

WRITING CASE STUDIES: A MANUAL

ADAPTED FOR USE BY THE ONLINE LEARNING CENTRE
USE THIS MANUAL AS A GUIDE TO PREPARING YOUR OWN CASE MATERIALS

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INTRODUCTION TO *WRITING CASE STUDIES: A MANUAL*

THE ROLE OF CASE STUDIES IN ARCHIVAL EDUCATION

The construction of case studies was first developed as a tool for the study of law in the nineteenth century. By the mid-twentieth century, case studies were increasingly used in other areas of professional education, including medicine, accounting, business and management studies, engineering, nursing and agriculture. Educators in these fields recognised that it was not enough to teach the generic principles and practices of a profession. It was equally if not more important to equip the student to cope with a variety of scenarios, so that he or she would be able to adapt easily to the wide range of work situations found within his or her chosen profession.

Case studies present realistic situations, allowing students to balance theory with practice.

THE USE OF CASE STUDIES

WHAT ARE CASE STUDIES?

The case study is an account of an administrative problem or situation in a real or imagined organization. In addition to the description of a specific problem, a case study may include additional information necessary to place the scenario in context and an analysis of possible solutions or actions arising from the situation.

One author of case studies, Paul R. Lawrence, defined the case study as follows:

A good case is the vehicle by which a chunk of reality is brought into the classroom to be worked over by the class and the instructor. A good case keeps the class discussion grounded upon some of the stubborn facts that must be faced in real life situations. It is the anchor on academic flights of speculation. It is the record of complex situations that must be literally pulled apart and put together again before the situations can be understood. It is the target for the expression of attitudes or ways of thinking brought into the classroom.¹

The purpose of using a case study in a teaching environment is to present the student with a scenario as close to that which he or she may encounter in subsequent work, in order that the student may be able to work through the problem and devise reasonable and workable solutions.

The case study puts the student in the problem solver's shoes.

The case study does not provide answers. Rather, it raises questions and allows the student to work through the decision-making process and find his or her preferred solution. The case study generates an action-oriented teaching environment; the student must actively participate in the process in order to meet the learning objectives. Through this process, much of the responsibility for learning is naturally transferred to the student.

¹ Paul R. Lawrence, 'The Preparation of Case Material,' in Kenneth R. Andrews, ed., *The Case Method of Teaching Human Relations and Administration* (Cambridge, MA: Harvard University Press, 1953), p. 215.

Case studies can help the student develop the following skills:

- identifying and recognising problems
- understanding and interpreting data
- understanding and recognising assumptions and inferences, as opposed to concrete facts
- thinking analytically and critically
- understanding and assessing interpersonal relationships
- exercising and making judgments
- communicating ideas and opinions
- making and defending decisions.

A case study presents a realistic problem, one that might reasonably take place within the normal work environment. The case study will include the complexities natural in the work environment, such as questions of policy or procedure, issues relating to reporting relationships or hierarchies or financial or administrative concerns.

Case studies should be as realistic as possible.

Case studies are often based on actual situations, which may be fictionalised to protect confidentiality. They are usually institutionally organised, dealing with a situation within an organization or agency. In order to make the case study as realistic as possible, the author must report to the best of his or her ability the facts of the case at the time the problem existed.

USING CASE STUDIES

Case studies can be used in teaching in a variety of ways. The choice of teaching method is of course up to the individual instructor, based on the resources and time available, the nature of the class and the students and the subject of the case study in question.

It is important to note that, as the case study method of teaching traditionally requires considerable interpretation and discussion among students and between students and teacher, it is not often used for teaching by distance education. It is possible to use case studies in self-study programmes, but this requires considerable planning and time on the part of the instructor, which in some respects is not in keeping with the independent nature of distance education work.

Following are some examples of teaching methods using case studies.

Class Discussion

The case may be presented to students, either on the spot for immediate discussion, mirroring a real-life situation, or as preparatory work in advance of discussion in a later class. The discussion itself may take place among the entire class, or the class may be divided into small groups, each of which analyses the case and reports back to the larger group.

Role Play

The case study may be presented either in whole or in part as a role play. For example, the students may be given 'parts' as people in the case and asked to present their 'character's' concerns and point of view. Discussion and analysis would proceed either through the role play or at the conclusion, as a class review.

Interviews

The students may only be presented with part of the information and be required to ask particular questions to extract the rest of the data needed and provide their analysis and recommendations. The instructor or other students may serve as 'actors' to present the information and answer questions.

Assignments

The case study may be presented as an assignment, with the student required to write an analysis and recommendations. This may be done as a take-home assignment or as part of an examination, requiring immediate response.

