Title	Task requirements and students' perceptions of prompts in an academic writing classroom
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Source	*Malaysian Journal of ELT Research, 10*(2), 82-106
Published by	Malaysian Journal of ELT Research

Task Requirements and Students' Perceptions of Prompts in an Academic Writing Classroom

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Abstract

The paper examines the research project task expectations of university student writers. It offers a detailed analysis of the rhetorical Moves that are likely to occur in university-level research paper prompts. The analysis highlights that while, some Moves such as *Background information* and *Assessment expectations* are optional, others like *Cognitive demands* on students are obligatory, and that an *Overview of task* and *Procedural directions* are desirable traits of prompts. A transitivity analysis of the prompts, student interviews and reflections revealed that despite the prescriptive tone and the heavy cognitive and rhetorical demands made on student writers, the prompts did not alienate the novices who were on the whole receptive to the requirements specified by the instructors.

KEYWORDS: Academic writing, task prompts, students' perceptions, task requirements

Introduction

A key factor in succeeding in an academic writing program is an understanding of what each writing task requires and hence of instructors' expectations. Indeed, this factor is the first hurdle that student writers must overcome when embarking on the academic paper writing journey in a Foundation program English for Academic Purposes (EAP) classroom in Singapore. By analysing task prompts and students' perceptions and interpretation of the task requirements, it is possible to uncover task expectations and the demands these make on students.

The paper identifies the expectations placed on student writers by examining academic writing task prompts and students' understanding of the prompts in the research context. Firstly, it also provides an analysis of the macro generic structure and the micro linguistic nature of task prompts. The macro generic structure analysis of the task prompts consists of an overview of task requirements and instructor expectations. The micro linguistic analysis will closely examine the skills student writers are expected to possess in order to write their first research paper in the context of this study. Secondly, these analyses are compared with students' interpretations of the task prompts. The paper concludes with pedagogical implications for EAP instructors and areas for further research.

Literature review

Research on task prompts is primarily motivated to inform the EAP curriculum. The research can be broadly divided into two main strands: (a) studies of task prompts only, with a view to a better understanding of the cognitive and rhetorical demands made on students, and (b) studies of the cognitive and rhetorical demands themselves as well as of other sociocultural factors.

The most common areas of investigation are the frequency of use – and hence the perceived importance – of specific task types (Bridgeman & Carlson, 1984; Carson, 2001; Hale, Taylor, Bridgeman, Carson, Kroll, & Kantor, 1996; Horowitz, 1986a; Lewis & Starks, 1997; Moore & Morton, 2005). Other research areas have included classifying task prompts (Cooper & Bikowski, 2007; Hale et al., 1996; Horowitz, 1986b; Moore & Morton, 2005; Nesi & Gardner, 2012; Swales, 1982), instructors' priorities for evaluating student writing and their perceptions of student difficulties (Bridgeman & Carlson, 1984; Carson, 2001; Moore & Morton, 2005), ways in which tasks are controlled by instructors (Horowitz 1986b), the cognitive and rhetorical demands these tasks place on students (Carson, 2001; Hale et al., 1996), student perceptions of their own academic needs (Kroll, 1979), and generic features such as patterns of exposition (Hale et al., 1996), use of sources (Carson, 2001), and the role of task topic and rhetorical functions (Moore & Morton, 2005).

Typically, these studies employed instruments such as questionnaires (Kroll, 1979; Bridgeman & Carlson, 1984), interviews (Kroll, 1979; Carson, 2001), content analysis (Carson, 2001; Hale et al., 1996; Horowitz, 1986a, 1986b; Moore & Morton, 2005; Swales, 1982), and discourse analysis (Moore & Morton, 2005; Swales, 1982) to obtain information about task prompts and related issues. Since Kroll's (1979) seminal study, the rhetorical demands of university writing assignments have been identified as a factor that affects academic success. The studies reviewed above show that although some task prompts do not explicitly refer to a preferred rhetorical structure, the organization of information in student research papers plays a significant role in determining how these papers are assessed.

Except for Carson (2001) and Hale et al. (1996), which also studied in-class writing, these studies examined out-of-class writing tasks that required primary or secondary data. Based on the data described in these studies, it is evident that university writing tasks require students to understand abstract theories and to critically evaluate these theories either on the basis of their readings or by applying these theories to new situations.

The two main categories of out-of-class tasks are "primary data dependent" and "secondary data dependent." Researchers studying task prompts have used different terms to refer to prompts that require students to collect data via field work (primary data) and those that require them to base their research papers on their readings (secondary data). Tasks that are dependent on primary data are also referred to as "phenomenal" (Halliday, 1994), "topic-specific" (Hamp-Lyons, 1986), or "deontic" (Moore & Mouton, 2005). Despite this terminological variation, these labels all refer to primary data dependent tasks requiring students to show their understanding of a theory, and to apply that theory to a new situation or to data they have collected. These are usually out-of-class activities as students need to investigate a phenomenon in some depth, which is a time-consuming process. Likewise, different terms are used to describe secondary data dependent tasks that require students to critically evaluate their readings without embarking on their own investigation. These tasks are also often related to abstract theories and are referred to in the literature as "metaphenomenal" (Halliday, 1994), "perspective-related" (Hamp-Lyons, 1986), or "epistemic' (Moore & Mouton, 2005). However, primary data dependent and secondary data dependent tasks differ in nature largely in terms of the nature of each discipline and frequently because of the focus of the writing course or the writing task itself. The prompts examined in this paper are secondary data dependent studies, the most common writing task prompt type in the undergraduate (Hale et al., 1996) and graduate curriculum (Cooper & Bikowski, 2007).

