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## A Two-School LINKS Competition

*You joined together to put on a competition between your cross-town rival schools using the LINKS Supply Chain Management Fundamentals Simulation. Tell us about your school, the class, and the group that took part.*

**Chad Autry**  
Oklahoma City University

**Tony Roath**  
University of Oklahoma

**Chad:** We are quite a bit different than OU – we are a small liberal arts-oriented institution that has a more “metropolitan” school of business...small classes and close ties with the business community of downtown Oklahoma City, which is only 2 miles away. There were fewer total students in my two sections (Undergraduate SCM and Graduate Supply Chain Analysis) than Tony had in his single MBA session. Our students are very diverse – we had 14 different nations represented on our eight teams, and they are a mix of working professionals and full-time students at both levels.

**Tony:** The University of Oklahoma is a public school and we are trying to develop and build the MBA program. The course that I have is a supply chain management core course that everyone has to take. There are about 67 people for any class. They are made up of all majors and a range from 2-3 years out to a lot of experience for different industries. My class was all part-time

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## Teaching With LINKS Sustainability Options



**Susan Golicic**  
**Colorado State**  
**University**

I have been a user of LINKS Supply Chain Fundamentals for about 4 years, first using it in introductory undergraduate and graduate SCM courses while at the University of Oregon. I am now teaching a sustainable supply chain course for students concentrating in SCM at Colorado State University. The objective of the course is to get students to think critically about all aspects of the triple bottom line (financial, environmental and social) within supply chains. The course is built around discussing supply chain activities and how these impact sustainability and how sustainability impacts the supply chain.

Supply chain students at CSU had not been exposed to simulations in any of their courses. I was aware that LINKS recently introduced recycling and recovery decisions in the supply chain simulations. So I spoke with Randy about how something like this might be applied to my sustainable supply chain course. Randy suggested that I might use the simulation as a capstone assignment in the course. Since the course emphasized making the case for/against sustainability (i.e., was it really worth it financially to address the other two aspects of sustainability?), running a simulation where they would have to do just that was a great way to tie everything together. The LINKS Supply Chain Management Fundamentals Simulation was run in the final four weeks of class with the students being able to not only make the standard LINKS sourcing, manufacturing, distribution and transportation decisions, but also decisions on recycling and recovery programs.

The students were required to write a final paper for the course making the case for or against the value of sustainability. They were able to not only use the assigned readings, course discussions, and information from industry guest speakers as support for their case, but also the experience they had from making the actual decisions and seeing results. I really feel they got more out of the class and their program, but also submitted much more thoughtful papers thanks to their experience with the simulation.

The feedback I have received from students has been positive. For example, one student commented, "I can honestly tell you that LINKS overwhelmed me so much in the beginning, but I learned so much from doing the simulation." Another said, "I enjoyed LINKS very much – it appealed to my finance/excel-oriented side." The consensus was that it was challenging and provided reinforcement for the information from all other course materials. I intend to continue using the simulation in this course.



## Adding Limited Reconfigurations to LINKS



**Verda Blythe**  
**University of Wisconsin--**  
**Madison**

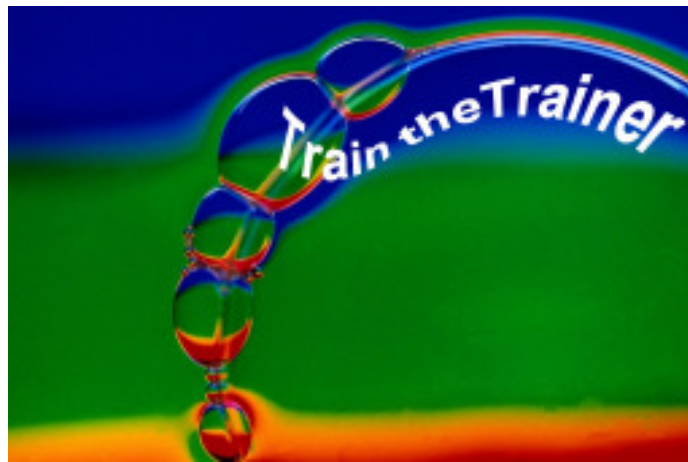
**T**he LINKS Supply Chain Management Simulation has been a part of my Fundamentals of Supply Chain Management course for five years. Every year in evaluations I'm told that the LINKS simulation is students' favorite part of the course. I also ask students for suggestions to improve the simulation experience, and what I've regularly heard is that they would like more levers with which to differentiate themselves in the marketplace, beyond price and operational efficiency/cost.

