
AC 2012-3928: CO-OPS AND THEIR COMMUNICATION NEEDS

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Co-ops and Their Communication Needs

For over 10 years the Cooperative Engineering Education program at Michigan State University provided a workshop in communication for its students going out on their first co-op. The 3-hour workshop addressed a range of topics that will be provided in the paper while addressing needs that students might have in the real world. It was a rushed effort to remind students quickly about what they needed to think about during their co-op experience. They left campus almost immediately and became immersed in their work. When the co-op finished, they produced reports detailing what they had learned from the co-op. They were required to write of their experience fourteen weeks after the initial workshop. It became easy to see that the workshop was really only a poor preparation for a paper produced much later and not a good introduction to necessary communication skill acquisition or remembrance. The issue of communication in the real world was lost in most of the co-ops' minds. When it was realized that not enough was being done for the students' needs, the current structure of addressing communication was implemented without the workshop.

The new plan attempts to bring students closer to the communication activities of the workplace and to allow them to see the importance of communication along with their technical expertise. In changing the focus of the experience from only personal acquisition of information on the working world to a broader involvement in actual communication activities, communication became more centrally focused and valuable to the co-ops. The paper addresses the original idea of the workshop idea combined with the present approach to suggest that by combining both efforts together, the co-op will receive the most value for the experience.

The early days of the three-hour workshop

Called simply the Write on Target Workshop, students arrived early on the Saturday morning before they left to go on their first co-op experience. The plan was to provide a last minute crash course in what to look for, avoid, and stress in their co-op work place. The ultimate goal was to create at the end of the experience a document that gave a good indication of what they had learned about the working world in their first large encounter. Emphasis was placed on making an effort to collect as much information about the working world so that future decisions about what they wanted in a career could be planned for and not simply walked into blind. A set of question conveyed what the individuals should be investigating.

1. Info session - What do you need for the report? _____

2*. Plant tour - What do you see? _____

3*. Co-op job orientation.

What are your responsibilities? What are the objectives of your position? Why does it exist?
Does it utilize your tech. background?

4. Who will you report to and how is this to be done? _____

5. Does the company have a particular style/format for text production. Is there anything peculiar about producing text for them?

6*. What previously learned material is to be used for your job? _____

- 7*. What new learning must take place for you to complete your assignments?
- 8*. Are there areas that you have not needed to study but have investigated out of an interest borne of the work assignment?_____
9. What is the organizational structure of the company?_____
- What are the functions, products, or services of your unit/company?
10. Describe management and the workers in the company._____
11. What is the relation of your unit to the rest of the company?
- 12*. What kind of evaluations have you received and what do they mean?
- 13*. Detailed account of your activities. _____
- 14*. What are you learning? _____
- 15*. Future assignments. _____
- 16*. What types of work assignments would be beneficial to your career?
- 17*. Are your career goals reinforced/modified during Co-op?_____
- 18*. What is your focus on career goals?_____
- (The * stressed that this information should be collected continuously during the semester.)

While the co-op report back to the institution was the focus of the student's effort, it was stressed that many other things needed to be considered when moving into an environment that requires communication skill to succeed. It was made clear why the students were producing the report and its importance to both them and the institution.

1. Why do I have to do a work report?

The Cooperative Engineering Education Program is designed to provide students the opportunity to integrate their studies at Michigan State with educationally-related work experiences in a variety of employment settings. As such, cooperative education becomes a part of the overall academic experience and an integral part of a student's engineering education. The required work report is one way that the faculty can monitor and evaluate this experience. Therefore, the work report is used as the primary means of determining a student's grade.

The work report should be considered as a formal academic assignment. It will be evaluated by a faculty member of your department in this manner. It should be prepared with the same level of serious attention and scholarship that would be given to any other academic assignment. Inadequate or late reports will result in inferior or incomplete grades.

2. How long does it have to be?

The paper should be neatly prepared, generally about 5-7 pages in length, and written in the formal style expected of a professional report. Be as specific and complete as possible. The reader should be able to determine what type and amount of technically related learning has been accomplished. The emphasis should be on the engineering and technical aspects of your position and how it relates to the organization, its products, and services.

3. When is the report due?

Co-op reports are always due no later than the Friday before Final Exam Week.

4. How do I turn the report in?

Most students will use the traditional mail services to submit their report. However, you should realize that other options are available. Reports can be sent by E-Mail (neatly formatted) or in MS-Word file on disk or as an attachment to E-Mail. (Students who submit reports electronically will receive comments back in that format very quickly. However, a grade will not be assigned until the suggested changes have been made. After the second submission, a final grade will be entered for these students.)