The present study

The present study draws on previous research for the methodological procedures adopted but uses a triangulated methodology in terms of data sources and analysis. This consists of the analysis of task prompts, student interviews and reflections from the student writers themselves.

Horowitz's (1986a) study is relevant to the current study in terms of how he chose to categorize the prompts. He too studied multidisciplinary research prompts. The difference is that the research papers served as a means for novices to carry out the research task and to learn about research methods alongside learning about academic conventions. The present study also differs from Horowitz's (1986a) in that it makes use of prompts from a single discipline whereas his data consisted of prompts from various disciplines. However, the current study maintains an affinity with Horowitz's (1986a) study in one main respect, namely, its examination of the form and content of writing prompts.

The current study also differs from other studies in a number of ways. First, the scope of discussion pertains only to research papers written by student writers. The study does not cover argumentative essays or library papers (papers comprising only of secondary data). Second, it examines students' perceptions and interpretation of task prompts by drawing on the methods used in socialization studies, such as interviews and student reflections. While most researchers have noted the importance of combining both perspectives, only Hale et al.

(1996) combined both the linguistic and social component of student writing in their research. The study, however, did not address students' perceptions of task prompts.

Next, the present study differs in terms of the background of the student writers under study, who are enrolled in a university foundation course in a Singapore university. For the most part, these students have achieved near-native competence in spoken and written English as a result of having been schooled entirely through the medium of English. Unlike other studies in which the task prompts were selected across academic departments, the task prompts analysed here are not content-specific to any discipline but were designed to help student writers acquire relevant research and academic writing skills. The prompts used in the current study assess novices' ability to understand and engage in academic discourse via internalized knowledge.

In addition, investigations into student writing difficulties tend to be general and are not typically always based on perceptions of these difficulties by the students themselves. For instance, although Swales (1982) and Moore and Morton (2005) provide a rich linguistic description of the task prompts, they do not take student perceptions and experiences into account. Other studies (described earlier in this paper) have generally examined task prompt types, the cognitive and rhetorical expectations of the prompts, the difficulties faced by students, and instructors' expectations. Although these provide useful snapshots of students' understanding of task requirements, they still only offer a partial picture. This study will examine task prompts with regard to all of these areas and, particularly by tapping student writers' own perceptions and interpretations of the prompts, explore what is required of students enrolled in a specific first year academic writing class.

Methodology

Foundation program EAP class – The Foundation program is a two-year course. Participants attend the program prior to embarking on their degrees upon successful completion of the program. In the second year, students attend an EAP class. The focus of the one-year EAP Foundation class is to provide students with study skills and a strong background in academic research and writing.

Multidisciplinary Task Prompts - Task prompt analysis is considered an important dimension of writing research and is referred to as a "sub-curriculum" in the EAP context (Moore & Morton, 2005). Task prompts are an integral part of student writers' experience as they provide the first contact these writers have with research and ultimately with research writing. For this study, 14 research project tasks set by an established testing institution in Singapore from 2000 to 2012 under the label "Project Work" were used. The tasks require students to "think across several disciplines and engage actively in research" (Pillai, 2009, p. 6). Task prompts were compiled at the start of this study in 2004 and the list was updated each subsequent year until 2012. Two tasks (Tasks 1 and 2) were set each year by the testing institution. The task prompts were multidisciplinary, as were those analysed by Horowitz (1986a). They were meant to enable students who did not have discipline-specific knowledge to carry out a small-scale research study, and hence they were deemed suitable to the purpose of an EAP classroom. Students were also given a choice of which project they wished to carry out (refer to the Appendix for a description of some of the task prompts).

Given that the students came from a range of disciplinary backgrounds, the task prompts in this study were designed so that they can be answered by any student in any field of study.

This was essential as the students had not started on their courses yet. Hence the prompts offered the broadest range of options to enable students to apply any prior world or disciplinary knowledge to any topic that interests them. Furthermore, these task prompts were found to be closer to the type of prompts that the participants in this study were expected to write in their courses.

Participants - The participants in this study were enrolled in a Foundation program at a Singapore university. A total of 24 students from two cohorts were tracked throughout this study. The purpose and format of this study were explained to the students during the first week of the semester. It was made clear that the study was optional. An informed consent form was given out signed by the participants, and returned to the researcher. Students were informed that the results of the study would be confidential and that their participation would in no way affect their grades. The names of the students have been changed for the purpose of this study. Where possible, the pseudonyms were selected to reflect the ethnicity of the students.

