identified as one of the three teacher roles in the virtual school environment by Harms, Niederhauser, Davis, Roblyer and Gilbert (2006); as a part of their Teacher Education Goes into Virtual Schooling initiative.

Student Success

By implementing strategies such as the role of teachers and support staff helping students progress through their classes, individualizing instruction through the affordances of technology, ensuring that students have ongoing access to the technology they need (Roblyer, Davis, Mills, Marshall, & Pape, 2008) and specific instructional strategies that support achievement, programs serving the needs of students who may be "at-risk" have defined successful outcomes in a variety of ways, all of which deal with the progress that the student is making while in various courses and as a participant in the virtual school program. Some programs measure success as the students' ability to complete coursework, and if they master the standards set for academic achievement as a result of the teaching and learning process, while others define it as a decrease in course drops. Other programs look to standardized assessment, course grades, graduation rates, and/or a decrease in student absences, truancy, or other behavioral issues.

Vignettes

This next section profiles these programs: Commonwealth Connections Academy, Hope Online Learning Academy, and Learn at My Pace. The three programs profiled represent snapshots of the strategies that were being used to address the needs of at-risk students throughout K-12 online schools at the time they completed the survey.

Commonwealth Connections Academy

Key Features:

- Provides students with Personalized Learning Plans,
- Employs a program for developing proficiency in foundation-level language arts and mathematic skills,
- Focuses on core content achievement and study skills,
- Provides expanded online and face-to-face tutoring for at-risk students, and
- Stresses early identification of at-risk students.

Commonwealth Connections Academy (CCA) is a public cyber charter school authorized by the Pennsylvania Department of Education. The school serves students in grades K–12 from anywhere in Pennsylvania. In 2008-2009, the school served over 1200 students in grades K-6, approximately half of whom qualified for free and reduced lunch programs.

At CCA, at-risk students are identified through a number of formative and summative assessments including state tests, the Terra Nova Test, DIBELS benchmarks, and curricular assessments. Connections Academy has developed the Longitudinal Evaluation of Academic Progress® as the diagnostic tool to assess students' academic strengths and weaknesses. Assessment results are used to individualize a student's academic program. These assessments are administered in the fall as pre-tests and again at the end of the school year as post-tests in the April/May timeframe. Pre-test results are used to develop the student's Personalized Learning Plan. Post-test results provide data about student's progress throughout the academic year and are used in planning for the next school year's academic program.

> *In grades 3-8, the Program for All Children to Excel (PACE) was created to ensure that all Connections Academy students attain proficiency in foundation level language arts and mathematic skills. Students who have not been successful in the core curriculum, and have not demonstrated mastery of the skills and knowledge required by their grade level state standards, make up the target population. Students are assigned a personalized course of study that allows for increased learning time in their areas of academic weakness. Time spent on electives and other supplemental courses is minimized to focus on basic skills. PACE students are placed in smaller classes with specially trained teachers and have a smaller student-to-teacher ratio. PACE teachers use Study Island, a web-based test preparation program, to assess students' academic skill weaknesses. Study Island is also used to introduce and reinforce the state's tested language arts and mathematics skills. PACE teachers increase the occurrence of direct instruction through the extensive use of LiveLesson® and Study Island. PACE fosters a strong foundation in basic skills and increases self-confidence as the students succeed in the program. In grades 1-2,*

additional strategies include the School Support Team, the Fast Forward brain-based reading program, and online tutoring through LiveLesson® as well as face-to-face tutoring in the school office.

In addition to the PACE Program, peer tutoring in the upper grades has been successful. Peer tutors work one-on-one with their fellow students offering academic support and expertise in an informal setting. Online counseling sessions take place throughout the school year. Curriculum Based Assessment diagnostic verifications through phone conversations not only gauge student performance and progress, but also help guide instruction. This continuous assessment and feedback ensures that the student is not falling through the cracks.

CCA administrators recommend identifying students early so that extra support can be put in place for the parents. Such supports include explaining the program's focus and pace. In addition, educating teachers about the support programs, working with parents so they openly discuss their children's learning problems, interventions targeted to help students, ways to choose assessments that identify at risk, and increasing engagement in courses are also strategies that have helped the school in meeting the needs of at-risk students.