THE LIFESPAN OF A CASE STUDY

Case studies can quickly become obsolete. For example, a case based on issues of computer technology will not be a useful teaching tool once that technology has been superseded. Studies involving materials or labour costs may quickly become dated as prices rise, or fall. In the areas most suited to case study work – professional management and practical application of theories – external realities will change so often that case studies will inevitably be out of date within a few years.

A case study may only be relevant for two or three years before being revised.

Some professional case study writers have suggested that the average life of a case study is two to three years. Thus when constructing case studies it is worth considering the potential life of the work in relation to the amount of work put into its creation. Does a case study involving detailed salary and budget figures need to be twenty pages long? Is it possible to write the study in such a way that numbers can be altered later, allowing the case to be updated easily in two or three years?

TOPICS FOR CASE STUDIES

Because the case study is a subjective document, there is no one ‘correct’ answer to any problem posed. Each student, each class and each instructor will provide a different interpretation of the issues presented. Thus case studies are often best used for teaching in those areas that are more interpretive than prescriptive. For example, case studies can be extremely useful to illustrate how to establish priorities, develop strategic or business plans, make arrangement or description decisions or apply theories or principles.

Interpretive topics are well suited to case study instruction.

ELEMENTS OF A CASE STUDY

A case study may consist of one scenario or several, and it may take many forms, from a traditional paper-based document to films, videos or audio recordings. The case study document may be as short as two pages or as long as thirty.

The case study is often accompanied by a set of teaching notes, one to several pages long. The teaching notes are in effect any communication between the author of the case and any subsequent instructor using the case, whether it be the author himself or another individual. The notes are intended to help the instructor understand the reason the case study was written, the questions that might arise from it and the professional or theoretical points that might be raised in discussion.

Teaching notes outline the educational objectives of the case study.

Some people argue that teaching notes are best prepared well in advance of the use of the case; others suggest that the notes should be prepared just before teaching the case each time, as the instructor may see different interpretations with each use of the case. Others recommend preparing a note after the use of the case on the issues raised during discussion, as a reminder for the next time.

There is also debate over whether teaching notes should accompany cases that are published or otherwise generally available. While there is agreement that it is useful to understand the author's purpose in preparing the case study, there is also a concern that if the notes are too prescriptive they might discourage subsequent instructors from working independently with the case material, instead relying on other interpretations of the problem.

On the next pages are descriptions of the common elements found in a case study and in the teaching notes, in the order they are usually presented. Each of these elements is demonstrated in detail in the section on constructing a case study.

Elements of a Case Study

Element:

Description:

Introduction

The introduction defines the problem to be examined and explains the parameters or limitations of the situation.

Overview/Analysis

The overview/analysis provides a scenario of the situation and offers more detail about the various players in the scenario, including the organization, its employees or other people involved with the issue in question. It may also mention professional, technical or theoretical issues that arise from the situation. It might also include graphic or visual aids such as budgets, organizational charts, mission statements or technical specifications, as relevant. In complex case studies, the overview and analysis may be presented separately.

Status report

The status report describes the organization's actions, on the matter. It may include statements from managers or employees about their intentions for resolving the issue.

Case problems

In many case studies, the status report may end with one or two case problems, which require the learner to analyse or solve a particular question. Case problems generally take one of three forms:

1. Give a situation and ask learners what they would do next.
2. Set a task, such as asking learners to prepare a report recommending an action for review by a key official.
3. Illustrate a scenario and ask learners to analyse the faults and recommend how it should have been handled.

Appendices

The case study may include as many appendices as necessary to ensure learners understand the case scenario and have the necessary information to solve the case problems, including exhibit copies of documents, charts, technical specifications and so on.

Elements of Teaching Notes

<u>Element:</u>	<u>Description:</u>
<i>Synopsis</i>	The synopsis presents a brief overview of the case in question.
<i>Educational objectives</i>	The educational objectives includes a discussion of the learning points raised by the case.
<i>Discussion outline/question set</i>	The discussion outline/question set provides the instructor with guidelines for how to teach the case. It includes key questions to raise while discussing the case study, with appropriate answers or discussion points.
<i>Tips for resolving the case problem</i>	If a specific problem was outlined in the case, these tips might describe the objectives of the problem and tasks to be undertaken. Tips might also be included about approaches that might be taken, sources that could be consulted and points that should be addressed in arriving at a 'solution'.
<i>Appendices</i>	Appendices to the teaching note may include a bibliography, a glossary of relevant terms or a list of other activities or exercises that might be used to further learning of the subject. Some appendices, such as the bibliography or glossary, may be prepared in such a way that they may be easily reproduced for the students.

