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# Techniques for Increasing Student Engagement for Contact Hour Equivalence: Online Courses That Are Flexplace, not Flextime

Sturges, David L. [1, a]

[1] College of Business Administration,
University of Texas-Pan American, [a] dsturges@utpa.edu

## Abstract

The concept pursued by this study is to find contact-hour equivalency for students to opt for online classes that are ensured of being equal to or better than classes on campus. The result is an application of online techniques that are based on not requiring students to come to campus for classes, but that meet in the schedule of classes. These are referred to here as "Flex-Place, not Flex-Time." This course design builds courses to allow scheduling activity on a schedule similar to building a Face-2-Face course schedule, but without the associated costs in dollars and time to commute to campus. Those students who work to support their educational costs, can go to the employee lounge to attend class rather than jumping into a car and making a thirty-minute drive to spend thirty-minutes looking for a parking place to make an on campus class.

## Introduction

Andrew Carnegie created the "credit hour" in 1906 and used the influence of his foundation to push for its adoption in higher education, not to provide a metric for student learning outcomes but to document faculty work for retirement benefit requirements.

(Fain, 2012). In spite of this targeted beginning, the credit hour became a widely used and accepted measure of curriculum content. Today, it is widely used as the principle basis for defining curriculum accountability by colleges, universities, and accrediting agencies. (Laitinen, 2012) Higher education institutions found the time-related credit hour concept to be an easy answer to a number of administrative issues requiring quantification for reporting and measurement. These included "determining state and federal funding, setting faculty workloads, scheduling, recording coursework, and determining whether students are attending college full time." (Laitinen, 2012). Over time, the "credit hour" departed a limited definition of time spent in academic pursuit and began to be a proxy for learning outcomes. (Fain, 2012).

The rapid growth of online courses through proprietary for-profit colleges, as well as traditional colleges, has cast suspicion on the credit hour as a proxy for student learning, especially as it relates to government financial assistance programs

The problem with online courses is their typical asynchronous structure that permits students to access course materials on their own schedules and in individual work to complete assignments, quizzes, exams, and papers. This asynchronous work makes defining by traditional credit hour "seat-time" definitions almost impossible. Serious questions are opened to equivalency of F-2-F courses that administrations continue to measure in time units and those delivered online.

This study offers suggestions in keeping with recent definitions of content achievement in online courses that no longer can be measured by the traditional definitions used by a majority of universities in the U.S.

**Definitions**

The original Carnegie Unit that defined a credit hour was, for example:

> "For traditional delivery methodologies (major semester), one unit of undergraduate academic credit equals:
>
> - 1 hour of lecture, seminar, or recitation and two hours of study per week, or
> - 2 hours of laboratory, studio, or similar activities and one hour of study per week, or
> - 3 hours of laboratory, studio, or similar activities per week, or
> - 3 hours of supervised independent study per week or
> - 45 - 75 total hours of supervised clinical or fieldwork experiences (additional preparation time may be required)."
>
> (Definition of a Credit Hour, 2011)

Colleges used this concept to determine their interpretations of appropriate "time on task" to quantify student-curriculum relations for administrative measurement of consistency in exposure to curriculum components. So, credit hour requirements for colleges are listed as fourteen or fifteen contact hours for a one-credit hour course. A fourteen-week 3-hour course would have three contact hours per week with six hours of student outside work. A seven-week course requires six contact hours per week with

twelve hours of outside work. A three-hour course would then have between 42 and 45 credit hours, not counting final exam time, no matter what length of semester the course was assigned.

Online courses, whether they are synchronous or asynchronous, are extremely difficult to measure using these criteria. The challenge has been to create a quantitative measure that meets the administrative needs filled by the current definitions of credit hour.

The Federal government entered the fray in an attempt to address the concerns of student exposure for financial aid administration by defining a credit hour:

> A credit hour is "an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that is not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out of class work for each week for approximately fifteen weeks for one semester... or the equivalent amount of work over a different amount of time." (National Archives and Record Administration, 2010)

The important component of this definition is the reference to "not less than one hour of classroom or **direct faculty instruction**…" (Emphasis added). This phrase opened the door to more flexibility for institutions to define what activities constitute an hour of direct faculty instruction. In fact, interpretation of this definition was the genesis

of defining contact hours based on relation to learning objectives and assessment of outcomes rather than limited to "time on task."

