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LEARNING-STYLE ASSESSMENT IN ONLINE COURSES: A PREREQUISITE FOR ACADEMIC SUCCESS

By

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ABSTRACT

Educational researchers have extensively documented the benefits of utilizing learning styles in the processes of teaching and learning from early childhood to Adult Education (Burke & Dunn, 2003; Cicco, 2009). This article examines the need to consider and employ learning-styles instruction in the online classroom. Adult learners are unique in that they have already developed strategies to navigate through their academic courses and to succeed, even in adverse conditions. As adult learners enter the world of online instruction, their techniques may or may not prove to be effective in allowing them to master course objectives (Kasworm, Rose, & Ross-Gordon, 2010). Introducing a learning-styles approach to differentiate the instruction in online courses may assist adult learners in recognizing their learning needs and preferences, while providing them with a repertoire of learning options which capitalize on their personal strengths. Implementation of learning-styles pedagogical methods in online courses offers educators and their adult students a new approach to de-mystify successful pathways for academic success (Cicco, 2009; Cicco, 2013; Fearing & Riley, 2005). Five important steps for integrating this proven method of instruction in online courses are discussed as prerequisites in contemporary Adult Education.

Keywords: Academic Success, Adult Learners, Differentiated Instruction, Learning Styles, Online Classrrom, Online Courses, Online Instruction, Virtual Classroom.

INTRODUCTION

Online instructors are continually faced with the challenge of applying principles of differentiated instruction in the virtual classroom. The academic success of adult learners may be significantly enhanced when they are taught by instructors that employ learning-styles based instruction in their online classrooms. The extensive research on the benefits of teaching with learning-styles pedagogical methods points to the importance of faculty members to educate their students of all ages on ways of assessing personal learning needs and preferences (Burke & Dunn, 2003; Cicco, 2009; Dunn & Griggs, 2003). Studies have documented the relationship between individual learning-style preference and learning outcomes and attitudes in online courses (Cicco, 2009; Drennan, Kennedy, & Pisarski, 2005; Fearing & Riley, 2005). This information is particularly relevant for adult learners, because they are likely to have already established metacognitive strategies for navigating through their coursework, and may be less inclined to explore new ways of learning that may serve to increase their academic success in online classrooms. Educating adult students about learning styles theory and on ways to assess their own learning styles and capitalize on their strengths is a healthy prerequisite to success in any course, but especially in online courses, requiring new teaching and learning approaches to result in high levels of academic output performance (Cicco, 2011; Rudestam & Schoenholtz-Read, 2010). This article will provide educators with five short steps to easily implement learning styles theory in adult online courses.

A New Approach in Adult Online Instruction

Faculty members in undergraduate and graduate education programs are often asked to complete training on various course management systems with emphasis on specific online pedagogies prior to teaching their online courses. This may be a beneficial practice but instructors often revert to their traditional classroom techniques in the conversion to the virtual classroom. A new approach to

teaching adults in online courses would combine methods with a history of success in traditional classrooms with research on what is actually effective in online courses. Learning styles theory has been the model of innovation and evidence-based practice for decades. The Dunn and Dunn Learning-Style Model describes learning style in the context of emotional, environmental, sociological, physiological, perceptual, and psychological stimuli, that are preferred by learners along a continuum, shown in Figure 1 (Dunn & Dunn, 2006).

Instructors and students who possess an awareness and understanding of learning style theory and its application in the adult learning process are in a position to select favorable teaching and learning strategies for online courses. There is a positive relationship between learning-style preferences and attitudes in online courses, which clearly impacts on performance outcomes (Cicco, 2009; Zacharis, 2011). When instructors are aware of their students' learning styles, they can and should integrate methods of instruction that accommodate those individual styles. The response to learning style goes beyond offering differentiated instruction in their lessons to building a deeper appreciation for matching lesson plan content and stimuli, assignment and practice options, and study exercises with learners' diverse needs, strengths, and preferences. To achieve this integration in the online classroom, instructors and students must first realize that adult learners may rely on old study habits without

Figure 1. The Dunn and Dunn Learning-Style Model (Dunn & Dunn, 2006).

sufficiently exploring new techniques. There must be a real conversation on learning-styles approaches and on the ways they can easily help students to optimize their learning experiences, particularly before the initial transition to online coursework. This discussion may take place between students and their academic advisors, program mentors, or with the online faculty instructor, prior to the start of the online module, and should be more or less structured, based on the learners' preferences. Furthermore, the discourse between instructor and student should demonstrate a respect for the prior knowledge and success of the adult learner, who may be transitioning to online coursework for the first time (Cicco, 2009; Hollins-Alexander, 2013; Rudestam & Schoenholtz-Read, 2010). There are simple steps every online faculty member may take to simplify the road to success for adult learners. Those steps are ideally intended for a first online course experience, or perhaps a foundations course in the program curriculum. It is also beneficial to repeat the steps and exercises in abbreviated fashion, in each subsequent course so as to acquaint new faculty members with their students' learning styles and to reinforce the students' self-awareness.

