POLICY ANALYSIS EXERCISE HANDBOOK

Master in Public Policy Academic Year 2022/23

"Emerging Innovations for a Sustainable Future"

A GUIDE TO THE POLICY ANALYSIS EXERCISE (PAE)
Hong Kong University of Science and Technology, Division of Public Policy
Academic Year 2022/23

The PAE is the capstone of the MPP curriculum and is one of the most useful experiences you will have in the programme. This Handbook should help you get the most out of your PAE experience. Becoming familiar with this Handbook at the beginning of the PAE process can save you some anguish and frustration later on.

This aim of this Handbook is to provide an overview of the PAE process, and advice on the research, writing and presentation skills. It acts as a complement to various other inputs in this process including the MPP foundational courses, your choice of electives, one-to-one interactions with your respective advisors and communication with your client, the scheduled PAE workshops, learning from your friends, good library research skills, and above all else, your own hard work.

Contents

Part I: The PAE Process

I.1 What is the PAE?

The PAE is a public policy study completed for a client organisation. It provides students the opportunity to apply and integrate skills they have gained in the MPP programme through work on a specific public policy problem. It also gives students the opportunity to structure, conduct, and take responsibility for their own creative project as they will regularly have to do in their careers. Finally, this experience provides a link between the academic and the professional worlds, and helps students practise the skills, knowledge, and values they will bring to their professional careers.

As it is a **client-based project**, an important measure of a PAE's success is client satisfaction. However, the PAE should also be seen as a learning experience for students. It should enable them to share with the client the responsibility for defining the problem, grappling with its ramifications, and deciding how to deal with related issues. A good client-student relationship, therefore, is an important ingredient in a successful project.

Here are selected useful references on Public Policy Analysis and Social Research:

- Babbie, Earl (2013). *The Practice of Social Research*, 13th edition, Wadsworth Cengage Learning
- Bardach, Eugene, and Eric M. Patashnik (2019). *A Practical Guide for Policy Analysts: The Eightfold Path to More Effective Problem Solving*, Sixth Edition, CQ Press, Washington
- Dipak K. Gupta (2011). 2nd edition, *Analyzing Public Policy: Concepts, Tools and Techniques,* ISBN 978-1-60426-570-5
- Dunn, William N. (2018). *Public Policy Analysis: An Integrated Approach*, Sixth Edition, Pearson, International Edition
- Howlett, M, M. Ramesh, and A. Perl. (2009). *Studying Public Policy: Policy Cycles and Policy Subsystems*. Toronto: Oxford University Press
- Wu Xun, M Ramesh, M Howlett, Scott Fritzen (2010). *The Public Policy Primer: Managing the Policy Process*, Routledge

I.2 PAE Timeline and Grading

General Timeline and Grading Scheme

The table below summarises the grade composition for the written portion of your PAE.

Timeline and Grading Scheme

Item	Milestones	Grading (%)	Grader	Dates
1	Assignment of teams, selection of clients, and allocation of advisors	n/a	n/a	Aug - Sep 2022
2	Initial prospectus	n/a	n/a	Sep 25, 2022
3	Final prospectus	10%	Faculty advisor	Nov 14, 2022
4	First draft of PAE	10%	Faculty advisor	Feb 20, 2023
5	Second draft of PAE	10%	Faculty advisor	Mar 31, 2023
6	Presentation Skills & English Writing Training Sessions	10%	(50-50) Communication tutors	Apr 23, 2023
			Ms Cynthia HUI: Business Communication & English Writing (item 2~5) **Ms Michael MAN**: PPT Presentation Skills	
7	PAE Conference	15%	Advisor, Second reader and Client	Apr 22, 2023
8	Final submission of PAE	30%	(50-50) Advisor and Second reader	May 14, 2023
9	Peer evaluation	15%	Group members	1st peer evaluation (7.5%): Feb 27, 2023 2nd peer evaluation (7.5%): May 21, 2023

Late Submission

Students shall follow the deadline for submission of assignments and present themselves for prescribed assessment activities at the scheduled time. **Late submissions without prior approval by the faculty advisor will NOT be given any grades.**

In the case your group is requesting a late submission of assignments, please send your faculty advisor's approval email to both PAE Coordinators, Prof. Pengyu ZHU (pengyuzhu@ust.hk) and Prof. Masaru YARIME (yarime@ust.hk), as well as the TA, Ms. Doris HU (yuminghu@ust.hk).

Grading Criteria for the PAE

Area	Learning Outcomes	Evidence and Grading Criteria
Problem Definition (Step One: Define the Problem)	1. Able to define the background to the problem and make it relevant. 2. Able to break down the problem and define the key cause(s) and outcomes. 3. Able to understand the unique needs of the client. 4. Able to make use of the learning and understanding from different modules to help with the above.	<u>Problem background</u> Demonstrated excellent knowledge and understanding of the background to the problem from multiple perspectives, and made that understanding relevant to the client and the problem. <u>Understanding of client and context</u> Demonstrated a deep understanding of the client's needs in relation to the current problem and context. Was able to clearly show how this understanding could affect the team's approach to the problem and the possible outcomes.
Research	1. Able to define the scope of the relevant literature.	<u>Research Questions</u>

(Step Two: Assemble some evidence)	2. Able to conduct a thorough literature review. 3. Able to draw relevant learning. 4. Able to use the learning from the literature review in the context of the problem. 5. Able to identify learning from other modules and apply it to the problem. 6. Able to devise a comprehensive and relevant research plan. 7. Able to explain and justify research methodology. 8. Able to craft relevant research questions. 9. Able to craft and/or use valid research instruments. 10. Able to conduct the research to achieve the desired results.	The research questions are relevant to the client's need, well-formed (i.e. are answerable through research), and clearly stated. The team is able to explain clearly from the literature review. <u>Literature Review</u> The review covers multiple academic sources, is very well organised, with a logical sequence and structure. The conclusions drawn from the review are very detailed and clearly linked to the evidence. The team is able to explain clearly why the articles were chosen and how they did their research. <u>Research Methodology</u> Demonstrated excellent planning for the research. Demonstrated excellent research methods choices and able to explain in detail why each was chosen and what the alternatives were.
Analysis (Step Three: Construct the Alternatives Step Four: Select the Criteria)	1. Able to devise and use a comprehensive analytical framework. 2. Able to define and use both holistic and atomistic analysis techniques. 3. Able to conduct a thorough analysis of the data collected in the light of the literature review and the research questions. 4. Able to select the appropriate data from the results gained. 5. Able to explain and defend the analysis process.	Developed and used an excellent analytical framework for the analysis of the data, utilizing appropriate analytical techniques (holistic, atomistic, etc). They were able to explain their approach in detail and show how it was relevant to the project. They were able to draw well supported conclusions from the data.
Inference (Step Five: Project the outcomes Step Six: Confront the tradeoffs)	1. Able to draw inferences from the data gathered in the literature review and research phases. 2. Able to project the potential policy decisions indicated by the research and analysis phases. 3. Able to assess each approach and establish the pros and cons. 4. Able to assess the trade-offs required in the choices presented. 5. Able to use well-defined criteria to help make the final choice. 6. Able to explain and defend the process.	Able to demonstrate clear and detailed pathways from the research and literature review findings to the possible proposed solutions. The solutions proposed are directly applicable to the problem at hand, with an excellent, detailed, and accurate assessment of the pros and cons associated with each choice. The final decision has been made with reference to a clear, defensible set of criteria linked to the possible policy outcomes to deliver the best overall result.
Argumentation (Step Seven: Decide!)	1. Able to construct a cogent inductive argument for the policy decision that they have taken. 2. Able to differentiate between strong and weak inductive reasoning.	Students are able to demonstrate a clear, detailed and cogent inductive argument for their policy decisions. The policy design and recommendations are clearly drawn from the premises developed from their research and literature review. They are also able to demonstrate valuable, clear and detailed cross-curricular application in their argument, supporting their premises and conclusion with evidence and logic.