For example, the Pennsylvania Department of Education produced new guidelines in 2008 that provided a flexible basis for schools to define the equivalence of credit hours. It suggests them as:

> "To identify high quality curricular content that is the equivalent of classroom instruction, the following should be considered. The activities that are the equivalent of classroom instruction *would best* be:
>
> - Directly related to the objectives of the course/program,
> - Be measurable for grading purposes,
> - Have the direct oversight or supervision of the faculty member teaching the course, and
> - In some form be the equivalent of an activity conducted in the classroom.
>
> The equivalent content should *not* be:
>
> - Homework assignments
> - 'Time spent', that is, a calculation based on the amount of time the student spends accomplishing a task"
>
> (Curricular Credit Policy: Ensuring Quality and Transferability, 2008)

Of importance to this study is the evolution of credit-hour criteria for accreditation

purposes. The Southern Association of Colleges and Schools bases its credit hour policy on the Federal guidelines. It says:

> "Comprehensive Standard 3.4.6 reads as follows: 'The institution employs sound and acceptable practices for determining the amount and level of credit awarded for courses, regardless of format or mode of delivery.' " (SACS Credit Hours Policy Statement, 2012)

According to the SACS document:

> "A credit hour is expected to be a reasonable approximation of a minimum amount of student work in a Carnegie unit in accordance with commonly accepted practice in higher education.
>
> - The credit hour definition is a minimum standard that does not restrict an institution from setting a higher standard that requires more student work per credit hour.
> - The definition does not dictate particular amounts of classroom time versus out-of-class student work.
> - In determining the amount of work the institution's learning outcomes will entail, the institution may take into consideration alternative delivery methods, measurements of student work, academic calendars, disciplines, and degree levels.
> - To the extent an institution believes that complying with the Federal definition of a credit hour would not be appropriate for academic and other institutional

needs, it may adopt a separate measure for those purposes.

- Credits may be awarded on the basis of documentation of the amount of work a typical student is expected to complete within a specified amount of academically engaged time, or on the basis of documented student learning calibrated to that amount of academically engaged time for a typical student. " (SACS Credit Hour Policy Statement, 2012)

In the case of accreditation by the Association to Advance Collegiate Schools of Business (AACSB), current standards include flexibility at both the undergraduate and graduate levels, although time remains a basic criterion for judgment. Standard 17 (current standard) says:

> "The bachelor's or undergraduate level degree programs must provide sufficient time, content coverage, student effort, and student-faculty interaction to assure that the learning goals are accomplished." (AACSB Standards, 2012).

While Standard 20 covers graduate content, it says:

> "The master's level degree programs must provide sufficient time, content coverage, student effort, and student-faculty interaction to assure that the learning goals are accomplished." (AACSB Standards, 2012).

In each of these standards, "task-on-time" is included as a metric. In the newly proposed standards, the focus is completely targeted to learning objectives and outcomes with only a relatively minor reference to time in curriculum design (Standard 11). The contact concept is included in four of the new standards.

Standard 8 says:

"The school uses well documented, systematic processes for determining and revising degree program learning goals; designing, delivering, and improving degree program curricula to achieve learning goals; and demonstrating that degree program learning goals have been met. "(Eligibility Procedures and Accreditation Standards for Business Accreditation. 2013)

Standard 9 says:

"Curriculum content is appropriate to general expectations for the degree program type and learning goals." (Eligibility Procedures and Accreditation Standards for Business Accreditation. 2013).

Standard 10 says:

"Curricula facilitate student-to-faculty and student-to-student interactions appropriate to the program type and achievement of learning goals." (Eligibility Procedures and Accreditation Standards for Business Accreditation. 2013).

Standard 11 says:

"Degree program structure and design, including the normal rime-to-degree, are appropriate to the level of the degree program to ensure achievement of high quality learning outcomes. Programs resulting in the same degree credential are structured and designed to ensure equivalence." (Eligibility Procedures and Accreditation Standards for Business Accreditation. 2013).

