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Transitioning from Traditional Classroom Training to Laptop-Facilitated Learning: Responding to the Orientations and Preferences of the Net Generation

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Abstract

With computer technology permeating the academic landscape, and the Net Generation dominating the academic scene, educators are called to reflect on and reconfigure curriculum design, facilitation, and evaluation to align with the e-learning era and learners' orientations and preferences. The purpose of this article is to present research findings about the transitioning experiences of the Net Generation in the college system as they move from traditional classroom training to laptop-facilitated learning, and to discuss implications for practice. Proposed is an e-learning transition model designed to help educators integrate laptop-based learning into the curriculum architecture.

The Challenge

With whirlwind force computer technology has entered the academic mainstream positioning itself as the bedrock of teaching and learning. It has manifest itself in curriculum design, delivery, and evaluation blurring the line between learning and computers. Over the past twenty years, post secondary institutions have moved technology from being a "one-time budget expenditure to being a hard budget line supporting the purchase, maintenance, and use of technology on campus" (Clayton-Pedersen & O'Neill, 2005). Inevitably, this has sparked educator inquiry regarding how technology can become an equally contributing partner in the new teaching-learning paradigm. The question is no longer whether to endorse e-learning trends, but how to unearth the power of technology to chart new pathways to academic excellence.

Before getting locked into the frenzied pace of integrating cutting-edge technology into classrooms, it is incumbent upon the academic community to deepen and broaden understanding and response to learners' experiences – our premier academic stakeholders – during this transitional period. Specifically, discerning the strengths and limitations of the transition from their perspective, and the impact of this change on their learning style preferences and learning relationships with colleagues and educators. Prensky (2001) supports this inquiry since "today's students are no longer the people our educational system was designed to teach" (p.1). Regrettably, we have been somewhat remiss in this area with our eye fixed predominantly on overall learner satisfaction with technology, such as software provisions and quality of IT support; and extrapolating data to gauge return on investment.

Dominating the academic scene is the Net Generation characterized as digitally literate and connected; experiential; entrepreneurial and independent; rejecting micromanagement; and

valuing empowerment, collaboration, and immediacy (Izzo, 2002). Understanding the Net Generation's transitional experiences positions educators to make more informed decisions regarding the use of technology as a teaching tool. By ascertaining learners' positive experiences, educators can continue to cultivate rich learning and by giving voice to the limitations of the transition, educators can foster change that minimizes problematic areas from taking root and potentially derailing e-learning. Consequently, learners' experiences take on benchmark relevance in the transition from traditional classroom-based training to laptop-facilitated learning. Emergent is a best practices framework for integrating learners' initial e-learning experiences into the curriculum architecture in order to develop and sustain meaningful and enriching climates for learning. According to Clayton-Pedersen and O'Neill (2005), "faculty must effectively tap students' existing familiarity with technology to engage them in constructing an integrated knowledge base and developing habits of the mind that will enable them to become lifelong learners" (p. 133).

Research Methodology

This article presents research findings about the transitioning experiences of the Net Generation in the college academic stream as they move from traditional 'chalk and talk" learning environments to laptop-based learning orientations. Research was conducted across Ontario colleges using on-line surveys and semi-structured focus group interviews to ascertain learners' experiences in their first year within mobile learning environments. A total of 182 learners responded to the on-line survey and 43 learners participated in focus group sessions. The following themes emerged from the analysis of data: e-learning climates; learner-educator academic relationship; e-learning relationships with colleagues; and learning style preferences. Also presented in this article are implications for practice and a model that educators are invited to use as they journey with learners through the transitional period.

Analysis of Results

E-Learning Climate

The proliferation of laptops gave rise to changes in the learning landscape. The majority of learners remarked on the intensifying social isolation as the learner-technology bond solidified. With learners absorbed in the technology for data retrieval and manipulation, note taking, and a myriad of academic and non-academic msning, there was less direct engagement with colleagues and educators. Learners noted the 'deafening silence" as techno-centricity pervaded classrooms which had once been punctuated by multi-levels of social discourse. The new e-learning classroom was likened to a platform for self-directed learning where one could follow in-class lessons or disengage and attend to assignments – often on-line connecting with colleagues to coordinate completion of work while lectures were in progress.

Conversely, some learners applauded the solitude and highly independent learning environment since the concentration on laptops diminished sideway conversations that were a major deterrent in traditional classrooms. Noted, however, were the mounting e-learning

distractions such as gaming, on-line chatting, and the voracious typing by some learners.

