Reports
Basic Report Writing

What Is a Report?

A report is a specific form of writing that is organised around concisely identifying and examining issues, events, or findings that have happened in a physical sense, such as events that have occurred within an organisation, or findings from a research investigation. These events can also pertain to events or issues that have been presented within a body of literature. The key to report writing is informing the reader simply and objectively about all relevant issues. There are three features that, together, characterise report writing at a very basic level: a pre-defined structure, independent sections, and reaching unbiased conclusions.

Having a Pre-Defined Structure

At a very basic level, a report can be distinguished from an essay by the creation of headings into which information is organised. Broadly, these headings may indicate sections within a report, such as an Introduction, Discussion, and Conclusion. Within the main section(s) making up the body of the report (the Discussion in the example just given), there is often an opportunity to create your own structure according to the literature you have sourced, your development of ideas, and the task assigned. An example of a report structure is presented below. Two versions are provided in which the first version indicates main sections and sub-sections through indenting, and the second does so through a numbering system.

| Introduction |
| Discussion |
| Technological benefits |
| Efficiency |
| Access to monitoring |
| Technological weaknesses |
| Disconnections |
| Lack of face-to-face support |
| Conclusion |

| 1. Introduction |
| 2. Discussion |
| 2.1 Technological benefits |
| 2.1.1 Efficiency |
| 2.1.2 Access to monitoring |
| 2.2 Technological weaknesses |
| 2.2.1 Disconnections |
| 2.2.2 Lack of face-to-face support |
| 3. Conclusion |

In the body of the report, the difference between main sections and sub-sections may be indicated through changes in heading font style. You may need to check the assignment instructions to see whether this is appropriate.

Overall, a report is a highly structured piece of work. Typically, the course coordinator or lecturer identifies the main sections required. Hence, you are often given more guidance on how to write the assignment, with respect to its structure, compared to an essay where you decide the order of information in the (essay’s) body. While you may have more freedom in structuring an essay, there can also be more difficulties in deciding upon exactly what structure that freedom will take. In contrast, a report provides you with that structure before you begin to answer the question, while still allowing you some flexibility and freedom in deciding on the organisation of sub-sections comprising the report’s main sections. The second element of report writing follows.
**Having Independent Sections**

Each section in a report is typically written as a stand alone piece, so the reader can selectively identify the report sections they are interested in, rather than reading the whole report through in one go from start to finish. It is important to keep this in mind when writing the report because your marker may in fact follow this practice when marking the actual report. Consequently, the marker may go through all the Introduction sections of students’ assignments first, select a mark for that section, then proceed to all the Discussion sections and select a mark, and so forth. Hence, if you have not written each section as an independent unit, you may lose marks because you have missed information that may be in another section. This process of creating distinct units may lead to some instances of overlap in information across sections. This is often the case with reports. Avoiding these overlaps of information may require a restructuring of the order and themes within which the information is categorised.

**Reaching Unbiased Conclusions**

A third element of report writing is that it is an unbiased and objective form of writing. Certainly, all academic writing holds to this ideal, including essays. However, while essays put forward a particular position or argument at the very beginning, summarised in the thesis statement and then backed up in the body, a report’s focus is slightly different. It sways more towards the process of identifying and overviewing the range of issues in the body of the report, and then reaching an objective conclusion or position at the end, as a consequence of the issues represented in the report’s body. Of course, you can always have in mind a particular point of view when you begin your report, but try to give the impression that you have come to your conclusion via an objective and methodical review of the issues involved. The Introduction section of the report may force you to summarise the report’s findings briefly, perhaps by drawing on the sub-headings within the report’s body. Nevertheless, try to ensure that the conclusion is the space where you give emphasis to your findings and the decision(s) you have arrived at after a careful analysis of all the issues. Indeed, it should be clear to the reader that your conclusion is reasoned logically from the discussion of the issues and the evidence you have presented in the body of the report.

**Deciding on the Report’s Structure**

When planning your report, it is often a good idea to select a structure that will most effectively demonstrate your organisation and examination of relevant issues. What follows is an illustration of different structural formats to choose from: flat, hierarchical, general-specific, and relationship-oriented structures.

**Flat Structure**

This involves organising issues of relatively equal importance, or when there is no need to consider how issues appear in relation to other issues in terms of whether they are more or less important.
**Hierarchical Structure**
This is organised around issues in order of rank or importance, with the most significant issue first.

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Discussion

1st Important Issue

2nd Important Issue

3rd Important Issue
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**General – Specific Structure**
In this structural pattern, a general issue is divided into several specific issues.

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Discussion

General Issue

Specific Issue A
Specific Issue B
Specific Issue C
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**Relationship Structures**
In this type of structure, each issue is related to another issue. These relationships or intersections comprise important components in the structure.