Interpreting these standards suggests that for both SACS and AACSB accreditation the important criteria are related to defining curriculum objectives at all levels and designing course delivery for student achievement of the objectives. “Time-on-task” is not as important a metric as achievement of tasks. If course design includes activities, assignments, and curriculum components that are targeted to exposure to and application of specific objectives in courses, then online courses can be determined to be the equivalent of traditional face-2-face courses with equal or more effective learning outcomes.

This turns our attention to what techniques, technologies, and activities are recognized as equivalents to serve as the basis for course design.

**Equivalency**

The evolution of the contact concept in university administration has led to a very different approach to defining appropriate levels of faculty-student and student-student interactions that can be determined to result in an equal learning experience for the Carnegie Unit measure. The result is a more complex planning, implementation, and assessment process to document learning in a course.

Only a few Departments of Education or colleges have really tackled the challenge. The new definitions are clear that faculty in the institution have the responsibility and accountability to define what types of course components will be classified as equal to faculty-student or student-student contact. In addition, the definition requires addition of specific challenges in online or hybrid courses. The University of Illinois developed one of the most complete early definitions. It provides its faculty with

faculty-developed activities that classify as course equivalents. Although it currently consists of forty-five activities, the list is a flexible, ever changing line up of activities that can be used to create course structure that strives to achieve objectives with multiple activities (Online Teaching Activity Index, 2010). The current list includes:

| | |
|---|---|
| Art Projects | Journaling |
| Article Critiques | Kinesthetics |
| Audio Recordings | Lab Experiments |
| Blogging | Learning Contracts |
| Brainstorming | Literature Reviews |
| Case Briefs | Multimedia Presentations |
| Case Studies | Oral Reports |
| Concept Mapping | Peer Review |
| Debates | Portfolios |
| Design Projects | Presentations |
| Document Analysis | Procedural Demonstrations |
| Essays | Student Q&A |
| Fieldwork | Quizzes |
| Gaming | Reflections |
| Group Debugging | Reviews |
| Group Problem Solving | Role Playing |
| Group Reports | Scavenger Hunts |

| | |
|---|---|
| Hypothetical Situations | Simulations |
| Ice Breakers | Socratic Dialogue |
| Inductive Reasoning | Web Design |
| Interviews | Wikis |

In other words, in designing a course, the content can be structured using multiple activities to contribute directly to accomplishment of the course's objectives. If the goals and objectives are composed appropriately and approved by faculty or are taken from a faculty-developed list such as the University of Illinois item menu, they become the centralized guide for selection of activities to contribute directly to accomplishment of the objectives.

The course is based on learning competencies and achievement of outcomes as opposed to "seat time" requirements. No longer is the student's roll to sit in a class, to absorb lecture material by osmosis to regurgitate it on a quiz to prove the student's short-term memory as a measure of learning success. Now students are actively engaged in learning because they see the benefit to the acquisition of the skill and have the opportunity to actively apply it in learning experiences.

**Best Practices**

At this point, the importance of meeting the equivalence challenge is significant because of its impact on accreditation at a number of levels. Now the question becomes,

do we have examples of how these types of course equivalence components can be built into an effective learning experience to engage students in the learning process.

To see how online courses can incorporate some of these equivalency techniques as well as some not yet included in the list, we will focus on currently delivered examples of online courses and how they meet the equivalence challenge.

These examples are used in three online classes at the University of Texas-Pan American's College of Business Administration. The courses are taught in both the 15-week and the 7-week formats. They are taught at both the graduate and undergraduate level. They are both synchronous and asynchronous in delivery. But, the courses are based on a schedule of deadlines and interactions between students-to-faculty and students-to-students. In other words, the activities in the course are more similar to Face-2-Face classes than they are to early correspondence type online courses. Instead of only Flextime as the basis for course activity, it takes that flexibility and augments it with Flexplace. This means the course is accessible from anywhere in the world and permits students to interact as in real time, but online.