Interviews - Semi-structured interviews were conducted with the students at the mid-point in their research project. The interviews helped to capture the experiences of student writers in the process of writing their assignments. The interviews were structured to elicit responses regarding the student writers' perceptions about the task prompt expectations. In the course of the interviews, the novices were encouraged to elaborate on their experience and their reasons for selecting a specific research task.

Reflections - Additionally, the student writers in this study were asked to submit at least three reflections on their writing experience written at three distinct points (pre course-mid course-post course) in the research project. Reflections offer the researcher an "opportunity to investigate social, psychological, and physiological processes within everyday situations" (Dörnyei, 2007, p. 156). Such solicited reflections are regarded by researchers as a means to study specific phenomena in a systematic manner so that "people can be heard on their own terms" (Bell, 1999, p. 266). The content of both the interviews and the reflections was examined for recurrent themes which were later compared with the analyses of the task prompts.

Macro-Analysis of Task Prompts –The discourse organizational structures were first analysed by using Swales' (1990) Move and Step analysis model. According to this model, Moves are smaller units within each sub-genre or component and are used by writers to construct the text. Each Move serves a separate rhetorical function. Sub-units of Moves are referred to as steps. Writers may use two or more steps to achieve the purpose of each Move. Move and step analysis are essential in identifying intra-component variation found within sub-genres such as task prompts. The frequency at which the Moves occur in a specific discipline or type of text helps to establish if a Move is obligatory or optional.

Micro-Analysis of Task Prompts - A lexico-grammatical text analysis of processes and related noun phrases was conducted on the task prompts to examine formal submission requirements such as expectations of what should be studied, task design, and research paper structure.

A lexico-grammatical analysis of processes, encoded as verb phrases, along with related noun phrases imply associated participant roles and the expected course of action (Eggins, 2000). In other words, the examination of processes and related noun phrases will help to identify the writer's intentions. For this purpose, Janks (2005) proposes a systematic rubric for text

analysis based on Halliday and Matthiessen's (2004) model of ideational, interpersonal, and textual meaning (refer to Table 1).

Table 1. Linguistic Analysis Rubric (Adapted from Janks, 2005)

Linguistic Features	Explanation
Transitivity	▪ Material process ▪ Relational processes ▪ Mental processes ▪ Verbal processes ▪ Behavioural processes ▪ Existential processes
Voice	▪ Active voice is used when participants are doers ▪ Passive voice is used when participants are "done to's," which also allows for the deletion of the agent
Mood	▪ Is the main clause in a statement, question, offer, or command?
Modality	▪ Degrees of uncertainty is created by Modals (may, might, could, will) and Adverbs (possibly, certainly, hopefully), and/or tag questions

Table 1 describes the primary characteristics of transitivity, voice, mood, and modality. All four are key factors that enable readers to identify the values and attitudes of writers. In Hallidayan linguistics, transitivity is part of the ideational function. In this function, "the speaker or writer embodies in language his experience of the phenomena of the real word; this includes his experience of the internal world of his own consciousness, his reactions, cognitions, and perceptions, and also his linguistic acts of speaking and understanding" (Fowler, 1991, p. 70). In the Hallidayan perspective, transitivity analysis provides the speaker/writer with the "facility to analyse the same event in different ways" (Fowler, 1991, p. 70).

Modality refers to "the area of meaning that lies between yes and no" (Halliday & Matthiessen, 2004, p. 68). Thompson (2004) links modality to academic writing in that it shows the "degree to which the speaker commits herself to the validity of what she is saying" (p. 69). What this implies more specifically will depend on the writer's knowledge of the content, the requirements of the genre, and the writer's linguistic competence.

In this study, the lexico-grammatical analysis of the task prompts will provide an insight into the implicit demands placed on students. The analysis will also reveal instructor's expectations and extrapolate from this the skills that student writers need in order to carry out the task and write up the research paper.

Macro-analysis of the generic structure of task prompts

The analysis shows that there are five rhetorical stages (henceforth "Moves") in these task prompts. The first Move provides the title of the topic. This is followed by the rationale, or what the instructor hopes the novices will achieve as a result of selecting the prompt. This combination of title and rationale provides the focus of the research and always constitutes the starting point for research task prompts. The third Move describes the cognitive demands of the task. This is followed by a Move in which instructors provide procedural directions for novices. Procedural directions serve as scaffolding for student writers in designing and carrying out the research project. The final Move in task prompts describes assessment expectations. The five Moves are as follow:

Move 1	Background information
Move 2	Overview of task
Move 3	Cognitive demands
Move 4	Procedural directions
Move 5	Assessment expectations

Unlike prompts that primarily serve to test writers' content knowledge and language ability under examination conditions, research paper prompts are designed to test writers' ability to produce extended papers over a period of time. The analysis of research paper task prompts shows that such prompts typically consist of:

- Information about the task
- Several options (possible research topics/tasks) that writers can consider
- Guidance on how to carry out the research project
- Guidance on what to present to the instructor in the final product
- Information highlighting the level of importance of the assessment criteria

These five components of research paper prompts address two of the criteria identified by Horowitz (1986b), which are (a) to display familiarity with a concept and (b) the process of discussing this concept in terms considered appropriate to the argumentative genre. Here, however, familiarity with process refers to students' ability to design and conduct a small-scale study and write up the research paper. The five Moves, [each consisting of sub-Moves - henceforth 'Steps'], which characterize the research paper prompts under study here are described in detail in Table 2.