**Relationship Structure A**
Discussion
Main Issues
  Issue A
  Issue B
  Issue C
Relationships
  Relationship between A and B
  Relationship between B and C
  Relationship between C and A

Relationship Structure B
This structure of intersecting circles involves similar connections already identified in the previous structure. In contrast though, this pattern is focused more on the new structures and ideas emerging from the intersection points between two and three components (i.e. A, B, & C), rather than concentrating solely on the interconnections between existing components.

Techniques for Carrying Out Your Analysis of the Issues
Typically, reports will require you to engage in some kind of analysis of the issues or events that the report is based on. This analysis can vary from quite simple identification and description to a complex comparison of the factors involved as well as an evaluation of the value or effectiveness of particular events, processes, or policies. At a basic level, you may only need to

- identify the issues that are relevant to the report,
- describe what they comprise or how they work, and
- explain why they are relevant and important, or why you have chosen them from a pool of available issues, or why these issues involve advantages or disadvantages.
Alternatively, you may wish to include a more evaluative focus to your analysis. A common technique, drawn from business studies’ approaches to report writing, involves looking at the pros and cons surrounding a particular issue. This approach is conceptualised in terms of SWOT –

- Strengths
- Weaknesses
- Opportunities
- Threats

Each of these headings could form a separate section or a single paragraph within the body of your report’s structure. Looking at the issue from different angles, especially pros and cons, will allow a more reflective and objective analysis of the topic. In cases where there are many issues at stake, you may also use SWOT as a method for analysing each individual issue involved in your report.

A similar technique to SWOT analysis has also been developed called Force Field analysis. This particular technique is drawn from a management arena. It identifies the process of comparing the pros and cons before arriving at a decision. Three steps are involved as follows:

- Identifying the driving forces in support of a decision
- Identifying the restraining forces or obstacles against a decision.
- Prioritising the most significant driving and restraining forces that will impact on the decision and writing these up in your report.

A further technique for managing your analysis, which is also drawn from the discipline of management, involves simply addressing the following issues, aspects, or influences in relation to your topic:

- Political
- Economic (or educational)
- Sociological (or social)
- Technological
- Legal
- Environmental

Each of these perspectives could form a single paragraph or a separate section of the body of your report. An easy way to remember these multiple perspectives is by using the acronym PESTLE. In some cases, you may find that it is more beneficial to select three out of the six perspectives and discuss each of these in depth. Once you have addressed the issues in the body of your report, there may also be a requirement to look at ways to move forward with a particular issue or how to proceed with a particular decision. In such cases, considering the implications for the future or recommendations may be relevant.

**Developing a Report Writing Style**

With report writing, in particular, it is important that you present your points to the reader as efficiently as possible in the word space allowed. Often, a report can be assigned to a context involving several different kinds of issues, or a particularly complex issue, which needs to be broken down into smaller issues, or a combination of these two contexts. Therefore, if you are concise, yet direct and also detailed enough to demonstrate your level of understanding and evaluation, you will be more likely to cover a greater number of issues. While this seems an obvious point about the benefits of conciseness in your writing, it is very easy to lose sight of this when you are in the process of examining the issues. What follows is a list of points to help you to write concisely.
**Tips on Being Concise in Your Writing**

1. Get straight to the point in the first sentence

   The first issue is.../involves.../relates to.../ is organised around...
   A second issue focuses on...
   The ... context presents another relevant issue because...

2. Explain the point more simply

   At the present time = Presently...
   In spite of the fact that = Although...
   In the event that = If...
   Portfolios can be developed so as to consider other options.. = Portfolios can be developed to consider other options...

3. Consider whether a phrase adds new meaning to the sentence?

   The point is that... – Just state the point without the build up.
   All things considered, the factors are... – It is assumed by your reader that you will have considered all the points in coming to your conclusion.
   As a matter of fact... – In a very general sense, it is often assumed in academic writing that you are dealing with factual evidence, so there may be no need to assert something as a fact.
   In a very real sense... – To an extent, everything can be real or you would not be writing about it.

4. Avoid qualifying words which are redundant. The following examples highlight the redundant words and phrases.

   Either and/or both... = either or both...
   Each and every...
   One and the same
   Equal to one another
   Exactly the same
   The end result = The result
   Earlier in time
   Past records
   Look back in retrospect = in retrospect
   Real truth
   True facts
   Established fact = fact
   Actual experience
   Past experience = experience
   Helpful assistance
   Perfect ideal
   Estimated at about
   Rough estimate
   Cost the sum of...= cost...
   Sum total
   Sufficient enough
The concept is important, but however it is not crucial… = The concept is important, but it is not crucial…
Combine together
Separate out
Suddenly collapse = collapse
Continue to remain
Close proximity
Random chance
Inner feelings
I, personally, … = I…
My personal opinion
Consensus of opinion
Unexpected surprise = surprise
Unsolved mystery

New Zealand ATM machines have been in existence since…= New Zealand ATMs have been in existence since…
HIV virus is increasing exponentially. = HIV is increasing exponentially.

