ABSTRACT

A holistic case can encompass the whole of technical writing by allowing the student to experience the total communication act in which the technical task and data are fully integrated into the rhetorical situation. The salient components of a holistic case are the persona of the technical professional, the facts about the technical problem and the real company, the fiction created on the basis of those facts, and the form of the case itself adapted for students. Four major steps relate directly to the development of these components: (1) design the case--plan the goals and objectives for the students who will assume the persona, and establish the real world source of information; (2) collect the facts--conduct the interviews, and research the technical and rhetorical information about a specific problem in a real organization; (3) create the fiction--transform the facts into a realistic fiction that could have happened to a technical professional on the job; and (4) construct the case--recast the fiction into a functional instrument for students to write professional documents. This approach gives students the opportunity to perform in a realistic context, using all of the skills and knowledge required in communication on the job.
Over the past few years, we have written cases of different sizes and shapes for teaching technical writing to engineers at Wayne State University. Originally, we adopted the case approach for some assignments because our sophomores and juniors lacked technical expertise and professional knowledge of the engineering world. Classroom experience soon proved to us that cases could indeed make up for students' lack of information and professional awareness. We also found out that cases were good exercises even for advanced students, providing realistic practice in specific writing tasks or isolating particular skills in the composing process.

In writing and testing various types of technical writing cases, however, we gradually developed a special kind of case which narrates the experiences of one technical person engaged in the problem-solving process in a professional rhetorical situation. Told from the limited point of view of this professional who writes as part of his or her job, the tale—replete with realistic technical data and contextual information—follows him as he confronts the communication problems which are an integral part of his technical task, recounting events without definitive assignments or evident communication solutions. These answers then must be created by the student who assumes the persona of the professional and writes whatever documents are appropriate.

We call this long, realistic fiction a "holistic" case. Rather than presenting technical information in a slight rhetorical frame, rather than isolating skills or tasks, rather than dictating exercises for which there is a known solution, rather than asking students to role-play a character, a holistic case realistically encompasses the whole of the technical writing process. A holistic case allows students to experience the total communication act in which the technical task and data are fully integrated into the rhetorical situation. A holistic case gives students the opportunity to perform in a realistic context, using all of the skills and knowledge required in communication on the job.

Despite the fact that other kinds of cases have a valid place in technical writing courses (our own included), we believe that the holistic case most fully exploits the advantages of the case method for students of professional communication.

The salient components of a holistic case are the persona of the technical professional, the facts about the technical problem and the real company, the
fiction created on the basis of those facts, and the form of the case itself adapted for students.

The persona that the student must adopt furnishes the entry point into the case, a professional role in the situation, but not a personal identity or character—rather a way for each student to "live" the case by assimilating his or her individuality to the mask. The origin for any valid case, however, lies in its facts, the base of real information about real people with real technical problems and real writing tasks in real organizations. The numbers must fit, the data must correlate as well as a technical report with the real world. The case must go beyond, or behind, this information, however, to recreate the facts into a whole, into a fiction which enables the student reader to "believe" and thus to experience the complexity of the real world of work in process. Finally the form of the case must furnish a suitable vehicle for students to learn communication principles and skills, and to become engaged in the whole of the writing process, creating individual solutions in the form of professional documents—memos, letters, reports, proposals.

These components of a holistic case presuppose the process for developing it. The would-be case writer, however, must be aware of the difficulty of producing a case that meets this description, and so we are outlining here a set of guidelines for instructors who wish to write holistic cases in technical communication. The four major steps relate directly to developing the noted components, the persona, facts, fiction, and case form. These stages are:

First -- Design the case: Plan the goals and objectives for the students who will assume the persona, and establish the real-world source of information.

Second -- Collect the facts: Conduct the interviews, and research the technical and rhetorical information about a specific problem in a real organization.

Third -- Create the fiction: Transform the facts into a realistic fiction which could have happened to a technical professional on the job.

Fourth -- Construct the case: Recast the fiction into a functional instrument for students to write professional documents.