Presentation (Written) (Step Eight: Tell your story)	1. Able to correctly cite the literature in the written report. 2. Able to write a report. 3. Able to present the argument effectively in the written format.	The report is written so that it always tells a consistent, clear, and coherent story. All of the arguments are clearly presented and supported with relevant facts, figures and other data. The arguments flow smoothly throughout the paper to culminate in the final proposal – the reader is able to understand the flow and argument throughout. All of the data is presented in easily understandable formats with appropriate use of tables and illustrations. All sources are clearly noted, and referenced in the appropriate manner. The paper is within the word/page count specified and presented in the specified format.

Grading Criteria for the Oral Presentation

Aspects	Details
Content of presentation	Demonstrated a clear knowledge of the subject matter. Ideas were explained logically together with the appropriate citations.
Organization of presentation	There was a clear sequence of the presentation. Student used an appropriate structure together with good transition devices to help the audience follow the presentation.
Use of Visuals and Infographics	There was appropriate use of Visuals and Infographics to help the audience understand the ideas.
Use of Non-Verbal Cues	Effective use of eye contact and gestures to make the presentation persuasive.
Use of Vocal Qualities	The student used precise articulation and audible voice projection to engage the audience.

I.3 The PAE versus the 'Traditional' Academic Paper

Students often say that the PAE is challenging. This is often because it is something that most students have not done before. It is an analytic and consultative product which uses research methods, but it is not a research paper in the traditional sense. It demands learning and skills that are not just intellectual, but also personal. It requires students to synthesize four kinds of skills: (1) substantive knowledge of the field (e.g., environmental policy, transportation policy); (2) knowledge of applied research methods and the skills to apply those methods (e.g., study design, interviewing, focus groups, cost-benefit analysis); (3) skill in negotiating a consultant relationship with a client and locating oneself and one's project within the client's organizational and political setting; and (4) skill in writing and presentation.

Many students find themselves stymied by difficult and unfamiliar tasks for which nothing in their previous academic or work experience prepared them. This is not surprising, given the difficulties of defining the problem in any client-driven project. In a consultant setting like the PAE, all sorts of extra complications arise. For example, the client may not know in details what he/she wants but feels obligated to appear knowledgeable; the problem as defined by the client may make sense only in the light of a history that is sensitive to talk about explicitly; or the proposed project itself may be part of a conflict within the organization or between the organization and outside actors.

I.4 Guidelines for Success with the PAE

The PAE emphasises the development of knowledge and practical skills. The actual execution of the PAE is learning process all itself regardless of one's prior knowledge of research methodology or experience of carrying out research. You will learn to do client-oriented research only by *actually doing it*. However, given all the other demands of the MPP programme, a great deal of time can be wasted and goodwill dissipated by inadequate preparation. Below are a few general guidelines that could help make your project successful.

1. Decide what you want to get out of the PAE.
2. Pick a topic you can live with for a year and will be constructive learning experience.
3. Identify your client early and try to determine who is responsible for guiding your project and how much of their time you will get.
4. Define the problem as clearly and as quickly as possible.
5. Make sure you and your client understand your roles and expectations.
6. As early as possible, develop a research design and identify the sources of data and who is most likely to provide them.
7. Take a lot of initiative, remembering you have advisors and peers in the Programme to provide support and guidance.
8. Be flexible and prepared for changes along the way.

In general, good analysis has the following characteristics:
- The problem is precisely defined, clearly stated, and placed in context.
- There is a clear and logical framework that guides both the analysis and its presentation.
- The analysis is based upon the best available evidence.
- The presentation of the analysis is clear, well-organized, supported by the evidence, and illustrated with specific examples.
- The conclusions and recommendations follow logically from the analysis.

The task of defining the problem is made considerably easier by developing a good working relationship with a client. The question then becomes: What can the client do, in what time frame, and with what resources? In defining the problem, you should initially discuss with the client the options that are available. This helps to focus the analysis. As the analysis develops, some options may be sharpened or redefined. Problem definition is thus a continuing process, but starting it right away can help to avoid false starts, wasted time, and irrelevant research.

Determining the nature of the problem requires some understanding of the political, institutional, and historical context. A good client can often supply this, but you should not rely solely on the client. Some independent effort is also necessary and will often pay high dividends in the form of more efficient relations with the client and better understanding of the client's problem. The PAE itself may not deal explicitly with this contextual background, but the reader who knows it should feel that the author does, too.

I.5 Forming a Team and Choosing a Client

Students will form a group of up to five members.

There are two ways of choosing a client.
1. You can approach and propose a research topic to the type of organisation you are keen to work with. You can start by contacting the organisation with a research proposal (1-2 pages) which includes research topic and scope, research methodology and expected outcomes. It usually takes some time to establish contact with a client and to reach an agreement with the proposed research topic.
2. You can choose a client from the list of clients provided by the Division of Public Policy.

Choice of a client is one of the most important decisions you will make. While it is possible to write a good PAE without a good client relationship--and to learn useful lessons by making the best of a bad relationship—the most valuable learning comes from working closely with a good client. Appropriate clients include:
1. elected officials or political appointees;
2. public managers or external consultants who advise these officials;
3. policy advocates outside and inside the government;
4. non-government organisations (NGOs) and businesses that work to advance the public interest; and
5. interest groups and professional/trade associations
6. Advisor-lead projects

A good PAE client is one whose actions and decisions have a real impact on public policy, who genuinely understands the purpose of the PAE, and is eager to provide assistance (i.e., time, access to people, information, etc.) for the project.

Clients who feel invested in the project and demonstrate a willingness to help are generally better than those who are talented but too busy. It is also important that the client have a clear understanding of what he or she wants and expects.

In selecting your client, it would be to your benefit to consider the following:

1. Are you interested in working with a particular individual? And conversely, is the individual interested in working with you?
2. Are you interested in a particular geographical location?
3. Are you most interested in the subject, regardless of where the project is located or with whom you will be working?
4. Does this project provide a clear and good connection to your future career path?

Try to understand the position of the client as much as possible. What does the problem look like from the client's perspective? What can the client do about it? What strengths and resources does the client have? What constraints does the client face?

Part of the advantage you bring to the client is <u>independence</u>. Therefore, you should not hesitate to look at the problem from points of view other than that of the client, and to bring those differing perspectives to the client's attention. One of the most useful services you can perform is to keep the client from being blindsided by facts, arguments, and perspectives that might not have seemed important at the outset, but later turn out to be. As you learn more about both the issue and the client's perspective, you should not hesitate to suggest that the focus be modified, or even changed completely.