Tips on Being Objective in Your Writing

As well as being concise, it is also important to be objective in writing reports. Here are three strategies you can use to develop an objective writing style.

1. Express ideas accurately by including some sense of precision, which can be achieved by quantifying something or expressing it in measurement terms, as follows:

   a lot – a high proportion; a large proportion
   quite a few – five to six approximately
   a long time – three hours

2. Central to being objective in your writing is eliminating exaggeration and words for dramatic effect. The following examples highlight the words that may not be useful in your writing.

   It is extremely important to…
   Absolutely complete
   Absolutely essential
   Completely destroy
   Completely fill
   Over exaggerate
   Very unique
   Severely tormented
   Really effective

3. Refer to actions independently of yourself. This helps frame your writing within a more formal and distant context, incorporating an impersonal tone. So, instead of saying “I argue”, “I recommend”, or “I suggest”, to position your work from an objective and independent stance, refer to the following:

   It is argued that…
   It can be argued…
   It is recommended that…
   It is suggested that…
However, in cases where you are referring to published authors, then it can be effective to present the author as the subject of the sentence as in the following examples:

Smith and Jones (2003) argue…
Hills (1987) recommends…
Abberley and Thompson (1976) suggest…

While you are referring to people in such instances, you are still referring to people independent of yourself. Moreover, they are people who have had their ideas scrutinised through a peer-review process, leading to academic publication.

Example of a Report

Question: Write a report on the extent to which online users alter their identity

Length: 2000 words

This assignment question is virtually the same as the essay question provided for the 2000 word mock essay on “discuss the extent to which online users alter their identity.” Consequently, it follows the same process of searching for literature and analysing the assignment question. It also contains the same information and evidence. However, the main difference is the work of reconstructing the essay into a report format and style. This change is most clearly evident from the use of headings to signify distinct sections, as follows:

1. Introduction
2. Discussion
   2.1 Possibilities for altering identity online
      2.1.1 Anonymity of the medium
      2.1.2 Lack of social consequences
   2.2 Constraints on altering identity online
      2.2.1 Conforming to real life identity norms
      2.2.2 Gender differences
         2.2.2.1 Gender socialisation differences in risk-taking
3. Conclusion

In developing section headings, it was necessary to have a well-thought out structure, which allowed for main sections as well as specific sub-sections within this, and when required, sub-sections within sub-sections, as evident in 2.2.2.1. It was also important to phrase topic sentences effectively so they clearly and directly addressed the report’s purpose, without the need to necessarily link back with the previous sentence.

In total, the report comes to 2026 words, which fits broadly within the margins of a 2000 word assignment, even though it is 26 words over the limit. Generally, it is acceptable to go over or under by 10% of the word limit. However, CHECK WITH THE ASSIGNMENT INSTRUCTIONS OR COURSE CO-ORDINATOR ABOUT THIS as some
choose to create their own rules. In contrast to the report’s 2026 words, the essay came to 1895 words. The difference may occur because in defining each new section in the report, an additional sentence or two was required to establish and introduce the new sub-topic. While the content of the report repeats the content of the essay, specific sections, namely the introduction and conclusion, have been moulded to comply with the conventions of a report. Nevertheless, overall the information is the same. Therefore, if you want to find out how to effectively answer the assignment question, see the notes attached to the essay.
1. Introduction

This report examines the extent to which online users alter their identity. It draws on evidence from two online communities, which operate textually and in real time, namely, Internet Relay Chat (IRC) and Multi-User Dungeons (MUDs). IRC offers users access to hundreds of chatrooms on a vast range of topics. On IRC, users are identified by their choice of nickname, dissimilar to real life names, in which “users can appear to be, quite literally, whoever they wish” (Reid, 1993, p. 63). In contrast, MUDs are virtual reality, role-playing environments where users create their own character by selecting a name, a gender including neuter and plural, and a description of their physical appearance (Curtis, 1997). The findings from this report demonstrate that while there are many possibilities for altering identity online, due to the anonymity of the medium and the lack of social consequences, definite constraints exist. These constraints pertain to the practice of conforming to offline identity norms. Gender differences, especially gender socialisation differences in risk-taking, also influence users’ capacity to alter their identity online.

2. Discussion

2.1 Possibilities for altering identity online

The online medium offers many possibilities for people to explore their identity. In particular, text-based communication enables users to present themselves in ways that may not be possible in face-to-face contexts. Indeed, research has reported the unprecedented freedom of identity exploration online within online communities that operate textually. Turkle’s (1995) observations on MUDs identified how role-playing
allows users to explore various aspects of their identity, as well as the capacity to take on other identities. This included opportunities to explore a wider range of roles than those available in real life, such as experimenting with radically different personae and transcending to a higher power, in addition to adopting multiple characters with different genders simultaneously. Similarly, on IRC users have the ability to take on multiple identities, signified through user nicknames, simultaneously (Reid, 1993). Such activities demonstrate the freedom users have in constructing identities online as the constraints of physical reality are suspended (Calvert, Mahler, Zehnder, Jenkins, & Lee, 2003). This evidence indicates that the capacity for identity alteration online is vast.

