Online Tutoring and the Offshoring of Education

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ABSTRACT: With the rise of the Internet, tutoring – one-on-one adult-to-child instruction – has moved into the virtual realm. Now, widespread access to increasingly sophisticated and inexpensive computer equipment combined with economic considerations have resulted in the tutoring business moving offshore, particularly to India. This paper explores the resulting debate about the appropriateness and effectiveness of offshore, online tutoring and what makes for quality online tutoring in general.

Introduction

Tutoring is likely as old as the human race itself (Kalkowski, 2001). From early hunter-gatherers who taught their children survival skills to volunteer after-school homework-helpers in 21st century America, the history of tutoring is lengthy and varied. For the purposes of this paper, a tutor will be defined as "a private instructor who teaches a specific educational subject or skill to an individual student" (Wikipedia, 2006), and an online tutor will be defined as a tutor who teaches in real time over the Internet.

Well-known American for-profit educational companies, such as Sylvan Learning and Kaplan Inc., have conducted face-to-face tutoring in the United States for decades (Sylvan Learning, 2006; Kaplan Inc., 2006); it is only natural that with the rise of the Internet, such leaders in the tutoring industry would expand their operations into the online environment. Online tutoring allows providers to reach students in remote communities who might not otherwise have access to tutoring services (Murray, 2005). Moreover, online tutoring provides the convenience and flexibility of round-the-clock availability right in the student's home – online tutoring sessions can be scheduled for nearly any time that works for the client – which is a boon to often overscheduled students and their families (Educational Gateway, 2005). Finally, and perhaps most important, online tutoring is considerably less costly than traditional face-to-face tutoring (Smart Schools Program, 2005). This is especially significant when considering populations, such as African-Americans, for whom one-on-one tutoring has traditionally been economically unfeasible (Journal of Blacks in Higher Education, 2002); online tutoring may be the most viable way for such families to provide these services to their children.

Since President Bush signed the No Child Left Behind Act (NCLB) in 2002, which in part compels failing primary and secondary schools nationwide to provide their students

with supplemental educational services (SES), the online tutoring business has expanded greatly (Reeves, 2005). Because of this increased demand and the lure of federal dollars provided through NCLB, "onshore" online tutors (who are located in the same country as their clients – in this case, the United States) have faced growing competition from the relatively new breed of "offshore" online tutors (who teach clients in the United States but are located overseas). While offshore online tutors (OFOT) may be based in any number of countries, such as Korea and China, the most significant single group of OFOT serving clients in the United States is located in India. Therefore, the remainder of this paper will focus specifically on Indian OFOT, and the acronym OFOT will refer to online tutors based in India and working with clients (students up through 12th grade) based in the United States.

Today, OFOT are at the center of a growing controversy over how NCLB funds are spent on SES and the larger issue of outsourcing tutoring jobs overseas in general. This paper, a review of the current literature regarding offshore online tutoring, will examine the issues surrounding the OFOT debate and explore the question of what makes for effective, high-quality online tutoring.

What Is Offshore Online Tutoring?

Online tutoring began in the 1990s (Hu, 2006), and online tutors located in India began servicing the United States in 2002 (CNN, 2005); as of 2005, a total of five Indian firms were tutoring students in the U.S. (Das and Paulson, 2005). Some of these companies, such as TutorVista, are headquartered in India along with their tutors. Others, such as Growing Stars, have a home office located in the United States but have all or most of their tutors located in India. Other, U.S.-based tutoring firms, such as BrainFuse, outsource a percentage of their total tutoring jobs to India but maintain a majority of American tutors on staff.

Initially providing tutoring in the fields of math and science, OFOT services have expanded to provide tutoring in history, geography, business studies and even English. Some companies provide clients with a choice of a U.S.-based or India-based tutor, particularly for subjects like English, although they may charge a premium for choosing an American tutor. Clients who complain about a tutor's accent or are otherwise dissatisfied may be offered a change of instructor (Rai, 2005).

Typically, an OFOT reports to work at a tutoring center in any of a number of Indian cities in the wee hours of the morning, which corresponds to late-afternoon or early-evening hours – prime tutoring time – in the United States. Tutors and their clients communicate through a combination of Voice-over Internet Protocol (VoIP), online whiteboards, electronic pad-and-stylus set-ups, and somewhat less commonly, webcam. The tutors may also have copies of their students' textbooks and follow along with the same school curriculum. Tutors motivate their clients with games and puzzles and reward them by flashing smiley faces and stars on the computer screens (Rai, 2005; Reeves, 2005).

