

ANDRAGOGICAL TEACHING METHODS TO ENHANCE NON-TRADITIONAL STUDENT CLASSROOM ENGAGEMENT

By

PAMELA ALLEN *

PAUL WITHEY **

DEB LAWTON ***

CARLOS TASSO AQUINO ****

* Research Affiliate, Center for Workplace Diversity Research, School of Advanced Studies, University of Phoenix, Arizona, USA.

** Research Affiliate, Center for Workplace Diversity Research, School of Advanced Studies, University of Phoenix, Arizona, USA.

*** Research Affiliate, Center for Workplace Diversity Research, School of Advanced Studies, University of Phoenix, Arizona, USA.

**** Senior Executive Director, Center for Excellence in Diversity and Inclusion, Argosy University Tampa & Sarasota, Florida, USA.

ABSTRACT

The aim of this study was to provide a reflection of current trends in higher education, identify some of the changes in student behavior, and potential identification of non-traditional classroom facilitation with the purpose of strengthening active learning and use of technology in the classroom. Non-traditional teaching is emerging in the form of blended classrooms, flipped classrooms, active learning, and team based learning. Incorporation of classroom technology, includes interactive tutorials, eBooks, Toolwire simulations, and embedding media into course content. The result of the study identified the potential paradigm shift that supports the proposal of new Non-Traditional Adult Teaching Models to help faculty in post-secondary education demonstrate diverse methods of teaching from the perspective of andragogy.

Keywords: Non-Traditional Students, Blended Classroom, Flipped Classroom, Active Learning, Team Based Learning, Classroom Technology.

INTRODUCTION

Over a century of research has been conducted on the effectiveness of higher education and the learning relationship between faculty and student. The research will often shift from faculty teaching techniques to how students learn and student learning responsibilities. The premise of much of the research is whom, if anyone, is ultimately responsible for student success. A major shift in the responsibility of the effectiveness of higher education began in the later 1950s and early 1960s when a boom in college enrollment began. During the late 1950s and early 1960s, college students started to think more strategically about the personal and professional benefits of higher education. As students began to change their approach to education, higher education institutions began to view students as consumers of a product or service considering the competition in higher education markets (Bonser, 1992). Changes in student behavior are a reflection of current trends in higher education. Non-traditional classroom facilitation methods are increasing in the form of

blended classrooms, flipped classrooms, active learning, and team based learning. Incorporation of classroom technology includes, interactive tutorials, eBooks, Toolwire simulations, and embedding media into course content. These new methods indicate a paradigm shift that supports proposal of new Non-Traditional Adult Teaching Models to help faculty in post-secondary education demonstrate diverse methods of teaching from the perspective of andragogy.

Purpose of the Study

The reasons for the study was to identify potential current trends in research literature regarding andragogy teaching methods to potentially identify non-traditional student classroom engagement. The study also attempted to identify and increase the understanding of traditional and non-traditional shifts regarding the use of technology in the classroom, non-traditional teaching methods, future trends in teaching and learning techniques from the perspective of andragogy.

Need for the Study

Student engagement, student learning techniques, and faculty teaching delivery modalities have often changed over time to accommodate changing cultures, learning and teaching expectations, and potential use of emerging technology. The catalyst for the experimentation of non-traditional teaching methods may be rooted from the perspective of andragogy, which include a learning environment that is challenging enough to further develop the reflective learning and student critical thinking, student's ability to incorporate life and work experiences within the course, using technology that is relevant and timely to course objectives and assignments, and technology that may allow self-paced learning (Halpern & Tucker, 2015).

Literature Review

Since the time of early Greek and Roman modern civilization, education has often been viewed as transactional, whereas the role of faculty was to teach and share knowledge and the role of students was to absorb the knowledge and identify how to apply the knowledge in his or her personal or professional lives. Fast forwarding several hundred years later, higher education transformed into a more individual evaluation of learning and how the learned content becomes applicable to individual lives. The focus became more about personal traits, individual characteristics, personal previous experiences, and how to meet the overall demands of a changing and present environment (Kolb, 1981). In the present and changing environment of current society, shifts in the relationship between higher education, technology, traditional and non-traditional use of technology have become involved in an information content delivery traffic jam.

Overall, classroom dynamics have been the responsibility of the faculty and the faculty member. The role of the faculty member has been to help students become as effective as possible with the intent of encouraging positive social and cognitive accomplishments (Johnson, 2006). Different faculty teaching techniques and the ability of faculty to incorporate emerging facilitation tools has a positive influence on student learning and success (Marzano, Pickering, & Pollock, 2001). However, students in modern society enter higher education with a new level of

expectations for learning and interaction with faculty. Student expectations are often a reflection of an extension of his or her existing environment, especially with the use and integration of technology within the classroom.

Traditionally, faculty demonstrated the use of technology with copies of paper handouts to supplement lectures, transparencies to display material to larger classes, slide projectors to provide visual representation to the discussions, and within the last twenty years, the use of PowerPoint presentations. While the use of these technologies may have increased student's understanding of course content, the incorporation of technology remained a one-sided transaction resulting in a somewhat interactive, but more efficient delivery of course material. Students continued to have the same expectations between faculty and student interactions, including teacher academic support. Students believed the instructor wanted them to learn, while peer support provided increased understanding of course material, grading fairness, cooperative learning, and competitive learning (Johnson, 2006).

Historically, whenever new technology is introduced, higher education institutions are often slow to respond, because faculty need time to adjust and reach a comfort level with the use of emerging technology (Fahmy, 2004). However, the use of emerging technology within the classroom and shifting from traditional instructional techniques to non-traditional instructional techniques has positive effects. The most significant changes include increased student participation, active learning, increased access between faculty and student, and higher levels of student motivation to learn (eun Oh & Gwizdka, 2011).

