

CHANGING PROFILE OF TEACHERS IN THE DIGITAL AGE

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ABSTRACT

Teacher has a new role in the digital age. Call him facilitator or mentor. He is expected to help learners learn at their own pace rather than push concepts and rules onto them. Though such roles have been around for years, e-learning is forcing them in letter and spirit and changing many a rules for the teacher and the taught. Profile and expectations of students have changed. They demand personalized education that matches their intellect, goals and constraints. In response to such changing needs, we observe many variants of technology based courses being adopted by educational institutes. But do these variants offer any thing different or are they old wine in new bottle? The key difference lies in the manner in which teaching and administrative processes and controls are managed while balancing student convenience with quality of learning. It needs a separate set of skills, culture and sensitivity.

This article, based on study of literature and personal experience, brings forth some critical skills that teachers need to acquire to operate in the digital and particularly in the virtual space. Such skills are also analyzed in the light of convenience versus quality.

Keywords: Teaching skills, Teacher's Role, Teaching Profile, E-learning, Online Education, Higher Education.

INTRODUCTION

It was mid 90s, when I got my first assignment as an online mentor in a newly launched programme called e-MBA. I wondered what would my role be, as there was no experience and no institutional guideline on how to teach online. Content was already with the students - in the form of an interactive CD; their study hours never matched my work hours; they were supposed to be self motivated learners, working at their own pace. I was assigned a mentoring hour twice a week, when students could reach me online, synchronously. But with very few students actually coming online, the hour felt more like a fishing exercise.

E-learning landscape has much improved since then. Changing student profile and expectations, emerging technologies and teaching pedagogies have given new shape and meaning to online teaching and learning. Today, e-learning is being widely adopted by even brick and mortar institutions by combining audio, video, text and web-based education in many different forms. Such variants offer time and space flexibility that is much needed by the working executives, who wish to upgrade

skills and knowledge at their own pace. With more and more regular degree programmes involving some form of online component, technology can be seen as a catalyst to the gradual melt down of boundaries between face to face and distance education. This meltdown is welcome for the students, who aspire to get quality education while balancing their work and family life, but it often poses a question for the conventional teachers and administrators and that is - is teaching online different from teaching face to face? Literature highlights significant differences between the two and frequently mentions technological as well as pedagogical concerns as the differentiating factors in online setting.

This article takes a wider perspective and aims to present issues that arise from the changing needs of learners and institutions that govern teaching in the digital albeit e-learning space and bring out the changes emerging in the profile of teachers. Discussions are based on literature survey as well as practice.

1. Theoretical Background

As per the free online dictionary (<http://www.thefreedictionary.com>), teacher is a person who teaches; and to teach

implies -

- To impart knowledge or skill to
- To provide knowledge of; instruct in
- To condition to a certain action or frame of mind.
- To cause to learn by example or experience
- To advocate or preach
- To carry on instruction on a regular basis in

Over the decades, researchers have highlighted various skill sets that a teacher should possess. Crawford and Yetton (1985) indicated that lecturing skills do have a face appeal and lead to student satisfaction; but top institutions link teacher's performance with research performance, course design and material. Pratt and Collins (2002) suggested five perspectives of teaching viz. transmission, apprenticeship, developmental, nurturing and social. Whether it is face to face or distance education mode, teacher centric or learner centric pedagogy, these teaching perspectives are widely applicable and well accepted in the field of education - irrespective of the pedagogy and medium of instruction involved. This neutrality of perspectives may lead to conclusion that any established teacher in a face to face setting should prove a good teacher even when the medium of instruction changes to online mode. However, literature does not fully support this as the student satisfaction from online courses is still not as high as in face to face setting. While time and space flexibility is seen as an advantage, lack of interaction is reported as a major weakness of online education (Arbaugh, 2000a; Arbaugh, 2000b; Beard and Harper, 2002; Jackson and Helmes, 2008; Rodriguez et al., 2008; Shanker and Hu, 2006).