Table 2. Moves and steps in research paper task prompts

Moves		Steps		
Move 1	Background information		▪	Providing a generic/specific title
Move 2	Overview of task	Step 1	▪	Appealing to the writers on how the task will benefit them
		Step 2	▪	Stating objectives
		Step 3	▪	Advising writers to review relevant literature
Move 3	Cognitive demands	Step 1	▪	Identifying cognitive processes needed to achieve each task requirement
		Step 2	▪	Elaborating on and explaining key terms, providing examples of key concepts, and proposing alternatives
			▪	Emphasizing that ideas need not be original
		Step 3		
Move 4	Procedural demands	Step 1	▪	Proposing possible ways of collecting data
		Step 2	▪	Rationalizing the importance of reviewing relevant literature/collecting data
		Step 3	▪	Elaborating on and explaining key terms, providing examples to key concepts, and proposing several alternatives
		Step 4	▪	Guiding the development of the research paper
Move 5	Assessment expectations		▪	Making explicit reference to how the research paper will be assessed

Based on the analysis of the research paper prompts studied here, the following presents a detailed analysis of the set of Moves likely to be found in university-level research paper prompts.

Move 1: *Background information*
Though this Move is present in all the prompts examined in this study, it may be an optional Move, especially under conditions of spatial constraints. It consists of the title of the prompt, which can be either highly specific and topic-focused or more abstract and metaphorical and merely intended to set the tone and hint at an area of study.

Move 2: *Overview of task*
This is an obligatory Move in which the instructor states the objectives of the task and summarizes its key requirements. It is also likely to consist of a description of how the task will benefit writers if they choose to carry it out. Within this Move, Step 1: *Appealing to the Writer on How the Task will Benefit Them* is a quasi-obligatory step designed to make the task more meaningful and motivating for the writer.

Move 3: *Cognitive demands*
Move 3 constitutes a key aspect of the task prompt as it provides the student writers with a framework for meeting the instructors' expectations. The function of this Move is to elaborate on the requirements of the task. The level of scaffolding provided by instructors is dependent on the needs of the writers. An optional part of this Move is to reassure writers that they need not create anything original.

Move 4: *Procedural demands*
This Move provides suggestions on how the task should be carried out and/or the manner in which the research paper should be written. Horowitz (1986b) notes that task prompts in different disciplines have evolved and increasingly include suggestions on the rhetorical organization of the paper, thus reflecting and highlighting a degree of cross-disciplinary variation that novices may not be aware of. Step 4: *Guiding the Development of the Research Paper* is included in the task prompts analysed in this study to serve this purpose.

Move 5: *Assessment expectations*
Though all Moves are implicitly related to assessment expectations, this optional Move makes explicit reference to how the paper will be assessed. It emphasizes the fact that equal attention should be given to each section.

Table 3 presents an example of the Moves and Steps structure, in a task prompt entitled "Far Horizons". The structural characteristics found in this prompt are typical of the other writing prompts analysed in this study (refer to Table 3 and Appendix A).

Table 3. Rhetorical structure of a task prompt

Move	Role and Function	Task Prompt
Move 1 Background information	Stating focus of topic	▪ Far Horizons
Move 2 Overview of task	Providing objectives	▪ This project task provides you with the opportunity to observe an aspect of society that is evolving and to predict further development in the near future
Move 3 Cognitive Demands	Providing a linear description of mental processes involved in completing the task	▪ Describe and analyse an aspect of society (e.g., the arts, lifestyle, science, technology) that is evolving ▪ Use this analysis to predict how this aspect could develop in ten years' time ▪ Based on this prediction, propose a course of action that could be taken to change the direction of this development for the benefit of society
Move 4 Procedural Demands	Providing a linear description of processes involved in collecting data and completing the task	▪ Gather information from the real world (e.g., via experiments, interviews, observations, surveys) ▪ Use this information to support your ideas (e.g., choice of topic, observation of development, prediction of impact)
Move 5 Assessment Expectations	▪ Warning writers of consequences ▪ Making explicit reference to assessment ▪ Indicating that all parts are equally important in the assessment	▪ Give due consideration to each part of the task and the assessment criteria

Interestingly, the prompts do not explicitly indicate that the task requires searching for sources and that the research paper needs to include citations. This is a "hidden" requirement that novices need to be aware of in order to succeed. It would of course be wise for instructors to include this requirement in their prompt to guide novices.

The inclusion under Move 5 of the statement "Give due consideration to each part of the task and the task assessment criteria" is the only explicit reference to assessment provided in the task prompt. It serves an optional function, indicating that cognitive processes and procedural knowledge are equally important in the assessment.

Swales (1982) discouraged making a distinction between primary and secondary prompts in order to avoid typecasting secondary prompts as less important as primary and secondary components of prompts serve different purposes. In this study, a distinction is instead made between "what is required of the task" (Move 3: Cognitive demands) and "how the student writers may be expected to accomplish the task" (Move 4: Procedural demands). Secondary prompts, in this case, would refer to other, less peripheral information provided in the prompts to reduce the complexity of the prompt for the writers.