OFOT are often highly educated; many hold undergraduate or graduate degrees in their subject areas and some have prior teaching experience. To avoid cultural misunderstandings and help ensure ease of communication between tutors and their clients, OFOT receive accent, cultural and technology training through their companies. Growing Stars boasts of its tutors receiving two weeks of training in, among other things, differences between British English (the standard in India) and American English (Rai, 2005). OFOT learn to understand American slang and substitute American English words for British English (such as saying "eraser" instead of "rubber") as well as work to make their accents more understandable for their clients (Rai, 2005). Tutors also have to accustom themselves to praising American students far more than Indian students and incorporate other American-style teaching methods into their sessions (Das and Paulson, 2005). Some OFOT even adopt American-sounding pseudonyms to use with their clients (Honawar, 2005), and the India-based tutors of at least one OFOT firm, Socratic Learning Inc., were recently discovered to be informing their American students that they were based in Texas (Garland, 2006).

Undoubtedly, one of the most attractive features of OFOT is the cost. An online tutor based in India may charge the client as little as $15/hour, typically half as much as is charged by a U.S.-based online tutor and less than a third of the average hourly rate for face-to-face tutoring. Several OFOT companies offer unlimited online tutoring for a flat fee of $100/month. OFOT are paid an average of $8-$10 an hour, or anywhere from $280-$450 a month. While far more affordable for employers than hiring U.S.-based tutors, this comparatively high pay rate by Indian standards makes online tutoring an attractive job opportunity for recent graduates in India; many OFOT are in their 20s or 30s (Prystay, 2005), and a single ad for a tutoring position might result in 200 or more qualified applicants (Honawar, 2005).

The OFOT Debate

Supporters of online tutoring in general point out that it is convenient, cost-effective and, because of its "faceless" nature, can often put shy students at ease in a way that is impossible with face-to-face tutoring (Bradley, 2005); critics note that the difficulties of maintaining Internet service in rural areas (GAO, 2004), general technological weaknesses such as hard-to-read virtual writing and inaudible audio (Online Mathematics and Statistics Tutoring) and the very "facelessness" cited as a benefit above, all constitute significant and worrisome drawbacks.

Both onshore and offshore online tutoring programs share these characteristics when compared with face-to-face tutoring. However, there is a growing controversy about the relative benefits and drawbacks of onshore online tutors (ONOT) and OFOT. This controversy has taken on new urgency as outsourcing firms are being approved to receive federal SES funds under NCLB and the American Federation of Teachers and others sound the alarm about American teaching jobs being sent overseas.

Supporters of OFOT point out that while the United States is in the midst of a teacher shortage, particularly in the areas of math and science, India is awash in engineers, mathematicians and science majors who, thanks to rigorous university entrance exams

and stringent higher-education curricula, are well-qualified to tutor American K-12 students (Prakash 2005). Far from taking jobs away from Americans, supporters claim that OFOT are simply filling a gap (Reeves, 2005).

The American Federation of Teachers (AFT) does not see it this way. While it does concede that there is a shortage of American teachers in certain subject areas, the AFT asserts that instead of outsourcing teaching jobs to India, the U.S. government should put more resources into recruiting and training Americans to become teachers in these high-need fields (Reeves, 2005). Others, such as the U.S.-based online tutoring firm SMARTHINKING, feel that there is no teacher shortage in the United States at all. Instead, they believe it to be a problem of distribution only: qualified American teachers are simply not geographically located where they are needed most. By using online technology, SMARTHINKING claims, enough qualified ONOT can be drawn from around the U.S. to provide for the tutoring needs of American students wherever they are (Noon and Douglin, 2000).