2.1.1 Anonymity of the medium

Underlying users’ capacity for identity alteration may be the anonymity of online communication. Researchers have argued that users alter their identity because of the anonymous features of the online medium, in which physical appearance cues are unavailable. This allows users to break free of social norms. For instance, Reid (1993) argues that the anonymity “and therefore invulnerability” (p. 403) surrounding one’s real life identity enables users to experiment with gender identity norms online by letting go of their social and cultural inhibitions. Literature exists about men and women masquerading as the opposite gender online (Curtis, 1997; Reid, 1996; Turkle, 1995). Consequently, as Calvert (2002) confirms, the anonymity of online interactions enables participants to freely express themselves in ways that are not as constrained by real world expectations. Hence, removing the rigid identity boundaries of such factors as age, ethnicity, and gender, which circumscribe behaviour offline, enables the
reconstruction of identity online, where the only limits are those created by the users (Reid, 1993).

2.1.2 Lack of social consequences

Another relevant factor influencing users’ capacity to alter their identity online is the lack of social consequences. Indeed, the physical distance between IRC participants, combined with the anonymity surrounding users’ real life identities, means few consequences exist for acting inappropriately and breaking social norms (Reid, 1993). According to Calvert (2002), the lack of consequences for breaching social norms permits users to explore more about themselves, compared to real life. Following this line of argument then, the popularity of experimenting with sexual identity on IRC may be indicative of the proportion of adolescent and young adult users able to safely explore their sexuality without the behavioural taboos of real life (Reid).

2.2 Constraints on altering identity online

In addition to the unprecedented freedom online enabling users to alter their identity, the literature indicates a number of constraints limiting users’ very ability to explore their identity online. These constraints are organised around conforming to real life identity norms, and gender differences. Central to gender differences are gender socialisation differences in risk-taking.

2.2.1 Conforming to real life identity norms

While online users have the capacity to alter their identity and interact as other than themselves, Baym (1998) argues that, in reality, many probably create identities
consistent with real life. In support of this, Baym points out how online norms develop out of pre-existing norms within contexts external to online environments. For instance, according to Reid (1993), IRC users consistently prefer being identified under one nickname – which is consistent with identifying under one name in real life contexts – as opposed to multiple nicknames. Similarly, based on his 12-month observations of MUDs, Curtis’ (1997) states that although MUD players may create a character vastly different from how they are in reality, many conform to their real life behaviours and personality.

Other research reinforces the view that online users may behave much as they do in real life and conform to identity norms common in face-to-face contexts. For instance, a posting to a discussion group about online personae highlighted equal numbers of participants acted the same as real life versus being different (Turkle, 1997). While MUD users can adopt a character as near or as distant from their real life self (Turkle), with neuter, plural, and hermaphrodite choices available, a number of MUDs have restricted gender to male and female only (Reid, 1996). Similarly, Curtis’ (1997) observations from a 12-month longitudinal study of LambdaMOO, a highly populated MUD, indicated gender identity comprised the fewest choices available. Further, even when players identified under a non-traditional gender, other users still requested real life gender identity disclosure. This evidence suggests that despite the opportunities for identity alteration, some users, at least, are choosing to retain offline identity conventions, which constrains their possibilities for identity alteration online.
Another study, conducted by Danet (1998), offers further evidence in support of online users conforming to real life identity conventions. Danet’s analysis of gender identities chosen on two MUDs (MediaMOO and LambdaMOO), constituting 1055 and 7308 players, revealed that a majority chose male or female, while only a minority adopted unconventional identities encompassing neuter and gender neutral. Moreover, far fewer players (3% and 4%) chose to create unique gender identities.

2.2.2 Gender differences

Interlinked with users’ conformity to real life identity norms, a second factor identified in the literature that constrains the extent to which users alter their identity online relates to gender differences. The influence of gender differences can also be illustrated in Danet’s (1998) study, which was described above. Although it was not possible to verify the real life gender identity of the players in Danet’s study, he estimated, based on current internet user population statistics recording 70% male and 30% female participation, that many male players were likely to be identifying under a female or unconventional identity. In support of males’ likelihood to explore identity boundaries, Reid’s (1996) survey results of LambdaMOO showed a majority were male (76.6%). Similarly, Turkle’s (1997) observations on the MUD, Habitat, revealed that while there was a 4:1 ratio of male versus female real life participants, the ratio of male to female presenting players was actually 3:1, indicating a greater proportion of males altering their gender identity. This evidence suggests that while some users’ may participate in identity alteration, male users may be more likely to do so than females.
Researchers have proposed several reasons for males altering their gender identity online. For instance, according to Curtis (1997), males are the most common MUD participants, which leads to a lack of female (presenting) players. This scarcity heightens the novelty of interacting with females online, leading real life males to present as female to gain the same attention. Another prominent reason for males’ altering their gender identity is to find out what it is like to be treated as a female. Males are also attracted to the fun in deceiving other males and enticing them into sexually explicit interactions by taking on a female gender identity (Curtis).