Hope Online Learning Academy

Key Features:

- The Response to Intervention model;
- One-to-one and small group direct instruction;
- Software, including Lexia® and My Reading Coach®;
- Spanish curriculum available for English language learners; and
- Student Attendance Review Boards.

Hope Online Learning Academy (HOLA) is an online public charter school serving approximately three thousand students in Colorado. Its program is characterized by individual learning plans and access to face-to-face mentoring in learning centers located within fourteen districts throughout the state. Many of HOLA's students are considered at-risk under the definition ascribed by this brief; the program addresses the needs of these students with multiple resources.

One key to remediation is the Response to Intervention model that not only provides tools for assessing and identifying students' achievement gaps, but also provides teachers with instructional components such as quality instruction, problem-solving teams and process monitoring. Students can receive one-on-one or small group instruction, both online or in-person at the learning centers. In addition to teacher instruction, students can receive remediation through software designed to increase reading proficiency. HOLA's Spanish speakers have access to an ESL coordinator as well as a Spanish curriculum to help bridge their language acquisition.

The program has also enacted policies meant to provide accountability and mastery of requisite skills. For example, students must achieve mastery of concepts before they are permitted to progress in the online curriculum. Also, in an effort to reduce absences and truancy challenges, HOLA established a Student Attendance Review Board that is tasked with meeting with families, students, and school personnel in order to develop plans to address attendance issues.

Finally, HOLA plans to increase its efforts to verify the effectiveness of its progress monitoring systems, but also recognizes that student mobility makes that task challenging.

Learn at My Pace

Key Features:

- Coaching teams for all students,
- Curriculum with built-in notifiers to alert teachers of academic needs,
- Rigorous curriculum,
- Supportive school staff, and
- Constant communication.

Learn at My Pace (LAMP) is a statewide online high school serving Minnesota students. Curriculum at LAMP is a combination of courses developed by Apex Learning (including many advanced placement options) and Literacy Advantage (for English language learners and students who need to develop additional reading skills). High school students transferring to LAMP generally have transcript information that permits coaching teams to identify at-risk students.

The heart of LAMP's program is the coaching team that is tasked with the mechanics of school (course selection, progress monitoring, communication, etc.) and with developing a relationship with each student. According to LAMP's program director, coaching teams are given these instructions: "Know your students so you know what motivates them in order to help them succeed. Let them know you are a teacher or administrator who cares." School staff uses the registration process, conferences, telephone, and other tools for communicating with families and developing relationships. Communication is not reserved for informing about deficits, but also for appreciating positive effort and success. Teachers and coaches must contact all of their students weekly unless there are drops in progress, in which case they contact students more often. LAMP acknowledged that families of at-risk students historically have limited relationships with school staff. By focusing on building relationships with students and their families, LAMP hopes to impact student achievement.

Challenges for Virtual Programs

While many online programs have identified the need for working with populations who are "at-risk" and have developed strategies for doing so (in addition to ways of measuring student success) this process is not without its challenges. One of the main issues reported was the difficulty in establishing and maintaining student engagement and motivation, and being able to hire teachers and staff who recognize the importance of doing so. LAMP Online High School describes this specific hurdle as helping colleagues understand that each student has needs and strengths and those who are not doing well in class have a reason that needs to be identified and addressed. According to the program director, these students need true motivation through validation and meaningful relationships instead of simply needing instruction. Wyoming e-Academy of Virtual Education echoed this concern, citing a lack of self-motivation and chronic academic failure as factors that prevent students from being successful in areas where they do have academic strengths because they believe they cannot learn in any area.