Apathy toward classroom learning was attributable to what learners perceived to be predictable, redundant, and frequently uninspiring curriculum delivery. Learners speculated that educators, in the experimental phase of exploring the technology-teaching alliance, inadvertently saturated learning with PowerPoint presentations which set the stage for lecture delivery and its inherent passive learner behaviours. Unfamiliar with how to pilot the change from a techno-centered to a learner-centered environment resulted in heavier concentrations of PowerPoint use and less inclusion of team-based interactions. According to the learners, this contributed to their spiraling downward disengagement in the classroom.

To extinguish lecture monotony, educators endeavored to interject questions to stimulate plenary group discussions, yet this was incessantly greeted with limited response. Learners, in their multi-tasking mode, admittedly did not follow lectures closely enough to contribute to dialogue. Hence, their classroom participation dwindled causing them to miss salient analysis and application of curriculum content which would have sharpened topic comprehension.

Unrestricted access to the internet was highly appealing for some learners yet, in hindsight, learners regretted that they succumbed to msning and gaming during class. The impact of these diversions was evident in test and assignment marks which, according to learners, plummeted ten to fifteen percent below previous semester grades. According to one student, “Msn and games will always be accessible. It’s a matter of being able to control yourself in order to learn effectively in class.” Resultantly, some committed to corrective action, such as decreased laptop use for non-academic purposes, while others sank deeper into the abyss condemning educators for impoverished teaching practices.

Adapting to educators’ diverse utilization of technology to supplement in-class learning and for communication beyond scheduled classes was fraught with challenges. Variance in approaches by high-end and low-end faculty users, according to the learners, resulted in a sharp and lengthy learning curve as they struggled to adjust to educator expectations. With faculty rarely explaining their philosophy and methodology for teaching with technology, learners were often left to self-discover via “trial and error” how to efficiently use technology in each educator’s class – some declaring that they lost valuable in-class time adapting to teaching styles, expectations, and preferences. Eventually, learners pinpointed the idiosyncrasies of how each educator connected with and communicated through the technology.

Learner-Educator Academic Relationship

In a techno-oriented learning environment, polarity was noted in the learner-educator academic relationship. Advantageously, technology set the stage for boundaryless accessibility to educators yielding continuous dialogue in synchronous and asynchronous discussion forums. On-line communication contributed to expeditious response to inquiries as

compared to in-person communiqué – yet some learners stressed discontent when inquiries were not addressed within the “24 – 7” timeframe to which they were accustomed.

In contrast, laptops were implicated for straining teaching-learning relationships. Laptops were accused of impeding depth and breadth in-class dialogue between educators and learners and forcing educators to constantly compete with technology for learner attention. With multi-tasking alive and vibrant in the classroom, learners – not mindful of in-class events – often asked for repetition of questions, instructions, and course material. Correspondingly, this ignited the ire of educators who aired their frustration with declining participation and the perceived laissez-faire attitude toward learning. This emotionally-charged reaction widened the already burgeoning gap between both parties – intellectually, emotionally, and socially.

Also distinguishable was eroding rapport between learners and educators. With both parties exploring the nuisances of e-learning and wrestling with the inherent challenges, less time was apparently spent forging a collegial and collaborative learning community distinguished by its rich exchange of insights, observations, and experiences. As a result, learners noted more impersonal interactions with educators. Some learners construed this as an outcome of the structured communication channels imposed by the e-learning management system, while others cited the decreased sharing of educators’ experiences and personal examples stemming from the prevalence of lecture delivery in the classroom. Learners found this disconcerting since many held educators in high esteem and viewed them as role models and mentors for their personal and business aspirations. Chickering & Gamson (1987) advocate that “frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Knowing a few faculty members well enhances students’ intellectual commitment and encourages them to think about their own values and future plans” (p. 4).

E-Learning Relationship with Colleagues

Technology was credited with advancing the efficiency and effectiveness of knowledge management. Discussion boards and emailing expanded communication channels between learners enabling them to conveniently and unrestrictedly converse. This was cited as a key advantage for studying, exchanging course notes when learners were absent from classes, discussing course-related issues, and most significantly for managing team-based assignments. Technology facilitated task completion by empowering learners to strategize project direction, exchange information, check team member progress, and meet on-line instead of in-person – which was an advantage given complicated work-life priorities. Learners reported that on-line connection with colleagues enhanced accountability as members were now responsible for regularly circulating their work-in-progress for feedback. According to Carlson (2005), building an e-knowledge management system is fundamental to satisfying the needs and expectations of the Net Generation as they are fluent in digital technology and prefer to learn from each other rather than a professor.