Remember that at all times the client will be expecting you to behave professionally -- from what you wear, to your deportment within the organization, to how you address the client's colleagues, to how you present yourself and your ideas.

Lastly, a word of caution: experience has shown that when a student gets his or her boss (or someone else who can influence their future careers) to be their client, there is a risk of a bad PAE. Why? Because such situations may often leave the student with a project to meet only the wishes of that particular individual and thus may limit the thinking and solutions that are considered and proposed. That kind of limitation undermines what we are trying to do and often leaves your advisor as the "cheese in the sandwich" – an undesirable situation.

I.6 How Faculty Advisors are Assigned

Once you have selected your PAE topic, the PAE Coordinator (working in consultation with other faculty) will assign you a faculty advisor. We try to carefully match topics to faculty in a way that best taps faculty expertise and interest. In addition, we seek to ensure that no advisor is supervising too many students.

Although you cannot request a specific advisor and be guaranteed an assignment to that person, we do consider your requests as we make advisor assignments. Remember, our goal is to provide the support you need to enable you to write the best possible PAE. Thus, no matter who your advisor is, you should also feel free to consult with any faculty member on any issues related to your PAE.

Faculty advisors only include PPOL home and joint faculty members, excluding adjunct/visiting and affiliated faculty.

As your final PAE is being drafted, the PAE coordinators will also assign a second reader, who will be assessing your oral presentation at the PAE conference as well as grading your final paper. The names of the second readers will not be divulged prior to the conference as changes may occur along the way.

I.7 The Initial and Final Prospectus

During the initial stages of the PAE module, you will be expected to complete an initial prospectus and a detailed final prospectus. The following points will provide you with some guidance as you prepare these two documents. These guiding points suggest the type of information that should be included in your prospectus. However, you do not need to be limited by them or to follow them precisely.

Initial Prospectus (about 3-4 pages)
Your initial prospectus should include information on the following (even if many will probably be very tentative at this early stage, especially items 5 and 6):

1. State your policy question. What is the problem or issue? How is it defined by your client, and by you?
2. Name your client, including your client's organization, position, mailing address and telephone number. *(for client-based PAEs)*
3. For non-client based PAEs: identify your target organization. This would be an existing organization that faces the policy question that you are examining and at whom the PAE recommendations are aimed, even though there is no client relationship yet.
4. Give a brief background to the problem. What is essential to know in order to understand the problem? How did it arise, what are the constraints on its resolution? Why is your client involved? What can your client do? Who is affected? Why is it a problem NOW? What are the implications? 5. Describe the major options or alternatives that you will investigate. What are some of the possible recommendations or courses of action? Do you anticipate recommending policy changes? new activities or programs? developing organizational capacity? etc.
5. Discuss the criteria you will use for evaluating the alternatives. Will you consider monetary costs? political viability? organisational capacity? equity and distribution? What are the most important decision-forcing criteria?

Final Prospectus (about 6-8 pages)
In the final prospectus, revise items 1 to 6 and add the following:

1. <u>State your research methods</u>, including the sources of data and how they would be used:
   a. Will you conduct interviews? Will you use focus groups? Who will be involved? What questions will you ask?
   b. Will you perform a cost-benefit study?
   c. Will you use regression analysis?
   d. What sources of information will you consult?

2. <u>Give an outline of the deliverables</u>, including an early draft of the contents, key tables and charts.
3. <u>Draft a work schedule</u>, including a list of tasks and when they are expected to be completed.

These points are meant for guidance only. You do not need to be limited by them or to follow them precisely. However, the type of information they suggest should be included in your prospectus. The readers of your prospectus should have a clear understanding of the research strategies and policy options that you plan to pursue. The problem itself should be crystal clear, and your research agenda should follow logically from the problem.

As you write your Prospectus, please consider the following specific issues:

- Do you have access to the project data, surveys, studies, etc., that you will need to complete your research? Does the pertinent information exist?
- Why does your client really want you to investigate this problem? What are the underlying issues? What is the context?
- Is the problem narrow enough in scope that you can realistically address the important issues in the time available?
- Do you have a clear understanding of your client's goals and expectations? Does your advisor? Does your client understand your expectations?

I.8 PAE Conference and Oral Presentations

Close to the end of your MPP, you will be given the opportunity to present your analysis and findings to your classmates, advisors and clients (if they can attend) at the PAE Conference. This would happen in and has two important purposes: to help you crystallize your ideas in order to produce a more coherent PAE, and to give you practice with the important professional skill of oral presentations.

Since a strong presentation will help you and will elicit the most wakeful response from your audience, the following guidelines should be of some use:

1. Plan to talk **no more than 15-20 minutes** and devote the rest of your allotted time to questions and answers. This will help to keep both you and your audience focused on essentials and will provide an optimum degree of useful feedback.
2. Practice and time your presentation at least once. You will find it surprisingly difficult to cover what you want to cover in 20 minutes.
3. An effective organisation of your presentation: a. statement of the problem and its importance; b. just enough context and methodology for the audience to understand; c. the most important story you have to tell; d. key recommendations.
4. Because the presentation is meant to benefit you, feel free to identify one or two key issues on which you want advice from the audience.
5. It will help the audience to follow your material if you hand out an outline or other simple materials (e.g., a table with key data, a glossary of terms, a flow chart or other visual that tells the story).

Being a part of the audience is just as important as presenting. Listening to other people talk through their ideas will help you sort out some of your own issues. (It’s almost always easier to solve other people’s problems than it is to solve your own!) In addition, the skill of listening critically yet providing supportive guidance is invaluable to future managers.

To be an effective presenter, you will have to be able to do well in the following aspects;

Aspects	Details
Content of presentation	Demonstrated a clear knowledge of the subject matter. Ideas were explained logically together with the appropriate citations.
Organization of presentation	There was a clear sequence of the presentation. Student used an appropriate structure together with good transition devices to help the audience follow the presentation.
Use of Visuals and Infographics	There was appropriate use of Visuals and Infographics to help the audience understand the ideas.
Use of Non-Verbal Cues	Effective use of eye contact and gestures to make the presentation persuasive.
Use of Vocal Qualities	The student used precise articulation and audible voice projection to engage the audience.

Part II: Data Gathering

II.1 Data Collection and Interviewing

Gathering information for your PAE will incite you to develop skills that go beyond the demands of most academic writing. Unlike a research paper, for which use of library resources is usually sufficient, the PAE is likely also to require that you use such means as customised survey instruments, personal observation, computer modelling and simulation, focus groups, interviewing, and so forth.

Perhaps the most challenging of these skills is the ability to extract live information from busy, and sometimes harried, individuals whose attitudes towards your project can range from sympathy through indifference to mistrust. Thus it is important, prior to beginning your inquiries, that you develop some constructive strategies for interviewing people. While the problems you will need to confront will vary from one PAE to another, the following are some issues you will find it useful to consider in planning your interviewing program.