CONSTRUCTING A CASE STUDY

What follows is a breakdown of the elements of the typical case study with a description of how the elements are constructed and an example of their application to the development of a case study. The intention is to complete with a finished case study.

INTRODUCTION

The introduction defines the problem to be examined and explains the parameters or limitations of the situation.

Example:

It is mid-February 1996. Andover University Archives is faced with a decision about whether to restructure its existing but inadequate automated information management system or to scrap the system entirely, purchase new software and develop a new system better suited to its changing information management needs.

The university is aware that a pool of unallocated funds will come available on 1 March, as part of year-end financial reallocations. If the university wishes to use these funds to alter its information management systems, it has to prepare a detailed application to the University Finance Department in the next two weeks. To do so, it has to decide whether to revamp the existing system or replace it; in either case it must know what resources will be required.

The Director of the University Archives knows that, aside from these year-end funds, money for such a significant project will not be available for at least another two years, as the university has imposed a freeze on all non-essential spending.

Comments:

The introduction establishes the problem and provides the boundaries of the situation.

The University Archives has a short time in which to make a major decision about the direction of its information management.

It appears the University Archives must make some sort of decision or risk losing the funding available to undertake the work.

OVERVIEW/ANALYSIS

The overview/analysis provides a scenario of the situation and offers more detail about the various players in the scenario, including the organization, its employees or other people involved with the issue in question. It may also mention professional, technical or theoretical issues that arise from the situation. It might also include graphic or visual aids such as budgets, organizational charts, mission statements or technical specifications, as relevant. In complex case studies, the overview and analysis may be presented separately.

Example:

In 1988, six months after his appointment, the Director of the University Archives began to develop an automated information management system. This system would be used to manage the following tasks:

- establishing and maintaining a records retention schedule for university records;
- providing annual disposition documentation to advise departments of pending destruction or transfer of records;
- accessioning records into the records centre and into the archives;
- tracking the movement of records retrieved for reference;
- maintaining statistics on the uses of the records centre and archives.

The University Archives chose the Paradox software package; its decision was based on the fact that the university's finance and personnel departments were acquiring Paradox at the same time and a special reduced price was offered for a bulk purchase, with two years' service and assistance included. Since the assistant archivist was well-versed in the use of Paradox and would be responsible for its maintenance, this seemed a logical action.

The University Archives spent many years developing the intended functions but gradually found that the software was not flexible enough to handle all of the required tasks. It was necessary to bring in a computer programmer every six months to download and reload the data to eliminate errors generated in the data processing stage. Further, the University Archives wished to expand the information management system to include the following tasks:

- automatic generation of standardised records descriptions based on administrative information entered into the computer;
- printing of labels, finding aids and lists as required;

Comments:

The background provides a detailed narrative of the situation. The narrative is presented in chronological order, with no foreshadowing. In this case the University Archives is presented as having a clear understanding of the tasks it wishes to accomplish with the software. However, it may later turn out that the University Archives has misidentified its requirements, or that it has changed its requirements and expected its existing resources to handle new priorities.

Since the problem is not intended to be straightforward, the narrative may include additional information, including 'red herrings', that the student must consider as they search for the key issues. For example, it may or may not be important that the University Archives acquired the software through a special purchase programme, and it may or may not be important that a member of staff had previous experience with the software.

It is important not to use language that might bias the presentation in any way, such as 'unfortunately, the Director chose to do x' or 'the University Archives made the mistake of doing y'. The student must be left free to evaluate all aspects of the situation independently.

The retirement of the assistant archivist, and the appearance of a contractor, can serve as a red herring or as a clue to the key issues involved in the case. It may be useful to provide quotations from the contractor's report in the analysis section of the case study or as an appendix.

- on-line searching of files, by title, by creating department or by keyword searching of the database;
- expansion of the database to include all archival records in the repository, both institutional and private;
- possible internet access to the archival data, with restricted access to selected information about current records.

As of 1992, the University Archives had a staff of four: two full-time professional staff, one full-time clerical assistant and one part-time student assistant. In 1993 the staff complement was reduced to three when the assistant archivist retired. As of 1996 this position had not been filled, owing to the budget freeze.

In 1993 the University Archives engaged a contractor to assist with revising the database. The consultant advised that the software chosen was not adequate to the task, but at that time the University Archives was not in a position to change. After eighteen months the contractor provided an interim report recommending that no further data be added to the database until the software was changed.

The University Archives continued to add data until spring 1995, when the system suffered a collapse and two week's data had to be re-entered. At that time the Director requested emergency funds to take action on restoring and upgrading the system, but the university was only able to provide \$1000, which allowed the University Archives to purchase and install a tape backup system.