I didn't know if this would be possible because the only LINKS version that includes product development decisions is the "extended" version. However, in my case, this version is too advanced and time intensive. I was looking for a hybrid and, after discussing with Randy, he was willing to make it happen. The solution we came up with was a minor tweak that delivered significant benefits to the student experience: allowing limited reconfiguration (product development) decisions for bandwidth and packaging only, with the other set-top box product attributes always remaining fixed at their original values for all firms.

A few benefits I observed from the fall semester:

1. When determining strategy, teams can design their products to fit that strategy; i.e. are they positioning themselves as the Dell or Apple of the set-top box industry?
2. Allows students to apply concepts about functional vs. innovative products/industries, and the different supply chain design each requires
3. Required students to look in more depth at the markets to determine which product-quality "level" and corresponding pricing structure customers wanted
4. Allows students to incorporate sustainability, and the value consumers are willing to pay for sustainability, in the packaging decision. (The students loved this.)

The enhancements did not require any significant changes in how I managed the simulation, but they enhanced the student experience by making the simulation a bit more robust, comprehensive, and meaningful. Many thanks to Randy and his development team for working with me on this change!



# LINKS Train-The-Trainer Seminar

January 5-7, 2010

LINKS Simulations Immersion Experience

Five Teleconferences and a Four-Round LINKS Simulation Event

**R**egistration is available for the next three-day, intensive-mode Train-The-Trainer distance-learning seminar for the LINKS simulations. Randy Chapman, the LINKS author, leads these distance-learning events for academic faculty interested in learning more about teaching with LINKS. This intensive-mode seminar format includes 5-6 hours of work per day during the three days of the distance-learning seminar.

LINKS Train-The-Trainer Seminars are offered for the enterprise management, marketing, services, and supply chain management LINKS variants.

Current LINKS instructors are invited to pass along this announcement to faculty colleagues and

advanced doctoral students who might be interested in learning more about teaching with LINKS.

Experienced LINKS instructors sometimes participate in a LINKS Train-The-Trainer Seminar to refresh their memories of LINKS details just prior to teaching with LINKS or to explore another LINKS simulation variant for a future teaching activity. Such experienced LINKS instructors may elect just to participate in the TTT's four-round simulation event, ignoring the public teleconferences included in the LINKS TTT program. (PowerPoint decks are e-mailed to all LINKS TTT participants before each teleconference, so such experienced LINKS instructors may freely choose to participate in all, some, or none of the teleconferences as per their availability and interest.)

Details about LINKS Train-The-Trainer seminars may be accessed via these URLs:

- <http://www.LINKS-simulations.com/TTT/EMttt.pdf> [Enterprise Management]
- <http://www.LINKS-simulations.com/TTT/MSttt.pdf> [Marketing]
- <http://www.LINKS-simulations.com/TTT/SMttt.pdf> [Services Marketing]
- <http://www.LINKS-simulations.com/TTT/SCttt.pdf> [Supply Chain Management]

# LINKS Spotlight

The LINKS simulations may be customized in many ways to fit an instructor's particular educational application. Customization is accomplished via a wide range of instructor-optional switches embedded into LINKS. Instructor-optional switches permit LINKS to be customized to fit an instructor's preferences and course requirements.

Instructor-optional switches embedded in the LINKS scenario files permit a wide range of optional LINKS capabilities to be enabled. Instructor-optional switches add to the richness and complexity of the LINKS experience. Generally, these switches may be engaged at initialization or after, at the LINKS instructor's option.

For **LINKS Products Simulations** instructors may increase:

- Simulation Complexity
- Product Development Complexity
- Procurement Complexity
- Manufacturing Complexity
- Transportation Complexity
- Service Complexity
- Generate Demand Complexity
- Financial Engineering Complexity
- Research Studies Resources
- Cost-Structure Complexity



Likewise, for **LINKS Services Simulations** instructors may increase:

- Simulation Complexity
- Service Design Complexity
- Marketing Complexity
- Financial Engineering Complexity
- Research Studies Resources
- Cost-Structure Complexity

Please contact Randy Chapman ([Chapman@ChapmanRG.com](mailto:Chapman@ChapmanRG.com)) to discuss the strategic and tactical instructional implications associated with these instructor-optional switches. The LINKS Administrator manages these switch settings on the LINKS instructor's behalf.