Q. Whom should you interview, and when?
A. It seems natural to consider those occupying the highest positions in organizations to possess the most knowledge about their operation, but this is not always true. In many cases, it is the people in the trenches who can give you the clearest view of what a problem really looks like. This makes it important to decide who can give you the best information at both the macro and micro levels. If there are many people who can provide input, how will you sample them to get the widest range of viewpoints? Whose interviews should be conducted before others, so as to establish a reliable base of information and tests for statements about its significance? In other terms, who might serve as a corrective for whom? Refer to primary data, namely, quantitative and qualitative data gathered by the researcher in the course of his/her inquiry. It includes (i) original quantitative data sets, with explanations of how the data was gathered or constructed; (ii) all survey questionnaires and responses, copies of documents that are not widely available or are rare in nature (e.g. the originals may be held in private or personal collections including the collection of the researcher him/herself), interview transcripts, field notes, films/videos, photographs, aural recordings, and (iii) other such unique data gathered or constructed by the researcher

Q. How will you elicit their cooperation?
A. Consider what you will tell them about you, your client, and your project that will help you get all the information you need. Of course, client confidentiality can often be a significant issue, so in such cases you need to gauge how much can be said to achieve your purpose. It is also useful to look at your interaction with interviewees from a rhetorical standpoint: What subtle appeals to their intellect, interests, and feelings will persuade them to help you? It is helpful to think of this as an exchange relationship. What are they getting by talking with you?

Q. What logistics should you consider?
A. Where will you conduct the interview—in the person's office, outside, over lunch? When is the best time for the interviewee? Is a phone call appropriate, or will face-to-face contact be important? Should you query individuals, or would a focus group help to elicit nuances from people's interactions and responses to one another's observations? How will you record your findings? Is your memory good enough that taking notes will suffice, or would you need to tape the interview? Would a tape recorder hinder the subject's responsiveness, and do you have the time to transcribe? (Focus groups almost always demand being taped.)

Q. What homework do you need to do before the interview?
A. Do you need to research the person's background, or do you have enough contextual clues from your research on the organization? What library research will be helpful in formulating issues and questions? Would accessing on-line data be valuable? Try to prepare yourself sufficiently so that you are not totally surprised by your subject's responses and aren't in the position of having to adjust to entirely new information and formulate questions about it on the spot.

Q. How will you coordinate the questions?
A. What is the first question you will want to ask--the one that is most likely to open doors to the information you need? What other questions do you want to ask? What is the most appropriate order for them; i.e., how do they relate? Should you write your questions out on paper at regular intervals with space for responses, or do you prefer using the open space on your note pad in a more free-form manner? How can you best allow for unanticipated questions that occur to you as you absorb new information? One of the best ways to do this is to devise an interview guide—a set of categories

of topics you intend to cover with key words and phrases, rather than a set of fully-worded questions. How will you phrase questions that raise sensitive issues?

Q. How will you manage the interview process?
A. Two of the biggest problems you may run up against are quiet people who don't talk and garrulous subjects who won't shut up. Try to think ahead of time of ways to stimulate the former group and tactics for steering the latter back to your line of inquiry. You may want to consider having different sets of questions oriented towards different tendencies—more concrete, focused questions for the talkers and more open-ended questions for the less naturally effusive.

Q. How will you verify the information you receive?
A. How will you insure that you have gotten the facts right? Would interviewing additional people help? Would more library or data base research yield verification? Whom can you consult informally to verify that you are getting the story straight--your advisor, other faculty members, or outside experts from other institutions?

Q. What do you do after the interview?
A. Should you write thank-you notes? If someone has given a large chunk out of his or her busy schedule to accommodate you, a written acknowledgment of your gratitude is incumbent upon you. In any case, such courtesies never hurt, and they sometimes lead to people's calling you back with information that occurred to them after you left. Often, long-standing and mutually beneficial working relationships are woven of such fabric. As soon as you return to home base, write out and complement your notes with whatever else you remember from your conversation while your memory is still fresh. Force yourself to write your material out in complete sentences; this helps you to make the full logical connections while they are clear and to sort out the story in your mind. Weeks or months later your disconnected jottings may not mean as much as they seemed to at the time.

II.2 Helpful Checklists

Included below are some helpful checklists to help you through the research phase of the PAE.3 Whereas each PAE project is different and thus may involve its own peculiar research strategies, most will benefit from the general (and time-tested) research recommendations summarized below.

1. Planning Your PAE Project

1. Draw up a short list of topics.	Consult library catalogues, colleagues and fellow students
2. Select a topic for investigation.	Discuss possible outcomes with your Faculty advisor and decide what the emphasis of your study should be.
3. Establish the precise focus of the study.	Draw up a "first thoughts" list of questions and subject each to rigorous examination.
4. Decide the aims of and objectives of the study or formulate a hypothesis.	This carefully about what is and what is not worth investigating.
5. Draw up an initial PAE outline.	List aims and/or objectives, questions to be investigated, possible methods of investigation and relevant literature to be consulted. Consult your Faculty advisor.
6. Read widely and deeply to be enable you to decide whether you are on the right lines.	The initial reading may give you ideas about approach and methods and how information might be classified.
7. Devise a timetable to enable you to check that all stages will be covered and time allowed for writing.	It is easy to take too long over one stage and so to have insufficient time to carry out essential tasks in the next.
8. Consult your Faculty advisor regularly.	At the stage of deciding on a topic, and after drawing up an initial PAE outline
9. Make sure you are familiar with HKUST's policy on plagiarism	Do your best to clarify any unclear areas of faculty advisor/student rights and responsibilities.
10. Keep a brief record of what has been discussed with your Faculty advisor.	It will serve to remind you about what tasks and targets have been agreed.

2. Negotiating Access, Ethics, & Problems of "Inside" Research

1. Clear official channels by formally requesting permission to carry out your investigation as soon as you have an agreed PAE outline.	Check regulations regarding ethical guidelines and protocols.
2. Speak to the people who will be asked to cooperate.	Getting the permission of the management is one thing, but you need to have the support of the people who will be asked to give interviews or complete questionnaires.
3. Maintain strict ethical standards at all times.	Consult your Faculty advisor if you become concerned about the way the research is developing.
4. Submit the PAE outline to the head/principal, senior officer, or ethics committee, if necessary.	List people you would like to interview or to whom you wish to send questionnaires and state conditions under which the study will be conducted.
5. Decide what you mean by anonymity and confidentiality.	Remember that if you are writing about "the head the Committee" for example, and there is only one head of that particular committee, the person concerned is immediately recognizable.
6. Decide whether other people, apart from your client, will receive copies of the report and/or see drafts or interview transcripts.	There are cost and time implications. Consider this carefully before you make any commitments.
7. Inform participants what is to be done and provide them with an information sheet with contact numbers.	This is part of ethical research and is usually required for data collection though interviews and questionnaires.
8. Prepare a consent form that outlines the intentions and conditions under which the study will be carried out to hand to participants.	This form should be safely stored and kept with you for any future reference, and again is typically required for data collection during fieldwork.
9. Be honest about the purpose of the study and about the conditions of the research.	Since the PAE research is part of the requirements for your degree, it is better to inform everyone you are interviewing.
10. Remember that people who agree to help you are doing you a favour.	Letters of thanks should be sent, no matter how busy you are.