In order to establish the goals and objectives structure that lends itself to better documentation to the relationship among goals, objectives, activities, and assessments, these courses were developed using the Quality Matters rubric. This is an online resource comprising a number of institutions that have set about to define quality practices in

online courses. It is constructed on the concept of the relationship between goals and objectives and all other components of the course. You can access the rubric at http://www.qmprogram.org/files/QM_Standards_2011-2013.pdf . Figure 1 shows a work sheet for establishing the linkage from objectives through activities to outcomes and assessment. Once goals and objectives are created that meet the criteria for specificity, measurability, and assessment procedure, the process moves to selection of "Learning Activities."

**Figure 1. MGMT6330 Organizational Behavior, Quality Matters Development**

This is a segment of the table that sets the objective-assessment lineage for a seven-week course with a total of 14 modules.

| Week | Modules | Module Level Objectives | Instructional Activities and Assessments |
|---|---|---|---|
| Week 3 | Module 4: Managing Leadership<br><br>• Read and analyze information about the concepts and application of leadership<br>• Identify, analyze, and apply control variables in simulation to achieve leadership success<br>• Create a white paper and presentation to demonstrate fact-finding, analysis, and development of conclusions on topics related to the strategy and tactics of | 1. As a student, I will use critical thinking to analyze a leadership situation in Virtual Leader Scenario 1 and my ability to apply the concepts of controlling the situation's tension levels, idea flow, and power position in order to get productive work done as measured by my overall performance ranking on the simulation. Goal is 90+.<br>2. As a student, if assigned Flash Report 2, I will use my critical thinking skills to analyze how my overall score on the simulation was achieved and will demonstrate my ability | All students:<br><br>• Read Module 4 resource-Leadership<br>• Complete Virtual Leader Scenario 1, minimum score of 70+ on overall rating (see rubric). Target is 90+ on overall rating. Multiple attempts should be made to achieve the 90+ ranking.<br>• Students may access a provided Internet resource for previous papers contained in a library for previous classes. http://www.baclass.panam.edu/MGMT6330library/Sp2011.html<br><br>http://www.baclass.panam.edu/MGMT6330library/Fall2010.html |

| | | | |
|---|---|---|---|
| | achieving success on the simulation. | to synthesize an explanation for how the variables affect the overall outcome as measured by a rating of 80% or greater on the White Paper and presentation my Flash Report group creates.<br>3. As a student, if assigned to FR 2, I will demonstrate my ability to use the ODT planning method for task performance to analyze needs for group productivity and to determine the steps necessary for implementation to complete the task as measured by an acceptable or greater rating on the ODT application reported in the white paper, the oral presentation, and peer evaluation of my performance as a member of the task team.<br>4. As a student, if assigned Flash Report 2, I will make my individual contribution to the team production outcomes of the white paper and formal presentation in WIMBA™ as measure by a rating of 90% or greater on the Peer Evaluation for FR 2. | • Students should use the BB Learn discussion board to ask questions or make comments about Modules 4<br>• Exam 1<br><br>Students assigned FR2<br><br>• Access referenced readings is textbook, *The Manager's Bookshelf: A Mosaic of Contemporary Views,* 9th ed. Pierce and Newstrom, ISBN-13:978-0-13-612250-0 ISBN-10:0-13-612250-7. Pearson Education 2011.<br>• Students should access Virtual leader Scenario 1 as many times as needed to score 90+.<br>• Students should carefully note the strategy and tactics for accomplishing the 90+ score.<br>• Students should communicate to the assigned FR2 task team members to discuss how the score of 90+ was accomplished. The team should discuss optional strategies and tactics to accomplish the 90+ ranking.<br>• Teams FR2 A, B, C, and D should create a paper and presentation to review the basic concepts of leadership, including sources outside the textbook readings. In addition, the paper and presentation will describe in detail the outcomes the team achieved in its analysis of how to score the 90+ |

| | | | |
|---|---|---|---|
| | | (addresses CO 1, 2, 3, 4, 5) | ranking in VL Scenario 1. Paper will be composed on BB Learn WIKI.<br>• Students may access a provided Internet resource for previous papers contained in a library for previous classes. http://www.baclass.panam.edu/MGMT6330library/Sp2011.html<br><br>http://www.baclass.panam.edu/MGMT6330library/Fall2010.html<br><br>• Teams should create an ODT map to describe and document the team's effort for positive outcome for assignment. The ODT map should be in the paper and the presentation with narrative explanation.<br><br>Prepare a 20- to 30-minute presentation, including visual support, and record in BB Learn Wimba and place in archive. |