In the design and construction stages, the writer must aim to turn the materials into a document that will work in technical communication courses. However, the collection and creation stages are of chief significance; in them
the writer must connect the case to real events that actually occurred inside some firm, and then write a believable narrative representing what might have happened on the basis of those facts. As the Harvard casewriters in business administration have insisted, cases must be built on thoroughly investigated, real situations; "armchair" cases, concocted from general principles, a patchworth of anecdotes, and the casewriter's practical experiences from here and there, are academic monstrosities that only purport to be real. After finding the facts, however, the writer must shift his efforts to fabricating a story.

For just as a communication case cannot be written without empirical data, so it cannot be constructed on facts alone in the mode of the business or engineering case. A "facts-only" case, like an armchair model, is distorted, but for a different reason: it lacks the heart of the rhetorical matter—the people problems, the messiness of interaction, the political dimension.

The process of collecting data and creating a story is a real dialectical interaction of fact and fiction. The fact about the real problem originates the fictional image which, in turn, must be validated in terms of the real-world's possibilities. In short, the case must be realistic, not necessarily real in every detail; the fiction must be plausible, for no matter how real and true, without seeming to be so, the case will not be accepted by its readers. In developing a case, therefore, the casewriter must go back and forth between the story, the data base, and its source, the interviewees. The casewriter thus works backward from the finished product (say, a final written report) to recover the process and environment of its becoming. Even during the collection stage, he must reach beyond the written documents and technical data to recover the "stuff" of human relationships behind the project. Out of these fragments of reality, then, the casewriter creates a fiction, a whole and credible experience that might generate the actual documents produced. The student, reading the case, reverses this procedure, developing written products by re-enacting the process.

Stage 1 - DESIGNING THE CASE

The objective of the first stage is to plan the case objectives and procedures in light of the target students and a real-world contact person. Basic principles of effective case design, as outlined by John Brockmann, should govern all stages of the procedures for holistic cases. However, even in the initial preparation, the development of a holistic case differs from cases focusing on the
facts or aiming for specific tasks or skills (writing a progress report or a report with a comparison section). Instead of identifying specific objectives for the writing to be produced from the case, you should adopt the development of general principles, strategies, and skills of technical communication as your goals. A holistic case will present a real communication situation involving writers in basic rhetorical principles such as report design based on audience analysis, in planning strategies such as selection of relevant information from mass of detail, and in skills such as revision for reader efficiency. Thus, rather than designing the case with specific assignments in mind ("a trip report in memo format"), you should follow the lead of the empirical evidence, giving full play to the complexities discovered. In fact, throughout the procedures, you should question your methods and your manuscript to ensure that you are not adjusting the facts to meet academic preconceptions either about the target students or your professional contacts.

1.1 **Define the target students** by their career goals, their current status, and their potential use of the case in the classroom.

Although the range of students who can profitably use a case extends well beyond a particular occupation, students have the strongest motivation and educational experience in cases where the persona of the technical professional closely defines their own career goals. The profession, the occupational setting, the employee position, and the writing tasks of the persona should all be at least reasonable and relatively imminent for the student audience.

Although the facts in the real world are primary, the case must present technical information within the students' capabilities, must assume only professional expertise within their knowledge, and must demand reading and writing tasks within their competency.

Although the situation should display the principles inherent within it, the potential classroom application cannot be ignored as a factor in many decisions; without some control, many cases would grow like topsy until they could never be used without major surgery.

1.2 **Select the real-world contact** by the organization and by the technical professional as writer.

Select an organization of type, size, and activity pertinent to the profile of the target students. Consider, however, the accessibility you have to that organization through an appropriate employee within it--someone who
meets your criteria for profession, technical field, position, and writing tasks. Although you may need supplementary or "sponsoring" contacts within the company who have sufficient authority to provide access to documents, to present the supervisory or institutional perspective, or to furnish entree to other offices or units, your most essential contact is the technical professional who must write as part of his or her position, well within the company ranks.

Although a management sponsor could assign a writer to work with you on the case project, you will do best to directly contact your acquaintances developed during the course of your other business-industrial activities. The personal approach is advisable because the resource writer must be willing, even eager, to participate in the case development. Not only must he devote many hours in interviewing time (far more than most firms would allow on the job), but he must be open, revealing much about his firm and his co-workers—and himself. The resource professional must become your true partner in the educational enterprise. The overriding pre-condition for collecting the data for a good holistic case, therefore, is to find such a strong contact person.

