

Monitoring and evaluating e-tutors in the digital age

Bhushan Talwar¹, Shradha Kanwar², Vijay Mandke³

¹ (Educational Technology, NIIT University, India)

² (Educational Technology, NIIT University, India)

³ (Educational Technology, NIIT University, India)

Abstract : *E-tutoring is emerging as an effective teaching learning intervention to address the prevailing e-learning challenges in the digital age. The author in his previous research paper ‘Adaptive Remediation Solutions Design Framework and Implementation for Student Success’ has identified the current gap and recommended Learning to learn driven remedial interventions for improving overall learning experience and student success rate. For the effective implementation of Adaptive Remediation Solutions framework, e-tutors need to be continuously monitored and evaluated to teach in the online and blended learning environments. This paper ascertains the need of an effective monitoring and evaluation criteria for e-tutors in the digital age. The monitoring and evaluation criteria emphasizes the importance of learning effectiveness by promoting interactive and effective learning, immediacy behavior by timely and quality pedagogic interventions, learners’ engagement by creating conditions to keep learners committed to the learning process and ensuring steady progress towards completion of the course activities and student surveys by implementing effective feed-backward mechanism to continuously improve learning outcomes. It’s a process centric timely intervention to improve convergence technology enabled educational technology skills of e-tutors in the information age and thus enabling them to enhance the teaching-learning interplay to improve overall learning outcomes.*

Keywords: *Monitoring criteria for e-tutors, Instructor onboarding and evaluation criteria for effective e-tutoring, Preparing e-tutors for student success, 21st century tutoring skills*

I. Introduction

E-tutoring is emerging as an effective teaching learning solution to the prevailing e-learning challenges in the digital age. A white paper by Cherie Mazer, Ed.M, entitled Online Tutoring: A New Retention and Remediation Solution, found that while the number of students enrolling in undergraduate degree programs has increased 34% from 2000 to 2009, the number of those students who are unprepared for college has increased proportionately. According to Virtual Strategy Magazine, fully 60% of students entering community college require at least one remedial course (James Marshall Crotty, 2012) [1]. Thereby, it indicates that e-tutoring is seen as a personalized intervention to address individual learning requirements.

E-tutoring is different from traditional tutoring and requires 21st century skill to impart effective delivery of instructions. Thereby, it requires different set of onboarding & evaluation criteria for continuous development of e-tutors to ensure better learning outcomes in the digital age. Sahiba Pahwa in her article ‘21st century educators? You must know these skills’ has mentioned that teaching in the 21st century is definitely not an easy task. Students are digitally focused and have more free access to information challenging thus the traditional prototypic picture of the teacher as the knowledge instigator. Engagement is also another serious issue that makes educating such kind of students a real nightmare. It takes so much creativity, originality, and novelty from the part of teachers to get students motivated and engaged. Technology has the cure but this cure cannot be effective unless teachers know how to use its prescription. Teachers need to acquire certain digital skills that are detrimental to the success of their instruction and without which no learning objectives could be cultivated. (Pahwa 2013) [2]

The author in his previous research paper ‘Adaptive Remediation Solutions Design Framework and Implementation for Student Success’ has identified the current gap and recommended Learning to learn driven remedial interventions for improving overall learning experience and student success rate. E-tutoring applied with Adaptive Remediation Solutions Framework focuses on creating a personalized, customized and timely anchored instructional interplay between the teacher and the learner leading to adequate analysis of learner’s engagement and effective and constructive assessment process (Talwar et al 2015) [3]. The aim is to have teachers to digitally empower diverse learners to connect, communicate and collaborate by creating a rich environment indulging technology in the classroom to help them evolve. 21st century education requires technology integration to help make the world a smaller place and encourage social and collaborative learning to ensure flow of information is not limited to the classroom but goes beyond it to commence projects and work. Siddhika Bajpai in her article ‘Vision: 21st Century Learning, Teaching, and Education’ stated that “The aim is to have teachers to digitally empower diverse learners to connect, communicate and collaborate by creating a

rich environment indulging technology in the classroom to help them evolve. The main aim is to make the students learn in a more impactful manner by integrating words with visuals and other means of technology to help them grasp more. 21st century education does not involve only learning the traditional way, but also to integrate technology to help make the world a smaller place, to make the interaction go beyond the classroom and classmate to virtual trips and multi-region and multi-nation interactivity to commence projects and work (Bajpai, 2013) [4]