3. Keeping Records, Making Notes and Locating Libraries

1. When recording sources, make sure you always note the author's name and initials, date of publication, title, place of publication and publisher.	There are variations for books articles collections and journal articles. Make model cards as memory joggers
2. Decide on a system of referencing and stick to it.	
3. Make an accurate note of all quotations. Plagiarism can be avoided through carefully crafted notes and not cut/paste notes.	Note any omissions; make clear what is a direct quotation and what is your paraphrase. The final draft of your PAE will be run through the TURNITIN software for plagiarism detection by the PAE administrators.
4. REMEMBER that it is still possible to produce good PAE with access to computer databases	But the riches to be found from databases can be worth the effort of finding out how to exploit them.

4. Finding and Searching Information Sources

1. Plan your research as soon as you can.	Decide how far back you want to search and the type of materials you will focus on.
2. Add to your keyword list as you discover more subject terms.	Remember to note which keywords you have searched under and which sources you have used.
3. Manage the information you retrieve.	Record the bibliographic details un a systematic way, to ensure that anything you cite can be properly referenced.

4. No single bibliographic source has everything. Do not quote Wikipedia, go back to the original source used.	The same information will be available from different sources. Don't worry if you cannot access all the sources described. Remember too that some bibliographic sources change their titles according to the format of the materials they cover: CD-ROM, online or hard copy.

5. Analysis of Documentary Evidence

1. Decide how you want to use documentary evidence.	Will it be used to supplement other sources of evidence or will you use it as the exclusive method of gathering data?
2. Decide on your approach to the documents.	You can let the source material determine your research questions or, more commonly, you will formulate your research questions after reading the literature on the subject and take these questions to the sources.
3. Undertake a document search to ascertain the existence of different sources of information.	Documents may be found in different places in an organization so it is important to be persistent. Always negotiate access to the documents and do not assume that you can consult them; some information may be confidential.
4. Analyze the nature of the sources used.	Some sources will be deliberately produced for the attention of future researchers but, more usually, sources will be inadvertently produced by the everyday working of the education system.
5. If the documents are bulky it may be necessary to decide on a sampling strategy.	Try to read a balanced selection of documents in the time you have available. The strategy must be appropriate to the purposes of your research and be capable of being justified in your PAE.
6. Be aware that there may be different kinds of evidence in each document.	Look for witting and unwitting evidence
7. Subject each document to the critical method and ask a range of questions.	What does it say? Who wrote it? Why? How did it come into existence? Is it typical of its kind? If is complete?
8. Compare the document with other sources to see it is accurate or representative.	
9. Then ask further questions about the authors of documents.	What is their background and social and political views? Did they experience or observe what they are writing about? Did they usually tell the truth?
10. Detect bias in the document.	Remember that biased evidence can also be very useful.
11. Decide whether the document is reliable for a particular purpose.	Check it against other sources to ascertain its truthfulness but remember that although it may not be an accurate account of an event or development, it may be a reliable expression of the author's views.
12. Strive to gain a full appreciation of the value of a source, the validity and reliability of evidence.	Use your accumulating knowledge to gain insights and try to make the critical method a habit in your research methods.

6. Designing & Administering Questionnaires

1. Decide what you need to know.	List all items about which information is required.
2. Ask yourself why you need every single question, and how you will use the information collected.	Examine your list and remove any item that is not directly associated with the task.
3. Is a questionnaire the best way of obtaining the information?	Consider alternatives.
4. Check working of each question.	Is there any ambiguity, imprecision, or assumption? Are you asking respondents to remember? Will they be able? Are you asking for knowledge respondents may not have? Any double, leading, presuming or offensive questions? Keep language simple. Don't use words respondents may not understand (that includes technical language), unless you are dealing with a professional group all of whom understand your linguistics shortcuts.

5. Decide on the question type.	Verbal, list, category, raking, scale, quantity or grind. Each type requires a different analysis.
6. When you are satisfied that all questions are well worded and of the right type, sort into a sequential order.	Usually, the more difficult questions come at the end, when the participants have had time to reflect on the issues.
7. Write out instructions to be included on the questionnaire.	Respondents must be quite clear about how they are to answer questions (tick boxes, Yes/No., etc.)
8. Consider layout and appearance.	Instructions must be clearly presented (perhaps different font displayed in a prominent position?) Decide whether you need a righthand margin for coding.
9. Decide on your sample.	As much as possible, select a sample that will give you subjects likely to be representative of the population. If you have to make do with convenience sampling, explain why in your report.
10. Pre-test your questionnaire, multiple times.	Ideally, it should be sent to people who are similar to your selected sample. However, it that is not possible, ask friends, family or colleagues to help.
11. Try out your methods of analysis.	Even with five or six completed questionnaires, you will be able to see whether any problems are likely to arise when you analyze the main returns.
12. Adjust the questionnaire in the light of the pre-test respondent's comments and your preliminary analysis.	Consider timing. If it took your guinea pigs too long to complete, consider whether any items might be removed.
13. Decide at an early stage how the questionnaires are to be distributed.	People are doing you a favor by completing the questionnaire. Don't expect them to pay for the privilege.
14. Unless you are administering the questionnaire personally, include a cover letter and a self-addressed envelope	If you have official approval to carry out the survey, say so.
15. Don't forget to say when you would like questionnaires to be returned.	Keep a record of when questionnaires were distributed and when returned.
16. Decide what you are going to do about non-respondents BEFORE you distribute the questionnaires.	Remember you will not be able to send out reminders if all responses are anonymous.
17. Do not distribute questionnaires before checking whether approval is required.	Never assume that "it will be all right."
18. Begin to record data as soon as completed questionnaires are returned.	You have no time to wait for stragglers.
19. Do not use complicated statistics unless you are familiar with statistical techniques.	Often, regression analysis may not be the best method of analysis is your sample is too small.

7. Conducting Interviews

1. Decide what you need to know.	List all the items about which information is required.
2. Ask yourself why you need this information.	Examine your list and remove any item that is not directly associated with the task.
3. Is an interview the best way of obtaining information?	Consider alternatives.
4. If so, begin to devise questions in outline.	The final form of questions will depend on the type of interview and vice versa).
5. Decide the type of interview.	A structured interview will produce structured responses. Is this what you want, or is a more open approach required?
6. Refine the questions.	Write questions on cards. Check wording.
7. Consider how questions will be analysed.	
8. Prepare an interview schedule or guide	Consider the order of questions. Prepare prompts in case the respondent does not provide essential information freely.