Students also need help developing their time management skills as well as their ability to navigate through assignments, as described by Catholic Schools K-12 Virtual School:

> *Time management needs to be taught so that at-risk students do not procrastinate when in an online class. They also need additional help when navigating multi-task assignments and assessments in the online world, (for example, completing coursework, posting to discussion boards and doing a paper for submission to teacher in one week).*

Another problem facing supplemental programs has been getting support and assistance from their local school or school district, while helping the traditional schools understand that the virtual model is not for every student, nor is it a "cure-all" for struggling students. Virtual programs also face some of the same obstacles as their traditional counterparts in garnering parental support, reducing the impact of student mobility, increasing retention, and addressing the lack of resources, including access to technology.

Implications for Practice, Research, and Policy

Professional development is needed for virtual teachers in meeting the needs of students with disabilities, identifying at-risk students, and differentiating instruction, topics that are not part of the current professional development programs for the majority of virtual teachers (Rice & Dawley, 2007). Professional development is also needed for tutors, facilitators, counselors, and other school support staff who work with at-risk students. The path of professional learning should begin with educator and administrator preparation programs, including internship and practicum experiences in virtual schools and with at-risk students as a requirement for professional educator and leader certification.

Policy ought to strengthen and integrate comprehensive data systems into the instructional design and teaching processes in virtual schools. Data illuminate relationships among teachers, students, content, and interactions in courses that inform and guide teaching practices (Ferdig, Cavanaugh, DiPietro, Black, & Dawson, 2009). Such data systems must identify students with Individual Educational Plans so online schools can address their needs and monitor their progress as it results from various supports, designs, and practices. In this way, the virtual schooling community can aggregate data across school models to learn how best to meet the needs of a wider range of students.

All online courses must be made accessible to all students. Over 13% of K-12 students receive special education services and they are increasingly drawn to online courses to meet their unique needs (Keeler, Richter, Anderson-Inman, Horney, & Ditson, 2007). Research is needed into the design of learning environments that support at-risk students, in particular the balances among online and face-to-face time, the support relationships with adults, effective and academic supports, parent/family support, and the contribution of expanding learning time.

Section Summary

The purpose of this section has been to share various virtual school programs from across the nation who are working with student populations who may be "at-risk" and who have developed strategies for helping these students succeed in their academic endeavors. These strategies include having faculty and staff assist students in progressing through their classes, individualizing instruction through technology, and specific instructional strategies that support achievement. Virtual schools working in this area have specific recommendations for other programs looking to work with at-risk students, including increasing contact and communication between teachers/support staff and students and their families, identifying students who may be at-risk as early as possible, implementing specific online curricula and flexible scheduling, and working with teaching and support staff to ensure they are able to meet the needs of online students who may be "at-risk." These virtual programs have had various successes, as measured by an increase in course completion rates; standardized test scores; and graduation rates, in addition to a decrease in course drops, student absences, truancy, or other behavioral issues (Watson & Gemin, 2008b).

However, this undertaking is not without its frustrations. Reported challenges include issues with student engagement and motivation, hiring and training of qualified teachers and support staff, providing students with the necessary skills in order for them to be successful in an online environment, along with decreasing student mobility, improving parental support, and providing additional resources, including access to technology.

While working with students who could be identified as "at-risk," virtual programs are faced with a unique set of opportunities. The Lead Curriculum Developer from Primavera Online High School encapsulates this challenge well:

> *Too many have been trained to expect total responsibility for education to lie with the educational organization. At-risk by definition entails those who have not "bought into" the educational program. To lift the "at-risk" label means to become engaged in the educational process. Consequently, it is imperative to shift the responsibility for education, at least in part, to the learner. That shift is not accomplished magically, and requires a consistent effort from the institution, and precise diagnosis of the student's skills and expectancies, in order to respond appropriately to his/her academic needs.*

By investigating the strategies used by various K-12 online programs to meet the needs of at-risk students, describing their experiences from a programmatic level, and examining recommendations to similar programs, the first section of this issues brief seeks to inform the broader K-12 online community with regard to working with students who belong to at-risk student populations. The second section of the brief focuses on the teaching practices, instructional strategies, and the online delivery and design methods employed to assist at-risk students who enroll in online classes.