Among the important goals for the graduate organizational behavior course is the team interaction, communication and leadership skill application to a level not usually perceived to be possible in an online course. The process turned to brainstorming how these goals could be addressed in an online environment. Figure 1 illustrates the activities determined to provide stdent-2-student and student -2- instructor interaction equivalents. The first consideration in selection was that they required interaction among the students that goes beyond the primary interaction tool in online courses, the discussion board. One

option that emerged was having class meet virtually. Students could then access the classes from anywhere in the world, but at specific times to make student-faculty and student-student interaction more extensive.

The methods to achieve this virtual interaction were reviewed and two possibilities were found. First was using Wimba or Collaborate, virtual classroom tools in Blackboard Learning Management System, or similar meeting software. These provided real time virtual class meetings including ability to upload and use presentation slides and for students to share audio or text exchanges of ideas and extension of presentation topics.

The second option was to use Second Life for the virtual class delivery. It provided the same capabilities as the Wimba tool, but with one addition. It put the virtual class in a 3-D world environment where students were Avatars representing the students and were controlled for all actions by the students.

Research into Internet and gaming activity of teenagers revealed that 97 percent of teenagers between the ages of 12 and 17 played computer, portable, web or console games. Gender categorization found 99 percent of males and 94 percent of females played games. Of these 65 percent of gamers play their games with other people, making it an effective social interaction activity. Reviewing a list of the most often accessed games shows that the largest percentage is 3-D world games such as Halo3 or Madden NFL. (Lenhart, et all, 2008).

Children growing up in today's social arena have 3-D gaming exposure as a major experience. With this kind of background in gaming, a question arises about whether education should incorporate the world of 3-D in students' experience base or ignoring it. The use of 3-D worlds as the basis for education and learning experiences means that student exposure to learning activities are comfortable arenas for them. The 3-D world would be a type of place they know instead of the traditional college classroom that can resemble a boring, stilted, lecture environment.

This student gaming background suggested that the Second Life world might be a tool for creating a learning experience that is more attractive and fun for students and can be done as the basis for online courses to open the world to students anywhere. No long would students have the challenges of driving distances to the campus at rising fuel prices or suffering the usual challenge to find parking at a commuter campus.

The goal became to incorporate Second Life as a delivery tool to accomplish the goals and objectives define for the course!

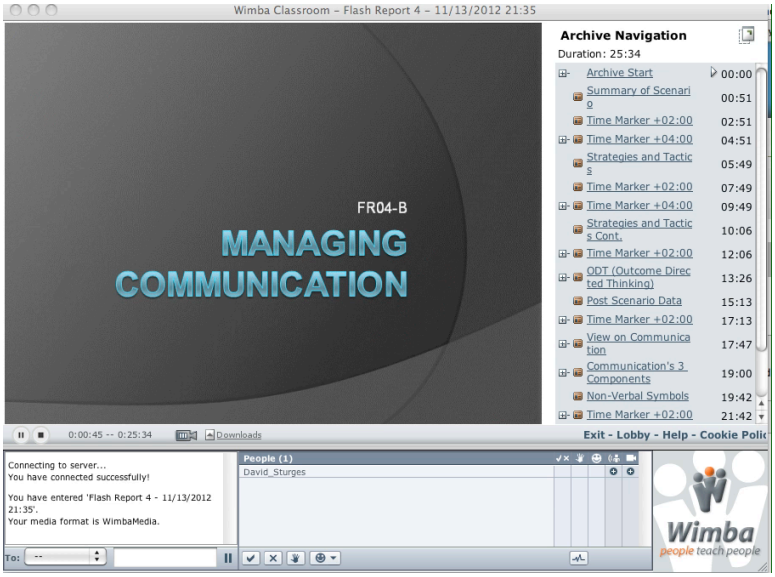
Our institution already had a commitment to Second Life, meaning that it leases space in the 3-D environment. Any faculty member may use the SL resource and the distance-learning technicians provide any and all training and support to make the building of SL resources easier. A tour of the SL world will show that a number of universities and colleges from around the world have similar commitment to using this

educational tool. This tool requires the school to commit the financial support to make it work. It is not a tool that a faculty member would want to adopt individually.