For effective implementation of Adaptive Remediation Solutions framework, e-tutors need to be onboarded, monitored and evaluated to teach in the online and blended learning environments. The monitoring and evaluation criteria needs to emphasize the importance of learning effectiveness, quality and timeliness of response, learners' engagement and student surveys to continuously improve instructors digital skills to support the learning process itself by providing instructions, stimulating questions, examples, feedback, motivation to deliver better learning outcomes. In other words, e-tutors need to be supported to improve on their Convergence Technology (CT) enabled Educational Technology (ET) skills to enhance the overall teaching-learning interplay. CT constitutes convergence of computing (Net and Mobile Computing included), wireless sensory networks and telecommunications, consumer electronics and content. CT enabled ET has productized the classroom and provided abundant opportunities for higher education worldwide in the form of e-learning, e-tutoring supporting teacher-learner, learner-learner, and learner-content communication.

II. Approach

The focus of this research is to design an effective onboarding and evaluating criteria for e-tutors in the digital age. The work involves identification of drivers for enhancing the e-tutoring experience by exploring and documenting best practices and key learning for designing the onboarding and evaluation criteria. As a part of the implementation of this model, e-tutors are educated in the process of tutoring by emphasizing and enhancing learning effectiveness, quality and timeliness of response, learners' engagement and student surveys to support the learning process itself by providing instructions, stimulating questions, examples, feedback, motivation to deliver better learning outcomes.

III. E-Tutor Monitoring And Evaluation Criteria In The Digital Age

In distance education, learners are separated by time and space and e-tutor plays a pivotal role to support the learning process by timely interventions. These interventions are carried out by means of Convergence Technology enabled Educational Technology in the digital age. Initial and ongoing training, mentoring, and assessment of effectiveness are keys to the success of any tutoring program whether it is face-to-face or virtual. Sulcic and Sulcic (2007) developed and demonstrated a successful e-tutoring program. Training programs are designed to help the e-tutor understand the specifics of e-learning and become familiar and competent within an online learning environment (p. 208)[5]. The below mentioned monitoring and evaluation criteria has been identified for e-tutors in the digital age.

3.1.1 Learning Effectiveness - Interactive & Effective Learning

The goal of education is learning. So, learning effectiveness is rated as one of the most critical parameters to judge education in the digital age. "Learning Effectiveness means that learners who complete an online program receive educations that represent the distinctive quality of the institution. The goal is that online learning is at least equivalent to learning through the institution's other delivery modes, in particular through its traditional face-to-face, classroom-based instruction. Interaction is key." (Johnson et al 2000) [6]

As noted, what research there is linking interactions with instructors and student learning is based, for the most part, on perceptions of the same. Richardson and Ting [7], for example compared the perceptions of two groups of students involved in asynchronous learning. They found that students learning through written correspondence with instructors were more concerned with instructor feedback than any other sort of interaction with their instructors, whereas students learning online felt that all interactions with instructors mattered. Shea, et al [8] found significant differences in perceived learning among students interacting with their instructors at differing perceived levels. Students who reported low levels of interaction with their instructors also reported the lowest levels of learning. Conversely, students who reported high levels of interaction with their instructors also reported higher levels of learning from them. Swan, et al. [9] found a strong correlation between student perceptions of learning and their perceived interactions with instructors. Richardson and Swan [10] similarly reported a significant correlation between student satisfaction with their instructors and their perceived learning online, and Jiang and Ting [11] found correlations between perceived interactions with instructors and perceived learning.