9. Pre-test your schedule.	Schedules need to be tested, and you need practice in asking questions and recording responses.
10. Revise the schedule, if necessary.	Take account of pre-test respondents' comments.
11. At all cost, avoid bias.	Be particularly vigilant if you have strong views about some aspect of the topic. If someone else asked the same question, would they get the same answer?
12. Carefully select who to interview. Do not start with the more senior and most important interview, as your interviewing skills are still developing during the initial phase of interviews.	Interviews take time. Try to select a representative sample. Decide what to do if the selected people are not willing or able to give an interview. Be realistic about the number of interviews that can be conducted in the time available.
13. Try to fix a time and place in which you will not be disturbed.	Occasionally, your interviewee will prefer to bring other people during the interview, in order to give more information, or simply to ensure that others know about the interview.
14. Make sure official channels have been cleared (be mindful of gatekeepers), and let interviewees see any protocol documents beforehand.	A letter from your faculty advisor, programme head, etc. explaining the purpose of the research will at times be helpful.
15. Introduce yourself, explain the purpose of the research, and establish your credentials early on.	Say what you intend to do with the information the interviewee gives. Agree anonymity or whether statements can be attributed.
16. Specify how long the interview will last.	Do your utmost not to exceed the time limit.
17. Try to check the accuracy of your notes with respondents (particularly items to be quoted in the PAE).	This will take time. Remember to allow for it in your planning. Don't promise to check with respondents if this is likely to prove difficult.
18. Decide whether or not to record the interview together with the interviewee.	Remember it will take a long time to transcribe. Permission must be given. Remember also that if an interview is recorded, it may affect the way a respondent words his or her answers.
19. Honesty and integrity are essential.	Make no promises that cannot be fulfilled. Respect the respondent's views about anonymity. If you know a respondent has been indiscreet in revealing confidential information, never take advantage.
20. Don't "spoil" other researchers' chances by disenchanting respondents.	There are a number of ways in which participants can become disenchanted. Appointments not kept or the interviewer arriving late; taking longer than promised; promising to check for accuracy and not doing so; conducting the interview in hostile manner; failing to thank the respondent, etc.

Part III: Writing Guide

The following sections are organised around the questions that students have most frequently asked concerning the process of writing the PAE.

III.1 Organizing Your Material

Q. How can I best organize the process from data collection to first draft?
B. The task can vary, of course, depending on the nature of the project, but we've found that most students can streamline the process by starting out with a "working" Table of Contents, which should be part of your final prospectus. In other words, try to imagine your finished product: How will your report break down your client's problem into digestible chunks, or "Sections"? Then you'll be more prepared to collect your data and classify it into meaningful categories.

Even at this early stage, it's not as difficult as you may think to envision four or five manageable chapters. After all, most traditional client reports follow a recognisable pattern:

	Elements of a report	Details
Front matter	Title page	This page contains the title and the necessary information of the candidate
	Table of Contents	The table of contents gives an overview to the structure of your whole report. It also allows your readers to locate the main sections and their sub-sections of your report.
	Acknowledgements	A paragraph for you to thank the people or organisations in contributing to your report.
	Executive Summary	The Executive Summary is a concise presentation of a report's major findings, conclusions, and recommendations.
Main report	The Introduction	The Introduction usually jumps right in by describing the problem and how you propose to solve it. Then you provide just enough background (and no more) so that the reasonably informed reader can be brought up to date
	Earlier sections	Earlier sections examine different parts of the problem, or analyse it from different perspectives. This is where some real creativity comes in handy. It's up to you to formulate a process that identifies key variables, invents methods of quantifying complex data, and establishes relevant criteria for evaluation. Each chapter should examine some meaningful aspect of the project so that a parallel structure becomes obvious from one section of your report to the next. Ideally, this parallelism will be indicated in the headings and subheads you create to organize each chapter, and will be announced in the methodology section and the overview of your report at the end of the Introduction.
	Later sections	Later sections offer conclusions and recommendations unless you've decided to include such "solutions" within each earlier chapter, when appropriate. In that case, you might summarize those earlier recommendations and approach such additional issues as implementation, alternatives, or future implications of the broader context.
Back matter	Reference	All sources cited in your paper to be listed in either MLA or APA style or a style that is advised by your supervisor.
	Appendices	Appendices should contain your methodology and detailed data so that the readers can reconstruct the analysis if they want. In this section, you might describe the research procedures and strategies. The main text should focus on the findings and inferences, not the data that you have gathered.

This is just a basic paradigm for a client report. You're relatively free to invent variations on the theme, as long as your client and your advisor support your originality. In other words, the process is decided to be more flexible than formulaic. Aside from telling students that a beginning, a middle, and an end are needed, you and your advisor should address the fine details).

Still, if early on, you can picture this reasonably impressive finished product, you're off to a more confident start and the questions you pose in collecting your data will be more specific and more relevant to potential conclusions and recommendations.

Q. Does it make sense to start imagining graphic displays of my findings at this early phase of the process?
A. YES! The earlier you can begin to sketch a diagram of your data breakdown or a flow chart of your research process, the clearer your focus will be for you and for potential data sources. As you start to collect information, envision the charts or graphs that will best display the significance of those data to your analysis. Finally, as your report takes shape, imagine a chart or graph that would summarize your key findings at a glance.

Once your data are clearly labelled, it really helps to arrange your categories to achieve the following progression from description, through analysis, to recommendation:

- Facts, figures, quoted opinions (verifiable data)
- Findings (your observations linking groups of facts)
- Conclusions (your interpretation of findings)
- Positions (your advice to "Believe this!")
- Recommendations (your advice to "Do this!")

Your goal here is to reach a point where all your research material is spread before you in some clearly labelled fashion so that you can begin to flesh out your potential Table of Contents. Then, if you find your data doesn't quite fit that early outline, it's time to re-arrange it so that it reflects the work you've accomplished. This also serves as a good "reality check" to see just where you might need to collect more data. Just be sure that the Table of Contents you adapt is coherent, logical, unified, and consistent.

Q. Do I have to balance my arguments with counter-arguments or my recommendations with alternatives?
A. Some clients and advisors have strong feelings on this issue, one way or the other. So it's best to determine in advance what their expectations are. Depending upon the nature of the project, you might be able to leave out all counterarguments. On the other hand, your client could be particularly interested in your "objective" ability to examine multiple perspectives. So if you have any doubts along these lines, ask!

III.2 Writing the First Draft

You are required to write at least one and in some cases two preliminary drafts before committing to a final version. Doing several drafts will not only help you to sort out your material in your mind, but it will also give your advisor opportunity to provide you with helpful feedback that will improve your product. You will likely be amazed how much your PAE will change and improve from first to last draft.

Q. What should I start with, when writing my first draft?
A. Once your advisor has approved your proposal and you have refined your working outline you should have a pretty good sense of where you will be going, or at least where you want to go, with your PAE. But at the point of doing your first draft you may not have all your data, your analysis may not be completed, and some questions may still remain open. Nevertheless, you have to begin somewhere, so what do you do?

While your Introduction can, and should, incorporate such material, it serves as both a description of the context in which the PAE was conducted and an overview of the rest of the report. Thus, it has this essential distinguishing characteristic: It refers explicitly to the report that follows, while the Executive Summary does not.

Commonly your Introduction will begin by specifying who the client is, the nature of the problem to be solved, and your purpose in doing the PAE. While your client undoubtedly knows these matters, beginning in this way helps third parties understand the reasons for your work and your client's expectations concerning outcomes. What is more, this is a good way to remind yourself of your purpose putting it in writing helps to clarify your thinking about it.

This statement of purpose naturally flows into a discussion of the key questions you intend to answer, the salient issues you will address, and/or the principal problems that your PAE solves. It is best to finish the Introduction with a sort of reader's guide or road map to the rest of the report, specifying what is contained in each of the subsequent chapters and how the chapters relate to one another.

Q. Is the PAE paper quite different from a standard research paper?
A. Yes, it is also different from the structure that would be expected if you were to write an article for an academic journal. Remember that you are not writing to show someone that you have mastered one corner of a large discipline and are therefore qualified to offer new ideas, theories and observations to add to that discipline. Rather, you are engaging in a problem-solving endeavour on behalf of a client who is interested in practical results. Your credibility is best established by meeting those expectations.