5. What if I've been working on a "confidential" project?

Due to the confidential nature of many co-op assignments, many employers will require you to discuss this assignment with them before you begin to write your report. You should know of any specific guidelines established by your employer.

6. How should I begin to organize?

Review all materials and documents that relate to your assignment; including job descriptions, written reports, organizational charts, and any evaluative comments you may have received. You may also wish to consider keeping a journal or log of your activities to help you recall things you wish to address in your report.

7. What else should I keep in mind?

You may also wish to have someone such as your coordinator, supervisor, mentor, or other individual review your report. They may be able to provide meaningful comments and suggestions to improve your effort. In addition, a well-developed written report can be an excellent way to promote your interests and abilities within the organization. However, **REMEMBER YOUR AUDIENCE!** Your co-op report is going to be evaluated by an MSU faculty member, not your supervisor.

8. Any other helpful hints?

You should keep a copy of the final version of your work report. We have had a few cases where reports have been misplaced, and it is helpful to have quick access to another copy.

Students should pick up their graded report and review faculty comments after returning to campus. You may find this to be helpful in other courses or when interviewing for permanent positions or graduate school.

The formal report

And the report itself followed a path of discovery, allowing the student to discover what the actual workings of industry entailed.

LEVEL I REPORT

Informational Abstract

I. Nature of the Work Setting

- a. The functions, products, or services of your employing organization.
- b. The organizational structure of your employer.
- c. The relationship of your unit or department to the overall structure.
- d. The objectives of your position. The utilization of your technical background in the position.

II. Duties and Responsibilities

- a. A detailed account of your major activities to date (emphasis on the specific technical functions of your position.)
- b. Any additional responsibilities you anticipate before the completion of your co-op assignment.
- c. Your assignments and their relationship to your field of study.
- d. Your accomplishments that will make you a better engineer.

III. Relationship to Career Goals and College Study

- a. Ways in which your career goals been reinforced or modified.
- b. Changes in your plans for future coursework.
- c. Value of experience on potential career options.

IV. Overall Evaluation

- a. Has your employment experience met your expectations?
- b. In what ways has it differed from your objectives?
- c. In what ways could your assignment be improved by your employer?
- d. Could it be improved by you?
- e. Have your assignments provided a broad, developmental experience?
- f. Has your co-op assignment given you a progressive, in-depth learning experience?
- g. What would you want your professors to know about your assignment, your educational enrichment, your technical accomplishments and your overall development as an engineer?

(Clarification)

The Informational ABSTRACT follows a format that appears as:

- a. A review of what information is contained in the report. It should indicate more than just broad generalizations, i.e. I had a job at TRW.
- b. The abstract allows you to prepare your reader for what is to follow.
- c. If the report is weak in technical content, at least your reader will be warned ahead of time. This may remove some preconceived notions about the paper.

Additional topics

Some of the things discussed in the workshop included the keeping of design notebooks that would provide the students with a place to store not only the information needed for the co-op reports but a suitable location for engineering ideas and questions that might be raised and the answers found. Also included were the formats of the varieties of documents that would be created on the job: memos, email, executive summaries, etc.

Moving from the structured part of the communication activities, the workshop delved into areas that engineers might not always consider as valuable: Audience, for example requires students to assess the readers. As the audience becomes known, the writer must pattern his or her response to it with very specific concerns.

- a. Intended audience - who are you writing to and how will this affect what you say to them.
- b. Their needs - information, detailed or not, clear and understandable.
- c. Their level of competence - you must work at the level of the reader
- d. Their understanding of the words - how they will interpret
- e. Their ability to interpret - in how much detail will they go into changing what you say to what they think it says.

From this discussion the workshop quickly moved into a discussion of reader's needs and how they accept information, structures that help understanding, language and its many levels, and the construction of a text in a way that best benefits the reader.

At the end of the three-hour session, students had been given a crash course in communication. Provided with a manual of instruction, they were sent out on their co-op experience and hopefully prepared for the weeks ahead.

Post workshop era

After much discussion and a need to give students a more immediate response to their communication needs, the one-time workshop format was abandoned for an ongoing process of providing students with topics that they might consider more important. These currently include Diversity Fair Cram sessions that help students prepare for fairs that focus on co-op, intern, and experiential learning experiences and how to communicate to an employer. Practice interviews take place throughout the semester with resume workshop and help session spaced out to address student needs. There is a stress on how to get into a communication mode when considering working in the real world. Here immediacy is stressed and waiting for an entire semester to receive those tidbits of knowledge on communication have been replaced with other issues that require one to think about how they are being presented to employers.