Trends and Instructional Practices for Teaching At-Risk Students in K-12 Online Programs

Battan and Russell (1995) stated that "there is no such thing as the 'typical' at-risk student, and therefore there can be no 'typical' program or program components" (p. 90). Embracing a philosophy of using self-paced curriculum and individualized instruction has helped to reach students who have had limited success in traditional educational systems (Hurley, 2002). Key factors for improving at-risk student outcomes are: small class and/or school size, flexible approaches to timetabling and to learning needs, alternative programs that improve access and choice in the curriculum, individualized programs, recognition of the learner by allowing self-direction and ownership of the learning process, promotion of positive student/teacher relationships, and accessible re-entry for students who wish to return to school (Dwyer, 1996; Maptone, 1999; Webber & Hayduk, 1995).

Wheeler, Miller, Halff, Fernandez, Gibson, and Meyer (1999) asserted that at-risk students have the potential to succeed if their needs are recognized and addressed. To be successful, both face-to-face and online learners need to be motivated and engaged in tasks and course participation. "While motivation tends to be an internally driven characteristic, it is also known that external factors such as the teacher, course design, and learning activities can and will influence motivation within the context of learning" (Aragon, Johnson, & Shaik, 2001, p. 14). In her study of cyber school students, Weiner (2003) found that motivation was one of the key factors in determining success in the K-12 online learning environment.

Roblyer (2006) indicated that it is not surprising that virtual programs that enroll a high percentage of at-risk students are much more likely to have high dropout and failure rates. Creating and using prediction models to identify at-risk virtual learners has assumed an increasing urgency in virtual schooling (Roblyer & Davis, 2008). In the absence of such models, this section explores some of the teaching practices, instructional strategies, and online design and delivery methods used with at-risk students.

Methodology

This section aims to identify specific teaching practices and instructional strategies, as well as online design and delivery methods used to assist at-risk students who participate in online courses from virtual providers. A survey was created to determine the types of programs and practices that virtual schools use to assist at-risk students to successfully complete online coursework. It was designed and administered to virtual schools internationally, and then analyzed to determine specific techniques being utilized out in the field to assist at-risk students to successfully complete online courses.

In order to create a common understanding of the meaning behind "at-risk", the authors of this section provided the following description to the survey participants:

> *Students at risk for dropping out of school, those who may be retained until graduation through participation in virtual programs, include students with identified special needs, students in*

racial/ethnic minority groups (which may be a proxy for low socio-economic status), students with high absenteeism, students with behavior problems, students with low academic skills, students with high residential mobility, students in larger families, students with convicted parents, students with low attachment to school or community, and students who are not native English speakers.

Sixteen virtual institutions responded to the survey; fifteen were from the United States and one was from Turkey.

Results

Of the 16 respondents, only one school reported that it was specifically designed to teach at-risk students. Fourteen of the virtual schools responded that they felt it was necessary to create specific programs, activities, or practices for at-risk students in a virtual environment. Eight claimed that less than 30% of their online student population could be designated as at-risk based on the definition used in the survey. Seven virtual schools reported that 50% or more of their student population could be classified as at-risk according to the same definition. One school responded that it was trying to track this statistic starting this current school year (i.e., 2009-10).

Fourteen of the respondents stated that at-risk students are referred to their school, six of these schools reported that the student referrals came from the local school districts within the geographical area of the school. Two online schools received students from juvenile correction agencies and truancy courts. Ten of the online schools advertised that they work with at-risk students, including using brochures, presentations, fliers, informational meetings via WebEx technologies, direct marketing, and a program website, along with sharing the virtual option with local school districts and collaborating with other online programs. Twelve of the virtual schools reported that there were no additional costs for developing specific programs that were designed for at-risk students. Of those that had additional costs, the range was between $150,000 and $250,000 per program.