## LINKS Graffiti

The LINKS-simulations.com website is a busy place, as these annual website statistics for the last three calendar years demonstrate:

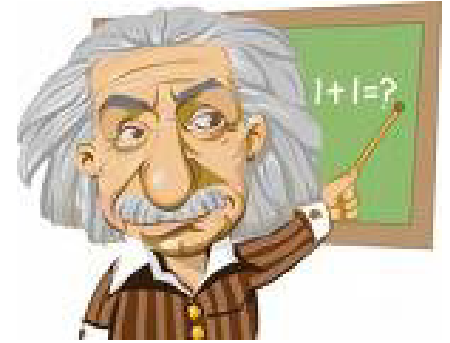
2009	497,021 unique visits
2008	456,247 unique visits
2007	341,149 unique visits

# New LINKS White Paper

A new LINKS White Paper has joined the evolving collection in the Instructor Resources section of the LINKS website: “Designing Effective LINKS-Based Courses: Required, Recommended, and Optional Elements”

The full set of LINKS white papers includes:

1. “Best-Practice Teaching With Business Simulations”
2. “Extreme Customization With LINKS Simulations”
3. “Practice Rounds in LINKS Events”
4. “Adding Ethical Dilemmas To LINKS Events”
5. “Individual Performance Assessment in Business Simulations”
6. “Designing Effective LINKS-Based Courses: Required, Recommended, and Optional Elements”



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## LINKS Simulations Test Questions

A test bank of LINKS multiple-choice questions supports LINKS instructors in their LINKS events.

- This test bank includes 200+ multiple-choice questions covering all LINKS simulations variants.
- Each multiple-choice question includes the best answer as well as a brief explanation for that answer.
- The questions are organized by topical categories and by LINKS simulation variant.
- The LINKS simulations test bank is included in the Instructor Resources section of the LINKS website.

These LINKS simulations test questions are provided to LINKS instructors in Word doc format to facilitate use throughout LINKS events. LINKS instructors may freely use these questions for testing or for in-class discussion purposes by appropriate cutting-and-pasting from this Word doc file.

These multiple-choice questions might be used for in-class discussion purposes, for testing/assessment usage, and for an instructor’s personal review and refreshment before a LINKS event.



## Continued from page 1

students and had at least 5 years work experience. They jumped on LINKS pretty good after the initial ramp-up period. They had spreadsheets and were very much involved and I think that was due to their work experience. They had the wherewithal to know they were part of the bigger picture but they still had to figure out their particular roles and responsibilities.

### ***How did you get interested in using LINKS and how did the competition take shape?***

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**Chad:** This is my third or fourth time using LINKS. I am one of the academics who is “sold” on the product, and I passed the idea of using it and doing the cross-university contest along to Tony while we were planning our courses last summer. He had heard of the game, but did not know what it really entailed so I did a tutorial for him one afternoon in July. We decided to give the competitive format a try, even though his class was an eight-week MBA module and mine were 16-week traditional courses.

**Tony:** I heard of LINKS before but I never got a chance to jump into it until Chad spurred me on and encouraged me to try it out with both classes. We thought it was a good idea to give them competition, to give the MBAs a chance to get their feet wet, and give them the incentive and motivation to go after it. Chad also had a lot of backing from his Dean, and as soon as I mentioned it here, everybody jumped on the bandwagon.

### ***How did you get involved and what did you do together to make this work so well?***

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**Chad:** We have known each other for a while and share a lot of ideas about teaching. This was just a natural extension of what we were going to do individually.

**Tony:** Randy is very responsive and Chad knew what was going on and had experience with LINKS. Chad and I talked back and forth all the time on how to adjust on the fly, and how to compensate for different things that were going on.

### ***How did the logistics of the classes work out since one class was semester-length and the other was 8-weeks long?***

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**Chad:** That was a little challenging for my students. At the beginning of the term, our students were at the same place on the knowledge curve (somewhere near zero, based on the student profiles) but because his class went through the material faster. It gave them an advantage after about the midpoint of the simulation. On the other hand, I was pleasantly surprised at how my students worked ahead in order to make up the time deficit (they knew about the OU students’ schedule and realized early on that they’d have to excel out of class to be competitive).