An excellent e-teacher needs to be an excellent teacher, as Anderson (2008, pp. 290) puts it. He adds that an e-teacher also needs to be technically good and pioneering, clearly indicating the need for some additional attributes that an online teacher needs to possess. Dykman and Davis (2008b, pp. 162) warn the uninitiated, who may often think that teaching online will be much easier than teaching in the conventional classroom setting. There are distinct skills that a teacher

needs to acquire when progressing towards the digital space.

The fact of the matter is that while a teacher is a key player in the entire teaching and learning process in a face to face setting; and takes a backend role of content writing, assignment setting and assessment in conventional distance education; a teacher in online setting needs to take on multiple roles and collaborate with a pool of experts in varied areas in order to facilitate a rich learning experience. Table 1 summarizes the essential skills as suggested by two recent studies - Lee & Hirumi (2004) and Kim & Bonk (2006) - that are based on earlier studies as well as empirical investigations. Both the studies include technology handling as an important skill but associate higher relevance to the pedagogical concerns such as interaction, facilitation and course design/development.

Technology being at the back of all operations brings in many more complexities and related challenges to online education such as increased speed, scale, investment as well as expectations. It raises learner's expectations of reliable, efficient and personalized service (Cohen & Pine II, 2007; Esmahi, 2007) thus leading to the need for agile and service oriented culture. It is also worth mentioning here that online education with a desired level of quality involves heavy investment. Financial viability of such an investment is a key concern for investors thus making economies of scale a necessity. With increasing number of students enrolling for online courses (Kolowich, 2009; Sikora & Carrol, 2002), online education either in a brick and click (blended) or as a click only (pure e-learning) format is coming closer to

Essential skills for online educators in higher education Lee & Hirumi (2004)	Skills Needed to Teach Online in 2010 (Kim & Bonk, 2006)
Interaction	Course developer
Management	Facilitator or moderator
Organization / Instructional Design	Subject -matter expert
Technology	Instructor or lecturer
Content Knowledge	Student counselor or advisor
Team work Skills	Technology Trainer
	Program coordinator or developer

Table 1. Online Teaching Skills - a Summary from Literature

being a workable business proposition and may even become the learning paradigm of future (Hutchinson, 2007). It is deemed to have the potential to deliver even better quality than the current face to face setting (Kim and Bong, 2006).

As technology gets accepted by educational institutions and raises new expectations amongst learners and education investors, it is imperative for teachers to understand the wider perspective, so as to get ready for future. Following section explores the challenges that confront a teacher and suggests the roles that a teacher needs to take up in response to emerging market dynamics and related business concerns.

2. Challenges Confronting a Teacher

2.1. Changing needs of learner

Each learner is characterized by one's own life style, ambition, intellect and constraints which govern the expectations from teachers and the education system. A learner who executes his day to day transactions electronically and enjoys convenience and service from all other segments, cannot be expected to get slow when it comes to dealing with an education provider. Academic administrators and teachers need to match up with the service quality standards in other service industries. Part time, executive education, distance learning, certificate courses etc. are all off-shoots of institutional response to such expectations and foster some degree of flexibility in time, space and choice of content.

Though time and space flexibility are the two much talked about flexibilities leading to growth of e-learning, there are many other forms of flexibility that demand continuous (at times radical) improvement in the teaching pedagogies. Figure 1 illustrates various kinds of flexibilities that need to be managed by teachers operating in the e-learning space. An arrow moving from inside-out implies the band of flexibility from zero to infinity. Teaching and administrative controls lie in the center with the tendency to keep flexibilities to a minimum in the wake of ease of operation. Need for any new form of flexibility or increasing the degree of any known flexibility tends to

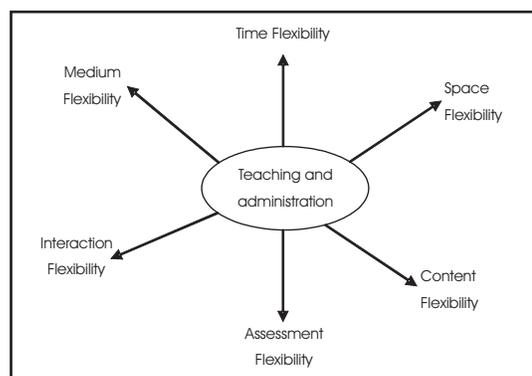


Figure 1. Student Expectations Forcing Change in teaching and learning

exert a pull on the system and implies a need for review of existing academic processes and controls. Figure 2 outlines a band of these flexibilities as may be needed by learners based on individual context.

