

# The NetTutor® Online Tutoring Service: *A Research Proven Strategy for Student Success*

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## Introduction

NetTutor is a Web-based online tutoring service. The NetTutor website, trademark, and interface technology are owned by Link-Systems International, Incorporated (LSI), a privately-held distance-learning software corporation in Tampa, Florida (*Online Tutoring*).

NetTutor went live in 1996 making it arguably the first private online tutoring service providing both *synchronous* tutoring (where both learner and tutor are live simultaneously and chat with each other), and *asynchronous* tutoring (where the learner submits a question or composition which will be reviewed and returned by a tutor). LSI also developed, maintains, and leases hosted access to a proprietary Java applet whiteboard-style interface (the WorldWideWhiteboard®) with which NetTutor conducts tutoring in both modes. All NetTutor operations – tutoring, management, and technical support – are conducted at LSI's main office in Tampa (Businessweek).

## Origins and Development of NetTutor

Link-Systems International was launched in 1995 by professors from the University of South Florida in Tampa with the goal of making every type of academic resource available on the Web.

The company was incorporated in the state of Florida on February 27, 1996. NetTutor was the firm's first product and went live later that year. LSI began to lease the technology supporting NetTutor (originally under the NetTutor name, as well) in the following year.

## Textbook publishers

NetTutor was the first online tutoring service to integrate with textbooks. Access to NetTutor, for instance, has been packaged with certain McGraw-Hill math, science, and accounting books since approximately 1997 (Smith & Kline, 2004). Over the subsequent years, NetTutor has been packaged with higher education textbooks published by John Wiley and Sons, Pearson, Cengage Learning, and Bedford, Freeman and Worth. The subjects tutored have multiplied to include such fields as allied health, computer science, writing and composition, and world languages (Kersaint, Barber, Dogbey & Kephart, 2011).

## Research on the NetTutor interface

Early research into NetTutor was conducted by educators eager to employ technology in their own classrooms. Consequently, it focuses on technical issues such as usability and robustness, but it also discusses the ability of participants to express themselves in effective online discussion of specialized subjects, especially mathematics. A study at Hampton University in 1999 concluded that NetTutor could effectively support such activities as online office hours (Verma, 1999).

- The whiteboard-like nature of the NetTutor interface (today marketed separately by LSI as the WorldWideWhiteboard) offers tools to support subject-specific online chat and to illustrate concepts. For instance, researchers at Stony Brook University found that "[d]espite some flaws, according to our research NetTutor remains the only workable math-friendly e-learning communication system" (Smith & Ferguson, 2004).
- Similar results were found using NetTutor technology and tutors at Utah Valley State College in a study describing the use of NetTutor as "[o]ne of the earliest synchronous models for math tutoring" (Turrentine & McDonald, 2006).
- Another study conducted at the University of Idaho beginning in 2005 shows increasing acceptance of Web-based online tutoring by students in the university setting (Thomas, Li, Knott, & Li, 2007).

## Breadth of usage

- By 2007, LSI reported that NetTutor tutors had conducted over one million online tutorial sessions (*1,000,000<sup>th</sup> Online Tutoring Session*).
- The NetTutor service has expanded from its initial ties with the textbook publishing industry and now directly reaches learners in a variety of environments, such as at college-track high school programs, for-profit schools, programs associated with the labor movement (ALEKS), public universities, and community colleges (Fairmont State GEAR UP).

## NetTutor Today

NetTutor focuses on the specific goals of groups of students. A learner may access NetTutor by one of the following methods:

- The learner may directly purchase tutoring time from the NetTutor website
- The learner may receive a limited amount of usage free with the purchase of a new textbook
- The learner may receive NetTutor assistance while enrolled in specific courses if his school has chosen to provide tutoring through NetTutor

The NetTutor service is typically integrated into an existing virtual learning environment such as a publisher Web portal, a learning management system like Blackboard®, Moodle, or Sakai, or else into a specific campus tutoring website requiring students to enter special access codes.

NetTutor assistance is of the "academic-assistance" type (Kersaint et al., 2011). Conversations take place in a shared virtual whiteboard environment. In addition to providing for the free placement of text on the screen, the whiteboard is equipped with a toolbar for inserting math, chemistry, accounting, or English proofing symbols. Learners may submit their writing or questions for tutor review, or may choose an available live tutor and engage in synchronous discussion. Learners may save or print out their live tutorial sessions, but live tutoring is exclusively one-on-one. Queued tutoring access offers other learners part of the benefit of a group discussion, as does the bulletin board feature of NetTutor.

Recent research published about NetTutor suggests that offering students the use of online tutoring as a resource in a traditional "brick-and-mortar" setting leads to an increase in student persistence and achievement (Kersaint, et al, 2011).

## NetTutor and the Essential Elements of Online Tutoring

LSI has consistently expressed awareness and has designed NetTutor operations to address the controversies which continue to surround the use of third-party distance-learning solutions. The most frequently expressed include concerns about how students and adult learners use or misuse the online tutoring resource, whether and how faculty can gain support for their teaching through the service, and how parents or program administrators and leaders can gauge the effectiveness of online tutoring.

### Academic Honesty

Some online providers express indifference or fatalism regarding the possibility that students will use tutoring to cheat (Caron). LSI has built a firm stand against academic dishonesty into the practices of NetTutor. With each institution, NetTutor establishes guidelines as to the content of the assistance given by tutors. In particular, this involves the use of Socratic questioning and problem-modeling to eliminate answer-giving in favor of step-by-step facilitation of learning.

Tutors are acquainted with the learning goals of a program, course, or institution. Usually the tutors are acquainted with the course a student is taking. A library of relevant textbooks is maintained on NetTutor facilities.