Step One: Introduce Learning Styles

The first simple step for improving the online learning experience is for instructors to introduce learning styles theory to their adult students. A brief Power Point presentation or Webinar, which addresses the Dunn and Dunn Model and reveals student success rates when employing learning-style strategies lays the foundation for further exploration of personal preferences and strengths (Cicco, 2013; Dunn & Dunn, 2006; Rundle, 2006). Every student enrolled in the online course should attend the presentation or participate in the Webinar, sometime prior to the start of the course, perhaps as an initial homework assignment or institutional programmatic prerequisite. Additionally, every student should examine a sample of research evidence on the powerful results of learning-style pedagogical methods with adult learners. The elements and stimuli in each domain of the Dunn and Dunn Model should be reviewed in the presentation, to begin the process of self-reflection in students as they examine the
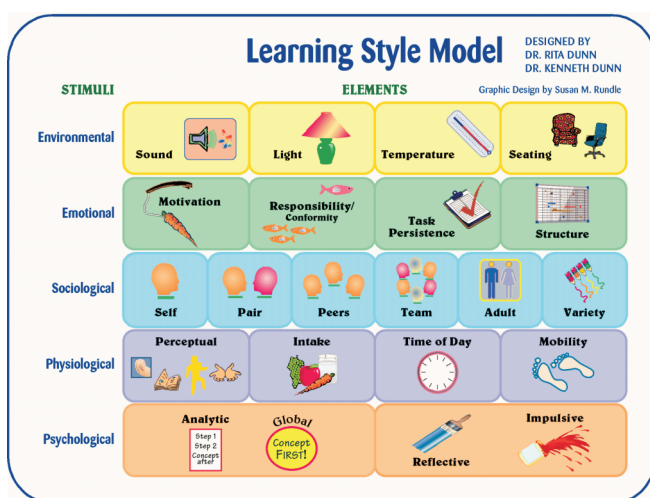
strategies they prefer and those that allowed them to experience academic success in different courses (Dunn & Dunn, 2006; Rundle, 2006; Zacharis, 2011). The course syllabus should also include some coverage on the learning-style approaches to be included during the semester to help make the virtual classroom more interactive and responsive to learners' needs. Examples of those methods include the use of live media, small-group assignments, field trips, interactive tutorials and online games, self and peer-review exercises, assignment alternatives and a variety of assignments with varying levels of structure and instructor directives (Bernstein & Bass, 2005; Cicco, 2009; Cicco, 2013).

Step Two: Administer a Learning-Style Assessment

Contemporary online instruction requires greater planning and thinking on the part of faculty and students. The conversation on how to make the online course a richer and more valuable learning experience should continue beyond the initial course advisement procedure. Faculty members and students are accountable for the success of the online course experience, based on their participation in course activities and active engagement in the course improvement process (Drago-Severson, 2009). The second step in the application of learning-styles instruction is for the faculty to administer a learning-style assessment for all students in the online course. The *Building Excellence Survey* is a well-established online assessment of adult learning-style preference and should be a required assessment listed in the course syllabus (Rundle, 2006). It is recognized as a valid, reliable, and inexpensive instrument for measuring learning-style preferences across the Dunn and Dunn Model's domain areas and requires only 20 minutes to complete (Rundle, 2006). Upon completion, it rapidly generates and provides the learner with his/her unique learning-style profile and with clear suggestions for capitalizing on personal learning-style strengths, which can be incorporated in the next step as explained below (Rundle, 2006).

Step Three: Conduct a Self-Reflection Exercise

The adult learners are now equipped with a tangible tool for maximizing their online course experience. The third step is for the student to write a self-reflection essay, explaining their interpretation of their learning-style profile and how it can improve their performance in online courses. This self-reflection is intended for personal use and to be shared in discussion with the faculty instructor and with classmates in discussion board exercises. The self-reflection activity insists that the students thoughtfully and creatively consider the ways they can utilize their understanding of learning styles to possibly alter their study and assignment completion strategies. It is also an exercise that may open the communication process with the instructor, who will receive suggestions on students' preferred activities and favored methods of instruction in the online course. With this step, students not only have a tool in hand, but they are taken a step further by synthesizing learning-styles awareness with an actual plan for action in taking responsibility for their success in the course (Cicco, 2013; Drago-Severson, 2009; Swenson & Taylor, 2012).