At present, the need for time and space flexibility is largely addressed through distance or online courses and has migrated from a 'wish' to a 'critical decision variable' used by a learner while deciding on choice of content and period of enrolment. Other flexibilities that may appear as

Low Flexibility		High Flexibility
Learner adheres to given fixed timelines	--- Time ---	Learner dynamically defines the study hours and course duration
Learner's physical presence is mandated as per fixed teaching pedagogy such as face to face, correspondence or video conferencing.	--- Space ---	Learner dynamically chooses the location for study and interaction without any change in operational setup.
Learner goes through the structured curriculum as a bundled offer given to an entire group of learners.	--- Content ---	Learner makes his own basket of content based on one's individual ambitions and abilities.
Learner adheres to the interaction standards created and imposed by the teacher / learning environment	-- Interaction --	Learner chooses the degree of interaction based on personal preferences and constraints
Learner adheres to the assessment criteria defined by the teacher / institution and applicable at par with the entire group of learners	-- Assessment --	Learner makes a choice on whether to opt for credentials of the learning outcomes or not.
Learner accepts the learning platform prescribed by the education provider and ensures physical / technical compatibility at one's own end	--- Medium ---	Learner demands compatibility to one's preferred tools and technologies, such as RSS feed, screen readers and handheld devices.

Figure 2. Band of Flexibility Needed by Learners

a wish-list of learner today are bound to turn into decision variables as soon as some education providers start offering the same. While flexibility of time, space and medium is largely technology driven, the other three forms of flexibility need high degree of human intervention and agility in teaching methods. They are usually handled on an ad-hoc or limited basis and actually take a toll on the system resources. Handling them also leaves one under bewilderment, pondering whether accommodating such requests for flexibility implies a compromise on academic rigour or refusing them leads to suffocation (and dissatisfaction) for the learner. Teachers need to evolve trade offs based on the context and continue to identify innovative ways to balance quality with flexibility.

2.2. Changing business of education

Primarily, educational institutions hold a social responsibility and are often constituted as not for profit organizations. Government and industry sponsorships have been their primary source of revenue with student fee as an additional support. With increasing competition in the education sector and also increasing cost of technology and intellectual infrastructure, forward looking institutions today strive to be financially independent. Cost strategies adopted by for-profit institutions are being considered by not-for-profit institutions as well (Blumenstyk, 2008).

In an attempt to maximize quality, resource utilization and returns on technology investment, institutions offering online education are unbundling the teaching roles (Dykman and Davis, 2008a). As a result, a series of new roles (Kruse, 2002; Learning and Skills Network, 2007) and related processes are emerging. Some such roles are

- Content writer to develop material suited to learning needs
- Facilitator to provide all subject related mentoring thus facilitating self learning
- Instructional designers & graphic artists -- to create a rich learning environment
- Marketing team - to help reach out to masses.
- Support staff - to manage the volume of learners
- Technical support - to manage the technology and

act as a technology help desk for learner.

Teacher, who usually handles content or course facilitation with the help of many other roles, becomes just one player in the team, unlike being the means and the end of a course in a pure face to face setting with minimum need for administrative support. This change can lead to a cultural setback for many a seasoned teacher. Academic administrators need to carefully plan suitable change management programmes to get their academic staff adapt to such changes and enable them work as a team player. Teacher should be able to appreciate the need to understand and respond to the institutional growth and revenue also thus embracing the role of an entrepreneur.