Although the technology equipped learners with the tools to efficiently navigate on-line communication, social isolation pervaded the classroom learning environment. With learners magnetized to their laptops during classes, there was a marked decrease in collaborative inquiry - the hallmark of the learning community (Weimer, 2002). Learners lamented the absence of collaborative inquiry, especially the rich exchange of diverse viewpoints when controversial issues were at the forefront. During the limited occasions when team discussion was part of the learning, some colleagues remained laptop-engaged attending to more pressing tasks. Some learners posit whether educator uncertainty regarding how to revive team-based inquiry in the laptop environment was a contributing factor.

Learning Style Preferences

As part of the on-line survey administered for this study, participants were asked to identify their learning style from a list of characteristics associated with Kolb's Learning Style Inventory. The degree to which learning style preferences were satisfied in an e-learning format contributed to learners' perceived connection to the learning. Within Kolb's Learning Style framework, learners characterized as divergers and assimilators expressed the highest satisfaction with technology as it accommodated their preference for autonomous learning and no compelling need to form connections with others. The limitless availability of information in a mobile environment fed their curiosity for knowledge beyond the prescribed classroom curriculum. According to one learner, "the ability to take my work wherever I go and do research whenever I'm inspired to do so, enables me to work when the time is right or when an idea surfaces." As well, the visual stimulation afforded by graphs, charts, video vignettes, and interactive websites was appealing to these groups of learners who were oriented toward reflective observation.

Learners characterized as convergers and accommodators expressed less satisfaction with mobile learning. Given their connective learning style they preferred to learn in team-based settings and develop working relationships with colleagues and educators. Their dominant preference for active experimentation was being suffocated in classrooms plagued by PowerPoint-centricity. The disconnect between learning style preferences and delivery mode resulted in loss of student concentration and active pursuit of interaction with others by sending email and instant messages.

Implications for Practice

Unveiled in this study is a checkered landscape of e-learning challenges, opportunities, disparities, struggles, and successes that polarize our ability to manage the integration of laptops into our learning environments. As educators, we are called to leverage demands in two distinct areas: to pinpoint the strengths of mobile learning so that we can enhance its presence and value; and to isolate root cause problems in order to minimize that which threatens the viability of teaching with technology.

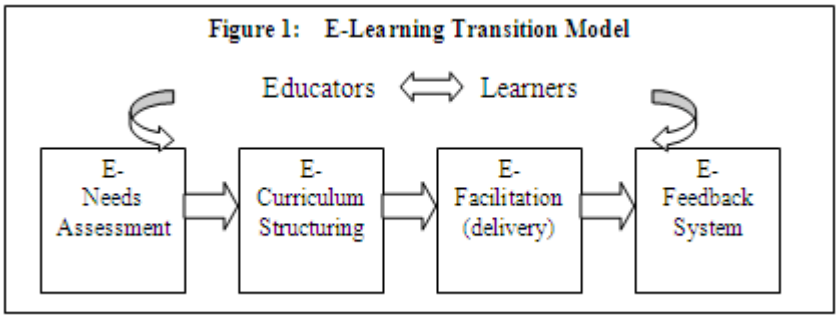
Building the infrastructure to support mobile learning extends beyond crafting policies and procedures that mandate appropriate laptop

use. Inarguably, policies and procedures occupy a foundational role in controlling some types of inappropriate behaviours such as emailing, msning, and downloading from non-academic sites, yet responding to the challenges of classroom management and engaging – or reengaging – learners in the curriculum requires a more rigorous and proactive plan. The solution is embedded in how we reform learning to meet the needs and expectations of this new generation of learners. We are invited to reflect on generally espoused teaching practices and reconsider how we structure, facilitate, and evaluate learning.

Proposed in this article is an e-learning transition model designed to help educators integrate laptop-based learning into course design, delivery, and evaluation. The intent is to untangle some of the complexities inherent in this transition and to chart a path that more seamlessly segues into e-learning. Specifically, the model charts a direction for the transformation of curriculum development, delivery, and evaluation involving collaboration between educators and learners. The model is based on the premise that both academic stakeholders are equally responsible for developing and sustaining an environment that is conducive to learning (Weimer, 2002). Although educators hold the reins of the academic process – curriculum content aligned with competency demands and expertise in measurement and evaluation – learners play an instrumental role in shaping the academic blueprint. According to Chickering & Gamson (1987), “good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning” (p. 4).