The formal co-op report also took on a different look in trying to become more relevant to student needs, creativity, and useful to the co-op, intern, and experiential learner program. What was once referred to as the third term co-op report containing

- I. Cover Sheet (as outlined above)
- II. Brief Abstract. Overview of your assignment, accomplishments, and learning gained by this experience.
- III. Project

Examples could include:

- Oral presentation to department faculty in major field of study
- Video presentation
 - Tour of your work site and an on-site presentation to a co-op member or a faculty member of any MSU College of Engineering department.
- Group report

now encompasses the creation of websites devoted to the co-op experience, blogs containing running commentary of the co-op's work, and any other form of communicating their experience in a more creative manner. This has become a very popular part of the co-op experience.

Review

With the above three methods of providing communication information to students, one sees that each has merits when trying to develop a consciousness in students for what they are speaking and writing. The workshop has benefits for students needing a flash course in preparing for the semester's communication activities. The continuous semester long sessions both voluntary and required also help to keep the student's mind on the needs of communication and the change in focus to a more upbeat modern presentation of information gathered during the co-op experience. All have their own merits. I believe that each needs to be employed in any office that services students doing a co-op, internship or experiential learning activity. There is a need for formal instruction, whether it be a one-time workshop or a longer set of classes. There needs to be a methods by which students can gain a great deal of knowledge on the workplace and its needs throughout the semesters preceding and after their work experience. As Morgan Norman <http://jobs.aol.com/articles/2011/10/13/6-ways-to-be-a-better-communicator/>¹ says about communication we can also say about programs involving co-op:

No matter how good you are at communicating, there's always room for improvement. Being a good communicator will affect every aspect of your life - from personal to professional. We've also heard the tips on TV and at seminars: Face the other person, maintain eye contact, follow up with questions. It all boils down to the fact that listening is about discovery.

He stresses that in order to improve, the learner must

1. Know the audience. Everyone has their own way of communicating, and it's important that you know your audience so you know how to approach and what to expect. You should also be aware of your co-worker's current projects, and gauge whether or not they have any point of

reference to the topic you want to discuss. If they have no context, it might take them longer to reply to an inquiry. They may also be the kind of person that doesn't ask too many questions, but don't assume that means they completely understood everything. Be sure to ask follow-up questions to confirm their understanding of the topic at hand.

2. Understand the circumstances. Good communication requires context and fully understanding the circumstances. Making assumptions could lead to wasted time, going in circles without moving forward. In a professional circumstance, this means understanding the goal of the person on the other end of the conversation. What are they trying to accomplish and what is it that they need from you? If you're the one who needs help or advice, be clear on what it is that you're trying to accomplish and convey it to the other person.

3. Listen. Yes, this is included in every possible resource on being a good communicator - but that's because it's important. You have to actively listen in order to reply, contribute and collaborate. A great communicator is an active listener and doesn't interrupt (unless necessary to clarify a point). Even then, try taking notes to ask questions at the end instead of interrupting because your question could be answered in the next sentence.

4. Ask constructive questions. If you understand the circumstances, and listen well, then the questions you ask will be for the next step of clarification. This way, you aren't spending time making the other person repeat the same information, unless you didn't completely understand. The questions you ask are for your benefit and will help you in the long run.

5. Anticipate. Whether you're communicating as you delegate a project, or you're on the receiving end of a conversation, anticipate what could come next. If you're the one providing information, anticipate the questions that you could be asked and be prepared with the answers. If you're the one receiving information (being assigned a task), anticipate the kind of information you may need and prepare questions to ask.

6. Be concise. Give as much information as necessary, but also strive to be as succinct as possible. Too much fluff and beating around the bush could make communication muddy. Write down the points you absolutely have to address, along with how much information you need to provide to ensure you're clear in what you're conveying. Any other information that is not necessary, unless it can help clarify a point, should be left out.

Interestingly, we can gain from this in our own programs. Each of the items reflects not only what the student must do but the program itself must do through workshops, sessions, and materials given to students.

Conclusions

Many programs try various means to give their students experiences with the creation of text or practice in speaking or finding a happy medium to provide enough information to put their students on a level playing field when it comes to communication. I believe that providing the students with concrete required workshops on communicating their experiences along with voluntary sessions throughout the semesters, along with more interesting and creative ways to

communicate their experiences will help send into the real world those same students as individuals who are able to communicate in the professional manner we desire.

References

1. <http://jobs.aol.com/articles/2011/10/13/6-ways-to-be-a-better-communicator/>

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