Interaction refers to reciprocal events involving at least two actors and/or objects and at least two actions in which the actors, objects, and events mutually influence each other (Wagner, 1994) [12]. Irrespective of the learning theories we hold (behaviorist, constructivist, cognitivist, or social), mutual interaction in some

form is integral to our notion of how we learn. Similarly, interaction is widely cited as the defining characteristic of computing media [13, 14, 15, 16, 17]. Researchers concerned with computer-based education have identified three kinds of interactivity that affect learning: interaction with content, interaction with instructors, and interaction among peers (Moore, 1989) [18]. Interaction with content refers both to learners' interactions with the course materials and to their interaction with the concepts and ideas they present. Interaction among peers refers to interactions among learners which also can take many forms -- debate, collaboration, discussion, peer review, as well as informal and incidental learning among classmates. In any educational setting, the instructor serves as an expert who plans instruction to stimulate students' interests, motivates their participation in the learning process, and facilitates their learning. The relationship between instructor/student interactions and learning outcomes has been well documented in traditional classrooms [19, 20]. It stands to reason that interactions with instructors would be equally important online. Interaction with instructors includes the myriad ways in which instructors teach, guide, correct, and support their students. The interactions between e-tutor and learners that take place in the class need to be observed to determine effectiveness as an instructor. Specifically, the instructors need to be evaluated on the effectiveness in elucidating the course objectives, maintaining clear and supportive communication with students, and creating an engaging learning environment. Each of these modes of interaction support learning and each can be uniquely enacted in online learning environments. The student success rate is a good indicator of learning effectiveness. It's a percentage of learners successfully completing the course over the total number of learners enrolled for the course. The Student Success Rate is collected on the completion of the course and is a good indicator of interactive and effective learning.

3.1.2 Immediacy Behavior – Timely & Quality Interventions

Hillman et al maintained that user-interface interaction involved more than just the mediation that occurs between senders and receivers in all communication, but rather entailed genuine and ongoing interactive processes through which users developed mental models of the interface based on their interpretations of its structure and actions. They further contended that learner-interface interactions were critical because failure to interact successfully could dramatically inhibit learning. For example, a student who has difficulty navigating folders or asynchronous conferences may completely miss vital course content or instructions. At the very least, students who must devote significant mental resources to interface interaction will have fewer resources to devote to learning. On the other hand, productive interactions with well-designed interfaces can enhance learning by elucidating knowledge structures or scaffolding knowledge creation (Hillman et al, 1994) [21].

Process-centric timely interventions are designed to facilitate the teaching-learning interplay by providing customized and differentiated instructions and feedback on the basis of analysis of the learning risk. The key is to monitor learners progress at an intermediate level since the progress at an intermediate level is tied with the success in the final goal. At times, working in the online environment is new for both tutors and students. Miller recommends "trying to encourage the students as much as possible because they often tend to feel quite lost, alone and discouraged. Let them know that the online procedure is new and will get easier" (S. Miller, personal communication, April 21, 2001). Timely intervention helps in improving immediacy. Immediacy refers to perceived "psychological distance between communicators" (Kelley, 1988) [22]. In traditional, face-to-face classrooms, educational researchers have found that teachers' immediacy behaviors can lessen the psychological distance between themselves and their students, leading, directly or indirectly depending on the study, to greater learning [22, 23, 24, 25, 26, 27, 28, 29, 30, 31].

Educational researchers have found that both teachers' verbal immediacy behaviors (i.e., giving praise, soliciting viewpoints, humor, self-disclosure) and their non-verbal immediacy behaviors (i.e., physical proximity, touch, eye-contact, facial expressions, gestures) can lessen the psychological distance between teachers and their students, leading (directly or indirectly, depending on the study) to greater learning. For example, while early research on immediacy posited a direct relationship (learning model) between teachers' immediacy behaviors and both cognitive [22, 23] and affective learning [23, 24, 25], more recent immediacy research has come to believe that intervening variables mediate the relationship. In motivation models [26, 27, 28], the intervening variable is hypothesized to be state motivation. In these kinds of models, teachers' immediacy behaviors are conceptualized as increasing students' motivation to learn resulting in greater affective and cognitive learning. In Rodriguez, Plax and Kearney's [29] affective learning model, affective learning itself is seen as the intervening variable; that is, teacher immediacy behaviors are seen as increasing students' affective learning which in turn affects their cognitive learning.