Since the release of the first smartphone in 2007 and the increased popularity and affordability of tablets and laptops, technology has become an integral part of the daily experiences of diverse college students. Student's comfort with technology has increased to point where the use of technology is expected, especially in higher education. New non-traditional classroom technology includes a variety of different approaches to engage students and improve the ability of faculty members to become more effective. These different approaches

include interactive tutorials, eBooks, Toolwire, and the use of embedded media in the classroom. These approaches become the part of larger classroom techniques and can be easily incorporated into blended classroom, flipped classroom, active learning, and team based learning to strengthen student learning, engagement, and success.

Non-Traditional Classroom Facilitation

Classroom facilitation has many variations and definitions in higher education. Faculty may use a variety of techniques to increase learning and student success. Some of these techniques include traditional approaches to classroom facilitation, which may involve lectures, PowerPoint presentations, or encouraging students to work interdependently on a variety of assignments and course material. However, classroom facilitation, especially considering the increasing use of technology associated with modern society, may require non-traditional classroom facilitation techniques to engage students and increase student success.

Effective and engaging classroom facilitation involves motivation on behalf of the faculty and student. Since the faculty member is one that generally sets the tone and mini-culture within the classroom, faculty need to be motivating and engaging with students (Ejiwale, 2012). Regardless of the modality of classroom facilitation, traditional campus, online, or a hybrid of both traditional classroom and online, students that have a sense of belonging and engage tend to be more successful and have an overall feeling of belonging (Thomas, Herbert, & Teras, 2014). A few successful non-traditional classroom facilitation techniques that faculty may benefit from using include blended classroom, flipped classroom, active learning, and team based learning techniques.

Blended Classroom

Evolutions in the higher education industry indicate an effort to create a more personal and customized learning environment. A special report developed by the Center for Digital Education described blended and virtual learning as innovative by creating a new way to learn, changing how teachers facilitate, administrators develop the functional process, and the students learn (Cauthen & Halpin, 2012). Transforming the structure of traditional

methods in higher education will involve creation of new adult learning models, non-traditional curriculum, more personalized approaches to learning and developing the means to finance this new approach (Cauthen & Halpin, 2012). However, the journey begins with clarification of definitions of blended learning.

The meaning of blended learning continues to create some confusion. For instance, a basic understanding of blended learning suggests courses that combine online with face-to-face delivery. Furthermore, the curriculum design and the role of the facilitator also include efforts to combine web-based technology, teaching and the learning process to create a more interactive classroom for the students. The blended learning structure consists of "substantial proportions of the content delivery online, typical use of online discussions, and reduction in the number of face-to-face meetings" (Allen & Seaman, 2011, p. 7). However, another illustration of blended learning suggested that, integrated online courses combined with traditional face-to-face activities, in a planned, valuable, pedagogical manner, and where a portion of the face-to-face time is replaced by online activity is considered blended learning (Picciano, 2011). However, in 2012 many education experts and diverse organizations provided contributions to create acceptance of a normal definition that depicts blended learning as a formal education program where a student learns in a different manner than in the traditional brick-and-mortar classroom (Staker & Horn, 2012). A recent definition of blended learning in a research study on teacher education includes being an intentional integration process in the classroom, combined with field-based learning experiences using digital technology (Keengwe, Mbae, & Onchwari, 2016).

Consumer and research groups focusing on online learning refer to blended learning as a hybrid learning that suggests there are no real differences between these types of learning (Cauthen & Halpin, 2012). The main point to recall is that blended learning has developed a positive reception in the classroom and may also have positive student performance results and increase learning effectiveness (Auster, 2016). Another form of blended learning is the flipped classroom model. The flipped

classroom model suggests a change in how the instructional material is covered in class (the instructor's lecture, materials provided to students outside of class, such as instructional video recording, etc.).

Flipped Classroom

Flipped classroom techniques were developed to increase student engagement and participation in K-12 primary education (O'Flaherty & Phillips, 2015). Flipped classroom techniques involves students reviewing weekly course elements prior to class to improve the ability to prepare students for in-class activities. These activities generally involve deeper discussions, in-class projects, and other class activities to reinforce content learned and to challenge students on how to use the material in his or her personal and professional lives. In higher education, the success of flipped classrooms is attributed to faculty using classroom time to help students understand how to apply the learned knowledge and to create deeper discussion (O'Flaherty & Phillips, 2015).

A changing higher education student population is placing pressure on faculty and the institution to be more engaging by helping students develop stronger connections between theory and personal or professional application of the material. Flipped classrooms help build that bridge by using several techniques. These techniques involve more student time outside of the classroom, and expand preconceived ideas about classroom facilitation. Shared responsibility of learning between faculty and student are reinforced, requiring higher levels of cognitive and problem solving, while allowing for more student peer interaction and group think on how to solve problems (Galway, Corbett, Takaro, Tairyan, & Frank, 2014). Flipped classroom techniques also allow for a more cost-effective and efficient way of classroom facilitation. Many higher educational institutions are facing economic restraints with increased class sizes, sometimes limited resources, and faculty teaching more classes. Flipped classroom allows for a more student centered effective classroom facilitation that brings more value for student cost investment (O'Flaherty & Phillips, 2015).

Many learning theorists have recently become strong advocates for flipped classroom techniques to help

students learn and retain information because students come to class more prepared, more engaged, and students spend less time daydreaming, are not distracted by his or her smartphone or other electronic devices, and spend more time engaging in the class by processing and analyzing how content is applicable to today's global economy (Rotellar & Cain, 2016). Faculty can benefit from using flipped classroom to monitor classroom discussion and student's critical thinking skills to identify strengths and weaknesses with student's comprehension of the course material. Adjustments to course content can be adjusted to turn weaknesses into strengths and adjust classroom activity opportunities for further discussion. This type of classroom awareness on the behalf of faculty and students increases the success of active learning.