2.3 Convenience, Quality or Returns

Quality means different to different stakeholders. While a learner wants individualized attention; teacher prefers a limited group of students for better interaction and high academic rigour for a leveled learning outcome; investor prefers to have volumes of enrolments, standard content and processes for efficiency and higher returns on investment.

Time and space flexibility has been high on the preference list of learners. This flexibility is undisputedly perceived as a significant benefit of distance and online over class based courses; but less interaction (Arbaugh, 2000a; Arbaugh, 2000b; Beard and Harper, 2002; Jackson and Helmes, 2008; Rodriguez et al., 2008; Shanker and Hu, 2006), privacy, technology difficulties and more focus on technology than content (Plotrowski & Vodanovich, 2000) are seen as their associated disadvantages. Despite a significant increase in courses and students in distance education (Sikora & Carrol, 2002), mixed response on its benefits brings home the fact that convenience of learner and quality of teaching can have an inverse relation if not properly mediated. Whereas learners would prefer full customization, and investors would find mass production as a viable business proposition; it is the teachers and academic administrators who need to do the balancing act between the conflicting goals of students and investors

and get closer to mass customization thereby facilitating personalized, quality education at low cost.

3. Changing role of a teacher

The moot question then is what is expected from a teacher in the digital age? Moving on to online mode, the purpose of teaching still remains the same i.e. to impart education and help others learn while conditioning them into certain frame of mind. What changes is the mechanism to impart education and the culture that binds all the stakeholders together. For example, dissemination of structured knowledge on an ongoing basis can be handled better and on a larger scale, when automated rather than when delivered through repeated physical lecturing. Teachers need to appreciate such trade off between standardization and customization and should take a wider role in making the content lecture proof, thus enabling a learning environment conducive to self styled learning for masses.

Following from the deliberations made in previous sections, it is recommended that for survival in the digital age, teachers need to have the ability to manage pedagogical, technical as well as business concerns. Towards this, a suggestive profile set comprising of ten skills is outlined below. A summary of the same is provided in Table 2.

Subject Matter Expert

Unarguably, an online teacher has to be an excellent teacher first. A teacher should be master of the subject and be able to transmit subject knowledge to a learner. Teaching online may not involve repeat transmission (lecturing) of subject knowledge as technology can easily take care of this. Instead, an online teacher has to take up the increased task of handling unstructured queries related to subject matter, while giving students additional perspectives of the subject and invoking them to think beyond the obvious. It also requires more accuracy, speed and transparency of work because every online action is tractable by its very essence.

Mentor

A teacher should be able to counsel and nurture the learner and facilitate self learning. One should be able to

S.No	Category	Attribute	Description
1	Pedagogical	Subject Matter Expert	A teacher should be master of the subject and be able to transmit subject knowledge to a learner in a format best suited to a context of learning.
2	Pedagogical	Mentor	A teacher should be able to counsel and nurture the learner and facilitate self learning
3	Technical	Technology friendly	A teacher should be comfortable with technology use and should have good control over the learning management system and technologies
4	Pedagogical + Technical	Course Designer and planner	A teacher should be good at course development with clearly defined course objectives, schedule, expectations and a learner friendly interface
5	Business	Service oriented	A teacher should be able to define as well as adhere to service quality expected in the 24x 7 environment of effective teaching and learning
6	Pedagogical	Community Builder	A teacher should be able to create a social environment conducive to seamless interactions and knowledge exchange
7	Business	Entrepreneur	A teacher should be business minded and should look for new opportunities for value creation for all stake holders
8	Business	Team Player	A teacher should be ego-less and should be able to work well with the e-learning team comprising varied roles such as course developers, designers, student care.
9	Business + pedagogical + Technical	Innovator	A teacher should be constantly on the look out for better technologies and pedagogies to improve learning
10	Business	Agile	A teacher should be able to adapt to and manage with agility the fast changing needs of students as well as education business.

Table 2: Teacher's Profile in the Digital Age

identify an individual learner's aims and limitations and advice them on the best possible way of learning. Being online, a teacher has to be even more actively involved in course facilitation and student mentoring to make up for the lost interactivity caused by distance and time difference.