Critics also question whether the claims of OFOT quality live up to the reality. Regulating and monitoring online tutoring is challenging to begin with as industry standards are few and the industry itself is so new; it becomes even more difficult when tutors are located overseas (Rai, 2005). They question how familiar OFOT are with state-specific curricula and whether OFOT can effectively teach across not only a physical but also a cultural divide (Das and Paulson, 2005). Furthermore, OFOT do not complete the criminal background checks and fingerprinting that are often required of ONOT and face-to-face tutors; in October of 2006, the New York Education Department cancelled its contract with Socratic Learning Inc., which employed 250 OFOT, because those tutors could not be subject to criminal background checks (Suneja and Bannerjee, 2006). Adding insult to injury in the eyes of the AFT, certain school districts such as those in Boston and Chicago are prohibited from offering their own tutoring services to students while approved tutoring providers can hire OFOT without any oversight, amounting to a "gross double-standard" (Das and Paulson, 2005). Concerns have risen to the point that Congress has gotten involved; the United States Government Accountability Office has recently authored, at the request of nine members of Congress, two reports on the implementation and evaluation of SES at the state and local level (GAO, Aug 2006; GAO, Sep 2006).

Anecdotal evidence suggests that whatever concerns professional educators and politicians may have, parents of students enrolled in OFOT programs and the students themselves are generally satisfied with the OFOT experience (Das and Paulson, 2005; Rai, 2005; CNN, 2005; Prystay, 2005). Students report feeling a sense of connection with their tutors despite the physical distance; they are often interested in learning about their tutor's culture and find real benefit in the tutoring they receive. Despite initial misgivings about tutoring quality, language or cultural issues, parents report an increase in their children's grades, sometimes after only a few weeks spent working with an OFOT, who – if paid for on an unlimited monthly plan – can be accessed daily if desired. OFOT seem to reciprocate these positive feelings; they report feeling a sense of connection with their students, despite some initial misgivings such as having children

call them by their first names instead of by the more formal titles accorded teachers in India (Rai, 2005). OFOT also report that they enjoy their jobs and appreciate the excitement and enthusiasm of their American students (Honawar, 2005).

Towards a Standard of Quality in Online Tutoring

What constitutes quality in online tutoring? The Education Industry Association (EIA), a professional association of private education providers, has compiled what it claims is the first-ever set of guidelines to outline the requisite skills and knowledge for tutors in general (Education Industry Association, 2006). The EIA reports that "[t]he guidelines were developed by and for the education service industry, which includes individual tutors, as well as companies that operate learning centers, test prep services, schools (including charter schools), education management services, and alternative and special education programs." These guidelines establish three levels of qualified tutors: Master Tutor, Tutor and Educational Assistant. Their qualifications are listed in Table 1.

Table 1. Education Industry Association (2006)

Master tutor:	· Demonstrated knowledge of the education service provider's education program/model · A Bachelor's degree and/or teaching certificate · Completion of a research-supported tutor training program if the degree is not in education
Tutor:	· Demonstrated knowledge of the education service provider's education program/model · Undergraduate work totaling at least 60 credit hours · Completion of a research-supported tutor training program · Supervision from an education service provider
Education assistant:	· Demonstrated knowledge of the education service provider's education program/model · Possession of at least a High School diploma · Completion of a research-supported tutor training program · Supervision by an education service provider

It is apparent that these qualifications serve as an outline of the minimum requirements that can be reasonably expected of paid tutors, such as the completion of at least a high-

school education and demonstrable knowledge of the education provider's instructional program. However, while these qualifications may serve as an aid to the private education industry's administrative arm in advertising for and hiring a particular class of tutors, they do not speak to the larger question of what makes for effective and high-quality tutoring within the tutoring experience itself.

While limited research asserts that other forms of instruction may be just as effective (Schacter, 2000), the widespread belief, held by educational scholars and laypeople alike, is that one-on-one, adult-to-child tutoring is by its very nature the most effective form of instruction possible (Bloom, 1984). Researcher Timothy Shanahan reports being told by both teachers and researchers, "Of course [tutoring] works. They teach only one child at a time. Anything would work that way" (Shanahan, 1998). It is, however, unclear as to *why* one-on-one, adult-to-child tutoring is effective (Juel, 1996). Betterton and Nash, as reported by Hylan and Postlethwaite, in conducting one of the few thorough investigations into the design, implementation and evaluation of academic tutoring, stated, "We have not cited any supporting literature for two reasons: there isn't very much [and] what there is, isn't of practical value" (Hylan and Postlethwaite, 1998). Understandably, therefore, no body of literature exists that examines these questions within the online realm.