Active Learning

The goal of active learning is to increase student participation resulting in improved learning outcomes (Brint & Clotfelter, 2016). Keeping this in mind, a shift in higher education suggests changes from traditional lecture-based formats to more interactive methods and techniques that integrates the cutting-edge advances in technology and teaching methods that are the most recent attempts to increase student engagement (Perrotta & Bohan, 2013; Hora & Ferrare, 2014). Faculty engaged in higher education must consider what teaching and facilitation methods are the most appropriate and diverse approaches that would have the best positive impact on their student's learning experience (Aranha, Shettigar, & Varghese, 2013; Lane & Harris, 2015).

Gonzalez (2014) compared three different delivery methods (Lecture, Hybrid, and Online), that indicated delivering content using a type of blended media would result in the highest student success rates, followed by hybrid methods, with traditional lectures, without the use of chalkboards or PowerPoint slides, being the least successful. The ability to implement more interactive and active teaching methods help to foster student engagement leading to student achievement in the college setting (Lane & Harris, 2015; Smith, Jones, Gilbert, & Wieman, 2013; Wieman & Gilbert, 2014). Further research supports the PowerPoint dependent instructor's exploration

of delivery methods for a more interactive approach that results in the students achieving a positive outcome (Hunt, et al., 2016).

However, the significant results of a research study suggested that, changing the teaching methods of the instructor does not necessarily increase student-learning outcomes (Hunt, et al., 2016). Shifting from observing a teaching method to focusing on how the students are engaged in the content provides more meaningful information on whether learning is actually occurring. Therefore, choosing the most effective teaching methods or the least effective teaching methods in a learning point emphasizes how different media and the way the content is presented can achieve the desired behavior, engagement, and learning outcomes in the classroom (Hunt, et al., 2016). Demonstrating the commitment to create a student-centered learning environment and developing an engaging student experience is essential for valuable and meaningful learning to occur in college level courses (Lane & Harris, 2015; Smith, et al., 2013). Team-based learning in the non-traditional classroom has created more opportunities for teachers to facilitate more than in the traditional classroom setting.

Team-Based Learning

The concept of team-based learning suggests that, there are no individualistic components comprised in the learning mode. This reduces the amount of traditional concepts being reviewed by the faculty, which decreases the amount of time faculty would spend on grading papers, counseling individual students, or preparing assignments. A team-based learning structure would allow faculty to breakdown the concepts into small incremental assignments that stretch learning concepts over a two to three-week period (Stein, Colyer, & Manning, 2016).

There are three components that make team-based learning possible. Each component occurs during traditional teaching; but becomes more beneficial in the non-traditional, team-based learning sessions. The first relates to the pre-class preparations that identify concepts formulated for segmented introduction during each class period. This pre-class preparation creates the basis from which the students will begin the remaining two team-

based learning components. The second is the Readiness Assessment Process (RAP), where the student identifies what is required for each week and begins preparing by independently reading materials and completing pre-class work (Stein, et al., 2016). The third and final concept in the non-traditional, team-based learning system relates to applying the course concepts. This application can take the most time to accomplish and is accomplished by breaking class into groups to discuss particular situations surrounding the weekly concepts. In addition, the application can be accomplished through the use of exercises, presentations, or group interaction. As the groups become more cohesive, the team develops supporting the creation of the name team-based learning.

Once the transition to a team has been accomplished, a process begins that builds strong bonds between each member of the team. For instance, team members will become adamant about individual members being committed to the success of the team. There is no tolerance for the team member who lacks the desire to be an integral part of the team. Ensuring there is interaction, team-based learning should require the team member to identify an area of expertise and a commitment based on that expertise to the other team members on the team. There would be specific consequences should the team member fail on the commitment to the team (Stein, et al., 2016).

Peer evaluations, at this point, become a crucial part of team-based learning through an evaluation process of each member on the team. The evaluation identifies the team members' strength and weaknesses. This would help each team member to understand where the weaknesses are in the team and what the strengths are in the team. This type of skills assessment encourages team members to combine strengths in order to overcome any weakness that may exist. Through collegial collaboration, competence, and confidence may all contribute to the overall success of the group and this helps to make team-based learning succeed (Stein, et al., 2016).

Each phase of the team-based learning process is identified as knowledge, competency, and the ability to collaborate. Knowledge occurs in the preparation stage,

and competency is developed during the readiness assessment process to show a sufficient level of knowledge has been achieved. Finally, the ability to collaborate occurs during the application process to reinforce what is understood and needs to be applied to strength the knowledge and competency (Whitley, et al., 2015).

Classroom Technology

The increased use of technology by students may allow faculty and students to engage and learn in new non-traditional formats. As faculty becomes more comfortable with using non-traditional technology formats, student success, retention, knowledge creation, and satisfaction should also increase. Specific technology which can be used by faculty to increase student engagement and course success are interactive tutorials, online library tutorials, MOODLE, interactive flash games, eBooks, Toolwire, games and simulations, and media embedded in the classroom.

Interactive Tutorials

Interactive tutorials within the classroom have grown in popularity over the past few years, but the adoption of interactive tutorials by faculty have not reached the level of student interaction expectations. Interactive tutorials allow students to become more engaged, and construct new thinking models using personal and professional experiences with course content. Interactive tutorials also permits faculty and students to develop goal and process orientated learning, that creates an opening for real-world simulation by applying existing and new knowledge to critical thinking and problem solving. Some interactive tutorials encourage cross-collaboration among other students in the class (Van Oostveen, Muirhead, & Goodman, 2011).