Since summer 1995 the Director has been researching other information management systems and has determined that Inmagic software would perform more of the functions desired, though it was more suited to textual searching and reporting than to the number crunching required to generate disposition schedules and annual records updates.

In February, the Director was notified by a colleague in the Finance Department that some funds would be available for end-of-year projects, which is why the University Archives is now considering a major change in the software and systems used.

The fact that there has been a loss of data can be seen as a key issue, or it may be a separate problem entirely.

The overview should bring the case up to the present, without necessarily providing information about the actual decisions made or action taken. That information is usually included in the status report.

STATUS REPORT

The status report describes the organization's actions on the matter. It may include statements from managers or employees about their intentions for resolving the issue.

Example:

As of March 1996, the Director of the University Archives had solicited preliminary quotations from two consultants for (1) revision of the existing system and (2) development and installation of a new system.

Consultant A estimated \$10,000 for revision and \$65,000 for installation of a new system but advised against revision, claiming it was a poor use of resources. Consultant B estimated \$15,000 for revision and \$35,000 for installation of a new system and felt either approach was feasible.

Given the short time frame available for preparing their quotations, both consultants reserved the right to provide revised estimates prior to commencing any work.

The Director is not satisfied that he has sufficient information to make a valid decision about which direction to go. He sees his options as follows:

1. submit a proposal for revision to the existing system;
2. submit a proposal for development of a new system;
3. submit a proposal for a project to conduct a complete investigation of the University Archives' information requirements and options;
4. forego the opportunity and make alternate plans.

Comments:

The status report presents the situation to date but does not offer the 'solution' to the problem. The students will be asked to determine the options available as part of their analysis of the case study.

CASE PROBLEM

The case problem may do the following.

- Give a situation and ask learners what they would do next.
- Set a task, such as asking learners to prepare a report recommending an action for review by a key official.
- Illustrate a scenario and ask learners to analyse the faults and recommend how it should have been handled.

Example:

The Director is concerned that he may not have sufficient information to make a valid decision about which direction to go, but he knows that if he does not act now when the funds are available, he will lose his chance and be stuck with a collapsed system. He calls you in to help him by assessing the situation and recommending a realistic and effective course of action. The deliverable is a three-page report summarising the issues, analysing the alternatives and making a recommendation.

Think over the situation and prepare an annotated plan of how you would approach advising the Director of the University Archives. Starting from your return to your office to begin the task, outline and explain the rationale behind the steps you will take in preparing the advice, the form you will be choosing to deliver and briefly summarise the key points you have decided to make in the three page report.

Comments:

The case problem sets the task but does not offer the 'solution' to the problem. The students will be asked to determine the options available as part of their analysis of the case study.

APPENDICES

The case study may include as many appendices as necessary, including exhibit copies of documents, charts, technical specifications and so on.

Example:

<i>Appendix: Data Structure</i>			
<i>Existing data structure:</i>		<i>Indexable / Searchable</i>	
ID	identification number	no	yes
DN	department name	no	yes
ON	office name	no	yes
CN	contact name	no	yes
SDR	start date of records	no	yes
EDR	end date of records	no	yes
DE	date information		
	entered/updated	no	no
<i>Proposed data structure:</i>		<i>Indexable / Searchable</i>	
ID	identification number	no	yes
ME	main entry	yes	yes
DN	department name	yes	yes
ON	office name	yes	yes
CN	contact name	yes	yes
SDR	start date of records	yes	yes
EDR	end date of records	yes	yes
DNR	date note	yes	yes
PD	physical description	no	yes
LMM	linear metric		
	measurement	no	yes
ROA	restrictions on access	no	yes
RM	related materials	no	yes
AH	administrative history	no	yes
SC	scope and contents note	no	yes
AP	access points	yes	yes
DE	date information		
	entered/updated	no	yes

Comments:

This case study may include such additional information as:

- *technical specifications for the existing software system, including data fields and so on*
- *annual budget for the University Archives*
- *extracts from the annual report of the University Archives, indicating how the repository's resources have been allocated*

The decision about how extensive the appendices should be will depend on the nature of the case study. The case should only be as long or complex as necessary to serve as a teaching tool. It is not a good use of time, for example, to provide extensive financial documentation which may make the case study obsolete sooner rather than later.

CONSTRUCTING TEACHING NOTES

What follows next is a breakdown of the elements of the typical teaching notes with a description of how the elements are constructed and an example of their application.

SYNOPSIS

The synopsis presents a brief overview of the case in question.