At the end of our 16 week semester, our students were commenting that they could have done better in a rematch, but for the most part, we were within 10% of the OU students, and in one industry of the four we ran, we were actually ahead until the very last week.

**Tony:** One thing we would do better is to try and synchronize the classes--8-week classes vs. 16-weeks. We have already figured out how to do that. Chad also recommended that we teach the course differently as far as letting the simulation be the guide and that meant looking at forecasting right away and how you progress through the supply chain decisions.

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***What was the reaction of your students?***

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**Chad:** Oh, ours were really fired up about the chance to compete with the OU MBAs. It was one of the primary reasons, I think, that I saw them up here on the evenings and weekends with their laptops fired up. And they wanted to start each class session with the LINKS discussion rather than typical class notes, so I let them do that after the third decision period and on through the seventh week. We did need to work a lot more than we had anticipated on forecasting, so I adjusted to the students' needs when they asked for that.

**Tony:** There was lots of stuff going on but they were intrigued with the game. The package was daunting and a lot of work but they ran with it. I think it was due to their real-life work experience.

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***Did you have any input from your deans and did they become interested or involved?***

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**Chad:** Our Dean loves to compete with other schools at anything, so this was a natural for him. He frequently asked for updates and even told some of our students some of his old industry war stories about supplier selection.

**Tony:** One of the things they did was put up money. Prize money and money for the play-off venue, and Randy volunteered his time to run the links as a competition. They plan to do a write-up in the local paper, and we will write this up in our school newsletter.

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***Do you think you will run competitions again?***

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**Chad:** I know I want to – we got a little more motivation out of this than I typically see in courses like these.

**Tony:** I will do it definitely for the core courses, and may even do it for the logistics classes. We may add some complexity to it since those students will already have had the other simulation.



VS.



***What was your conclusion as to how well this worked? How did the students react? What responses did you get from the students?***

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**Chad:** I think our students liked the ability to make hands-on decisions rather than simply learn from cases and readings. They got very competitive, and that led to different sorts of questions than I usually get – they were asking some very detailed things about procurement and logistics that most students would not think of in more traditional exercises.

**Tony:** I think it worked pretty well. It gave them incentive that they were competing within the class, but also they competed with OCU. “You can’t let the undergrads beat you” was the war cry and lit their fires a little bit.

***Did students ever get together for a playoff or get to meet their competition face to face?***

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**Chad:** That was our original intention, but it became impossible (when the OU 8-week class ended) to reconvene their members nearly two months later (as mine were finishing the course).

**Tony:** They never met face to face, it was all simulated. Some students said “I didn’t know these guys could affect me and my production over here.” It was an eye opener to look at integration and direct and indirect affects on your job and performance measurements.

***Were there any problems that occurred and were they anticipated?***

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**Chad:** There was nothing out of the ordinary. We had our share of complainers about the workload needed to do well, but that happens every time in my experience. You get out of LINKS what you put in, and some don’t want to get much out.

**Tony:** Once the initial ramping up was completed so they knew what to do and what was expected there was nothing that came up. They had to think about the choices their competitors were making which resulted in them taking their business. They had to shift gears in their thinking.

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### ***Did you change your syllabus and teaching plan to adjust to LINKS?***

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**Chad:** This to me is one of the most important issues that should be raised with LINKS users. I find that LINKS has caused me to completely revamp the SEQUENCING of my course. Most of the textbooks have all of the material you need to know (at least at a basic level) to become a supply chain manager – but it tends to be presented in somewhat of a haphazard order (or one based on theory more so than practice, perhaps). LINKS has caused me and my students to think much more about the sequence of events that occurs in supply chain, and how the processes are interlocked. For example, it all starts with a demand forecast, and so now that is one of the first things I go through with the students in the supply chain courses. Only after that has happened do the other processes begin to make sense in the systematic perspective. So in fact, yes, I have really restructured my courses around the LINKS decision making opportunities –they reflect business practice much more accurately than my books do.

**Tony:** You have to look at the decisions you have to make. You look at marketing coming in before you look at the demand. Then you need to look at the supplier and how are you going to fulfill this demand. You walk through production along to the final goods to the consumer. It was an easy transition and LINKS backed it up because you had to make those decisions as you went along.