When asked to select the types of programs or practices for at-risk students utilized at their virtual school, more than half of the schools responded with the following:

- Mentoring
- Synchronous meeting/tutorials
- Differentiated instruction based upon various learning styles
- Extended calendar to complete online work
- Learning activities that relate to real life
- Alternative options
- Curriculum that encourages self-motivation, self-assessment, and independence
- Project-based learning
- Smaller virtual class sizes
- Remediation programs

- Offering an academically challenging curriculum
- Programs that create the belief that teachers and fellow students care about the welfare of at-risk students
- Computer literacy programs
- Time management

We can conclude from these survey responses that virtual programs understand the need to create alternative learning venues for students with learning difficulties that classify them as being at-risk. The current task is to track the success of these learning programs to determine which prove advantageous in improving online course completion for at-risk students.

There were four trends identified based on the data provided by the sixteen schools: increasing mentoring and tutoring, using data to evaluate student needs and screen, identifying and evaluating at-risk factors, and individualizing instruction.

Mentorship and Tutoring

Mentoring and tutoring was identified as important for supporting at-risk students. In terms of mentoring, one school replied that "every student has an 'iMentor,' a supervising teacher, and a school counselor in addition to class teachers." All of these people checked on the student regularly to help them succeed. Another virtual school responded that they offered "online individual tutoring, site-based tutoring sessions, academic coaches, and online extra-curricular activities" (e.g., clubs, newsletters, and yearbook). While not focused on at-risk students, Barbour (2007) found that students in one rural school rarely utilized the supports made available by a supplemental virtual school, choosing to rely upon their school-based teachers (even when those teachers were not subject matter experts in the specific course the students needed assistance).

Pre-Screening and Continual Screening

The use of screening to identify students needing support is another prominent theme. One online school described how they developed a special program that uses Lexile scores with each of their students upon entering the online school. They stated, "key to our program is the Lexile which we use extensively to determine reading and comprehension levels and use this in all of our academic assignments." The Lexile Framework for Reading is an educational tool that connects readers with materials using a common measure called a Lexile. It denotes both reading ability and text difficulty on the same scale. Together educators are able to select reading material that both meet and challenge a reader's unique abilities and interests (Metametrics, 2009). This school utilized this application with all of their students because it feels that "any student who does not have a program that is designed for them and that meets their needs and learning style is at risk".

Another virtual school uses the Learning and Study Strategies Inventory (LASSI), designed to gather information about learning and study practices and attitudes. Students complete the LASSI assessment upon enrollment to ensure proper placement. Finally, another online school reported they use the Response to Intervention (RtI) to assist students who are struggling. This school identifies students who are at risk, monitors their progress, and designs interventions to support their success. This strategy has the potential to offer the intellectual stimulation, communicate

excitement and joy in the learning process, and enable at-risk students to work with educators who understand them and their unique needs (Diamond & Dutra, 2007).

Identifying At-risk Students

When asked how schools specifically identify at-risk students, three of the schools stated that they either do not know how students are identified or do not have a formal definition for at-risk. Twelve of the remaining 13 schools identify at-risk students through an enrollment questionnaire, teacher referral, local school registration for students retaking courses, recommendations from school district, intake interview, consultations with parents and school personnel, testing, a red flag process that includes attendance, progress, and academic testing performance, or indications on applications as to whether a student has an Individual Education Plan. The remaining school only serves students who are designated as at-risk. In addition to the initial screening of their students, some virtual schools identified that "modifications are done depending on the level of performance," with one school reporting that they send an "intervention specialist to work with students."

Two of the virtual schools stated that it is their local school policy and school district who determine if student enrollments are approved. One school indicated that they have a trial enrollment period of 14 days in which students are allowed to withdraw from their program and receive a partial refund. This allows students to try a course and determine if it is right for them. Hawkins and Barbour (2010) found that over 80% of virtual schools have trial periods that range from as little as one day to as long as 185 days.

The question was posed as to how schools assessed whether students have the skills necessary for success in a virtual environment. Two of the responses indicated that they do not know how their school assesses their students, with the remaining responses identifying the following techniques: a week-long orientation at the beginning of each semester, iMentors who keep tabs on the students' academic progress, an interview process, recommendations from teachers and guidance personnel, pre-testing, past records and transcripts, student's independent reading ability and level of motivation to succeed in school, introductory inventory and online readiness course, and by looking at the student's present level of performance.