Example:

In 1988 the Andover University Archives installed the Paradox software package to manage its information systems, including managing retention schedules, preparing disposition documentation, controlling accessioning and tracking activities and maintaining statistics. Over the years the University Archives has found the software to be increasingly inadequate for given tasks and unsuitable for new tasks the University Archives wishes to automate.

As of March 1996, the University Archives has an opportunity to apply for funds for a special project, either to restructure the existing system or to scrap it and develop a new one. The Director knows that, aside from these year-end funds, money for such a project will not be available for at least another two years, as the university has imposed a freeze on all non-essential spending.

The Director solicited preliminary quotations from two consultants for (1) revision of the existing system and (2) development and installation of a new system. Consultant A estimated \$10,000 for revision and \$65,000 for installation of a new system but advised against revision. Consultant B estimated \$15,000 for revision and \$35,000 for installation of a new system and felt either approach was feasible. The Director sees his options as follows:

1. submit a proposal for revision to the existing system;
2. submit a proposal for development of a new system;
3. submit a proposal for a project to conduct a complete investigation of the University Archives' information requirements and options;
4. forego the opportunity and make alternate plans.

Comments:

The synopsis simply provides an overview of the key issue(s) of the case, serving as an aide-memoir for the instructor.

EDUCATIONAL OBJECTIVES

The educational objectives includes a discussion of the learning points raised by the case.

Example:

This case study may seem to focus largely on technical issues, such as the selection of the most appropriate software for various tasks. However, it is really more a management problem.

At the end of the exercise, students should have a clearer understanding of the following issues:

- The importance of planned management of resources and systems. Topics of relevance include budgeting, planning and utilising resources such as permanent staff and consultants.
- The importance of project planning. Topics to discuss include determining institutional and systems requirements, identifying and addressing changes to those requirements and allocating resources effectively.
- The requirement for technical and systems structures. Topics to discuss include the identification of computer requirements, the choice of software and planning for upgrades.

Comments:

The educational objectives of a particular case may vary depending on the environment within which it is used. For example, this case study addresses both technical and organizational issues; in a course on records systems automation the former may be a priority, whereas in a management course the latter may take precedence.

DISCUSSION OUTLINE/QUESTION SET

The discussion outline/question set provides the instructor with guidelines for how to teach the case. It includes key questions to raise while discussing the case study, with appropriate answers or discussion points.

Example:

Following are key issues or questions to raise to encourage discussion about this case. These are not presented in any particular order.

- The University Archives is facing a deadline for action; is this a realistic deadline? Perhaps the University Archives should not be concerned about applying for these particular funds. Perhaps it should instead investigate other options that allow it to make decisions in a more planned fashion.
- It seems that in 1996 the University Archives wishes to use the software for much more than was intended when the software was selected in 1988. Is the University Archives trying to accomplish too much with one software package?
- Institutional requirements are always changing and it is often necessary to plan for software upgrades. It is not clear that the Director planned for regular upgrades. Would he be hasty in making a decision now rather than taking more time to plan for future requirements? How does an institution manage changing requirements?
- Staff resources are critical to the success and continuity of any technical or operational system. Does it matter that the one individual in the University Archives familiar with the software has retired, leaving a gap in knowledge? Should the Director have arranged for more extensive training for other staff prior to this retirement?
- The consultants' estimates vary considerably. Given that they both had mere days to prepare their quotations, does the Director have any guarantee that their estimates reflect the real situation. Should he defer action and investigate other options?
- At the end of the discussion, the students should be asked what options they see to resolve this issue.

Comments:

The questions and comments serve to guide the discussion. Depending on the course within which the case is used, the discussion may focus on various aspects of the problem, from technical to managerial. However, students should be encouraged to consider all relevant concerns, even if they do not seem to have a direct bearing to the topic being taught at that time.

The purpose of the case study is to introduce realistic situations in a classroom environment; students must have the opportunity to consider all the practical as well as theoretical problems that arise.

TIPS FOR RESOLVING THE CASE PROBLEM

The instructor can pose a number of suggestions for resolving the case problem or develop activities to help the students work through the case and see how they might resolve the issues raised.

Example:

The instructor should encourage students to prepare a course of action for the problem presented. They must define the nature of their task and responsibility and focus on how to fulfil it productively within the short three-day timeframe. They also need to determine what their recommendations or actions would be.

Proposing a course of action might be assigned as a role play or a longer written exercise or assignment and might include learners brainstorming points under the following headings.