However, females also alter their gender identity, but typically for a different reason. Due to the proportion of males gender-switching, many females have been required to “prove” their real life gender. Consequently, many females alter their identity from female to neuter, gender-neutral, or male (Curtis, 1997). Similarly, other research indicates that females alter their identity to avoid harassment, including sexual harassment (Turkle, 1995).

Therefore, the research indicates that when it comes to identity alteration online, it is not a simple case of observing whether or not the behaviour occurs. Rather, researchers also need to consider the reasons for users engaging in identity alteration, to better understand the extent to which online users actually alter their identity. The evidence indicates that males and females may alter their gender identity for very different reasons. While males may do so for a range of reasons, including general identity exploration, gaining attention, and deceiving others, the research suggests that females typically do so to avoid harassment.
2.2.2.1 Gender socialisation differences in risk-taking

Within the context of gender differences, gender socialisation differences in risk-taking, learnt in real life, face-to-face contexts, may further impact on the extent to which males and females alter their identity online. In support of gender socialisation differences in risk-taking, underlying gender socialisation theory is the notion that males learn to engage in risk-taking activities by extending behavioural boundaries. In contrast, females learn to stay within appropriate behavioural conventions, maintaining their safety (Spender, 1995). Disorientation surrounding the adoption of masculine identities by real life females, evident in Bruckman (1996) and Reid’s (1996) gender-switching encounter, in contrast to liberation from the restrictions of gender appropriate behaviour experienced by a male when gender-switching (Reid) may provide support for the existence of gender socialisation differences in risk-taking online.

Further, the anonymity created by textual communication forums online, which provides a protective mechanism for reducing social risk, may help facilitate opportunities for risk-taking online, thereby offering additional support for males’ capacity to alter their identity online more so than females. As Curtis (1997) highlights, if social errors occur, users can easily log on as another character without redress. Hence, as already identified in this discussion with respect to the lack of social consequences, the shield of anonymity relieves users of any accountability for their actions, eliminating the physical consequences of irresponsible and offensive acts. Subsequently, it is argued that those more likely to engage in risk-taking, namely males
(Coet & McDermott, 1979), may also be more likely to utilise online environments for identity exploration, including identity alteration, compared to females.

3. Conclusion

The findings in this report clearly show that the extent to which online users alter their identity is a complex phenomenon. On the one hand, evidence demonstrates the unprecedented freedom of identity exploration online. The anonymous features of the online medium made available through the lack of physical appearance cues, combined with the lack of social consequences for one’s actions as a result of physical distance and anonymity, lead to vast possibilities for users to alter their identity online.

On the other hand, research evidence demonstrates how, despite freedom from the constraints of social norms governing online behaviour, users do engage in practices, which function to constrain their very capacity to take full advantage of the medium to alter their identity. These practices involve users’ choice to conform to real life identity norms, such as in the case of preferring one nickname identity, and retaining the male and female gender dichotomy. In addition, there are clear gender differences surrounding users’ choices to alter their gender identity. Moreover, the literature suggests that males and females’ identity alteration may be linked to their gender socialisation differences in risk-taking, leading males to be more likely to take risks in exploring their identity online compared to females.
The findings in this report may have implications for research within the field of cyberpsychology. In particular, gender socialisation differences per se as well as gender socialisation differences in risk-taking may impact on behaviours of online users, beyond identity alteration. Future research needs to investigate this issue.

To avoid duplication of information, refer to the essay on the same topic for the list of references used on pages 62-63, which is formatted according to APA conventions.
Basics on Business Report Writing

There are many good resources available on how to write business reports, which are mentioned at the end of this section. Hence, to avoid duplication of information, this section provides a very brief overview of the typical requirements involved in business report writing. It addresses the following topics: purpose of business report writing, typical sections, the difference between inductive and deductive reports, as well as what to include in the main sections. It ends with a list of qualities for an effective business report.

What Is the Purpose of Writing a Business Report?

Business reports are typically assigned to enable you to

- examine available and potential solutions to a problem, situation, or issue
- apply business and management theory to a practical situation
- demonstrate your analytical, reasoning, and evaluation skills in identifying and weighing-up possible solutions and outcomes
- reach conclusions about a problem or issue
- provide recommendations for future action
- show concise and clear communication skills

Remember that with business reports, typically, there is no single correct answer but several solutions, each with their own costs and benefits to an organisation. It is these costs and benefits which you need to identify and weigh-up in your report. Further, when writing the report, you need to consider the audience you are writing for, whether it is the CEO or will the report be available to all staff concerned? Therefore it is vital that you ensure an appropriate level of formality, sensitivity, fairness, and objectivity.