### Conflict of Interest?

At some services, the tutor solicits further student purchase of tutoring time. This is not the case for LSI, which has its own corporate-level marketing and sales teams. In these cases, the role of the tutor as educator may be compromised by his or her implied role as salesperson.

The business arrangements between users of the NetTutor online tutoring service and LSI are entirely separate from tutoring activity. That is, tutors are incentivized to deal efficiently with a steady flow of inquiries, not to extend sessions to collect funds. In fact, there is no charge for processing, retrieval, viewing, or archiving tutoring sessions. NetTutor is not in competition with teachers, but is instead an entirely supplemental service.

## Tutor Qualifications

A constant concern is that tutors be qualified to discuss questions learners ask. At NetTutor, this is assured through a centralized organization. Academic credentials (masters and doctoral degrees in the area tutored), problem-solving ability, and skill at online communication are areas under constant review at the service's facilities. The effectiveness of the NetTutor tutor training program is assured through affiliation with national learning organizations.

## Tutoring Pedagogy

One benefit of the use of a shared environment enjoyed by the staff of NetTutor is that it facilitates a guided development the tutor's use of best-practices of pedagogy and andragogy practices and communication methods. In addition, lead tutors and tutor program coordinators conduct hands-on review of how tutors use their training (Anthony, 2010).

NetTutor maintains a degree of *pedagogic agnosticism*, providing tutors and technology adaptable to any specific pedagogy adopted by a given institution.

## Availability and Relevance of On-Demand Tutoring

NetTutor provides 24/7 support in every area it tutors. Specific hours of coverage are arranged on an institution-by-institution basis. The tutors, with learner's textbook and even the course syllabus at hand, commit to the specific learning goals of each student. This addresses a long-standing concern of educators that tutors might not be engaged in the same learning issues as the student (Neville, 1999).

## Technical Issues

Use of Web-based education requires understanding, and efficient technical support. NetTutor provides a link on each of its pages to a top-tier customer and technical service team to resolve issues of individual learners. LSI provides institutions with direct contacts at NetTutor. This means that there is always a person who can quickly look into any larger issues that arise.

LSI statistics show up-time for the NetTutor servers at 99.999%.

## Due Diligence and Online Tutoring

Given its long track record and the great variety of implementations of NetTutor, LSI welcomes the inquiries of any campus, publisher, or other stake-holder in education. In the rapidly expanding distance learning field, online tutoring done correctly is one of the most effective tools available.

It is a matter of due diligence for anyone exploring the possibility of using a third-party vendor of online tutoring to inspect closely the work of any candidate service. Indeed, there are institutions that have found this out through bitter experience. They may have hired tutoring services where the tutoring was outsourced across the globe, and where pedagogical and communication standards were not heeded. They may have encountered companies with complex, unaccommodating pricing schemes. Still others have had difficulty obtaining student usage statistics on time.

## The NetTutor® Online Tutoring Service

By focusing on the quality of tutoring and the hours of availability, and with LSI's expertise to rely upon for technical and business support, NetTutor is a very strong offering in the online tutoring market. More than that, however, NetTutor has acquired a stature in the academic community as a pioneer in online support that systematically addresses the needs and concerns of all stake-holders.

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## About Link-Systems International, Inc.

### LSI Mission Statement

Link-Systems International is the leader in providing integrated technology and service solutions to educators in order to improve the quality of education and training, ensure student success and retention, and provide affordable education to students, workers, and their families.

### Our Company

Link-Systems International, Incorporated (LSI) is a privately held technology services and content development company that has been dedicated to student success and student retention in K-12 education, higher education, and workforce development education since 1995.

Our core technologies include a very flexible online tutoring/teaching platform, an online grade book, an online algorithm engine with metadata and workflow capabilities, and an online business intelligence/data mining technology designed to provide real-time alerts regarding student/school/teacher performance, attendance, and other metrics.

Our core services include content development, consulting, and online tutoring through our NetTutor® brand.

Our customers include K-12 publishers, higher education publishers, virtual high schools, higher education institutions, technology companies, and joint programs dedicated to providing online educational content to members of organized labor and their families.

We are located in Tampa, Florida, a few miles from the University of South Florida. Along with the Moffitt Cancer Center -- one of the premier medical research institutions in the United States -- USF has excellent engineering, computer science, and mathematics programs, providing LSI many of its employees.

Launched in 1995, LSI has created several unique and powerful technologies that facilitate the sharing of content over the Internet. We specialize in mathematics, technical, and scientific content -- the most critical types of online content with respect to student success, and the most difficult to share online.

Today, LSI is recognized by a variety of publishers and educational institutions not only for its high-quality work and dedication to meeting commitments, but also for its unique ability to develop digital strategies that are custom tailored to the needs of its customers.

## The NetTutor® Online Tutoring Service

Our partners and customers have come to value and trust LSI because we are the only company that offers a complete suite of interoperable solutions that address the entire life cycle of the student, with an overt focus on the bottom line: student success and student retention. That student life cycle includes:

- \* Online Assessment and Placement
- \* Content Authoring
- \* Content Recovery, Content Management, and Metadata Management
- \* Online Teaching, Collaborating, and Tutoring
- \* Online Homework and Testing
- \* Online Grade Book Technologies
- \* Online Real-Time Performance Monitoring and Intervention

Through a relationship with LSI, educators acquire the ability to construct a complete, holistic approach to student success and student retention.

### **Corporate Executive Team**

Vincent T. Forese, President, Chief Executive Officer

William K. Barter, Senior Vice President, Sales, Marketing, and Business Development

Dr. Emil Moskona, Senior Vice President, Chief Operating Officer

Dr. Yanmu Zhou, Senior Vice President, Chief Technology Officer

Dr. Milena Moskova, Vice President, Research and Development