- Identify the key players, factors and issues in the case.
- Tease out the underlying problems, prioritise them, then identify resources and gather information pertinent to addressing them: Do you have sufficient information or will you need to gather more? What sources of information are critical?
- Identify and analyse the various options, perhaps using a SWOT type analysis: For example, the Director sees his options as follows:
 - submit a proposal for revision to the existing system
 - submit a proposal for development of a new system
 - submit a proposal for a project to conduct a complete investigation of the Archives' information requirements and options
 - forego the opportunity and make alternate plans.
- Are there other constructive options he hasn't considered? Do you have to consider all of them in equal detail?
- Make and justify appropriate recommendations.
- Decide the best way to present the research and its findings in three pages.

Comments:

The instructor can determine a number of actions students could take, or he or she could allow the students to determine their own activities. It is useful to offer guidance so that students don't end up 'off track' and discussing issues that are not relevant to the purpose of the case study.

APPENDICES

Appendices to the teaching note may include a bibliography, a glossary of relevant terms or a list of other activities or exercises that might be used to encourage further learning of the subject. Some appendices, such as the bibliography or glossary, may be prepared in such a way that they may be easily reproduced for the students.

Example:

Appendix: Bibliography

Selected readings relevant to this case study include:

Cook, Michael. *Archives and the Computer*. 2d ed. London, UK: Butterworth's, 1986.

Cook, Michael. *Information Management and Archival Data*. London, UK: Library Association Publishing, 1993.

Hunt, John, *Managing People at Work: A Manager's Guide to Behaviour in Organizations*. London, UK: Pan, 1981.

Kesner, Richard M. *Automation for Archivists and Records Managers: Planning and Implementation*. Chicago, IL: American Library Association, 1984.

Menne-Haritz, Angelika, ed. *Information Handling in Offices and Archives*. Munich, GER: K.G. Saur, 1993.

Penn, I.A., Pennix, G., and Coulson, J. *Records Management Handbook*. 2d ed. Aldershot, UK: Gower, 1994.

Robek, Mary F., Brown, Gerald F. and Maedke, Wilmer O. *Information and Records Management*. 3rd ed. Encino, CA: Glencoe Publishing Company, 1987.

Society of American Archivists. *Evaluation of Archival Institutions: Services, Principles and Guide to Self Study*. Chicago, IL: Society of American Archivists, 1982.

Wild, Ray, ed. *How to Manage*. London, UK: Pan, 1982.

Yorke, Stephen, ed. *Playing for Keeps: Proceedings of an Electronic Records Management Conference Hosted by Australian Archives*. Canberra 8-10 November, 1994. Canberra: Australian Archives, 1995. *An electronic version of this publication is available on the National Archives of Australia Home Page at URL: <http://www.naa.gov.au>.*

Comments:

The appendices to this teaching note may include references to articles on such topics as project management or software upgrades. If drawn from a real situation, the students might be provided the final funding application or similar documents, to see how the situation was in fact resolved.

As with the appendices to the case study itself, these appendices should be prepared with regard for the possible obsolescence of the case. Bibliographies will have to be kept current, for example, particularly if they relate to ever-changing technical issues. They might include a wide list of readings or only those the students would not have encountered in their usual studies.

Original documents from real situations should only be used with the permission of the originating office; it may be necessary to recreate the documents, along with the case, in fictionalised form if the case is to be used extensively.

EVALUATING A CASE STUDY

After a case study has been used one or more times, it is important to evaluate its suitability. The instructor should ask the following questions:

- Were the educational objectives achieved?
- Did the discussion remain relevant to the issue or did it transgress into side topics?
- Did the students have sufficient detail to consider the case? Too much detail?
- Was the case relevant to the work situations students might find themselves in? If not, did it provide a good example of other systems, organizations or cultures?
- Did the students find the case stimulating and informative?

It is useful to prepare a brief memo or document outlining the use of the case and the discussions generated, for reference the next time it is used. Ideally, the instructor will amend or annotate the teaching notes, adding or changing questions or discussion points, for example.

Without such an evaluation of the case study, it can quickly become not just obsolete but, worse, irrelevant. A valuable case study remains current, interesting and challenging.

A valuable case study is current, interesting and challenging.

SAMPLE CASE STUDY

Systems Downfall or Organizational Shift?:

The Case of Andover University Archives

Introduction

It is mid-February 1996. Andover University Archives is faced with a decision about whether to restructure its existing but inadequate automated information management system or to scrap the system entirely, purchase new software and develop a new system better suited to its changing information management needs.

The university is aware that a pool of unallocated funds will come available on 1 March, as part of year-end financial reallocations. If the university wishes to use these funds to alter its information management systems, it has to prepare a detailed application to the University Finance Department in the next two weeks. To do so, it has to decide whether to revamp the existing system or replace it; in either case it must know what resources will be required.