Stage 2 — COLLECTING THE FACTS

The objective of the collection stage is to reconstruct a subjective view of a complete communication event by amassing technical and rhetorical details. Your interviews of the technical professional, the main method for collecting this information, should be a sequence of meetings which facilitate his responses, gradually allowing you to share his world. These interviews have three functional stages: to introduce the case project, to research the technical facts and rhetorical record, and to explore the rhetorical situation in depth.

In all your interviews, aim to get the respondent to talk freely and openly about the subject by using techniques of exploratory interviewing. (Tape-recording will help here by allowing you to be an undistracted, encouraging listener.) Let the flow of interaction, subtly guided by your open-ended questions, govern the meetings. Seek all documents generated by the project and then use the writing as a probe in subsequent discussion. Eventually, pose some closed questions and request that the respondent elaborate upon and verify your record. Overall, however, let the exploratory approach prevail and thus ensure a case built upon real happenings, not academic preconceptions.

2.1 Introduce the case project. Prerequisite for the success of the interviewing are the initial meetings in which you engage the technical
professional in the project, pledge anonymity to him, and select the communication problem for the project.

**Engage the respondent.** While establishing rapport with your respondent through receptive interviewing about his work, you can learn much about the routine of his position, unit, communication, and the company—background material that will bear upon the case. Most people like to talk about their jobs; if you show genuine, uncritical interest, you will encourage the flow of information and probably get to look at samples of the writer’s memos, letters, and reports. In these initial encounters, you should also explain your methods for researching the case and your educational objectives, particularly how students will use the finished case. Otherwise, some respondents, especially those familiar with business administration or engineering cases, might approach your project with serious misconceptions.

**Pledge anonymity.** Of chief importance in the first sessions is to state your ethics as a casewriter and your responsibilities to the respondent and his firm. You should pledge anonymity to the contact, both within and without the company; you should promise protection of institutional identity and proprietary information; and you should outline your proposed distribution of the case and methods for disguising information. You can gain the technical person’s confidence by promising to submit the case manuscript for his approval; if necessary, you can relieve him of any burden for proprietary information by clearing the facts with the organizational sponsor. Throughout the case project you should carefully maintain the anonymity of the firm, its products, and its personnel, leaving nothing in the case manuscript that could be traced back to its source and never referring orally to your contacts by name or firm. Such care is necessary to protect yourself, as well as your sources. Contrary to the business case which is facts, the holistic communication case deals with subjective impressions and dramatic representations of probable actions. Securing formal company releases for such information would not only be extremely difficult, but the shadow of the request for such permission could kill the case before it is born. Few individual writers would provide the kind of information you need if management were scheduled to peruse the case prior to its release; in fact, even the possibility of such inspection could undermine the trust and confidence necessary for interviewing.

**Select the communication problem.** After you establish the cooperative structure and the procedures of the case project, you should ask to screen the technical professional’s communication for material appropriate for
the case. Encourage him to elaborate on the circumstances of a document, so you can uncover possibilities, as well as acquaint him with the holistic case approach. Criteria for selecting a project include the governing objectives and principles (for example, is the matter routine?), as well as pragmatic considerations (does the material lend itself to various solutions; does it have some focus and shape as a distinct event?). Obviously, you should avoid projects the respondent cannot remember well or which did not fully engage him. Your screening should also eliminate problems that are technically inappropriate for any of several reasons, but chiefly because they are highly sensitive subjects from the firm's perspective. On the one hand, technical information must be up to date so that students will view it as current; on the other hand, it must not be so top secret that your contacts will fear to discuss it openly. Corporate protection of technical information is a fact of business which you must take into account—better to drop the highly proprietary project at the first negative sign than to strap it after a big investment of time.

2.2 Research the technical facts and the rhetorical record. The second set of interviews should build up a picture of all the facts on the selected project, but particularly the technical facts. The technical problem, the steps in technical problem solving, the data obtained, the solutions—all aspects of what the technical professional perceives as his "real job"—should be covered in great detail, far beyond what seems relevant to writing a case, much less alone writing a report. Moreover, you should seek your respondent's help in whatever analysis and interpretation you require to adequately understand the technical information.