Q. If my message is likely to be controversial, how should I approach it with my client?
A. Tact is best established by managing your tone, rather than by rearranging your organization. If your result is controversial, making your reader wait for it while sifting through a mound of material is not bound to increase its appeal. It is best to tell your clients what they want and need to know when their attention is keenest and their minds are freshest - at the beginning.

Q. Given that I am also writing for my faculty advisor and other academic readers, how should I satisfy their expectations?
A. Your faculty advisors will be satisfied by your having done the best possible job of meeting your client's needs, so there is no necessary conflict between the two sets of expectations. Your academic readers will be most interested in several things: First, how you place things in context (proper problem definition, literature review, appropriate theoretical framework, etc.); and second, seeing how well you have validated your results analytically and then translated them into feasible recommendations. It is not the placement, but the coherence, of your analysis that is critical to them.

Q. Are my readers interested in finding out how I arrived at my results?
A. Some more so than others, but your readers will naturally gravitate towards those parts that most immediately address their interests. What you want to avoid above all is a step-by-step narrative of how you arrived at your results. Instead, keep your focus clearly on your most significant findings, the conclusions you draw from your analysis of them, and the recommendations that emerge from your conclusions. You best satisfy your readers by serving them the meal, rather than reading them the recipe.

Q. Suppose I still have big sections missing in my first draft—what should I do?
A. Keep the same structure you intend for your final draft, but indicate in brackets or italics what the sections will contain and what remains to be done to flesh them out.

Q. I want to make my analysis convincing—what should I do to make it so?
A. Be explicit in your assumptions. Nothing is more frustrating to a client than to discover in the middle of a report that the analysis, and thus the conclusions and recommendations, depend upon a set of operating assumptions that weren't clear from the beginning. If your analysis depends upon a set of limiting assumptions, state them in your Introduction. Even better, work them out with your client before you begin writing, and include them in your Introduction as well.

Try to verify your findings with more than one source. This is the principle of triangulation, which in navigation is the process of determining your exact location by taking bearings on two different objects whose exact coordinates are known. In their Watergate articles, Bob Woodward and Carl Bernstein would publish no information that was not verified by at least two additional independent sources. Triangulating helps to counteract bias, axe-grinding, subjectivity, and dependence upon compelling, but atypical, anecdotes as evidence.

Avoid including interesting, but ultimately irrelevant, incidentals in your analysis. It is tempting to include such material to be diverting and to "liven up" your analysis, but in reality it serves only to distract your readers and to confuse them about what the essential point is. If you maintain a consistent focus on the matter at hand, the clarity of your line of argument will compel your reader's attention more than any juicy tid-bits might.

Be sure to support each of your points with sufficient evidence--don't short-change some and be lavish with others. If your development of an idea starts to grow way out of proportion to that of coordinate ideas, either you haven't developed the others sufficiently or this giant idea is more important than you originally thought. In the latter case, don't hesitate to give this idea more prominence, break it up into subordinated sections, and adjust your outline and Table of Contents accordingly.

Avoid leaps in reasoning or analysis that would stump anyone but an expert. Remember that you are writing for decision-makers, not for other analysts. A good principle to follow is: Never overestimate your reader's knowledge, nor underestimate his or her intelligence.

Be consistent in your expression of terminology, concepts, definitions, categories, and so forth. This is an extension of the prior principle; an expert might be expected to recognize shifts in terminology as a choice among synonyms, but your common intelligent reader might not.

Q. What should I do about footnotes? How should I attribute interviews?
A. It may be useful to cite the dates of individual interviews. Be careful, though, to respect your source's confidentiality when it is requested.

When making reference to published material, you need to provide a complete list of works cited.

Referencing and Plagiarism
All PAEs will be submitted to TurnItIn to check for any plagiarism. Please do re-read the materials provided to you during the Referencing and Plagiarism Workshop to ensure that you do not unintentionally commit plagiarism in your PAE. Remember that you must clearly mark the material that you have quoted from and the source it comes from, and you must ensure that all material referenced is included in the bibliography.

III.3 Writing the Executive Summary

Perhaps the most challenging task in writing the PAE involves crafting the Executive Summary. When you have been dealing so much with painting the big picture, it is difficult to render it down into a sketch that has enough detail to tell the same story, but not so much that it loses its value as a sketch.

Q. What is an Executive Summary and what is its purpose?
A. The Executive Summary is a concise presentation of a report's major findings, conclusions, and recommendations. It is an objective statement of the more extensively developed substance of the accompanying report. Its purpose is to provide a brief overview of the content of the report that can be read in a short amount of time to accommodate the schedule of a busy executive. It gets its points across in no more than 1000 words. As a consequence, the Executive Summary cannot include extensive data for support, but it can and should make a concise, coherent, and convincing case for the course of action the report recommends. There are various online resources on how to write executive summaries, among which: http://www.astia.org/resources/How_to_write_an_execsummary.pdf
http://www.wikihow.com/Write-an-Executive-Summary
http://www.griffith.edu.au/__data/assets/pdf_file/0003/320178/writing-an-executive-summary.pdf

Q. How should the Executive Summary be structured?
A. Try starting with a statement that puts the problem in a nutshell, that says in 25 words or less what the case is. Follow this with an illustrative statement that supports this assertion. Develop this idea concretely with either quantitative or qualitative findings that show your reader the extent of the problem. If appropriate, you can then indicate the implications of failing to act on the problem.

Different subject matters will naturally lend themselves to different treatments, but the most important principle is that your opening paragraph go right to the heart of the matter, rather than recount background information that the client already knows.

Next, present the three to five major findings resulting from your research. You might have more or fewer, but going far beyond this range may be an indication that your definition of major could benefit from rethinking. You may have begun your research with the intention of testing several hypotheses-that is, tentative expectations about what you might find. If so, what did you discover? Keep your focus on actual results, rather than recounting the process by which you arrived at your findings: Your client is interested in the meal, not the recipe. Present these findings in either descending or ascending order of importance, or by any other rational scheme that befits the conceptual structure of your analysis.

After this, you can shift your focus to the conclusions you draw from these findings. Here you can put the problem in its broader context. For instance, you can compare your findings with those experienced at other agencies, if such information is appropriate and available. You might note any trends your findings uncover that constrain your choices for solutions that preclude or favour particular avenues of approach. At this point your reader should be clear about your criteria for choosing among possible solutions.

Once you have done this you are ready to present your recommendations. If you have followed the procedure suggested above, you will have established a strong case for the recommendations you are about to give. One of the most persuasive means you can use to build such a case is to provide clear rationales for having rejected alternative solutions-rationales that are logically and conceptually related to the criteria you developed in your conclusions. In ranking recommendations be as specific as possible concerning actions to be taken. A good test is to apply the journalist's rule for a good lead: Who should do What, Where, When, Why, and How. Set your recommendations off with bullet points so that they stand out.

At the end, let your client know what benefits will ensue from your recommended course of action, and indicate, if appropriate, what further steps may need to be taken to build upon and refine the research presented now. The following Executive Summary exemplifies the essential principles discussed above.