What Are the Typical Sections of a Business Report?

Business reports typically adopt the following sections:

Introduction
Discussion
Conclusions
Recommendations

What Is the Difference between an Inductive and a Deductive Report?

The order of the report sections will depend on whether you are required to write an inductive or deductive report. An inductive report involves moving from the specific issues, as outlined in the discussion, to the more general, summarised information, as displayed in the conclusions and recommendations. The list above provides an example of an inductive report, where the discussion appears first (after the introduction), followed by conclusions and recommendations. Such reports are ideal for an audience who has the time to read the report from cover to cover, and also in instances where the findings may be somewhat controversial, hence, the need to demonstrate your reasoning and evidence, as laid out in the discussion, for the recommendations decided upon. In contrast, a deductive report is one where you move from the general then to the specific. Hence, the conclusions and recommendations appear first, followed by the discussion. This type of order is effective when faced with an audience who does not have time to read the whole document, but can access the conclusions and recommendations. Consequently, such an order is also appropriate for reports which are not contentious or unexpected in their decision outcomes and recommendations.
Managing the Introduction section

This is the first section of the report and is easiest to write after you have written the other report sections, as then you know what your outcomes will be, which you can briefly summarise in the introduction. The purpose of the introduction is to

- State the purpose or aim of the report, which may include who has commissioned it, if relevant.
- Provide background details relevant to the situation, such as a brief overview of historical developments, as well as definitions of any terms that are unlikely to be recognised by the audience.
- Summarise the problems and recommended solutions.
- Clarify any limitations, restrictions, and/or assumptions made in undertaking your investigation of the situation, such as restrictions on time, lack of money, limited access to information and people, and/or assumptions made about the organisation because of the lack of information available.

In general, one page is more than adequate to address the issues typically required in an introduction.

Managing the Discussion section

This section is traditionally allocated the most marks, so it is well worth your investment in time to do it thoroughly. The Discussion section is generally the only section where you are able to support your analysis and reasoning with theoretical ideas, concepts, and models available within the course. Secondly, it is the only place where you can actually provide evidence to back up your conclusions and recommendations. Therefore, ensure that you draw on evidence from the literature, course materials, as well as your own observations from the actual case or organisation, where applicable.

A key task of the discussion is for you to be able to identify the problem(s) and then consider a range of possible solutions. Consequently, it may be useful in preparing this section to identify your conclusions and recommendations first, before proceeding to support these outcomes in the Discussion. Once you have planned the points you need to cover in your Discussion, it is very appropriate to look at creating different sub-sections within the Discussion that encompass and frame each of the issues, with meaningful headings for each sub-section. When writing each sub-section within the Discussion, the following structure may be useful for demonstrating the process you used to carry out your analysis and evaluation.

1. Identify the problem
   Example: The problem involves a lack of coordination at top-level management.

2. Identify the causes
   Example: This is caused by a lack of organisational skills and a lack of assistance from support people.

3. Identify the symptoms
   Example: As a result, the department is constantly in a state of flux, with no knowledge of where it should be heading.

4. Identify possible solutions
   This can be achieved by explaining advantages and disadvantages of Option A and Option B, which may involve describing short-term and long-term benefits.
Managing the Conclusions section

1.1 This is arranged as a numbered, bulleted-list.
1.2 Arrange each point in order of importance, rather than necessarily in the order found in your Discussion.
1.3 Match each point in sequence with the list of recommendations.
1.4 Each point provides a brief summary of one of the problems outlined in detail in the report.
1.5 Ensure each point links with the report’s objectives.
1.6 Write each conclusion in the present tense.
1.7 Each point needs to be specific and clear.

Managing the Recommendations section

1.1 This is also arranged as a numbered, bulleted-list.
1.2 Each recommendation should appear in sequence with the order of points in the list of conclusions.
1.3 Each recommendation should provide a response to each problem identified in the list of conclusions.
1.4 Each recommendation should be action-oriented, concise, and clear.
1.5 Each recommendation should also be realistic and feasible within the social, economic, and political climate.
1.6 Write each recommendation in the future tense, as appropriate.

Qualities of an Effective Business Report
(Sourced from Ruch & Crawford, 1999, p. 40.)
• A management tool, usually assigned, for decision-making.
• Read for business gain, rather than entertainment.
• Provides an accurate way of obtaining information.
• Answers a question or solves a problem.
• Meets the needs of the situation.
• Usually written in a formal style, compared to other types of business writing.
• Reflects good, clear thinking and thorough planning.
• Organises the material in a natural sequence.
• Presents information from the reader’s perspective.
• Stresses the value of the report in the title or first paragraph.