Yet, based on feedback from the student writers themselves, it was evident that they perceived the cognitive demands of the task as more important. At the start, there was a tacit understanding among them that the cognitive demands of the task were more important and hence needed to be given more attention than the methodological components (Procedural directions) of the research project. This was particularly evident from the number of references made to the cognitive demands of the task in the first student reflections. However, midway through and toward the end of the project, it became increasingly clear that students were much more aware and appreciative of the procedural directions provided in the prompts. Even more surprisingly, there was no explicit requirement in the prompts that the research papers needed to include a review of relevant literature on the topic. This requirement is presumably implied as it is conventional for research papers to include a systematic examination of literature in the field of study (presumably under Move 2: Overview of the task). In the event, many student writers did include a review of the literature in their research paper in response to the injunction: "Describe and analyse an aspect of society that is evolving" (or equivalent Move 3 in other prompts). A review of the literature also appears to be implied in Move 4: Procedural demands, where writers are asked to "gather information from the real world." Needless to say, as research paper writing is a particularly daunting challenge for novices, it is essential that when instructors expect to read a review of the relevant literature, that expectation should be clearly stated.

Micro-analysis of the task prompts

While a macro analysis of the task prompts provides an understanding of the overall generic structure of the prompts, a detailed analysis of the language used in the prompts should lead to a deeper linguistic understanding of the nature of the prompts and help identify whether there is a relationship between the way the prompts are worded, the student writers' own understanding of these wordings, and the texts produced.

A lexico-grammatical analysis of processes and related noun phrases reveals associated participant roles and expected courses of action (Eggins, 2000). Janks (2005) proposes that a systematic rubric for text analysis based on Halliday's (1985) model of ideational, interpersonal, and textual meaning be used to study task expectations. The processes and the related noun phrases used in the prompts under study here were thus examined in order to uncover the type of sub-task that was assigned to writers and to extrapolate task demands from these (refer to Table 4).

Table 4. Transitivity analysis of a question prompt

Processes		Associated Noun Phrases	Discussion
Objectives			
Material	Provide	… you with the opportunity	*Hedging*
Mental	Observe	… an aspect of society that is evolving	Seeks to assure writers that completing the project is beneficial to them
Mental	Predict	… further development in the near future	
Task Descriptions			
Verbal	Describe	… an aspect of society (e.g., the arts, lifestyle, science, technology) [that is evolving]	*Command/Imperative* Sign-posting for development of ideas by providing examples to guide writers
Mental	Analyse	… an aspect of society (e.g., the arts, lifestyle, science, technology) [that is evolving]	*Command/Imperative* Sign-posting for development of ideas by providing examples to guide writers
Behavioural	Use	… this analysis	*Command/Imperative* Refers to a previous process
Mental	Predict	… how this aspect could develop in ten years' time	*Hedging* Use of modality suggesting that the proposal should be practical, and not necessarily representative of writing by an expert
Mental	Base[d]	… on this prediction	*Command/Imperative* Refers to a previous process
Mental	Propose	… a course of action [that could be taken to change the direction of this development for the benefit of society]	*Hedging* Use of modality to indicate that the proposal need not be an original or potential solution, merely a sensible one
Material	Gather	… information from the real world (e.g., via experiments, interviews, observations, surveys)	*Command/Imperative* Sign-posting to guide the research process by providing examples
Material	Use	… this information to support your ideas (e.g., choice of topic, observation of development, prediction of impact)	*Command/Imperative* Sign-posting for the development of the written report
Mental	Give	… due consideration to each part of the task and the assessment criteria	*Command/Imperative* Emphasizing the need to meet all task requirements

Types and frequency of instructional verbs

Swales (1982) questions the benefit of conducting an enumeration of instructional verbs and their key complements as this can produce a long list of lexical items with misleading results since the same verb can require writers to do different things. He cautions that the function of instructional verbs should be carefully studied. However, in-depth analysis of these verbs should be preceded by a descriptive analysis of their types and frequency.

Table 5 indicates that the prompts were made up largely of mental processes requiring writers to exhibit critical thinking capabilities and of verbal processes requiring them to present their research findings and processes to their audience. There were comparatively fewer material processes providing guidance to writers on how to conduct or write up the research.

Table 5. Frequency of instructional verbs

Transitivity	Instructional verb	Frequency
Mental processes	Identify	11
	Evaluate	6
	Analyse	5
	Critically evaluate, Plan	4
	Consider	3
	Examine	2
	Predict, Develop, Select, Compare, Make a reasoned prediction	1
Verbal processes	Describe	10
	Suggest	8
	Explain, Propose	6
	Discuss	4
	Show, State	2
	Put forward, Give reasons	1
Material processes	Draw up	2
	Research its application, Devise	1

As can be seen from Table 5, there was a strong emphasis on cognitive processes (e.g., analysing, predicting, evaluating), which is another archetypal feature of academic task prompts. The use of these verbs also indicates that writers are expected (albeit implicitly) to exhibit in-depth knowledge of secondary data (gathered through their readings) and the ability to analyse primary data.