III.4 Writing the Final Draft

Once you have gotten your first draft back from your advisor with comments or annotations you will have a sense of what you have to do in terms of content before you hand in your final draft. You will be asked to submit a second draft in the interim, to assure that you have covered all the bases before committing to a final draft. Here are some basic writing principles to help you achieve clarity, coherence, and readability.

III.5 Revising and Editing

<u>Whenever possible, make the first or second sentence of each paragraph the topic sentence</u>. Doing so makes it very easy for your reader to skim your material and to retain the thread of your thought upon first and subsequent readings. It also makes it easier for you to translate your outline into your finished product. Using the subsequent sentences in the paragraph to support, expand upon, amplify, or otherwise develop an initially-stated idea is usually a more natural process for both reader and writer than that of working up to the main point.

<u>Keep each sentence of the paragraph focused upon the topic; when the focus changes, start a new paragraph</u>. One of the most effective ways of doing this is to use demonstrative adjectives and pronouns with clear antecedents to forge links between your sentences.

<u>Fight ambiguity and abstraction</u>. Instead, write concretely. To use a particularly Harvard expression: "Eschew obfuscation." This sentence is a good example of what you want to avoid: "The data base will grow as an information source through the expansion of the selective dissemination concept of knowledge exchange."

<u>Keep sentences to a reasonable length</u>. That is, while some sentences are naturally longer than others, as a consequence of the structure of the ideas they convey, clarity and simplicity usually go hand in hand. Perhaps the major cause of grossly inflated sentences is letting the subject and verb be separated too much by intervening amplifications and qualifications.

<u>When using pronouns, be sure that their referents, or antecedents, are unambiguous</u>. Consider these sentences: "The actions of the finance ministers were based on the need for more orderly markets. These are due to be examined at the forthcoming talks in Brussels." Does "These" refer to "markets," the closest prior noun, or to "actions"? As a variation on Murphy's Law, if a passage can be read with two meanings, it will be. One cannot depend on the context to save the meaning, for when ambiguity strikes, it does so because context is insufficient to fend it off.

III.6 Style and Formatting

The way a report is presented often colours the way it is received, especially when you are trying to capture the attention of busy people.

Clarity is everything. If the organization of your report is clear and you explain your research in simple, direct language, you will be on your way to writing a report that is accessible and, in its clarity, stylish. If, in addition, the content is compelling, you will be writing a report that matters.

Make your report "skimmable". Naturally, the first maxim to follow is to make sure your report is physically easy to read.

- Do you have wide enough margins and sufficient "white space" to make your report visually easy to skim?
- Do you include bullet points, like these, for lists?
- Are your charts clear and professionally presented?
- Is your report clear of spelling errors? (By all means use your word processor's spelling checker to relieve the tedium of catching typographical errors, unintentionally doubled words, and most misspellings, but remember that it won't catch words misspelled in context that would be correctly spelled in another context. There is no substitute for careful proofreading and the use of a dictionary.)

Also, are your road maps clear? Do the readers know, from your table of contents, organization, headings, narrative, and charts and diagrams where they are going, where they are, and where they have been?

Other simple stylistic principles are also helpful in improving your writing:

Use the active voice. "Active writing is more concise, more positive," says Meyer. "If you begin with 'It would appear...' or 'There seems to be...,' you'll find yourself in a passive trap."

Use strong action verbs. Action verbs bring movement to your writing. Things are happening. Activity is taking place. The more action in your writing, the more readers will be caught up in what you are saying and will forget time, which is an asset when you are giving them a long report.

Use concrete nouns. Concrete nouns ground writing. Readers can visualize what you are saying and the more they can see what you are describing to them, the more easily they will follow your line of reasoning. Naturally, you will have to use abstract nouns for some of the theoretical discussions of your report, but concrete nouns give writing substance.

Use inclusive language. Inclusive language is not just politically correct, it is morally persuasive. In your writing, be mindful of any words that would be offensive to others because of their gender, age, race, ethnic group, religion, or sexual orientation. When you are hesitant about a particular word, ask someone else if the word sounds objective. If it doesn't, find a more neutral word.

Be positive. Avoid negative language. Think instead how you can turn negative statements around and make them positive. When you are dealing with the problems of clients, you will often have to talk about failure, but what are the opportunities inherent in those failures?

Show, don't tell. You have spent months doing the research for your report. Now is the time to flaunt it. When you make a generalisation, back it up with a pertinent statistic, case study, or finding from your research. Details make generalisations and conclusions come alive. Specifics help make the readers visualize what you are saying.

Edit, revise, and then know when to stop. Good writing has been cast, recast, and polished. But you also have to know when to stop. If you edit too much, you may lose your original spontaneity. Make sure the reader can still feel your enthusiasm for your subject.

Have fun. There was a reason you chose your topic—because it interested you. Help the readers, through the liveliness of your writing, share your curiosity for your subject. You are their guide to a complicated issue. By helping them discover what you have discovered, you are also helping them share your excitement.

Hopefully, then, you will not only have analysed your client's problem, but your report will have planted the seeds for a solution as well.

III.7 The Importance of Charts and Graphs

Most client reports include some form of graphic display of information--usually to provide an overview of background material, to demonstrate relationships between complex data, to visualize a complex process, or to summarize the report's major findings. Most busy professionals have come to expect that the report will assist the reader by "digesting" key information into clear, creative charts or graphs.

Depending upon the nature of your project, charts and graphs might be absolutely necessary to your report. Your challenge is to create graphic displays that downplay less relevant data while zeroing in on just that contrast or relationship. Even a simple table can be highly creative if you can isolate the appropriate variables and indicate some evaluation of those variables across a spectrum of time periods, events, groups, products, etc. It's up to you to determine how relationships between key data will support your analysis and tell your clients exactly what they need to know.

The best PAEs often include a summary chart that offers the reader an overview--at a glance--of all the report's major findings. This can mean that the chart will include your evaluations of your findings from your client's perspective.

III.8 Doing the Final Document Audit

To check the quality of your report, consider "auditing" your PAE by asking yourself the following questions:

<u>Purpose and Objectives</u>

- Are the style and tone of the report appropriate to the audience and the occasion?
- Is the main purpose clear? In your own words, what is it?
- What do you expect the reader to DO after the reading the report?
- Are objectives stated early on and major issues clearly identified? Are they linked in obvious ways to the main purpose?
- Will the reader quickly see the relationship of the report's stated objectives to the problem at hand?

<u>Structure</u>

- Are subsections and paragraphs unified -- each focusing on one central topic?
- Does your format (headings, bullets, boldface, etc.) explicitly forecast the text that follows?
- Is there a need to introduce better formatting so that key ideas and findings jump out at the reader? Are there clear road signs indicating how your arguments move towards your conclusions? Are there clear sub-sections and sub-headings to guide the reader?
- Are there any extraneous or redundant parts? Can they be combined or deleted?

<u>Development</u>

- Do you indicate awareness of the difference between facts and opinions?
- Are opinions sufficiently supported by relevant data or persuasive arguments?
- Are issues overdeveloped by overly detailed or extraneous data or less relevant arguments?
- Are there materials that should be moved to the appendix?
- Could some findings be presented more clearly or strikingly in a chart or graph?

After you have completed your final document audit and made the appropriate revisions, you should feel confident of your final product. You have now put in the necessary preparation, analysis and writing time to produce a high quality PAE.