Step Four: Integrate Learning-Styles Instructional Methods

Online educators facilitated from step one to step three but in step four, they begin to utilize the information that they have collected from students to engage them in learning-styles instruction. The instructor is now responsible for accommodating adult students' learning preferences by differentiating each instructional module with enhanced opportunities for meeting their needs. Underlying this step is the notion that the educator is already familiar with the Dunn and Dunn Model and its direct link to teaching strategies that accommodate learners across the aforementioned learning domains (Cicco, 2013; Rundle, 2006). If the instructor is not well-versed on this theory and its teaching applications, it is a call for professional development through reviewing the literature or participating in one of many available learning-styles certification courses, which are frequently offered in online form. In doing so, the instructor models the same pursuit of self-knowledge and self-improvement that is expected from the students. Again in this step, the instructor takes ownership for the success of the course and for student learning outcomes by actively seeking to improve the online course. The perceptual domain is typically the first area explored by novice online instructors, because it lends

itself to responding easily to preferences for auditory, visual, tactual, and kinesthetic stimulation. The sociological domain is also popularly selected in differentiating lessons because it allows instructors to provide opportunities for independent and group work (Cicco, 2011; Cicco, 2013).

The possibilities are endless when instructors consider providing assignment options and alternatives for students that allow them to select the assignment which will best utilize their strengths and more accurately demonstrate their mastery of course objectives. Allowing for triangulated forms of assessment, student development of scoring rubrics to track their personal progress, and offering students the opportunity to collaborate in planning parts of lessons and presentations, heightens the level of communication between instructors and students. This exercise not only enlivens learning-styles pedagogy in the virtual classroom, but also reminds the educators and adult students that they share a common goal and are partners in the online course experience (Cicco, 2011; Kasworm, Rose, & Ross-Gordon, 2010; Rudestam & Schoenholtz-Read, 2010).

Step Five: Collect Student Feedback

Effective online teaching and learning requires that all course participants envision and capture the essence of lifelong learning by creating the conditions for academic success. Integrating a learning-styles pedagogy will certainly provide additional opportunities for students to succeed. Steps one through four of the course modification and improvement exercise described would be futile without step five, which calls for ongoing evaluation of the online course and each of its modules. Instructors must enable and encourage the students to provide them with feedback on lesson activities, academic support, supplementary resources, assignments, enrichment and practice exercises, levels of engagement and satisfaction, and assessments. The instructor must use this feedback from formal and informal forms of evaluation on a regular basis, to monitor the degree to which students' needs are being met through challenging assignments and diverse instructional methods that build on their self-understanding of learning-style strengths and preferences. Being open to receiving student feedback is just as important as providing them

with honest, thorough, and constructive evaluations that offer vivid insight into their progress towards the mastery of course objectives. Students and instructors should communicate on the ways that they can learn and teach more effectively by capitalizing on learning-style strengths and modifying instruction whenever it is appropriate and beneficial. Keeping the lines of communication open through formative and summative evaluations also enhance this professional relationship that develops between online instructors and their adult students (Cicco, 2011; Cicco, 2013; Swenson & Taylor, 2012).

Research Implications

It is recommended that educators consider employing the five steps to conduct action and applied research on the effectiveness of learning styles instruction in online classrooms. The five steps are based on the existing research on learning styles and online instruction, but it is imperative that they be considered in conjunction with empirical studies that clearly document the usefulness and viability of these methods in virtual classrooms. Comparative studies demonstrating the results of implementing the five steps would be invaluable to online pedagogues. Until this evidence is available, the protocol is somewhat limited but nevertheless it offers a solid framework for online instructors to creatively implement with the integration of their own dynamic teaching styles and in combination with their students' unique individual needs, preferences, and contributions to classroom rapport. Further research on the relevance of learning styles in online classrooms will not only contribute to the current body of literature, but will also allow for additional understanding on the theory's benefits and its evolution into the era of virtual instruction (Cicco, 2009; Cicco, 2013; Swenson & Taylor, 2012).

Conclusion

Assessing the learning-style preferences of adult learners enrolled in online courses is presented in this article as a prerequisite for academic success. The dynamics of contemporary online instruction call upon instructors and students to further understand the processes of teaching and learning through personal introspection and frequent professional development (Hollins-Alexander, 2013;

Swenson & Taylor, 2012). Online course instructors may actively facilitate and improve online course experience for themselves and for their students in terms of learning outcomes by following the five simple steps to introduce, incorporate, and evaluate learning-styles instruction. Educators and adult learners share the responsibility for designing and maintaining a vivid and engaging online course environment, where communication is clear and ongoing and, where learning styles theory is allowed to maximize the potential for strong academic performance. Clearly, linking course objectives with learning-styles curriculum and measurable performance outcomes will assist educators and students in realizing their academic goals and in improving their levels of satisfaction in the online classroom (Cicco, 2013; Rudestam & Schoenholtz-Read, 2010; Zacharis, 2011).

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