Mental and verbal processes

The language used in the prompts consists largely of instructions given to student writers and reveals more or less overtly the less powerful position occupied by these writers, so much so that the instructor is at liberty to demand through the use imperatives that writers display (among other qualities) critical literacy skills, as data on the four most prevalent instructional verbs in the task prompts - namely *Identify*, *Evaluate*, *Describe,* and *Suggest* - make clear (refer to Table 6).

Table 6. Primary role and function of mental and verbal processes

Transitivity	Instructional Verbs	Examples
Mental	Identify	▪ **Identify** a significant event or series of events ▪ **Identify** and explain the needs of two groups of people who can work together to benefit themselves and others … ▪ **Identify** an aspect of nature and describe its characteristics
	Evaluate	▪ …to **evaluate** its importance to the human condition ▪ Critically **evaluate** the possible impact of the plan on this group of people and on other areas …
Verbal	Describe	▪ **Describe** a phenomenon/trend/observation … ▪ **Describe** and examine a past event or series of events that has occurred in the last one hundred years … ▪ **Describe** how and why society measures or rates an aspect of life which has considerable impact on people …
	Suggest	▪ **Suggest** possible developments/problems in the future in an area and in a region of your choice … ▪ **Suggest** how current practice can be changed to suit the needs of a different group of people … ▪ **Suggest** how the momentum of this development can be maintained …

Overall, the frequency of mental processes in the prompts under study here is broadly comparable to that reported in Swales' (1982) study of 143 examination prompts, with *Identify* being by far the most commonly-used mental verb in the present study. However, it should be noted that this pattern need not be generalizable. A database consisting of a mix of in-class and out-of-class assignment prompts will likely contain a higher proportion of verbs referring to mental processes, than will one consisting exclusively of in-class examination prompts, since prompts referring to mental processes will imply greater cognitive as well as logistical complexity than can be handled in the relatively short time available for an in-class assignment.

Interestingly, Bridgeman and Carlson's (1984) study of university task prompts from 190 university departments revealed that *Compare and Contrast* mental processes were most commonly required by instructors in out-of-class papers. This is contrary to the findings of the current study, where *Compare* appeared only once in the database. An explanation for this discrepancy may be found in Bridgeman and Carlson's study, which suggests that as *Compare and Contrast* prompts resulted in papers with a relatively high level of personal involvement, this prompt would not likely be part of a research assignment reporting an objective study.

With regard to verbal processes, the distribution found in this study is again broadly comparable to that reported by Swales (1982), in which *Describe* was the most common verb type in university examination prompts, followed by *Explain*, though in this case, the prompt was found in out-of-class assignments. The only exception to this trend is the frequency of *Discuss*, which occurs frequently in Swales' study despite being identified as being more cognitively challenging than other verbal processes.

Material processes

Overall, mental processes tended to occur in the first part of the prompts, in contrast to material processes, which tended to appear in the second part of the prompt. Material verbs indicate the specific expectations of the task, normally including conducting a thorough literature review before carrying out some background fieldwork. This also implies that the data collection stage is not as important as the analysis of the data. However, this is a misleading impression as data collection needs a great deal of preparatory thought over the choice of data collection instruments as well as careful execution.

Material processes were also used by instructors to guide writers through procedural directions and to make reference to assessment criteria described in Table 7.

Table 7. Primary roles and functions of material processes

Transitivity	Role	Function	Instructional Verb
Material	Procedural: Literature review	Review the literature	▪ …to **research** the application of a concept/theory across subjects
	Procedural: Data collection	Collect primary data	▪ You are encouraged to **gather** information from the real world
		Validate the hypothesis	▪ **Gather** information from the real world <u>to verify your description or explanation</u>
			▪ **Gather** information from the real world. ▪ **Use** this information <u>to support your ideas</u> ▪ **Gather** information from suitable sources <u>to generate</u> and <u>substantiate</u> your own findings and suggestions
		Provide support for the proposal	▪ **Gather** the information from the real world <u>to assist you in the project</u>
	Assessment	Make explicit reference to assessment	▪ You should **give** due consideration to each part of the task and the assessment criteria ▪ **Give** due consideration to each part of the task and the assessment criteria

In this database, writers are instructed to complete the task by collecting data from "the real world" and to use that information to support their research. However, note that this phrase was replaced by "suitable sources" in the later prompts, the former implying more directly that student writers are expected to engage in field work or in gathering primary data.

Elaboration

The elaboration of key ideas in task prompts provides a further glimpse into instructors' expectations regarding the content of the task. Potentially, these elaborations enhance the clarity of the prompts by:
  ▪ Using alternative expressions and phrases to refer to similar aspects of the task;

- Providing possible interpretations of key content words;
- Providing several research possibilities for student writers to choose from; and
- Providing examples to clarify instructors' expectations.

Examples of how task prompts are elaborated are shown in Table 8.