The Director of the University Archives knows that, aside from these year-end funds, money for such a significant project will not be available for at least another two years, as the university has imposed a freeze on all non-essential spending.

Overview/Analysis

In 1988, six months after his appointment, the Director of the University Archives began to develop an automated information management system that would

- establish and maintain a records retention schedule for university records
- provide annual disposition documentation to advise departments of pending destruction or transfer of records
- accession records into the records centre and into the archival institution
- track the movement of records retrieved for reference
- maintain statistics on the uses of the records centre and archival institution.

The University Archives chose the Paradox software package; its decision was based on the fact that the university's finance and personnel departments were acquiring Paradox at the same time and a special reduced price was offered for a bulk purchase, with 2 years' service and assistance included. Since the assistant archivist was

well-versed in the use of Paradox and would be responsible for its maintenance, this seemed a logical action.

The University Archives spent many years developing the intended functions but gradually found that the software was not flexible enough to handle all of the required tasks. It was necessary to bring in a computer programmer every six months to download and reload the data to eliminate errors generated in the data processing stage. Further, the University Archives wished to expand the information management system to include the following tasks:

- automatic generation of standardised records descriptions based on administrative information entered into the computer
- printing of labels, finding aids and lists as required
- on-line searching of files, by title, by creating department or by keyword searching of the database
- expansion of the database to include all archival records in the repository, both institutional and private
- possible internet access to the archival data, with restricted access to selected information about current records

As of 1992, the University Archives had a staff of four: two full-time professional staff, one full-time clerical assistant and one part-time student assistant. In 1993 the staff complement was reduced to three when the assistant archivist retired. As of 1996 this position had not been filled, owing to the budget freeze.

In 1993 the University Archives engaged a contractor to assist with revising the database. The consultant advised that the software chosen was not adequate to the task, but at that time the University Archives was not in a position to change. After eighteen months the contractor provided an interim report recommending that no further data be added to the database until the software was changed.

The University Archives continued to add data until spring 1995, when the system suffered a collapse and two week's data had to be re-entered. At that time the Director requested emergency funds to take action on restoring and upgrading the system, but the university was only able to provide \$1,000, which allowed the University Archives to purchase and install a tape backup system.

Since summer 1995 the Director has been researching other information management systems and has determined that Inmagic software would perform more of the functions desired, though it was more suited to textual searching and reporting than to the number crunching required to generate disposition schedules and annual records updates.

In February, the Director was notified by a colleague in the Finance Department that some funds would be available for end-of-year projects, which is why the University Archives is now considering a major change in the software and systems used.

Status Report

As of March 1996, the Director of the University Archives had solicited preliminary quotations from two consultants for (1) revision of the existing system and (2) development and installation of a new system.

Consultant A estimated \$10,000 for revision and \$65,000 for installation of a new system but advised against revision, claiming it was a poor use of resources. Consultant B estimated \$15,000 for revision and \$35,000 for installation of a new system and felt either approach was feasible.

Given the short time frame available for preparing their quotations, both consultants reserved the right to provide revised estimates prior to commencing any work.

The Director is not satisfied that he has sufficient information to make a valid decision about which direction to go. He sees his options as follows:

1. submit a proposal for revision to the existing system;
2. submit a proposal for development of a new system;
3. submit a proposal for a project to conduct a complete investigation of the University Archives' information requirements and options;
4. forego the opportunity and make alternate plans.

Case Problem

The Director is concerned that he may not have sufficient information to make a valid decision about which direction to go, but he knows that if he does not act now when the funds are available, he will lose his chance and be stuck with a collapsed system. He calls you in to help him by assessing the situation and recommending a realistic and effective course of action. The deliverable is a three-page report summarising the issues, analysing the alternatives and making a recommendation.

Think over the situation and prepare an annotated plan of how you would approach advising the Director of the University Archives. Starting from your return to your office to begin the task, outline and explain the rationale behind the steps you will take in preparing the advice, the form you will be choosing to deliver and briefly summarise the key points you have decided to make in the three page report.