Resources on Business Report Writing

Websites
There are also useful websites on business report writing, two of which are presented here. They were current at the time of publishing this book.
Basics on Lab Report Writing

This section offers a brief overview of the traditional requirements involved in writing a lab report, typical for psychology students. However, this section may also have some use to science students who are required to write scientific reports. For more detailed information on lab report writing, a list of useful resources is available at the end of this section.

What Is the Purpose of Writing a Lab Report?

Lab reports are typically assigned to enable you to

- conduct scientific research
- formulate a hypothesis(es) about a particular stimulus, event, and/or behaviour.
- review relevant literature to justify your hypothesis
- allow someone to replicate your study by providing precise details
- apply statistics to test your hypothesis
- explore theoretical explanations
- evaluate research objectively and methodically
- communicate concisely and precisely

Remember that with lab reports, it may be impossible to rely on a single explanation for your findings. Therefore, it is vital that you provide as many potential and relevant interpretations as possible. Even if your findings do not support your hypothesis, they are still valuable because you can then demonstrate that within the contextual constraints of your study, your argument was not reliable, and you can then move on to consider other areas for research, without having to do down the same path. Further, this may open up avenues for others to investigate your hypothesis under different conditions. Nevertheless, there may have been unforeseen circumstances or conditions that were not possible to isolate and control, which you can use to help justify your results.

It is also important to be clear about the voice or grammatical style in which you write your report. For instance, traditionally, lab reports have been written in the passive voice, and used the third person pronoun, as in “The study was conducted by Smith and Jones (1996)” and “It was hypothesised that…”. However, more recently, it has become acceptable to use the active voice, as in “Smith and Jones (1996) conducted the study”, as well as make reference to yourself where relevant, as in “I hypothesised that…”. CHECK YOUR ASSIGNMENT INSTRUCTIONS for clarification or CONTACT THE COURSE CO-ORDINATOR. Further, you will also need to ensure a consistency in tense throughout the report, typically, the past tense, except when first referring to your hypothesis in the Introduction, which is likely to require the future tense.

What Are the Typical Sections of a Lab Report?

Lab reports typically adopt the sections listed below, which should appear in a bold font and centred on the page, with the exception of the Introduction, which may or may not follow the other heading formats. Check your assignment instructions for clarification.

Abstract
Introduction
Method
Results
Discussion
Managing the Abstract

The Abstract functions as a short, yet detailed, summary of the whole report. Hence, it is far easier to write at the very end, once you have completed the report. Ideally, you may be able to extract a sentence or two from each main section of the report to build your abstract. In creating your summary, it is important to include a sentence or two about each of the following:

- A statement about the topic, which demonstrates some reasoning for formulating the hypothesis.
- The hypothesis
- Brief details about how the study was conducted, including
  - number of participants.
  - participant characteristics, such as, for example, gender, undergraduate psychology students.
  - how they were recruited, and assigned to experimental conditions where appropriate.
  - any special equipment used to carry out the research.
- The main findings and whether they supported or disconfirmed the hypothesis.
- Identify theoretical explanations for the findings, as well as any major inconsistencies and/or alternative explanations, where word space permits.
- Research avenues for the future or implications of the research.

The Abstract can vary in word length from a minimum of 120 words through to 250 words. However, always check the assignment instructions to be sure of the limit required for your report.

Managing the Introduction section

This is the first main section of the report and may be easiest to write in conjunction with the Discussion section because it is often important to follow-up, in your discussion, on at least one or two of the studies you mentioned in your introduction. The central purpose of the introduction is to justify your hypothesis. However, to begin the Introduction, you need to start back at a more general area of interest that is relevant to your study. From there, you move rapidly into any major theories or models, as well as studies that have been conducted, which relate to the focus of your hypothesis.

When considering what studies to include, it is always useful to mention an original, pioneering study that may have been carried out many years ago, in the 60s or 70s, which led the research path. In some instances, the topic area may be an emerging one, and the original study or several pioneering works may have occurred in more recent times. Then from here, you have a range of options. It may be the case that the research findings in the topic area have been fairly consistent, except for one or two outcomes. In which case, it would probably be helpful to include the inconsistent studies to at least highlight the lack of consistency and hence the need to continue the investigation. In other cases, it may be more difficult, in that there may be a range of studies which all highlight diverse aspects of the study you have conducted. Here, you will need to prioritise which studies are most relevant to the current one – whether it be the particular technique used or the actual findings and type of research question.

From my own experience, as well as those of other students, the Introduction can be one of the most difficult sections of a report to write because it is difficult to develop a sense of direction about where to start and how much to include at the beginning. My best advice is to write the Introduction in pieces by summarising one study at a time, or one theoretical framework at a time. Then return as appropriate to shaping these pieces together to get a sense of the order in which these items can be best placed to most convincingly lead up to the reasoning for your hypothesis. Do not forget to also include definitions of any relevant terms and concepts, including the use of acronyms throughout your report.