Beginning with the technical problem solving is a strategy for success as a holistic case researcher. The technical focus convinces your respondent that the project is a serious educational activity for his profession, one worthy of his efforts. It will also fully establish your working-relationship. Part of his trust and willingness to go forward from this point, to try deeper waters, stems from his recognition that you grasp his technical problem and understand what he is doing. At the same time, his role as your teacher is well defined because you have focused on the technical subject; your subsequent efforts to learn about his rhetorical situation will not be thwarted by his desires to tell the English professor what he or she wants to hear.
As soon as the survey of the technical information is well in hand, you should begin to collect the facts about the rhetorical situation, the organizational record and official memory of the evolution of a problem or a project which assigned the task to whom, and so on. Even at this level, you may be struck by how much the respondent cannot remember or never knew. Try to trigger his memory with provocative questions, or simply by chatting about the topic, giving him time to recollect. If the gaps disclose substantial amount of important material the contact never did know, try to locate other persons within the company who can furnish the missing pieces. Keep in mind, however, what omissions characterized your primary contact's view; these gaps will become important as you create the fiction.

2.3 Explore the rhetorical situation in depth. The third set of interviews aims to go behind the official record to discover what actually happened, why it happened, and how it happened. Although these exploratory meetings should not be confused with therapy sessions, they are similar in one objective: to encourage the respondent to delve into his memory to recover the experience as fully as possible, including what was never acknowledged nor intended to be retrieved.

On the simplest level, you should try to reconstruct the technical events and the problem-solving process, including its rhetorical component, as it really happened, rather than in the "official version." At the point of writing up any investigation, reality undergoes a filtering and reordering to fit the constraints of the document; the dead ends and detours are often buried in a lab or log book; the finished paper or report which ignores the circuitous route becomes history—the truth. You must now write a new record full of the jumbled messiness of omissions and misunderstandings as much as facts and knowledge. To achieve this end, your main task is to alleviate the contact's embarrassment, even anxiety, in tearing down the neat image invoked by the written product so he will be committed to recovering the flux of life which it ordered and shaped.

In-depth interviews should also try to recover information the respondent probably views as extraneous: the interaction interfacing with the writing (the discussion at the coffee machine and the confrontation over the telephone). This is information which a typical technical professional believes to be separate from the task and its completion. Since he considers it to be at best irrelevant and at worst an obstruction, usually he has depressed his
memory of it; with little recognition of its significance to the reality of the
problem-solving process in action, he will only respond appropriately if you
guide him back over the territory, with many "and then what happened" questions.

Beyond recovering the actual behavior of participants in the
events, you should also evoke the writer's impressions of things and his
analysis of motives, his own included. Aiming to elicit his responses, you
can ask him to recount an event in detail, and then ask to explain it or
tell how he felt about it. Another technique is to re-play a tape and then
ask him to interpret and elaborate upon it. The subjective reactions you
seek (the key to portraying the situation fully and from the writer's point
of view) may be difficult to recover, even if the respondent is willing and
open; he may never have consciously confronted what "really was going on," or
he may have simply forgotten the unpleasantness. For most respondents who feel
comfortable with the interviewer, however, eventually the flood-gates will open
with the personal views, what is essentially "my side of the story." These
responses are, of course, akin to informal conversation with its gripes and
gossip, what is usually heard over the bar or in the carpool, remarks which are
self revelatory but not therapy.

Stage 3 - CREATING THE FICTION

The objective of the third stage is to transform the record of real-world
facts into a fiction through which the student can experience the full communica-
tion process on the job.

Though you began with information about the real technical problems at a
real firm, you cannot write up this data into a case. No matter how focused
your information collection on the specific problem, other problems and tasks
impinge upon it, denying it a tidy shape and a satisfactory ending. No matter
how in depth the transcripts of your tapes or full your details on the other
employees, you do not know most of these people nor the full reasons for their
acts; they remain shadowy figures in your imagination. Obviously, then you must
take all these facts and impressions and create out of them a fiction, a story
with close correlation to the "hard facts" of the technical data and the organi-
zational procedures, but with primary fidelity in all other respects to the sense
of reality in the story, to the truth of its fictional world in which the reader
must place his believe. Thus, for example, you must invent the dialogue for
not only the persona of the technical professional, but for all the other
employees as well, fashioning words that could have been said—telling a tale. Techniques of the storyteller that can transform the facts and impressions into a narrative are as various as the art of fiction. Certain strategies, however, are essential to produce a realistic fiction capable of interesting and engaging student readers, while readily lending itself to adaptation into a functional case. These are creating a persona which restricts the point of view to the writers and offers the reader a way into the fiction; developing well-realized characters in a realistic setting; planning a plot which traces the writer's experience of trying to solve a problem; and modeling language on the discourse types in which the writer gains access to the information.