There is, however, a significant body of literature related to peer tutoring (one child tutoring another child of the same age) and cross-age tutoring (an older child tutoring a younger child), mostly in the face-to-face environment. There is also a small but growing body of literature related to online tutoring, mainly in the university setting. Therefore, in the absence of direct research into best practices in one-on-one, adult-to-child online tutoring, these related resources provide a starting point for discussing a standard of quality in this emerging field. Although there are arguable three main quality-related issues inherent in the OFOT debate – instructional, affective and technological – the remainder of this paper will concentrate on instructional quality and will only touch on affective and technological issues as they relate directly to that area.

Instructional Quality

One of the generally-accepted methods of learning is through problem solving (Albanese and Mitchell, 1993); traditionally, such fields as mathematics rely heavily on problem solving in both teaching and testing, and tutoring often follows suit. However, research also indicates that students who possess too little expertise in the field of study may not benefit from problem solving and problem-based learning due to cognitive overload (Sweller, 1988). One value of a tutor, therefore, is to help bridge this gap for the student, lightening the cognitive load and providing a guided learning-by-doing experience that gives students the benefits of learning by doing while avoiding some of the costs (Merrill, Reiser, Merrill and Landes, 1995; Merrill, Reiser, Ranney, Trafton, 1992). In other words, an effective tutor "maintain[s] a delicate balance, allowing students to do as much of the work as possible and to maintain a feeling of control, while providing students with

enough guidance to keep them from becoming frustrated or confused" (Merrill, Reiser, Ranney, Trafton, 1992).

The extent to which tutors should intervene when assisting students in problem solving and the types of intervention that produce optimal learning are still under debate. Commonsense advice states that tutors should be careful not to "do the work for the learner" (Harris, 1980). Research, however, indicates that a certain amount of giving away the answers is not only commonplace, but also an acceptable and beneficial tutorial practice. The degree to which the tutor should "do the work for the learner" or makes the learner figure out an answer for herself seems to be determined in large part by the nature of the learner error.

Researcher Michelene Chi (Chi, 1996) outlines three types of tutor feedback – corrective feedback, didactic explanations and suggestive feedback – each of which provides a greater or lesser amount of information and error-correction to the learner. According to one study by Chi, both corrective feedback (in which a tutor provides a straightforward correction to a student's error) and suggestive feedback (in which a tutor alerts the student to an error without actually identifying and/or providing a correction) result in learning, while didactic explanations – lengthy explanations of the material – do not (Chi, 1996). A later study (Chi, Siler, Jeong, Yamauchi and Hausmann, 2001), however, finds that certain types of explanations do, in fact, promote learning; these are listed in Table 2.

Table 2. (Chi, Siler, Jeong, Yamauchi and Hausmann, 2001)

<u>Types of Explanations that Promote Learning</u>

- Rephrasing text materials by linking to prior knowledge and integrating with to-be-introduced information

- Introducing extraneous information that fills gaps in text materials

- Repeating information in text materials

- Rephrasing information in "everyday," easy-to-understand language

- Eliciting constructive responses from students

Corrective feedback, according to Chi, improves student learning of the "ideal template" (i.e., the target curriculum) and occurs when a student has made an outright error, such as choosing the wrong equation to solve an algebra problem (Chi, 1996). Similarly, Merril, et al, found that low-level syntactic errors (such as omitting a quotation mark during a computer-programming tutorial) elicit immediate corrective feedback ("Now remember to quote that…"), either with or without an explanation of why that correction was necessary (Merrill, Reiser, Merrill and Landes, 1995). Reinforcing feedback, a subtype

of corrective feedback, also enhances learner acquisition of the "ideal template" and occurs when the student has done something correct (Chi, 1996). This reinforcing feedback occurs as an ongoing part of the problem-solving process, with students in one study receiving an average of 6 instances of reinforcing feedback per problem solved and each instance of feedback occurring almost as soon as the error appeared (Merrill, Reiser, Merrill and Landes, 1995). Both types of feedback decrease the floundering that comes with cognitive overload (Chi, 1996) and keep the problem-solving process productive (Merrill, Reiser, Merrill and Landes, 1995).