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### ***Is there anything else you would like to discuss?***

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**Chad:** It's crucial to anticipate student questions, and to spend at least a course period on startup even if your students are taking the quiz etc. I am building a library of "nuance issues" that I remember to tell them during this session each time, and it keeps growing and growing. If they don't start off well, students sometimes get very frustrated, but I am finding that I can mitigate much of that by doing a lively session early in the term that is LINKS devoted. It pays me back for the time lost on course material very well.

**Tony:** We are going to keep this going. It gives students a good hands-on feel. I am teaching to the masses so LINKS gets them started and is very good for learning.



## Reminders

### **LINKS Passcode Retrieval:**

Convenient LINKS passcode retrieval for a LINKS participant (student or instructor) is possible via the “Retrieve LINKS Passcode” link on the main LINKS webpage (<http://www.LINKS-simulations.com>). Executing the “Retrieve LINKS Passcode” operation e-mails the firm’s passcode to the participant’s official e-mail address as currently recorded in the LINKS Simulation Database.

### **E-Mail Address Management:**

LINKS instructors submit their students’ e-mail addresses (grouped into teams) as part of the information-set provided to initialize a LINKS industry. Often, these are institutional rather than personal e-mail addresses. Since some participants prefer to use a personal e-mail address rather than an institutional e-mail address for LINKS, it’s possible for participants to update their official e-mail address as recorded in the LINKS Simulation Database.

Participant updates of official e-mail addresses as recorded in the LINKS Simulation Database are possible only after initialization and publication (via e-mail to all team members) of each LINKS firm’s passcode. Using their LINKS firm’s passcode, LINKS participants may change their official LINKS e-mail address after LINKS initialization via the “E-Mail Address Management” button in the LINKS Simulation Database. Confirmations of e-mail address changes are e-mailed to the old and new e-mail addresses.

### **Student Payment Timing:**

The published LINKS price (the discounted price) is in effect until the first round of LINKS is complete. Then, the price is increased 25%. This means that we can initialize your LINKS simulation event (and advance LINKS through to its normal starting point) and students can continue to pay at the discounted price until the first scheduled round is run. Before initialization can occur, we do need to receive your game-run schedule and the students’ e-mail addresses (grouped into teams).

It is not necessary for your students to pay before LINKS begins to have access to the discounted LINKS price. Students must only pay before the first official game run on your game-run schedule to receive the discounted price. Thus, student payments can occur simultaneously with the beginning of your LINKS simulation event.

Student payment with a personal credit card is via the “Pay For LINKS” link on the LINKS webpage.

As a practical matter, a final warning/reminder will be e-mailed to those students who haven’t paid by the first game run, before implementing the non-discounted price.

## LINKS Website Resources:

LINKS website (<http://www.LINKS-simulations.com>) links provide convenient access to all LINKS simulation variants, to the LINKS Simulation Database, to passcode-protected instructor resources, and to user interaction contact points such as "Pay For LINKS", "Payment Questions?", and "Retrieve LINKS Passcode".

## Some LINKS Resources:

- **Printed Manuals:** All LINKS manuals are freely available for download via the LINKS website. However, some LINKS instructors prefer to have publication-quality printed manuals provided for all of their students, rather than relying on their students to individually download/print the participant's manual from the LINKS website. We're happy to provide this service for LINKS instructors. The all-inclusive additional cost for participant manuals varies from \$18/student to \$28/student depending on the LINKS simulations variant. We normally need three weeks advance notice to arrange for production and shipping (to the instructor) from our on-demand printer.

- **LINKS Instructor Resources Access:** You may access the evolving LINKS Instructor Resources via the LINKS webpage. Contact Randy Chapman ([Chapman@LINKS-simulations.com](mailto:Chapman@LINKS-simulations.com)), the LINKS author, to obtain the relevant access parameters (username and passcode).



The LINKS-Simulations Newsletter is a monthly newsletter for current and prospective LINKS instructors and for LINKS friends. Please e-mail questions, comments, suggestions, and other contributions (e.g., LINKS teaching tips) to [Winkler@LINKS-simulations.com](mailto:Winkler@LINKS-simulations.com).



Editor: Cyndy Winkler

**Access this edition: <http://www.LINKS-simulations.com/newsletter.pdf>**

**Access previous edition: <http://www.LINKS-simulations.com/newsletter-previous.pdf>**



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