3.1 Create a persona which restricts the point of view to the technical professional and pulls the reader into the fictional world. You should write a story which strictly defines the persona's view on this world, limiting the fiction to his direct experience of and response to people, events, and information. The image of this technical professional must be one with which the students can identify because of the relevance of the occupation and of the demonstrated professional competence. If readers are to project themselves into the mask of the technical professional, however, you must devise the persona to minimize the distance between the image and the reader. Most obviously you should limit the explicit characteristics of the professional person. Do not provide a name, assign a sexual or ethnic identity, suggest anything about a private life, nor mark any strong personality traits, especially not quirks or incompetencies. The objective thus is to create a persona that invites the reader not to role-play a character but to assimilate his or her individuality into the professional mask. Such a persona is a vehicle through which the reader can experience the real-world of work and develop his or her own genuine professional voice.

3.2 Develop well-realized characters in a specified setting. Contrary to the persona's neutrality as a character, the surrounding employees in this technical narrative should be fully developed characters portrayed in a rich accumulation of mundane detail. From your factual record, select fragments and then fabricate the missing pieces to complete a coherent picture of real but fully disguised persons operating in what seems to be a faithful reproduction of a real organization. Overloading the details, you should emphasize the relevant points to create whole characters whose behavior is believable, whose actions exhibit their significant traits, and whose total characteristics add up to
coherent if one-sided professionals. Individual actions should be invented to demonstrate motivations, personal speech rhythms established, along with behavioral motifs to compress as much personality as possible into limited narrative time. Your aim thus is to create a fiction that "tells" more than it "tells" so that the reader will be involved directly with the persons in action in a solidly specified world and forced to analyze the whole situation for himself.

3.3 Plan a plot that traces the writer's experience of trying to solve a problem. Because real projects don't have tidy beginnings and endings, you must define and shape certain events to represent in the fiction. Also, most real projects absorb only a part of an employee's day; your story must clearly represent that fact without overburdening the reader. A real project may have three aspects, two of which you might eliminate; it may have two phases separated by years, which you might collapse into a single time frame; it may have unsupportable complexities, which you might suppress to a couple salient issues. Your factual records, in short, should be modified to develop a plot structure which will help you to tell a realistic but captivating story, involving the reader in what will happen next and encouraging him to seek answers for the dilemmas confronted by the persona.

The plot of this fiction should be built upon the individual technical professional's active involvement in the problem-solving process, both in its technical and rhetorical aspects. The ordering of the action then should be determined by the chronological pattern of the persona's growth to knowledge, not by when an event occurred. Just as the real writer must cope with whatever he knows at the moment, the plot should impose upon the reader the simple order of when each scrap of information comes to the technical professional. Although much of the information, particularly the technical data, should be presented descriptively to condense the story, significant communication actions like interviews and meetings should be dramatized in part, both to heighten reader interest and to cause him to deal with the interaction directly. Thus, the plot line must reinforce the reader's understanding of the problem as in a state of becoming through presenting information that is full of gaps, repetitions, contradictions, and always subject to new interpretation.

3.4 Draft the fiction simulating the types of communication in which the writer originally got the information. The story should be drafted in forms most closely approximating the modes of discourse actually used in the real situation. Some transmission may be in the form of documents—a memo assigning the problem, for example. You can either use real documents (dis-
guing them appropriately), or you can draft them, closely imitating models you observed. Most of the language of the fiction, however, should be in conversational discourse, some in narrative form, but much in dialogue. In other words, the fiction should be written in forms totally unrelated to the documents that the case should generate. (This principle is particularly important for technical data which should not be ordered into patterns beyond the log or lab book.)