The next step in the process was to select the equivalency activities that most effectively contributed to course objective achievement. Here is a sample of the planning processes that occurred.

*Organizational Behavior-Graduate Level*

Figure 1 shows a work sheet for developing the linkage between the objectives and the activities to ensure the fulfillment of the contact hours equivalency. Building this work sheet meant a thought process of what the objective for the course was, how that objective was to be recognized at the lesson level (called learning modules), and the activities that would contribute to the student's learning experience to acquire knowledge and skills defined in the objective.




In general, the course had several components that emerged as significant equivalencies. These included team assignments, production of written research paper, presentation of findings to the class, class member's evaluation of presentation information and style, and open discussion of topics in real time interaction of students.

In the first example of using electronic tools to achieve these objectives is to use the Wimba™ or Collaborate™ tools that are included in the Blackboard Learning Management System. This tool allows students to prepare presentations as members of groups, then to present the outcome in a forum that can be viewed buy and entire class at the same time. The HETS presentation is an example of this type of action and its level of effectiveness for meeting the desired

objectives related to presentation skills. Students who could not attend the synchronous time or students who wish to review their own presentation style to seek ways to improve skills can record these presentations for view at a later time.

The activities to operationalize the learning objectives were then placed in Second Life environment for students to enter the SL world, attend the virtual class from anywhere in the world, and commit to producing the learning outcomes targeted in each of the Learning Modules. In other words, this method allows tools that are familiar to students in the 3-D type worlds with an attendant student reaction of positive, fun, and "cool" opinion. As an example, for one of the Flash Reports (a paper and presentation produced by a team on a specific topic), the team comprised students in Atlanta, Georgia, Phoenix, Arizona, and Beijing, China. A screen shot shows a team presentation in Second Life.


In addition, this screen shows the text feature that allows the instructor and students to exchange comments, questions, and relevant stories while the presentations proceeds. The result is a lively multi-purpose event as students view the presentation, listen to the dialog, and make comments in the text file. Each student benefits with an increase in content exposure beyond what might be found in a similar presentation in the real world, Face-2-Face classroom.

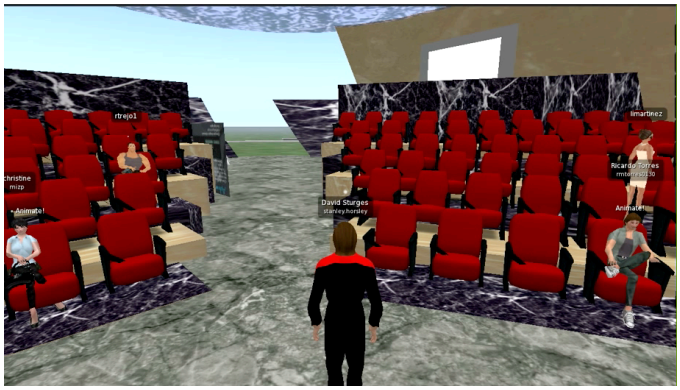
*Strategy and Policy-Undergraduate Level*

This course is one for which the reluctance to create online delivery has been high. Since most courses are based in Case Analysis in individual and team production, the belief has been that the online delivery could not accomplish the same type of learning experience and effectiveness that is the hallmark of F-2-F classes (D. Sturges, personal communication, January 6, 2103).

Again, using the list of equivalency activities for online courses permits selection of items to fulfill the objectives of the course in the online environment. After defining the course's objectives, the activity needs come down to the following:

1. Case Analysis
2. Team decision-making
3. Strategy and Tactical planning
4. Strategy and Tactical implementation
5. Outcome assessment
6. Report writing and presentation to firm administrations
7. Student evaluation of writing and presentations
8. Peer evaluation for group dynamics effectiveness
9. Organizational Communication effectiveness
10. Student-Student exchange (discussion boards, email, and text in SL)
11. Student-Faculty exchange (text in SL. Email, Office Hours in SL)

The Strategy and Policy course is usually operationalized by faculty who what to make a direct effect on student understanding of the strategy planning, implementation, and evaluation processes. Thus, these courses in traditional format depend heavily on faculty lecture to explain or expand on text-based learning. In fact this is one of the reasons strategy and policy faculty have been reluctant to move to the online format. However, the capabilities of Second Life provide the faculty member with the same capability that would be found in an F-2-F course.