Pervading this model is the commitment to remain grounded in adult learning principles introduced by Knowles (1980). Knowles articulated the importance of mutual involvement as the essence of perpetuating meaningful and engaging learning. Educators may be inclined to rely on their own steam and resources when preparing curriculum for e-delivery and, in doing so, project their own interests, needs, and expectations which may or may not be aligned with the learners’ paradigm. Involvement, according to Knowles, encompasses educator-learner partnership in the academic architecture – curriculum planning, facilitation, and evaluation – so that educators can manage the tensions of expectations against realities and deliver on learners’ needs and expectations.

If used as a common framework for teaching and learning across college courses, the e-learning transition model builds consistency into the academic process which would be applauded by learners facing the challenges of adjusting to varied approaches to teaching with technology. Housed within this model are the following four components: e-needs assessment, e-curriculum structuring, e-facilitation, and e-feedback system.



E-Needs Assessment

The quintessential ingredient in this model is the e-needs assessment featuring learner profiling – a fact-finding process resulting in a biographical account of one's learners. Chronicled are their needs, expectations, and preferences for meaningful e-learning; their competency and experiences with technology; and their learning style preferences. The signature importance of profiling is that it frames the learning context and serves as the backdrop against which decisions are made regarding curriculum content and delivery. The profile is fundamental to ascertaining which activities, strategies, and techniques warrant integration into the curriculum in order to excite and engage learners and, ultimately, achieve the learning outcomes (Rekar Munro, 2005).

With mobile learning systems affording educators the advantage of corresponding with learners prior to official course start dates, profile data can be collected, synthesized, and built into the curriculum before the first day of classes. As a preliminary step, on-line surveying is an effective tool for reaching the masses and attaining data within a short timeframe – which is laudable given collapsing intervals between course registrations and start dates. As a follow-up intervention, focus group discussions may be appropriate in order to seek clarification on survey data or to probe for depth and breadth details.

With learners self-identifying as detached from classroom learning, and hence, easily slipping into the msn vortex, early intervention is imperative. The e-learning needs assessment provides a forum for learners to declare their orientations and helps educators close the gap between technology and delivery. Instead of educators bearing the burden and struggling with how to cultivate a user-friendly e-learning environment, the weight shifts to joint accountability to fulfill this mandate. Instead of hypothesizing learners' needs and preferences, educators search for this data to minimize guesswork and frustrations.

E-Curriculum Structuring

Joint accountability is extended into the e-curriculum structuring phase of the model whereby educators invite learners to join them in synthesizing learner profile data and dialoguing about how to tailor instructional design accordingly. The invitation to share insights capitalizes on learners' experiences with technology gained from personal experimentation with digital gadgetry and from hands-on use

throughout their academic careers. The Net Generation has expertise that can be channeled into curriculum design. For example, if gaming is a common sidebar activity entertaining learners when under-stimulated in the classroom, then this may be an ideal place to uncover themes that trigger excitement and explore how to build them into experiential, team-based events for the classroom. Anchoring learners' "virtual reality" to course content may be a critical link en route to re-inspiring the Net Generation in the academic arena.

It is not being advocated that curriculum be seized by learners and decisions regarding content coverage be left to their discretion. The intent is to fortify collaboration on curriculum design so that educators do not bear sole responsibility for transitioning to an e-learning world. Educators still remain vigilant to that which is mandated by the program of study, the academic institution, the provincial governance, and the professions within which graduates will practice.

Inclusion of learners in this process augments their ownership and accountability for learning as they are now directly involved in shaping curriculum and have a vested interest in reaching course objectives. If wholly committed, it is less likely that they will disengage from the learning since that which is unfolding in the classroom is a result of their input. If disengagement resurfaces then both parties are called to dialogue about corrective courses of action until they discover the right blend of teaching-learning practices to support their unique set of needs and expectations.

E-Facilitation

Facilitation of learning most likely will have a different complexion given the ongoing consultation that has crystallized between educators and learners. Input offered during previous phases in the model may spark change in the approach to facilitation. With learners galvanized to take a more active role in curriculum, opportunities present themselves for learners to showcase their techno expertise in a facilitative capacity. Whether through experiential, team-based presentations conducted in class to solidify theory-application linkages, or formal presentations built into the evaluation criteria, technology can be integrated into the curriculum in order to punctuate diverse applications. This challenges learners, as facilitators, to exercise the full extent of their knowledge and expertise in order to create and deliver technologically sound – and equally sophisticated and polished – presentations. Given the techno-orientation of the Net Generation this may be an effective motivational tool to inspire learning.