Table 8. Analysis of elaboration features in task prompts

Means	Lexis	Analysis
Words with similar meanings	- concept/theory - event/series of events - existing way of doing things/patterns of behaviour	Alternative expressions/phrases
Examples	- events (e.g., discovery, an achievement, a disaster, a cultural/societal change) - a field of human endeavour (e.g., science, technology, the arts, economics, etc.) - a change (e.g., technological, cultural, conceptual, artistic, etc.)	Possible interpretations of key content words
Research options	- service/product - possible developments/problems - phenomenon/trend or observation - by a group, enterprise, agency, society, or country - by a group of people or an organization of your choice - by planning an event or a series of celebratory activities	Possible areas novice writers could focus on Expands the scope of research possibilities for novice writers

Horowitz (1986a) suggests that instructors elaborate on the content and rhetorical organization of the research papers because this is a conceptually difficult step in understanding the prompt. However, Horowitz also comments that given the major role that the nature and content of the prompt plays in determining how the writer will carry out the writing task, elaboration in task prompts may result in controlled writing that will make it easier for instructors to assess the paper but will also result in papers that are similar in nature to one another.

Modality

Modality analysis allows researchers to understand interpersonal relationships in the text (Eggins, 2000). In the task prompts considered in this study, modality is used to indicate probability, frequency, and usuality (refer to Table 9).

Table 9. Modality analysis

Modality	Prompt	Analysis
Obligation	…the project task asks you to show… …this project task encourages you to devise a plan…	Indicates unbalanced relationship between instructor and writers
Probability	…how the impact of the change can be drawn to the attention of the general public	Instructors indicate judgment as to the likelihood or probability of writers being able to accomplish/predict this
	…how the life and work of your ground breaker might be suitably showcased…	Allows writers to speculate
	…how the momentum of this development could be maintained…	Provides a means for researchers to write as novices
Usuality	… that have persisted until the present…	Writers are prompted to study a common phenomenon or practice

The types of process verbs discussed earlier are often linked to modality choices. For example, a question prompt can require writers through the use of imperative statements to undertake a number of mental and material processes in order to complete the task.

The task prompts in this study are characterized by several statements stating obligations that are typical of instructions given to writers. These statements of obligation serve to provide clear parameters for the student writers by providing them with close guidance on the requirements of the research paper format.

The second most prevalent type of modality used in the task prompts is probability, which indicates that any finding or idea proposed need not be an original or potential solution but that it merely needs to be a sensible one. This sets a reassuring tone for student academic writers still very much on the periphery of academia and allows them to engage in academic writing more comfortably as novices rather than as experts writing for their peers. However, this statement may also undermine confidence building in the writers by appearing to assume that they are not capable of proposing anything innovative or substantial.

The use of modals indicates the "implicit judgment of the speaker" (Eggins, 1994, p. 180). Thus the use of both probability and usuality modals in these prompts suggests that instructors assume that writers need a great deal of guidance to achieve their objectives. However, this need not be seen as a negative feature of these prompts as instructors' use of obligation, probability, and usuality also aims to scaffold writers and to empower them to achieve their goal of carrying out and writing up the research.

Student writers' perceptions

Although the initial macro analysis of the task prompts is crucial in helping both researchers and instructors understand the rhetorical nature of the university research paper, in depth-understanding of the process of acquiring the skills needed to carry out such a task successfully also requires a detailed examination of students' understanding of writing task prompts and the acquisition of writing skills.

Moreover, however richly layered a textual analysis of task prompts may be, it will only provide one dimension of the research writing process. It is therefore important to document the student writers' own beliefs and understanding of the task prompts as this will benefit future writing task design and EAP curriculum development.

Understanding the rhetorical structure of research papers

Returning first to the rhetorical structure of the papers under consideration in this study, 20 out of 24 student writers seem to regard mental processes as more challenging than verbal processes, which require them to merely describe their findings:

Hazal: *I chose the straightforward question that required me to suggest something as others required more thinking skills.* (reflection)

Rishi: *I did not understand how to devise, how to critically evaluate, or even how to make a reasoned prediction. So I picked a question where I clearly understood the requirements.* (reflection)

For their part, verbal processes such as *Describe* or S*uggest,* which function as signposts explicitly indicating what should be included in the research paper, were generally considered more manageable by the student writers than were those that required them to analyse information or data. This is surprising since to meet the requirements of, for example, the prompt asking them to "suggest how current practices can be changed to suit the needs of a different group of people," writers would first need to identify current practices before critically evaluating the needs of a different group of people. This shows that the choice of instructional verbs by instructors may well affect task selection depending how it is perceived by the writers. It also indicates that to minimize anxiety levels among student writers, instructors should make greater use of verbal processes in task prompts as opposed to mental processes.