Faculty and student approaches to learning often become mismatched in today's learning environments as the student learning preference is often constrained by faculty teaching environments and higher education institutions slowness to incorporate newer technology (Herrmann, 2014). A few emerging non-traditional interactive tutorials which are being used by faculty include Library tutorials, Modular Object Orientated Dynamic Learning Environment (MOODLE), and Interactive flash

games.

Library Tutorials

The most popular interactive tutorials used by a majority of higher education institutions are library and research interactive tutorials to assist students with becoming more comfortable using the library to locate material instead of relying on the internet. Library interactive tutorials teach students how to use the university's library to locate a wide-range of material to support the students learning. These library tutorials often use game theory strategies to make the tutorial interactive, fun, and encourage curiosity (Halpern & Tucker, 2015).

MOODLE

This interactive tutorial was developed as a way to diminish the student, faculty, and institution frustration with faculty not being engaging enough from a student's perspective, students are not engaged enough from the faculty perspective, and the need for more methodical pedagogical and administrative guidelines from the institutions' perspective (Bierne, 2013). MOODLE has been used in both secondary and higher education as a way for faculty to create his or her own unique interactive tutorials based on specific course content and objectives to help overcome student and faculty engagement concerns.

Interactive Flash Games

Interactive games have been around for centuries as a way to help students learn in a fun and challenging way. The interactive games are often simplistic and may use key terms and other learning descriptors to help students learn and retain information. As computer popularity grew and computer software became more user friendly, interactive flash games became a popular tool by faculty and students to learn and retain course content. Although often viewed as elementary interactive tutorials for higher education, interactive flash games usually result in higher student engagement and course success. Student's in a recent survey responded with an 87 percent or higher agreement that interactive flash games helped the student study for an exam, increased learning and retention of course material, improved test scores, viewed as an effective use of classroom technology, and overall contributed to a better learning environment (Maiga &

Bauer, 2013). The three examples of interactive tutorials to increase student classroom performance are highlighted as an encouragement for faculty to use or develop interactive learning tools to increase student engagement. By using interactive tutorials with students, faculty can focus more course time with deeper discussions, real-world scenarios, further development of student critical thinking and problem solving skills, and incorporation of student's experiences as students come to class more prepared and increased familiarization with course content.

eBooks

Another aid for classroom technology is the eBooks that have become a large part of e-Learning. The eBooks provide a way to have constant access to reading materials by utilizing the technology components carried around on a daily basis (e.g., iPhone, iPads, Tablets, mini-computers, etc.), rather than carrying around heavy textbooks. As students have begun using eBooks, post-test scores as compared to pre-test scores, have improved (Worm, 2013; Rojeski, 2012). However, the learning method does not need to be dependent upon what kind of knowledge is gained through the use of the type of classroom technology. When analyzing the learning methods, problem solving can be assumed to be dependent on a case-based method that could be integrated through eCases or classroom teaching (Worm, 2013).

When students do not take advantage of what eBooks have to offer, they are not aware of the wealth of knowledge that can be gained by using eBooks. Being able to transform the theoretical context of what is written into a different perspective for what students are expected to learn can create challenges (Worm, 2013). However, some valuable skills are the ability to choose the right type of tool to increase the possibility to that students will understand and learn what is being taught. There are benefits to both teaching and learning methods as educational tools move from the traditional methods to the non-traditional methods that involve diverse types of computer simulations developed by companies such as Toolwire.

Toolwire

Higher education continues to expand toward sophisticated, online collaborative, simulations, and interactive e-learning systems that use artificial intelligence for delivering customized instruction to students (Bell & Federman, 2013). Toolwire is a company that designs customized e-learning resources for customized instruction. The growth of e-learning enables this expansion for numerous courses and degree programs. Toolwire helps to engage learners, empowers teaching, improves outcomes, as well as develops, delivers, and supports immersive learning tools for online and blended learning courses. Game-based learning and virtual desktop products and solutions are additional aids for educational institutions to engage learners and prepare them for success in the classroom and in the workplace (Toolwire, 2016). The Toolwire approach focuses on a game-type learning design to engage students in course materials and personalized learning experiences.

Games and Simulations

In 2015, an expansion in games and simulations began to include topics associated with business communication writing, student success skills, critical thinking, psychology, environmental science, and virtual medical internship. Each of these brings more depth to the traditional classroom and elevates the student to a new learning level to a better perspective the Toolwire website provides a thorough explanation of some of the ways interactive game and simulation can be a benefit to the facilitator. There is an introduction that establishes learning content and scenarios; pre-tests that help to evaluate skills and knowledge levels through auto-graded activities; digital learning objects that introduces and provides an explanation of skill-specific content; interactive games that provide opportunities to practice and apply concepts that will increase the students skills and knowledge; dynamic remediation to help address any errors and misconceptions as a result of the student's responses during the interactive game segment; a post-test that measures the concepts learned and the skills achieved during the 5-question, auto-graded activity; mentor feedback is provided to deliver personalized feedback;

and finally, the performance analytics that are delivered through a single score based on pre-and post-test results so students can take steps to improve skills and knowledge in areas where improvement is needed (Toolwire, 2016).

The effectiveness of computer-based simulation games is apparent. Sitzmann (2011) used a meta-analytic technique with diverse comparison groups who either received no training or alternative training. The results revealed a higher declarative knowledge, a higher procedural knowledge, a higher retention and, a higher self-efficacy than trainees in a comparison group (Sitzmann, 2011). The effectiveness of the simulation game; however, was not influenced by a perception of entertainment. Toolwire technologies could be a valuable addition to a blended learning environment combining online and face-to-face learning. The strong learning outcomes are associated with blended learning as a comparison to the traditional, face-to-face instruction method. Media embedded in the classroom is an additional non-traditional method that supports the benefits of technology in adult learning environment.