The varied approaches to integrating technology into presentations may also enrich the learning of educators. If we acknowledge that educators are also learners in the academic forum, we unleash vast potential for exploring the power of technology. With the most technologically savvy generation as teachers, educators may be inspired to experiment with and test drive more advanced applications of the technology in curriculum delivery. In doing so, we capitalize on the technological repertoire of educators and learners and enhance the learning of both parties. Ultimately, we create a learning community that shares and experiments with best practices. This may be an invaluable

training tool in the teaching-learning equation.

E-Feedback System

An e-feedback system is the final ingredient built into this model to ascertain the effectiveness of e-learning premised on the collaborative efforts of educators and learners. According to Brookfield (1995), “a constant feature of our teaching should be a concerted effort to understand how students are experiencing learning” (p. 200). Recommended, however, is a process that is markedly different from end of term evaluations. With performance evaluations administered at the conclusion of courses, few opportunities prevail to make changes for the benefit of the learners that provided the feedback. Therefore, the feedback system should not be a conclusionary course assessment, but a continuous process woven into the teaching-learning relationship.

Magnifying its significance as a vehicle for course enhancement and faculty development requires feedback systems to retain a prominent and constant role in the curriculum (Rekar Munro, 2005). Given ease of accessibility to learners via mobile learning systems, regular feedback can be solicited through on-line surveys and chat lines which accommodate synchronous and asynchronous discussions. Consider how electronic debriefing sessions can be built into class activities to measure not only content comprehension and application, but to explore the salience of the activities from the learners’ perspectives. To enhance the value of the feedback exchange in the eyes of the learners, perhaps course evaluation criteria could include a grade for learners’ feedback contributions.

Dialoguing about the process heightens educators’ awareness of their success in creating an e-learning community and positions them appropriately to make changes. It helps monitor the pulse of learner engagement and opens communication channels so that any emerging issues have a forum within which to be addressed (Rekar Munro, 2005). Regularly voicing concerns and working toward minimizing barriers decrease the probability of problems festering and eventually eroding satisfaction and performance (Rekar Munro & Laiken, 2004). Early detection of and response to the need for change are more manageable than attempting to navigate the change process once learners become despondent. Making changes based on learner input launches a cyclical feedback process whereby educators develop and sustain a connection with learners disclosing that which is, and isn’t, contributing to learning. These regular process checks encourage the free exchange of insights and establish a norm that feedback is invited and expected in order to reach the pinnacle of excellence in the e-teaching-learning exchange.

Conclusion

As educators, we hone our craft by continuously reflecting on how to leverage the demands of curriculum coverage and the process by which learning takes root. This inquiry persists in the transition to an e-learning environment where the need to honour the process is even greater in order that technology is positioned as a teaching-learning tool and not a dominant entity overshadowing curriculum.

The model introduced in this paper equips educators with preliminary teaching tools for e-learning and stresses the salience of collaborative inquiry en route to making strong choices regarding how to couple teaching and technology. We transition into a new domain of teaching and learning that embraces the sharing of experiences and develops our personal repertoire of skills in order to better accommodate the evolving orientations and preferences of the new generation of learners. In doing so, we smooth out the rough edges that demarcate most new initiatives and sustain the energy, passion, and commitment for teaching and learning in the emergent e-learning world.

References

Brookfield, S. (1995). Becoming a Critically Reflective Teacher. San Francisco: Jossey-Bass Publishers.

Carlson, S. (2005). The net generation in the classroom. Chronicle of Higher Education. Vol. 52, Issue 7, pA34 – A37.

Chickering, A.W. & Gamson, Z. F. (1987). Seven principles for good practice in higher education. AAHE Bulletin. Vol 39(7), p 3 – 7.

Clayton-Pedersen, A. & O'Neill, N. (2005). Curricula designed to meet 21st century expectations. In Educating the Net Generation. Oblinger, D. & Oblinger, J. (Eds.), Educause e-Books.

Izzo, J. (2002). Values Shift: The New Work Ethic and What it Means for Business. Toronto: Prentice Hall Canada.

Knowles, M. (1980). The Modern Practice of Adult Education. New York: Cambridge Book Co.

Prensky, M. (2001). Digital natives, digital immigrants. On the Horizon, NCB University Press, October 2001, Vol. 9 (5).

Rekar Munro, C. (2005). Best practices in teaching and learning: Challenging current paradigms and redefining their role in education. The College Quarterly, Summer 2005, Vol. 8, 3.

Rekar Munro, C. & Laiken, M. (2004). Developing and sustaining high performance teams: Managing difference through an action research approach. OD Practitioner, Winter 2004, Vol. 36, 1, p 3 – 7.

Weimer, M. (2002). Learner-Centered Teaching: Five Key Changes to Practice. San Francisco: Jossey-Bass Publishers.

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