Using your interviewing tapes, try to capture the oral language of the particular work place, toning down the jargon as necessary to make it easily intelligible and to avoid caricaturing the technical persons. Write much of the fiction in the "internal" language of the persona, so that he can explain for himself what he is doing, what he is finding out, and how he responds to the situation. The style of these "mutterings" should not attempt to represent any modified stream of consciousness, but rather should represent an internal monologue, readily understandable to the world outside the self.

Stage 4 - CONSTRUCTING THE CASE

The objective of the case construction stage is to adapt the fiction into a functional instrument for students to use in writing professional documents. There are five main steps: revising the fiction so that the communication solutions remain open questions for the individual student; adapting it so that it focuses clearly on the communication process; screening the information according to students' backgrounds; adapting the information to functional use; and formatting and validating the case for the classroom.

4.1 Revise the fiction so that the communication solutions are left open to the individual student. In the real world, there is no one correct response, no one defined solution, but rather a range of possibilities of greater or lesser effectiveness in solving a communication problem. Moreover, these options are not equally pertinent to all writers. The student thus should have the burden of creating the communication answer that is both appropriate for the facts, but also for the synthesis of the persona and his or her individual self. If this truly open situation is to prevail, however, you must revise the fiction to ensure that you have not "loaded the dice" for a specific response or been unduly influenced by the actual documents produced by the technical professional you interviewed.

4.2 Adapt the fiction to focus on the communication process. The process of resolving communication problems introduced in a technical fiction can
be very time consuming, but crucial to developing student skills in assessing the context for writing. Time students spend reading, researching, analyzing technical problems, however, is time not available for their communication learning. Although data should not be recast into non-narrative forms (as it might be presented in an actual report), you should reduce the student reading and analysis time as much as possible without destroying the rhetorical impact of the case. Most rhetorical information should be of some potential relevancy in defining the audience and purpose of the communication; the details for background or providing overload should be reduced to a reasonable amount commensurate with the goals of selecting the relevant from the mass. More important, the technical information should be analyzed within the case, usually in the internal monologues of the persona and the dialogues with peers. The point is that the students’ major efforts should be devoted to confronting the composing process as an integral part of the technical task, and to confronting the whole of that process, not merely the drafting of an assigned piece. They should have to begin at the beginning by defining what is truly their own problem, analyzing their audience, figuring out their purpose, so that they can set about producing the documents that will meet their ends.

4.3 Screen the information in the story according to the needs of the students. Judging the target population’s technical and professional expertise, you should screen all the technical information, professional activities, and organizational methods to determine where the students will need explanations or elaborations to use the case with ease. Asking representative students to read the manuscript and note their difficulties will facilitate your task here. To avoid destroying the verisimilitude of the case, identify all information the students need which is inappropriate for the persona to think or talk about (for example, defining a term common to an industry but little known elsewhere) and place these items in the case apparatus: a background statement, footnotes, and appendices.

4.4 Screen the fiction for its functional application to writing. In reconstructing the process through which the technical professional solved his problems and wrote his documents, you may have inadvertently left out critical pieces of information, failed to emphasize certain points, or unintentionally contradicted messages. You may have insufficiently disguised some information or confused the picture through your efforts to disguise it. By attempting to write the possible documents based on the case yourself, and by subsequently
assigning them to representative students, you should determine if the information base in the case has integrity and is applicable to producing writing. The critical questions to answer here are: Is there anything that a real writer would know in this situation that is not made apparent for the student? Is there any problem with the case information that caused by the inadequacy of the case rather than by its attempt to mirror the imperfect real world?

4.5 Format the case and validate it for classroom use. Once you have completed the case manuscript, you should divide and format it into units that can be used easily by students in reading and writing up the information. You should prepare a possible list of assignments that could grow out of these materials, and you should validate these tasks by classroom use, preferably under other instructors. (Can they teach communication skills with this case without getting caught up in problems inherent in the case itself? Does the case facilitate their job?) Finally, you should submit the case to your technical partner for validation of authenticity. After all the adjustments, does every piece fit, is every identity sufficiently disguised, and does the story "tell it like it is" on the job?

Passing your resource person's review determines that your case is true. However, the final hurdle is acceptance as real and relevant by the target student audience, the people for whom you designed the project, both collecting the information and creating the fiction so that you could construct a case for them to write within.
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