Media Embedded in Classroom

Media embedded into the classroom help to identify and portray learning concepts that encourage the students to bring to the discussion, different cultures artefacts and practices into the classroom (Schmier, 2014). Providing the opportunities for students in this manner opens learning opportunities for the students because there is a building of concepts from one student to another. This offers more opportunities for creativity in the classroom. Examples of how embedded media is introduced into the classroom includes the use of video podcasts, and computer-based games and simulations such as Toolwire and Gamescape that helps to develop the students' multi-literate identities (Schmier, 2014). In addition, as facilitators begin the process of introducing new types of media into the classroom, students become more socially aware through the use of online activities instead of relying on peer-to-peer editing of the written work previously used in the classroom.

The idea of identifying how technology is a source of independent learning increases the way that media is

introduced into pedagogy, but without taking a look at the challenges that could occur (Lynch & Redpath, 2014). The fact of the matter is that moving from traditional to non-traditional learning methods does nothing but please the facilitators as the interactive, flexible, media-based modalities are introduced into the classroom (Lynch & Redpath, 2012). This type of a learning process in the classroom as compared to the traditional activities require an effort to engage in more thorough critical-thinking, which is a significant benefit for the facilitator. Efforts to use other forms of media embedded concepts into the classroom (such as those used to increase print-based literacy skills versus the gamified literacy apps) help to support the idea of a better way for the student to learn content assigned for each class (Lynch & Redpath, 2012).

Forming multimodal content by creating new methods to frame activities in the classroom can be accomplished by taking the print-based material and identifying ways to bring the concepts into an interactive stimulus from the conventional way to complete the exercises (Lynch & Redpath, 2012). Allowing students to be more creative with different learning activities by bringing more technology into the classroom helps support the concept of self-directed learning (Lynch & Redpath, 2012). Students become more vested in the learning process and begin to develop culturally. Students continue to become more engaged as different types of e-Learning are introduced into the classroom. Rapid changes in classroom functions are advancing, since students have more access to mobile devices, cell phones, laptop computers, iPads, and other devices that allow consistent connections to online classrooms, eBooks, media-embedded technology, interactive tutorials, and other tools (e.g., Toolwire and Gamescape), that help the student grasp the concepts that draws them into a positive learning cycle (Lynch & Redpath, 2012). Considering these realities, identification of the diverse forms of classroom technology includes games, simulations, interactive tutorials and types of social media, such as Twitter, that represents the future trends in higher education.

Future Trends

Development of classrooms compatible with increasing

technology will continue to evolve. Individuals increasing use of diverse mobile devices, including smart phones and iPads have become a part of routine personal and professional existence. However, the concern for those managing the business of education is the increased cost of education. Bell and Federman (2011) discuss several questions that address the cost-effectiveness of e-learning, the impact of e-learning measurement, in terms of student achievement, such as the retention and transfer of learning to future courses and the workplace; and what assessments would be needed to examine how e-learning affects the student's ability to retain and apply what has been learned.

Another consideration is cultural differences due to the international expansion of e-learning, which will also be a part of growing future trends. The cultural norms and differences in perspectives related to the value of e-learning from a non-western worldview is important. Bell and Federman (2011) reported a large percentage of research relating to e-learning is limited to college students within the United States. However, there are also cultural differences among students within the United States that should also be considered in future research concerning e-learning. The question is no longer if e-learning is effective.

The question is the focus on the future to help increase the understanding of different instructional methods, such as interactive simulations and gamification, to question how each affects a student's ability to acquire declarative and procedural knowledge. However, as blended and virtual learning continues to evolve, innovative types of learning in higher education creates the new frontier. The instructors, administrators, students and entire campus ecosystem must be open to a continuous transformation as the non-traditional becomes the new normal.

Non-Traditional Teaching Model

While there are many reasons why higher education institutions and faculty are sometimes slow with technology use in the classroom, using some of the technology is often better than not using technology at all to engage students (Schmid, et al., 2009). The umbrella that incorporates technology use in the classroom and classroom teaching techniques is the proposed Non-Traditional Teaching Model, as illustrated in Figure 1. The Non-Traditional Teaching Model incorporates characteristics associated with andragogy, which include promoting communication and interaction among faculty and students. The non-traditional teaching model encourages providing cognitive support to increase critical thinking and problem