Whatever the proposed model of the relationship between teacher immediacy behaviors and learning, a positive relationship between teacher immediacy and learning has been clearly documented in the research literature. This has led certain theorists to suggest that asynchronous media, because they are less personal than media which transmit non-verbal and/or vocal communications, are less capable of representing teacher immediacy, in this literature referred to as "social presence" [32, 33, 34], hence, by implication, are less capable of supporting learning. Researchers and practitioners experienced with online teaching and learning, however,

contest this view. They argue that rather than impersonal, computer-mediated communication often seems “hyper-personal” [35], that participants in computer mediated communications create social presence by projecting their identities through verbal immediacy behaviors alone [36, 11, 37, 38, 39]. This latter research, however, centers on online course discussions, hence on interactions among discussion participants, of which interactions between instructors and students are only a small, usually unidentified, fraction. As previously noted, research focusing on the roles instructors play in online discussions and their relationship to knowledge creation and learning within them is definitely a priority. Also of interest are other sorts of interactions between online instructors and students such as instructor feedback on assignments, journaling between instructors and students, and teaching presence in online lectures.

In today’s information driven environment, instructors immediacy behavior needs to be closely monitored and continuously honed for deep learning and better retention and are developed by sharing additional and preparatory content for students to supplement standard instructions, clarifying students’ doubts by understanding the context of the difficulty, providing quick resolution through synchronous learning (online chat) and sharing digital resources for quick reference and reinforcement of learning. Rich media, multimodal interplays provided through CT enabled ET in the form of internet, email, online chat, discussion forums, collaborating tools, social networking platforms need to be used to enhance/exhibit immediacy behavior. Immediacy behavior helps in reducing perceived psychological distance among instructors and learners. This becomes critical in the case of online learning where instructor and learners are separated by time and distance. Timely responses to student questions and assignment submissions are critical. Quick feedback keeps students on track with their academic progress and assures them that they are not alone in the learning process. Conversely, delays on instructor’s part can quickly lead students to experience feelings of isolation and demotivation. As a result, instructors are advised to login to their online class daily and check for submissions that require their attention. The instructors are recommended to provide query resolution and intervention to graded assignments within defined timelines.

4.1.1 Engaging Students

Student engagement in the class is at the heart of instructor’s mission. The best learning occurs when students are engaged – when they are doing things instead of sitting passively and listening. A classic study by the National Training Board US found that students retained only 5% of the information they received in lecture twenty-four hours later. Retention rates increased to 75-90% when active learning involving peer teaching was used instead of lectures. Other active learning methods (e.g., demonstration and discussion) also resulted in higher retention rates (30% and 50%, respectively). In another study of the effectiveness of lectures (McLeish 1968; cited in Fink 2003), students were tested on their understanding of facts, theory, and application after hearing a lecture that was specially designed to be effective. Despite being able to use their own lecture notes and a printed summary of the lecture, average student recall after the lecture was only 42%. A week later recall had dropped to only 20% [40] [41]. In a recent review of the effectiveness of active learning, Prince (2004) found extensive, widespread support for active learning approaches, especially when activities were designed around important learning outcomes and promoted thoughtful engagement [42]. Many instructors recognize that active learning results in significant improvements in student knowledge retention, conceptual understanding, engagement, and attitudes about learning. According to Vonderwell and Zachariah (2005, p.214), “Learner participation is an essential element for active and engaged learning”[43]. Although student participation is not a direct measure of learning, its necessary in order for a discussion to occur in the first place; and through the discussion, it is more likely that learning takes place (Dennen, 2005) [44].

So, student engagement promotes learning in the classroom and is important for receiving the full benefit of class discussions, announcements, and learning materials. If learners do not attend regularly, interact with classmates and class materials, and invest themselves actively in the learning process, they are unlikely to succeed academically. Therefore student engagement is a critical aspect of monitoring and evaluating e-tutors in the digital age. In order to analyze this correlation, tracking of students is done on the basis of learners engaging in one of the following activities: a) submission of a course assignment, b) participation in a course discussion thread by posting a comment, question, or response related to a course topic, c) submission of an “Ask the Instructor” question in the course management system, or d) submission of a Quiz or Exam. Instructors are encouraged to track student participation and engagement using this feature and to contact learners who appear to be disengaging from the class.