Suggestive feedback ("hints") helps put the learner back on the right path but leaves the actual problem solving up to the learner herself. Such hints may take the form of surface-feature feedback (which points out where the error is but does not directly suggest a way to fix it) or plan-based feedback (which simply restates the goal the student should be pursuing but leaves both the diagnosis and the correction of errors to the learner) (Merrill, Reiser, Merrill and Landes, 1995). Both types of suggestive feedback engage students in an interactive learning process ("co-construction" or "scaffolding") that leads to a deeper understanding of the material than corrective feedback (Chi, 1996); in one study, even when tutors provided no corrective feedback or didactic explanations at all, students were still able to learn as well through suggestive feedback alone as they were through a combination of all feedback types (Chi, Siler, Jeong, Yamauchi and Hausmann, 2001). The benefits of suggestive feedback hold true in peer tutoring situations as well, with the most successful peer tutors engaging in a high level of scaffolding with their tutees (Juel, 1996).

Instructional quality in tutoring is clearly determined in large part by tutor-student interaction during problem solving. Effective tutoring minimizes learner floundering in connection to low-level errors (since the cognitive payoff for the learner in discovering her own solutions to such errors is low) while supporting and guiding the learner to discover her own solutions to higher-level errors, which provides the largest cognitive payoff. So, what additional considerations exist in the online environment and within the online tutoring industry that might affect instructional quality?

One of the key factors in the success of any tutoring scenario, online or face-to-face, is training; research indicates that "the effectiveness of tutoring is strongly influenced by the quality and the amount of training received by tutors" (Boylan and Saxon, 1998, 2002). The question then becomes what constitutes quality and sufficient amount?

While certain child literacy programs provide their volunteer adult tutors with only a few hours of training before allowing them to work with students (Baker, Gersten and Keating, 2000), given the "delicate balancing act" outlined above, the two weeks of training cited by OFOT provider Growing Stars seems woefully inadequate to provide a solid foundation in tutoring technique, much less also provide the technological training required by all online tutors and the cultural and language training specifically required by OFOT. While there are clearly considerations of cost-effectiveness and return on investment, tutor training should not be sacrificed at the cost of learner success. Further research is obviously necessary to provide concrete suggestions for developing online

tutor training programs that maximize effectiveness while remaining economically feasible for the companies administering them.

Another factor in the quality of instruction in online tutoring is the quality of the technology used in the endeavor. With computer technologies as widespread and easily obtained as they are today, there is little difference in the types of technologies used by ONOT and OFOT. As indicated earlier, Voice-over Internet Protocol (VoIP), webcams, online whiteboards, and electronic pad-and-stylus set-ups are the most common technologies in use at this writing.

However, the very nature of these technologies raises a host of questions related to instructional quality:

- How is instructional quality affected by the presence or absence of video (via webcam) in online tutoring? Is there a quantifiable benefit to shy students in having a "faceless" tutor, as at least one anecdotal report seems to imply (Bradley, 2005)? Are other students negatively affected by this same "facelessness"?
- How do VoIP delays affect student interpretation of feedback and resulting assumptions about error correction? In a 1991 study, researchers found that a delay of even less than one second in a face-to-face tutor providing reinforcing feedback could result in a student assuming that she had made an error during problem solving (Merrill, Reiser, Ranney, Trafton, 1992). Will students unconsciously adjust to the unavoidable lag time in current VoIP technologies or will tutoring effectiveness be disrupted?
- How do mid-session interruptions due to dropped connections and other technological failures affect instructional quality, if at all? Is there an "acceptable frequency" of interruption beyond which instructional quality is impaired beyond reasonable hope of recovery?
- To what extent can an online tutor serve as a role model or mentor to a learner? If the tutor as mentor "empowers young people to do for themselves what their mentors begin by doing for them" (Reglin, 1997), how is student empowerment – and any related academic benefit – affected when the tutor is not physically present?
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Independent of technology, other questions related to instructional quality might include:

- What effects, if any, do cultural and/or language differences between tutor and learner have on the effectiveness of tutoring?
- Is there a statistically significant difference in the instructional effectiveness of OFOT and ONOT, and if so, what are the causes?

Clearly, there is a need for further research to explore these rich areas of inquiry.

OFOT Versus ONOT: Looking to the Future

The OFOT debate is not likely to fade away any time soon. The recent decision by the New York Education Department to cancel its contract with Socratic Learning Inc. has led OFOT supporters to question whether the problem is really a lack of criminal background checks on tutors who will never come into physical contact with their

students (Andreatta, 2006) or whether this is anti-Indian bias pure and simple (Vick, 2006). Whatever underlying forces may be prompting the current debate, independent research into best practices in the emerging field of online tutoring is one way to ensure that students receive the best possible learning experience from both ONOT and OFOT.

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