Technology friendly

Learning management system (LMS) and many other tools of information and communication technologies are the standard interface between learner and teacher in the online setting. It is thus imperative for teacher to be comfortable with technology, know the functioning of the LMS and be able to help learners with the basic trouble

shooting. One also needs to be comfortable with the use of chat, speed typing and culture of online interaction to act as a role model for learners.

Course Designer and planner

Online learners are at a disadvantage due to lack of physical proximity. Thus, while students within the physical campus can any time catch up with the professor or peers and seek clarity, it is important for online students to get clear instructions on the course expectations and study plan. Teachers should be able to crisply define the course objectives, structure and performance standards expected of the learner and should be able to visualize the quality of learning interface as suited to a kind of subject and concept. Effort should be to make the course content lecture proof. More the planning better is the possibility to automate the controls.

Service Oriented

A teacher should be able to define as well as adhere to service quality expected in the 24x7 environment of effective teaching and learning. Being online can be unforgiving as the issues can get escalated much quicker (Dykman and Davis, 2008c) and can cause unnecessary confusions, chaos or even irreversible damage. So teachers need to be very particular with accuracy, punctuality, responsiveness and cultural sensitivity. Each learner's satisfaction is important to a teacher. Maintaining agreed upon level of service quality may even be legally binding in some cases such as corporate education or institutional tie-ups. However, it remains a challenge for teachers to identify the genuineness of a service request. One should prefer to define and follow standard operating procedures to respond to service levels rather than entertaining ad-hoc service requests. Defining the thin line of demarcation between genuineness and manipulation is difficult but critical to service excellence in education because it may otherwise lead to mediocrity of education.

Community Builder

Interactivity is the key to learning. However, in the run for distance and time flexibility, teachers need to shoulder a greater responsibility to restore interactivity and create an

enriching and amicable online experience. It helps to create a feeling of community first so that learners feel at home with others and come forward to share knowledge, experience and sometimes jokes too to keep the atmosphere lively and conducive to open learning.

Entrepreneur

It is imperative for a teacher to appreciate the investor's view point and work as an entrepreneur for the long term growth of the institution. One should be able to contribute to value creation for self, for learner, for institution and for the society. It is all the more critical for online teachers as online teaching involves huge and recurring technology investments which can easily go down the drains if not used effectively.

Team Player

Due to the high end technology and volumes of learners involved, online education requires larger team base with diverse expertise. It is quite likely that a non-teaching staff such as a designer, project manager or marketing person suggests a teacher to go a certain way. Working in such conditions needs teachers to shed away ego and get to work as a team player.

Innovator

Pace of technology change and obsolescence can have severe impact on online teaching. Furthermore, any technology, pedagogical or business model is easily replicable. Thus, to have a sustainable advantage, an online teacher should be constantly on the look out for better technologies and pedagogies to improve learning and business returns.

Agile

A teacher should be able to adapt to and manage the fast changing needs of learner as well as education business with agility. It is a foreseeable future to have daily student enrolments with each learner enrolled for a separate bundle of courses and timelines and get paid on per student basis rather than per section basis. Technologies today are well equipped to facilitate this. What is needed is more agility of processes and before that agility of minds to believe that such a scheme can also work without compromising the process of

knowledge creation and dissemination.

Conclusion

A teacher is the one who imparts education and helps others learn; thus conditioning them into certain frame of mind. Irrespective of whether one teaches offline or online, the core purpose of teaching remains the same. However, when moving online, many additional complexities arise due to associated pedagogical, technical and business concerns that make teaching more challenging. To handle them, a teacher needs to be much more than just a subject matter expert; and should equally be a mentor, technology friendly, course designer and planner, service oriented, community builder, entrepreneur, team player, innovator and agile. With online education making inroads into even brick and mortar institutions, it is imperative for teachers, particularly in higher education to get sensitized to the need for changing their profile. They should get technically and culturally equipped to manage the dilemma such as standardization versus customization; and convenience versus quality that often occurs while handling different kinds of service requests of a learner.

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