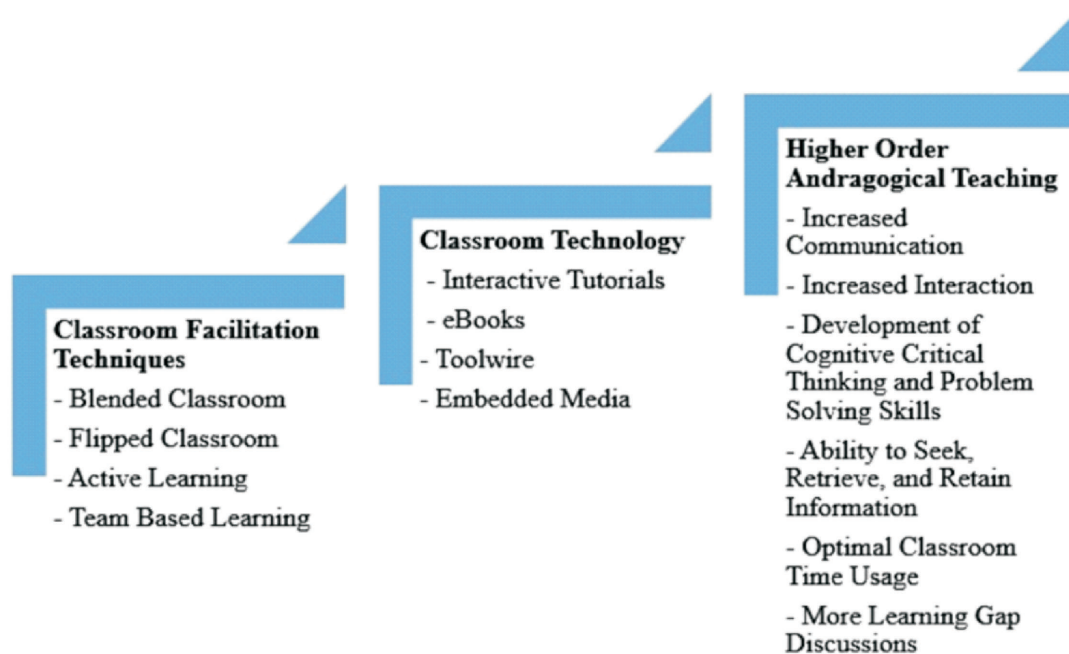


Figure 1. Non-Traditional Teaching Model

solving skills, while teaching students how to seek, retrieve, and use information, and increase classroom time efficiency by focusing more on course content discussions to fill in learning gaps (Schmid et al., 2009). The Non-Traditional Teaching Model is designed to be a step process, whereas as faculty begins to incorporate non-traditional facilitation techniques with classroom technology, faculty can achieve a higher order of andragogical teaching. This is the perspective associated with teaching adults and facilitating adult learning activities in the classroom. The model indicates another evolution from pedagogical teaching methods. This evolution will result in development of diverse models representing the path towards emerging non-traditional facilitation and technology that increases student engagement and success.

Conclusion

For nearly 40 years, computer technology has been available in higher education classrooms, but as higher education institutions, faculty, and students still find difficulties of incorporating technology in the classroom to increase faculty teaching methods, increase student performance, and increase student retention. The proposed Non-Traditional Teaching Model is a useful model to help faculty recognize the importance and some available resources to transform pedagogical teaching. To reach a higher order of andragogical teaching, faculty may benefit from including some or all of blended classroom, flipped classroom, active learning, team-based learning, interactive tutorials, eBooks, Toolwire, and embedded media techniques. Efforts to transform the classroom not only helps match student technology expectations with faculty course facilitation but also encourages development of new adult learning models that will propel higher education to new levels.

References

- [1]. Allen, I.E., & Seaman, J. (2011). *Going the Distance: Online education in the United States*. Newburyport, MA: Sloan Consortium.
- [2]. Aranha, P., Shettigar, D., & Varghese, D. (2013). "Chalk and talk versus powerpoint: Perception of nursing faculty in India". *American International Journal of Research in Humanities, Arts and Social Sciences*, Vol. 3(2), pp. 264-267. Retrieved from <http://dx.doi.org/10.2147/AMEP.S12154>
- [3]. Auster, C.J. (2016). "Blended learning as a potentially winning combination of face-to-face and online learning an exploratory study". *Teaching Sociology*, Vol. 44(1), pp. 39-48. Retrieved from <http://dx.doi.org/10.1177/0092055X15619217>
- [4]. Bell, B.S., & Federman, J.E. (2013). "E-learning in postsecondary education". *The Future of Children*, Vol. 23(1), pp. 165-185. Retrieved from <http://dx.doi.org/10.1353/foc.2013.0007>
- [5]. Bierre, J. (2013). "Actualizing MOODLE interactive tools usage within distance learning: Need for multilevel approach". *International Journal of Information and Education Technology*, Vol. 31(1), pp. 44. Retrieved from <http://dx.doi.org/10.7763/IJET.2013.V3.231>
- [6]. Bonser, C.F. (1992). "Total quality education?" *Public Administration Review*, Vol. 52(5), pp. 504-512. Retrieved from <http://dx.doi.org/10.2307/976811>
- [7]. Brint, S., & Clotfelter, C.T. (2016). "US higher education effectiveness". *RSF: The Russell Sage Foundation Journal of the Social Sciences*, Vol. 2(2), pp. 2-37. Retrieved from <https://muse.jhu.edu/article/612990/summary>
- [8]. Cauthen, L., & Halpin, J. (2012). *The Blended and Virtual Learning Frontier Special Report*. Retrieved from http://www.sonicfoundry.com/wp-content/uploads/imports/the_blended_virtual_learning_frontier_2.pdf
- [9]. Ejiwale, J.A. (2012). "Facilitating teaching and learning across STEM fields". *Journal of STEM Education: Innovations and Research*, Vol. 13(3), pp. 87-94. Retrieved from <http://search.proquest.com/docview/1015211575?accountid=458>
- [10]. eun Oh, K., & Gwizdka, J. (2011). "Impatient opportunists: A study of technology use in a higher education classroom". *Journal of Applied Research in Higher Education*, Vol. 3(2), pp. 81-96. Retrieved from <http://dx.doi.org/10.1108/17581181111198638>
- [11]. Fahmy, M.F. (2004). "Thinking about technology effects on higher education". *Journal of Technology*

Studies, Vol. 30(1), pp. 53-58. Retrieved from <http://eric.ed.gov/?id=EJ905124>

[12]. Galway, L.P., Corbett, K.K., Takaro, T.K., Tairyan, K., & Frank, E. (2014). "A novel integration of online and flipped classroom instructional models in public health higher education". *BMC Medical Education*, Vol. 14(181). Retrieved from <http://dx.doi.org/10.1186/1472-6920-14-181>