Instructional Practices

There are several instructional strategies that are common to many of the virtual schools surveyed. For example, synchronous learning activities and web conferencing are cited as teaching practices utilized to assist at-risk students. In some schools, mandatory face-to-face meetings between students and teachers are required every two weeks for a minimum of one hour. To assist with independent demands often associated with online courses and at-risk students, some of the virtual schools responded that they encourage students to work on a reduced number of courses taken at one time. One school indicated that they have a student assistance program that was coordinated by counselors and teachers. When at-risk students are identified, "they are assigned to a member of the team who monitors the work that is done and facilitates solutions in order to keep the student on track." Another school stated, "We usually work with them one-on-one, creating smaller pieces of assignments for them." Other schools indicated that they offer a flexible setting and time to complete assignments, as well as granting extensions when needed.

Multiple schools indicated that an online orientation is required before taking an online course to help students with the necessary prerequisite computer skills. Another school stated that they offer help desk and instructor assistance as a means to build computer literacy skills. Others offer "one-on-one training sessions using Elluminate classrooms, recorded training videos, PowerPoint presentations, and teacher generated 'how to' documents." One school offers a basic computer class that the students take, with another school making all students attend 20 hours or more of in-building orientation to help build computer literacy skills. "Hands on help sessions [are] delivered face-to-face for students who struggle with technical aspects of online learning," reported another virtual school. One school indicated, "Since [we are] an online school, basic computer literacy is required for entrance."

One school summed up these instructional supports as:

> *We believe and have put into practice the commitment to meaningful relationships between student and teacher. This is in accordance with volumes of research on reaching and teaching at-risk youth. We create positive educational outcomes for students who do not fit the traditional high school mold.*

Through specific instructional strategies, continuous monitoring of students, and the development of appropriate assistance programs, virtual school remains promising for at-risk students. The design and use of prediction models described by survey participants continue to aid virtual instructors while supporting student success.

Section Summary

While many believe that online learning can create opportunities for students to develop skills and acquire knowledge supported by quality curriculum, it should be noted that these programs may not be the most suitable educational environment for every student (Mulcahy, 2002). The contrast between what is required to be successful in an online course and the traits most at-risk students possess emphasizes the necessity for the development of specific programs within virtual schools that cater to both non-traditional distance education students and at-risk students. Virtual education institutions need to recognize what makes learners at risk in order to accommodate them. Without these supports, the promise of virtual schooling as a means to provide access to high-quality educational opportunities for students who traditionally lack such opportunities will be out of reach for many at-risk students (Davis & Roblyer, 2005).

Conclusions and Implications for Future Research

The purpose of this issue brief was to provide the first survey of K-12 online learning programs for issues and policies related to at-risk. In their annual *Keeping Pace with K-12 Online Learning* report, Watson, Gemin, Ryan and Wicks (2009) reported there were approximately 175,000 full-time students engaged in online learning in the United States. As Barbour (2009) speculated, many of these full-time online learners fall into the category of "at-risk". The first section of this issues brief explored how virtual schools were attempting to meet the unique needs of this population of

students at a program level, while the second section explored how virtual schools designed and delivered instruction to at-risk students.

With the publication of issues briefs, the iNACOL Research Committee also attempts to set an agenda for future research in that specific area. As Scherer (2006) indicated in her discussion of the research on student issues related to virtual schooling, "the sample of students needs to be broadened to determine if these findings hold true for a greater number of students…" (p. 19). As the literature to date has primarily focused on the higher ability student, clearly more research is needed into the experience of these students at the other end of the spectrum. As such, we recommend the following as possible avenues for future investigation:

1. Explore how the identification of at-risk students affects the attrition and course completion rates in virtual schools and what measures virtual schools take once a student has been identified as being at-risk.

2. Identify the assessment and prediction tools, models, and instruments used to remediate students' knowledge, skills and abilities to enable success in the online environment.

3. Determine specific design and delivery models of virtual schooling that have empirical evidence of improving completion and attrition rates with at-risk students.

4. Examine the factors that facilitate high levels of student engagement and contribute to the development of a positive learning community in virtual school environments.

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