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Al Quinton (The College of New Jersey) is a long-time user of the LINKS Supply Chain Management Simulation.



Al Quinton

Can you explain the mentoring program that you have set up for your LINKS Supply Chain Management Simulation with Johnson & Johnson?

We are very fortunate because Johnson & Johnson (JNJ) has a very strong relationship with our school of business and they have two co-op programs — one in finance...and the other in supply chain management. They approached the school and said “What can we do to interview your students in order to see whether they qualify for this co-op program?” It is a very selective program. So when I spoke to them, I said it would be great for them to get an exposure to our students by coming in when the students did their oral and written reports at the end of the semester.

Three years ago, JNJ said “We will send a team of people in and we will evaluate these oral reports at the end of the semester. That way we can become familiar with the students, we can see their level of knowledge and their ability to communicate orally. That led to “maybe we’ll come in and do some guest lectures on various topics within supply chain management.” The next semester they sent in a few of their professionals and they supplemented my lectures on particular topics—like forecasting, logistics, customer relationships.

That was very successful.

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LINKS Bulletin Link in the LINKS Simulation Database



The LINKS Bulletin is included as the last page of every round's financial and operating results reports. The Bulletin provides current-round industry-related information that a manager could easily observe without additional cost or with nominal effort during the normal course of events in managing a firm in a real-world competitive industry. To drill down below these headlines, you'll need appropriate research studies.

To provide additional visibility and convenient access to the Bulletin, a link has been added to the initial webpage in the LINKS Simulation Database.

Current Bulletin For Industry AZC Excel Spreadsheet Briefing Notes

By clicking on the "Current Bulletin ..." link (for LINKS industry AZC, in this example), you immediately access the current edition (a Word doc file) of the Bulletin for your LINKS industry.

Accessing the Audit Trace Logfile

The LINKS Simulation Database maintains a line-by-line audit trace logfile of input changes made by a LINKS firm. LINKS students may access this audit trace logfile for their LINKS firm via the LINKS Simulation Database. The audit trace logfiles for all firms in a LINKS industry is accessible to LINKS instructors via their "firm-0" webpages in the LINKS Simulation Database.

The audit trace logfile is accessible via the "Display Audit Trace Logfile" button on the opening webpage in the LINKS Simulation Database (i.e., on the webpage that appears after the successful input of a firm's passcode).

Normally, there's no particular need to access the LINKS audit trace logfile since all current inputs are accessible via the various web input screens within the LINKS Simulation Database. However, the audit trace logfile is useful for resolving questions relating to verifying a particular input change's timing. And, sometimes questions arise regarding the possibility that multiple team members were simultaneously making input changes within the LINKS Simulation Database ... a definite "no-no", as per warnings in the LINKS manual and e-mail reminders that all LINKS students receive during their LINKS events.

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Not only did the students enjoy it but the people who came in enjoyed the contact with the students. So we went one step further the following semester where I said why don't you form some teams and compete with the students in the simulation?

That's what we did last semester. They formed two JNJ teams, I got in touch with Randy and we formed these teams. They weren't the very best, they were in the top one-third of all the teams but they didn't necessarily beat every team.

The JNJ people understand what the simulation is trying to accomplish. They often say to the students in the class "Gee, you've got to make 10 different decisions amongst a team of 3 or 4 people and we've got 40 people making these decisions." They really are complicated decisions and they take a lot of time and effort to do them correctly, but the important point is that they learn the decision-making process rather than exactly how to make the right decisions.

So we said how can we make that even better? We have got this group of JNJ people that are familiar with the simulation so how can they better help the students and not just compete with them?

This semester we will put in a group of mentors.

JNJ said "we will provide each class* with seven mentors, people who are familiar with the simulation and are familiar with supply chain management who will interact through email or telephone conversations with each team." We matched them up and we sent out information to each team telling them who their mentor was and their email and phone numbers, and we informed the mentors who found out who their team members were, so they are now in the process of getting to know each other. It's a work in progress.

The amount of interest on the part of JNJ is very high.

What standards will you be using to evaluate the success of this mentoring program?

I will rely on the feedback that I get from both the students and the mentors. We'll see if it is really working. Let's say, if I have seven teams, and five teams tell me they really enjoyed it, they got good feedback, they got a reasonable amount of help, I will consider it a success.

If that doesn't happen then we will have to go in and re-evaluate it and see what can be done to make it better.

But the most important thing to me is that it is going to continue to support this JNJ connection with my students because their co-op program is unique. They don't just bring young people in

for a semester and have them do some part time work. Their co-op program is a six-month full-time program. They work 37 and a half hours a week. And they get paid very nicely for it. The JNJ philosophy is they give them projects to work on right away. They explain the project to them and the students have to jump in with both feet. I guess I've got about six of my students who have graduated from TCNJ who are working for JNJ in their supply chain group. The relationship has built over the last six semesters into a really strong working relationship. I think that the simulation has helped. Now there is a closer connection with the simulation that will bear fruit.

Do the mentors have set goals or objectives to prove?

That's a discussion we are going to have very shortly. I wanted to get the ball rolling and at least get them to meet the students. Now I am going to provide them with a recap and let them give me some feedback from their perspective from the real world.

This interview may inspire other professors to use this process in their courses. What words of encouragement or warning do you wish you had heard before you began this process?

In terms of "words of warning", the old expression — "Rome wasn't built in a day" — you have to give it a couple of semesters for you to be comfortable with it and for you to learn more about the simulation in order to teach with the simulation. There is no doubt that I am a much more effective teacher than I was seven years ago when I started the simulation.