[13]. Gonzalez, B.Y. (2014). "A six-year review of student success in a biology course using lecture, blended, and hybrid methods". *Journal of College Science Teaching*, Vol. 43(6), pp. 14-19. Retrieved from <http://search.proquest.com/docview/1537942187?accountid=458>

[14]. Halpern, R., & Tucker, C. (2015). "Leveraging adult learning theory with online tutorials". *Reference Services Review*, Vol. 43(1), pp. 112-124. Retrieved from <http://dx.doi.org/10.1108/RSR-10-2014-0042>

[15]. Herrmann, K.J. (2014). "Learning from tutorials: A qualitative study of approaches to learning and perceptions of tutorial interaction". *Higher Education*, Vol. 68(4), pp. 591-606. Retrieved from <http://dx.doi.org/10.1007/s10734-014-9731-3>

[16]. Hora, M.T., & Ferrare, J.J. (2014). "Remeasuring postsecondary teaching: How singular categories of instruction obscure the multiple dimensions of classroom practice". *J.Coll.Sci Teach*, Vol. 43(3), pp. 36-41. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.686.6458&rep=rep1&type=pdf>

[17]. Hunt, K.A., Trent, M.N., Jackson, J.R., Marquis, J.M., Barrett-Williams, S., Gurvitch, R., & Metzler, M.W. (2016). "The effect of content delivery media on student engagement and learning outcomes". *Journal of Effective Teaching*, Vol. 16(1), pp. 5-18. Retrieved from <http://eric.ed.gov/?id=EJ1092702>

[18]. Johnson, G.M. (2006). "Perception of classroom climate, use of WebCT, and academic achievement". *Journal of Computing in Higher Education*, Vol. 17(2), pp. 25-46. Retrieved from <http://dx.doi.org/10.1007/BF03032697>

[19]. Keengwe, J., Mbae, J.G., & Onchwari, G. (Eds.). (2016). "A blended approach to teacher education". In

Handbook of Research on Global Issues in Next-Generation Teacher Education, pp. 1-21. Hershey, PA: Information Science Reference (an imprint of IGI Global).

[20]. Kolb, D.A. (1981). "Experiential learning theory and the learning style inventory: A reply to Freedman and Stumpf". *Academy of Management Review*, Vol. 6(2), pp. 289-296. Retrieved from <http://dx.doi.org/10.5465/AMR.1981.4287844>

[21]. Lane, E.S., & Harris, S.E. (2015). "A new tool for measuring student behavioral engagement in large university classes". *Journal of College Science Teaching*, Vol. 44(6), pp. 83-91. Retrieved from <http://search.proquest.com/docview/1691409401?accountid=458>

[22]. Lynch, J., & Redpath, T. (2012). "'Smart' technologies in early year's literacy education: A meta-narrative of paradigmatic tensions in iPad use in an Australian preparatory classroom". *Journal of Early Childhood Literacy*, Retrieved from <http://dx.doi.org/10.1177/1468798412453150>

[23]. Maiga, H.A., & Bauer, M.L. (2013). "Using interactive flash games to enhance students' learning in animal sciences". *NACTA Journal*, Vol. 57(3), pp. 60-66. Retrieved from <http://search.proquest.com/docview/1437602144?accountid=458>

[24]. Marzano, R.J., Pickering, D., & Pollock, J.E. (2001). *Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement*. Alexandria, VA: ASCD.

[25]. O'Flaherty, J., & Phillips, C. (2015). "The use of flipped classrooms in higher education: A scoping review". *The Internet and Higher Education*, Vol. 25, pp. 90. Retrieved from <http://dx.doi.org/10.1016/j.iheduc.2015.02.002>

[26]. Perrotta, K.A., & Bohan, C.H. (2013). "'I hate history': A study of student engagement in community college undergraduate history courses". *Journal on Excellence in College Teaching*, Vol. 24(4). Retrieved from http://scholarworks.gsu.edu/msit_facpub/21/

[27]. Picciano, A.G. (2011). "Introduction to the special issue on transitioning to blended learning". *Journal of Asynchronous Learning Networks*, Vol. 15(1), pp. 3-7. Retrieved from <http://www.onlinelearningconsortium.org>