The engagement is measured primarily in terms of regular submission of graded assignments and successful course completion. E-tutors needs to make their presence regular, visible in the classroom. The job of an instructor is largely about creating conditions that will keep students committed to regular attendance in the class and steady progress towards completion of course activities. E-tutors need to participate frequently in class discussions and stay vigilant about creating the conditions necessary for lively and engaging class discussion and offering strategies to complete pending assignments. Students enjoy sharing their ideas. They need to be

provided with an assignment/challenge to do so in the Discussion Forum. It's advisable to post valuable and encouraging announcements in the digital classroom to promote student engagement. The announcements need to be fun, useful to the learning process, informative and a source of new and exciting information.

4.1.2 Student Surveys – An effective feed-backward mechanism

Generally speaking “little is known, still, and users’ perceptions and behaviors when interacting with online learning environments, reinforcing the dichotomy between designers and users’ perception of how web based environments ought to work.” (Hemard 2006: 262)[45]. The role of the tutor as an intermediary between learner and course becomes therefore even more important in all aspects of learning. A big part of that is listening to what the learners have to say and to invite learners to give feedback. It should not be forgotten that the teacher-learner relationship in an online environment is substantially different from the one learners are used to from their face to face teaching experiences (White 2003: 98) [46], and that the necessary adjustments can cause anxieties, frustrations and undermine their confidence.

There is no question that ongoing feedback from learners is vital for monitoring and evaluating e-tutors in the digital age. An effective feedback loop between tutors and learners is not only generally stimulating, but can greatly help in avoiding mistakes, in the sharing of successfully strategies, exchange of experiences and, last but not the least, it can lighten the burden of responsibility, especially if the tutor is running a course on his/her own. Student Surveys are considered to be important tool to feedback information on the instruction, delivery and learning modality. Students are asked to complete a course survey every quarter for each course in which they are enrolled. Responses are given on a 5-point scale (5 being the best score) and pertain to a range of course components including content, delivery, instruction, and support services. Students also have the opportunity to provide individual comments on any aspect of the course that they feel warrants special attention. The learning administrative staff reviews the results of these surveys to identify areas of potential improvement at the program, course, and instructional levels. Part of the overall evaluation as an instructor includes the ratings instructors receive from their students.

IV. Conclusion

E-tutoring is emerging as a preferred intervention to address prevailing e-learning challenges. E-tutoring is different from traditional tutoring and thereby requires 21st century information savvy skills to engage students in the learning process. If not engaged, students may get easily distracted and get dropped from the course. At times, instructors are not fully equipped with convergence technology enabled educational technology teaching-learning skills and need regular monitoring and feedback to bridge the gap. It's critical to bridge the gap since learners (recipient of knowledge) are pretty active in the information age and have access to all the information and knowledge resources in the world. These information learners need to be digitally empowered by creating a rich environment indulging technology in the classroom. This ensures that learning is not limited to the classroom but goes beyond it to commence project and work and thus promotes collaborative, social and experiential learning. E-tutoring monitoring and evaluation criteria is an effective process centric timely intervention to continuously evaluate and develop e-tutors helping them to improve the teaching learning interplay. It emphasizes the importance of learning effectiveness by promoting interactive and effective learning, immediacy behavior by timely and quality pedagogic interventions, learners’ engagement by creating conditions to keep learners committed to the learning process and ensuring steady progress towards completion of course activities and student surveys by implementing effective feed-backward mechanism to continuously improve learning outcomes. The criteria helps in improving overall teaching-learning experience for e-tutors and learners. While e-tutors get a platform to improve their convergence enabled educational technology skills, learners benefit from the improved teaching-learning methodology. It supports e-learning delivery and creates an engaging and conducive environment for learners for steady progress towards the completion of course activities. In other words, e-tutoring monitoring and evaluation criteria assists in the academic integration of learners resulting in higher academic performance.

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