Online office hours are another of the recognized content hour equivalency activities in the Illinois listing. Here is a brief example of the SL Office Hours that provides addition student-faculty interchange. These office hours are recording using Tegrity to create and inventory of Office Hours that students can review at their own schedule. This activity contributes to the achievement of objectives by providing explanation or examples to make understanding and application of concepts more clear. The end result is better performance in applying the concepts to the case study activity. The basic case study approach for this course is the online simulation that requires students to work closely in team decision-making and implementation evaluation in the strategic planning and implementation process. Student-student interchange includes students meeting in the company conference room (team assigned locations in SL), exchanging discussion board

posting on a private board, or physical meetings for those in the area who can meet on campus.

*Professional Development Course*

This course was designed to serve as professional development for students entering the College of Business. Tools in Second Life have allowed development of activities that contribute to objectives of the course and meet the content hour equivalency using some activities on the Illinois list and some that are not. For example, of the "not on the list of activities" that qualifies as direct instructor student interaction and faculty oversight is a tool that is called the Learning Module Gallery. This is a self-directed student activity that is a direct equal to class lecture, but that can be accessed at any time by the student.


In the LM Gallery, the student enters a maze comprising from ten to twelve rooms. Each room has from two to four slides posted on its walls. Next to each slide is an audio player. When a student stands in front of the slide and clicks on the audio player, it starts an animated avatar that explains the slide information in the instructor's voice. The student may access the galleries as many times as they want. When the students have finished the slides in one Gallery room, they click on the door to the next room to open it. However, before it opens it presents them with a randomly selected question related to

the room's content that must be answered correctly for the door to open. If he or she misses the correct answer, he or she then must decide to try another question or to return to the slides to clear any misunderstanding of the content. Upon completion of all rooms in a Gallery, the student presses a button in the last Gallery room that sends an email to the instructor advising that the student has completed the Gallery. The result is a record of whether or not the student has complete exposure to the content in the Gallery. Students in our business school have found this to be very game-like and engaging. And it's an online class that is fun.

**Equivalence and Assessing Outcomes**

This study began with the question of what criteria can the content of courses, regardless of delivery technique, be effectively documented as meeting federal, state, regional accrediting agency, and professional accrediting body standards. As a general criterion, the relations between course objectives, instructional materials, activities, and assessments for objective achievements are the documentation of choice to meet all levels of evaluation. Although many sources of processes and documentation guidelines are currently published, the criteria defined by Quality Matters™ provides a method of designing a course with a clear relationship among these criteria.

Figure 1 illustrates a portion of a table developed as a course blueprint using the Quality Matters™ concepts. The table's construction begins with a detailed development

of course objectives that relate to the degree program's objectives and then trace lineage downward to the module or lesson level. To set up equivalence, these objectives must be specific for who is to accomplish the objective, what they are going to accomplish, how they are going to accomplish it, and how they will know when they have achieved the objective in a doable, measurable way.

In the case of the course illustrated in Figure 1, the students can monitor their own progress because of the information regarding expected performance levels on specific activities or as judged by rubrics that define performance measures. This allows students to monitor their own performances while providing the basis for awarding grades in the course for a semester's work.

The activities built into the course are selected and placed in the lineage because they are designed to specifically address objective-concept learning and application in activities that are judged to be equivalence by faculty determination. Some students will take more time to reach the objective assessment expectation than other students. This permits all students, regardless of delivery format, to focus on achievement of learning and the course's objectives rather than spending a specified amount of time reading and writing. Therefore, a student completing an activity at an expected performance level following appropriate assessment tools, regardless of time required, fulfills the contact-hour issue.