- [28]. Rojeski, M. (2012). "User perceptions of eBooks versus print books for class reserves in an academic library". *Reference Services Review*, Vol. 40(2), 228-241. Retrieved from <http://dx.doi.org/10.1108/00907321211228291>
- [29]. Rotellar, C., & Cain, J. (2016). "Research, perspectives, and recommendations on implementing the flipped classroom". *American Journal of Pharmaceutical Education*, Vol. 80(2), pp. 1-9. Retrieved from <http://search.proquest.com/docview/1784466268?accountid=458>
- [30]. Schmid, R.F., Bernard, R.M., Borokhovski, E., Tamim, R., Abrami, P.C., Wade, C.A., & Lowerison, G. (2009). "Technology's effect on achievement in higher education: A stage I meta-analysis of classroom applications". *Journal of Computing in Higher Education*, Vol. 21(2), pp. 95-109. Retrieved from <http://dx.doi.org/10.1007/s12528-009-9021-8>
- [31]. Schmier, S. (2014). "Popular culture in a digital media studies classroom". *Literacy*, Vol. 48(1), pp. 39-46. Retrieved from <http://dx.doi.org/10.1111/lit.12025>
- [32]. Sitzmann, T. (2011). "A meta-analytic examination of the instructional effectiveness of computer-based simulation games". *Personnel Psychology*, Vol. 64(2), pp. 489-528. Retrieved from <http://dx.doi.org/10.1111/j.1744-6570.2011.01190.x>
- [33]. Smith, M.K., Jones, F.H., Gilbert, S.L., & Wieman, C.E. (2013). "The classroom observation protocol for undergraduate STEM (COPUS): A new instrument to characterize university stem classroom practices". *CBE-Life Sciences Education*, Vol. 12(4), pp. 618-627. Retrieved from <http://dx.doi.org/10.1187/cbe.13-08-0154>
- [34]. Staker, H., & Horn, M.B. (2012). *Classifying K-12 Blended Learning* (ED535180). Retrieved from Innosight Institute: <http://eric.ed.gov/?id=ED535180>
- [35]. Stein, R.E., Colyer, C.J., & Manning, J. (2016). "Student accountability in team-based learning classes". *Teaching Sociology*, Vol. 44(1), pp. 28-38. Retrieved from <http://dx.doi.org/10.1177/0092055X15603429>
- [36]. Thomas, L., Herbert, J., & Teras, M. (2014). "A sense of belonging to enhance participation, success and retention in online programs". *The International Journal of the First Year in Higher Education*, Vol. 5(2), pp. 69. Retrieved from <http://dx.doi.org/10.5204/intjfyhe.v5i2.233>
- [37]. Toolwire, (2016). Retrieved from <http://www.toolwire.com/>
- [38]. Van Oostveen, R., Muirhead, W., & Goodman, W.M. (2011). "Tablet PCs and reconceptualizing learning with technology: A case study in higher education". *Interactive Technology and Smart Education*, Vol. 8(2), pp. 78-93. Retrieved from <http://dx.doi.org/10.1108/17415651111141803>
- [39]. Whitley, H.P., Bell, E., Eng, M., Fuentes, D.G., Helms, K.L., Maki, E.D., & Vyas, D. (2015). "Practical team-based learning from planning to implementation". *American Journal of Pharmaceutical Education*, Vol. 79(10), pp. 149. Retrieved from <http://dx.doi.org/10.5688/ajpe7910149>
- [40]. Wieman, C., & Gilbert, S. (2014). "The teaching practices inventory: A new tool for characterizing college and university teaching in mathematics and science". *CBE-Life Sciences Education*, Vol. 13(3), pp. 552-569.
- [41]. Worm, B.S. (2013). "Learning from simple eBooks, online cases or classroom teaching when acquiring complex knowledge. A randomized controlled trial in respiratory physiology and pulmonology". *PloS One*, Vol. 8(9), e73336. Retrieved from <http://dx.doi.org/10.1371/journal.pone.0073336>

ABOUT THE AUTHORS

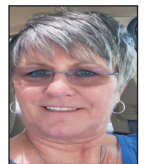
Dr. Pamela Allen is a Research Affiliate with the Center for Leadership and Education Research and a Lead Faculty Area Chair at the University of Phoenix. As an Executive Life Coach she provides professional consultation related to leadership, teamwork and organizational development. As a research associate in the Center for Leadership and Education Research she continues active research from national and global perspectives regarding non-traditional adult students and faculty, non-traditional face-to-face learning, blended learning, online learning, advances in educational technology and diversity and inclusion. Following these research themes, from March to June 2016, Dr. Allen was recently involved in professional presentations at the Western Academy of Management, Accreditation Council for Business Schools & Programs and the International Guide Conference in Madrid, Spain. Dr. Allen received multiple honorarium awards, a research scholarship award from the School for Advanced Studies and the Outstanding Teaching Award from the University of Phoenix in 2016.



Dr. Paul Withey is an Executive Consultant who assists several organizations to recognize the importance of strategic business development and operations. He has extensive experience in the financial industry, public relations/marketing, financial services/investment, product/strategy development, demographic analysis, insurance, database management, database mining, report writing, and IT system analysis and development. He has worked with several organizations on the importance of strategic business development and operations, focusing on the bottom up instead of the top down approach by understanding how chaotic internal and external events can provide organizational opportunities and improve decision making. Dr. Withey enjoys a work-life balance by pursuing a passion for national and international travel to experience diverse cultures. He is involved with his community, enjoys good food, challenging conversations amongst friends, and heartfelt humor.



Deb Lawton is a Faculty Member facilitating graduate management courses for the University of Phoenix – Houston Campus. In addition, as a Research Associate affiliated with the Center for Leadership and Education Research with the University of Phoenix, Dr. Lawton's interests in research and publishing relating to an understanding of current management concerns to better the workforce. As a Certified Myers-Briggs personality assessment consultant and researcher, Dr. Lawton's research relates to diversity issues in the workplace, a focus on the shift in faculty teaching methods and technology tools needed to facilitate student the learning process in higher education. She has published various papers in National and International Journals. She presented material at the Accreditation Council for Business Schools and Programs Conference and at the XI International GUIDE Conference and IX International Edtech Iknasbar Congress in Madrid, Spain. Dr. Lawton received the Research and Scholarship Award for her recent research accomplishments from the University of Phoenix in June, 2016.



Carlos Tasso Eira De Aquino is the Senior Executive Director for the Center of Excellence in Diversity and Inclusion at Argosy University, Tampa, Florida, USA. He is an accomplished Senior Executive and Educator combining over 15+ years of experience in leadership and scholarship in Business, Education, IT, and Engineering with a PhD and two Post-Docs. In his career, as an executive, he has been strategically building, managing and guiding diverse teams to solve complex, systemic problems. As an educator, he has taught, developed and supervised, and published relevant research and scholarship. Along his career Dr. Aquino accumulated achievements and recognition as Executive-Director, Senior Director, Project Manager, Provost, Dean of Business, Assistant Dean of Accreditation, among other capacities in organizations in the USA and abroad, with followers that encompassed a clear diversity of cultures.