Appendix: Data Structure

Existing Data Structure:

<i>Code</i>	<i>Field Name:</i>	<i>Indexable</i>	<i>Searchable</i>
ID	identification number	no	yes
DN	department name	no	yes
ON	office name	no	yes
CN	contact name	no	yes
SDR	start date of records	no	yes
EDR	end date of records	no	yes
DE	date information entered/updated	no	no

Proposed Data Structure:

<i>Code</i>	<i>Field Name:</i>	<i>Indexable</i>	<i>Searchable</i>
ID	identification number	no	yes
ME	main entry	yes	yes
DN	department name	yes	yes
ON	office name	yes	yes
CN	contact name	yes	yes
SDR	start date of records	yes	yes
EDR	end date of records	yes	yes
DNR	date note	yes	yes
PD	physical description	no	yes
LMM	linear metric measurement	no	yes
ROA	restrictions on access	no	yes
RM	related materials	no	yes
AH	administrative history	no	yes
SC	scope and contents note	no	yes
AP	access points	yes	yes
DE	date information entered/updated	no	yes

SAMPLE TEACHING NOTES

Systems Downfall or Organizational Shift?:

The Case of Andover University Archives

Teaching Notes

Synopsis

In 1988 the Andover University Archives installed the Paradox software package to manage its information systems, including managing retention schedules, preparing disposition documentation, controlling accessioning and tracking activities and maintaining statistics. Over the years the University Archives has found the software to be increasingly inadequate for given tasks and unsuitable for new tasks the University Archives wishes to automate.

As of March 1996, the University Archives has an opportunity to apply for funds for a special project, either to restructure the existing system or to scrap it entirely and develop a new system. The Director of the University Archives knows that, aside from these year-end funds, money for such a significant project will not be available for at least another two years, as the university has imposed a freeze on all non-essential

The Director solicited preliminary quotations from two consultants for (1) revision of the existing system and (2) development and installation of a new system.

Consultant A estimated \$10,000 for revision and \$65,000 for installation of a new system but advised against revision. Consultant B estimated \$15,000 for revision and \$35,000 for installation of a new system and felt either approach was feasible.

The Director sees his options as follows:

1. submit a proposal for revision to the existing system;
2. submit a proposal for development of a new system;
3. submit a proposal for a project to conduct a complete investigation of the University Archives' information requirements and options;
4. forego the opportunity and make alternate plans.

Educational Objectives

This case study may seem to focus largely on technical issues, such as the selection of the most appropriate software for various tasks. However, it is really more a management problem.

At the end of the exercise, students should have a clearer understanding of the following issues:

- The importance of planned management of resources and systems. Topics of relevance include budgeting, planning and utilising resources such as permanent staff and consultants.
- The importance of project planning. Topics to discuss include determining institutional and systems requirements, identifying and addressing changes to those requirements and allocating resources effectively.
- The requirement for technical and systems structures. Topics to discuss include the identification of computer requirements, the choice of software and planning for upgrades.

Discussion Outline/Question Set

What follows next are key issues or questions to raise to encourage discussion about this case. These are not presented in any particular order.

- The University Archives is facing a deadline for action; is this a realistic deadline? Perhaps the University Archives should not be concerned about applying for these particular funds. Perhaps it should instead investigate other options that allow it to make decisions in a more planned fashion.
- It seems that in 1996 the University Archives wishes to use the software for much more than was intended when the software was selected in 1988. Is the University Archives trying to accomplish too much with one software package?
- Institutional requirements are always changing and it is often necessary to plan for software upgrades. It is not clear that the Director planned for regular upgrades. Would he be hasty in making a decision now rather than taking more time to plan for future requirements? How does an institution manage changing requirements?
- Staff resources are critical to the success and continuity of any technical or operational system. Does it matter that the one individual in the University Archives familiar with the software has retired, leaving a gap in knowledge? Should the Director have arranged for more extensive training for other staff prior to this retirement?
- The consultants' estimates vary considerably. Given that they both had mere days to prepare their quotations, does the Director have any guarantee that their estimates reflect the real situation. Should he defer action and investigate other options?
- At the end of the discussion, the students should be asked what options they see to resolve this issue.

Tips for Resolving the Case Problem

The instructor should encourage students to prepare a course of action for the problem presented. They must define the nature of their task and responsibility and focus on how to fulfil it productively within the short three-day timeframe. They also need to determine what their recommendations or actions would be.

Proposing a course of action might be assigned as a role play or a longer written exercise or assignment and might include learners brainstorming points under the following headings.

- Identify the key players, factors and issues in the case.
- Tease out the underlying problems, prioritise them, then identify resources and gather information pertinent to addressing them: Do you have sufficient information or will you need to gather more? What sources of information are critical?
- Identify and analyse the various options, perhaps using a SWOT type analysis: For example, the Director sees his options as follows:
 - submit a proposal for revision to the existing system;
 - submit a proposal for development of a new system;
 - submit a proposal for a project to conduct a complete investigation of the Archives' information requirements and options;
 - forego the opportunity and make alternate plans.
- Are there other constructive options he hasn't considered? Do you have to consider all of them in equal detail?
- Make and justify appropriate recommendations.
- Decide the best way to present the research and its findings in three pages.