**Figure 2. Equivalency Cycle**

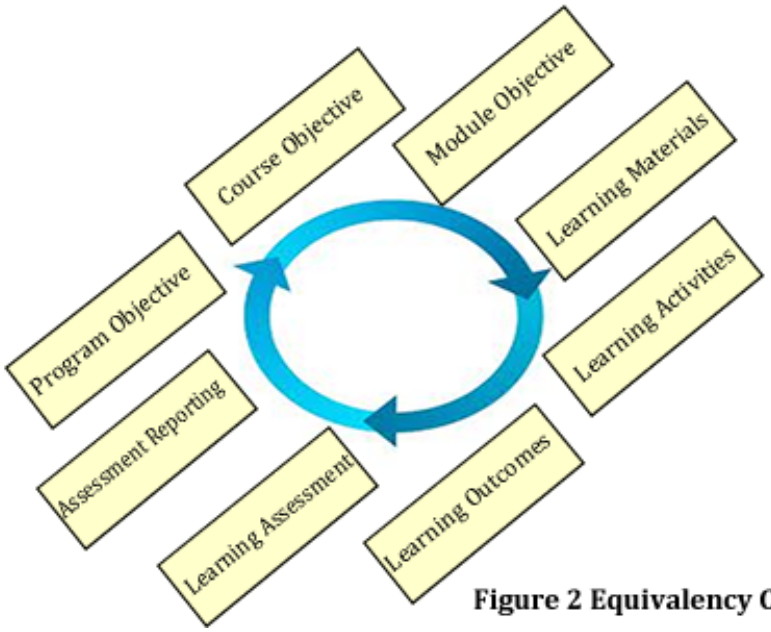



**Figure 2 Equivalency Cycle**

For course content to meet the criteria for contact-hour equivalence to meet the needs of higher education administration to document performance for a myriad of needs, it must not only follow a procedure for development, but to ensure that each step is documented for clear definition of relationship between development steps. Figure 2 illustrates the eight steps in the contact hour equivalency. Beginning with the program's objectives, the course will define its objectives as a contributor to the program's objectives. When the course's objectives are composed with sufficient rigor to recognized criteria of content (and this is a challenge unto itself that most faculty are not conversant with), the course activities to achieve the objectives are selected. Following selection of the activities, instructional materials are selected as illustrated by the course discussions in this study. The assessment is defined along with the definition of expected performance levels. Lastly, the assessment is made and composed into a report that becomes input for the objective construction task.

This method of creating, documenting and reporting course activity, regardless of delivery format, should provide a basis for judgment of course content as fulfilling learning accomplishments to meet reporting needs for federal, state, and accrediting agency evaluation of effectiveness.

## Conclusion

The purpose of this study is to define content hour equivalency opportunities to ensure that online courses meet or exceed the achievement of learning objectives of Face-2-Face courses. The definition and acceptance of contact hour equivalence is in the early evolutionary stage. Some educational administrations across the country have moved decisively on establishing acceptable equivalence for measurement of student performance for both financial records and achievement of learning goals.

The equivalency techniques chronicled here are developed on course activities and learning objectives in a predominately Hispanic-student university. The university is a commuter campus, meaning students commute to the campus from across a four-county service area in South Texas. The result is severe problems for students from cost of fuel to finding parking places when they arrive on campus.

The concept pursued by this study is to find contact-hour equivalency for students to opt for online classes that are ensured of being equal to or better than the classes on campus. The result is an application of online techniques that are based on not requiring

students to come to campus for classes, but that meet in the schedule of classes. These are referred to here as "Flex-Place, not Flex-Time." This course design builds courses to allow scheduling activity on a schedule similar to building a Face-2-Face course schedule, but without the associated costs in dollars and time to commute to campus. Those students who work to support their educational costs, can go to the employee lounge to attend class rather than jumping into a car and making a thirty-minute drive to spend thirty-minutes looking for a parking place to make an on campus class.

For our campus, and those like us, these tools can help us to create curriculum content to serve our students will flexibility in their course fulfillment while high-order learning objectives are achieved by students. These techniques have proved successful at our school. Student evaluations of these classes are unusually high. The study has not yet analyzed if similar success can be achieved at a traditional residential campus.

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