This is one of the few things where you can honestly see and let the students see the results of the theory and the examples that you are giving them in class. The simulation provides the student with the answer to the question whether their ideas work or didn't work.

Are there recurring questions or situations that you find come up with your students when they are using the LINKS simulation?

Yes, the students have to recognize that they have to do several levels of forecasting. They have to forecast not only the end product and how much of that product they need to sell, they need to forecast how many sub-components they need and how much raw materials they need. And they have to forecast plant capacity. I try to get them to understand that they just can't say "we need so many of this product 1 or product 2", they have to look behind that into the supply chain and determine what each member of the supply chain is going to do in order to make it all happen—when the final product gets to the customer.

They have to learn about trade-offs. In the simulation you have various suppliers with various characteristics—for instance, reliability. There is a reliability factor in both the different suppliers of the components and raw materials and there is a reliability factor for the transportation suppliers. They learn that getting the cheapest price is not necessarily the best deal. There are other characteristics that go behind the decision making process for a particular supplier or particular transportation provider.

The third thing that they learn is that all of this is fine from an operational standpoint but the supply chain group is there to provide an end product that has to be sold at a profit.

Not every student is going to know as much at the end of the semester as other students, but those are the three basic areas of what I consider to be the take-aways of the course and the simulation.

What advice do you give your students to help them succeed in this class?

I agree with Randy 110% that the students must read the manual. They are just not going to be successful unless they know what the various steps are. I tell them to read it and then I go through it in class very carefully, using PowerPoint slides at the same times we are going through the manual.

What strategies and tactics do you use to encourage or nurture the students?

The first thing that I do is use a teamwork situation where they can share information. They are sometimes willing to be more open with their fellow classmates about what kind of “dumb mistakes” they made than they are telling me. So this cooperative environment really does work much better.

The other thing that I stress a great deal is “Product Zero”, the postponement factor. I am a firm believer in the fact that supply chains can operate much more effectively by using the postponement theory and in the simulation; obviously, it is “Product Zero”. But again, students have to learn that you can’t use “Product Zero” in a distribution center that you don’t own. So they may not be thinking ahead. So they may say we don’t want to own that distribution center we’ll just outsource it, but then when they go to use “Product Zero” they can’t do it.

Have your teaching methods changed since you began using LINKS?

This year I have decided that since we have class periods that last for an hour and 50 minutes, I will normally run the class for an hour and 20 minutes, which is plenty long between class discussion and lecture, but I save at least 20 minutes at the end of the period where I strongly encourage the students to stay in the classroom with their team and have some discussion. Since we have class twice a week that means that they have at least 40 minutes a week with which to talk to each other face-to-face. Previously they would rush out of the room and would say “we’ll get together”, and I would get all of these different objections like “this student can’t come out for a meeting” or “that student is always late for a meeting.”



The Professor's Viewpoint

About Competition In LINKS Events

Al Quinton (The College of New Jersey)

I stopped using a competitive environment because I found that the students were not learning as much as they could have. They were more competitive and therefore weren't sharing information. I took that out of the grading system. I said at the end of the semester you will be graded on this written and oral report which will be a story about how you did in the simulation. How you started, what strategy you picked out, what particular criteria you chose and then you have to give a brief history of the kind of decision-making that you followed.

That would keep them on line as far as the amount of work that they did but it didn't stop them from communicating with each other. As I have moved on in the simulation, I have taken away this competitive part and made it a coordinated part where one team is teamed up with another team, and I usually do it after the first few decision periods ... say we have seven teams in the class, so I will team up the team that's doing the best with the student that's in the middle. Then I work my way down. The student in the second place will go one step below the middle etc. So that every team is teamed up with a team that is doing better than they are and that way they help each other.

The simulation is a bit difficult for them to get used to as far as the mechanics. In other words, how does the simulation work online what do they have to do. Frequently, I used to get calls from students that say "I put in these numbers and it didn't work. Help me." That leaves you nowhere, because you are not sitting in front of the computer, with the students when they do it. And they don't remember exactly what they did, so I wasn't able to help them as much as I wanted to. That's why I started this coordinated thing where it is one team helps the other team and they can rely on one another for information.

Penn State University (main campus) is probably one of the pre-eminent supply chain departments in the country and their program is both on the graduate and undergraduate level. I have to brag a little our students although they are undergraduates; their accomplishments are as good as if not better than in some cases the students that are in the Penn State program. My kids are only taking one course in supply chain but the simulation has a great deal of benefit, from just that one course. It's a bit rigorous for them. I have to tell them that in the beginning they are going to be somewhat frustrated but the name of the game is to learn. And so it is not like a video game where you want to kill the other guy, you want to learn from this and be able to say that at the end of the semester, you really understand how supply chain decisions are made, not necessarily that you made the right decision but that you know the process and you know what the variables are and you know how the evaluation takes place and how you should analyze them before you make the decision.



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.

· **What's New Document:** Please access the following document at the case-sensitive URL <http://www.LINKS-simulations.com/WhatsNew.pdf> to obtain a detailed listing of new updates/enhancements to LINKS. Experienced LINKS instructors should access this document several months before their next usage occasion, to review the updates/enhancements to LINKS since their last usage occasion.

· **LINKS Instructor Resources Access:** You may access the evolving LINKS Instructor Resources via the LINKS webpage. Contact Randy Chapman (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.



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