In terms of how much word space to allocate to the Introduction, it is probably the second most important section, so assign words accordingly. For a 2000 word lab report, about 500 words would be a fair figure to aim
for, depending on how many words are required to adequately describe the Method and Results sections. If these take substantially less words, you may be able to increase the Introduction accordingly.

**Managing the Method section**

This is a relatively formulaic section in that there is a clearly marked out structure to follow, namely, three sub-sections: participants, materials or apparatus, procedure.

**Participants**

In this section, give enough details about the participants so that someone could repeat the study using people with the same characteristics. Hence, you will need to mention the number of participants, their gender, whether they are students, as well as how they were recruited. It’s also important to mention whether participants volunteered and whether they were randomly assigned to experimental conditions.

**Materials or Apparatus**

Here you need to give details about the equipment required to carry out the study. This may include a particular type of technology, in which case you may need a model number and brand name. If you used a paper-pencil survey, which was designed specifically for the study, then you need to provide enough details so that someone could replicate it, if they wanted to repeat the study. In such cases, it may be appropriate to attach a copy of the survey in an Appendix at the end of the report, and give general details in this section, but refer readers to the Appendix for a full copy. If a paper-pencil test is well-known, you may only need to mention its name.

**Procedure**

In this section, you need to repeat the exact instructions that were given to the participants. If it is important in conducting the study to express instructions to participants using particular words and phrases, then mention these exactly as they were stated in the study. You may also need to include activities and tasks undertaken by the researcher.

The Method section can be the easiest to write because it follows a straightforward structure. Therefore, it is often the best section to start with when writing-up your report.

**Managing the Results section**

The Results section is often a good section to write-up after the Method because it can provide clarity on the findings, before you embark on thinking about possible explanations for the findings in your Discussion. The results provide the reader with information about what you found. Consequently, one of the key features of the Results section is to ensure that you only mention the findings, and not what they mean in relation to the study.

It may be useful to begin by naming the type of analysis carried out on the data, and if the data had been changed in any way from its raw form before you undertook the analysis. Then mention the difference or lack of difference between groups with respect to the activity they participated in during the study. If relevant, you can express this difference (or lack of) by including each group’s score numerically in brackets. This then needs to be backed up with statistical evidence to support the difference (or lack of). In this case, you will need to mention the name of the statistical test using appropriate statistical symbols, such as t, F, M. With each test, include the degrees of freedom, the value of the statistic, and the level of probability. For some tests, you may also need to provide the N value or number of participants. Most importantly, you also need to state whether the difference was “significant” or “not significant”.

When you have a lot of data, it may be convenient to display this in a table or graph and then summarise the main features or patterns in words. However, remember not to duplicate information. So, if you have a table with data contained within it, and then go on to repeat much of this data in the form of sentences, the written
expression of the data will be redundant. When using tables, the title appears at the top of the table; when using graphs, the title appears below.

**Managing the Discussion section**

This section is allocated the most marks, so it is well worth your investment in time to do it thoroughly. You typically begin with a sentence or paragraph, summarising the results, including whether they support or disconfirm the hypothesis. You can then choose to highlight the similarities in findings with the current study and previous ones. It is then relevant to move on to the most challenging part of the Discussion: explaining your findings.

A good proportion of your Discussion should be devoted to explaining, interpreting, and where relevant, justifying your findings. This can involve repeating some of the theoretical frameworks or models mentioned in the Introduction, but with a greater focus towards making sense of the outcomes in the current study. Beyond affirming the theory, you should also consider any alternative explanations for the findings. These may be drawn from studies that presented inconsistent findings with the theory. Additionally, you may also be able to draw on aspects of the study which may have been left to chance, rather than being experimentally controlled.

In the last part of the Discussion, it is beneficial to mention any flaws in the study, such as a lack of diversity amongst participants, sample size, and other characteristics of the sample population. If you can think of other disadvantages associated with the design of the study, this will most certainly add bonus marks. In the final part, before your concluding paragraph, it is a good idea to consider the future application of the findings in some way, and even the need for further investigations to ascertain unexplained aspects of the research outcomes. This particular part can also be included in the concluding paragraph, but will depend on your assignment instructions. In closing the report, finish by reaffirming the findings and their significance to the research area.

**Resources on Lab Report Writing**

Findlay, B. (2006). *How to write psychology research reports and essays* (4th ed.). Frenchs Forest, New South Wales: Pearson Education. See chapters 3 and 4 on research reports – how do you start and sections of a research report, respectively.


**Resources on Scientific Report Writing**


Websites
There are also useful websites on scientific laboratory reports, two of which are presented here. They were current at the time of publishing this book.