Only one student writer found that not being required to collect field work data was beneficial:

Mariam: *The task I selected this year did not need any surveys or interviews. In fact, it requires extensive research and a deep understanding of the question. Being a history student, I felt that the topic I picked would be a breeze.* (reflection)

Although Mariam commented that she felt she did not need to collect any secondary data, she did include one interview in her research project, though as an afterthought:

Mariam: *I did not think a survey or an interview was necessary. However after a brainstorming session I decided to interview my classmates as well as history teachers to make my project seem more credible.* (reflection)

Not being required to collect field data provides student writers with an opportunity to focus on secondary data. However, this can be a double-edged sword since there was a tacit understanding among student writers that if they rely entirely on secondary data they are not likely to do as well as their peers who chose both modes of data collection:

Yuching: *I wanted to include interviews and surveys as I wanted to do well. Otherwise it will look like I did not do enough work.* (reflection)

Bavani: *I have emailed the organization that I want to have an interview with them but so far I have received only one reply. I haven't get a reply from the major institution… So maybe getting an interview with them will be harder but I'll try to do something and get the interview with them. I have to get an interview to make the project better.* (reflection)

Student writers' belief that the inclusion of primary data will result in academic success needs to be examined further from a pedagogical standpoint as such beliefs may well result in writers engaging in field work for the sake of doing so and not because the task requires it. A related risk is that student writers may place greater emphasis on the mere collection of data than on the cognitively more demanding analysis of those data, which should be more important in determining the quality of the research paper.

Understanding task requirements

Recall that the task prompts did not stipulate the specific content of the research project. Instead, they were written in a broad manner to accommodate a wide range of student writers. In attempting to find a focus for the research, novices generally chose to define prompt items such as "Natural forces" or "To be or not to be" (see Appendix) in terms of themes that were familiar to them or that they had a prior interest in as well as in terms of topics that they were sure they would be able to handle successfully. Thus the student writers had to exercise considerable initiative and individual judgment in making their initial selection.

Familiarity with the topic: Student writers indicated that the task was also deemed to be easy when they had some background knowledge of the research topic:

Sruti: *I find it easier doing the topic that I'm comfortable with because I did a lot of environmental projects when I was in secondary school so I was in a recycling team in secondary school.* (reflection)

Wati: *I feel that this question relates closely to my life and surrounding thus enabling me to do my research and observation easily.* (reflection)

One student writer commented that she chose to define the prompt item "Natural forces" in terms of the topics that were currently being described in the media and that she felt were familiar enough to her that she could manage on her own:

Nora: *Natural forces like, you know, is very close to you. You hear about natural stuff all the day. You read about it in the papers and all. It's like matters very very close to heart. Other than something to do with technology and stuff then maybe I wouldn't have been able to do it. Maybe I would have preferred the group work then.* (interview)

Nora's comment that she would not embark on an unfamiliar topic without the support of a group is interesting in that it lends weight to the observation that even when conducting an individual research project, student writers value collaboration highly and opt to form informal groups spontaneously to support one another in carrying out their individual research project and even in writing them up.

Prior content knowledge: Some student writers reported, during the pair interview, choosing their research question carefully to ensure that it was a task that they had some prior content knowledge of and one on which they would be able to obtain both primary and secondary data:

Yagna: *The question was much easier and clearer to understand than the other questions. The question brought out my interest of nature and nature was something that I like to work on. Some of the questions were harder than this question. My interest on nature was the reason for me to choose this question over the other.* (reflection)

Bhavani: *Some tasks are difficult, I thought. Because mine I found it relatively easy because it has expected me to do something that I do in my daily life.*

Researcher: Could you elaborate?

Bhavani: *Like for me, I'm supposed to create a difference in someone's life because it happens everywhere because even if I'm going to donate some money to someone I'll be doing it every day in my life. So the task is relatively easier for me but it's just that I've to do it in a different way like in a larger scale to help larger group of people. So I found the title easier for me. But some topics like the culture will be harder because not all cultures will be easy to get information about. There will be some cultures that there are no… not much information. There will be information but less information. So for my topic I find that even though I have a lot of problems getting resources because mine is mainly about MINDS children, it's kept confidential so but still I managed to get information to proceed with my project.* (interview)

As with most of the quotes and excerpts in this section, it is interesting to note that although the task prompts could be interpreted in many ways, novices chose to define them in terms of a topic that they had previously worked on. Unfamiliar content areas were generally not attempted as they were considered difficult and perhaps too risky.

Personal interest in the topic: The task was also deemed manageable by the student writers when it was one that interested them on a personal level or that was a current "hot topic" among their peers, such as music piracy:

Nur: *As for me it is far horizons whereby I have to find what is actually happening right now, evolving right now. Yah I got to predict what's going to happen in ten years' time. Yah so for me, I focused on music piracy which is, is very common right now yah. It's common 'cause everybody is doing it. As it got download music from the computer and the internet...* (interview)

Challenging nature of the topic: None of the student writers reported making seemingly frivolous choices in selecting a research task. Although a few commented that the title of the task itself had prompted their choice, this was rarely the only deciding factor. A closer examination of student writers' perceptions reveals that there were other, more valid motivations such as wanting to take on a truly challenging task:

Yuling: *I like the title. "To be or not to be." 'Cos it's like I'm in a dilemma between two which both maybe equally important so I thought I can challenge myself to do some decision or how to solve this problem. And to look up what causes these problems.* (interview)

Although this purpose of challenge was an exception rather than the norm among student writers, this sentiment was echoed by other writers, who also described wanting to rise to the challenge of researching a topic they were not familiar with but whose novelty appealed to them:
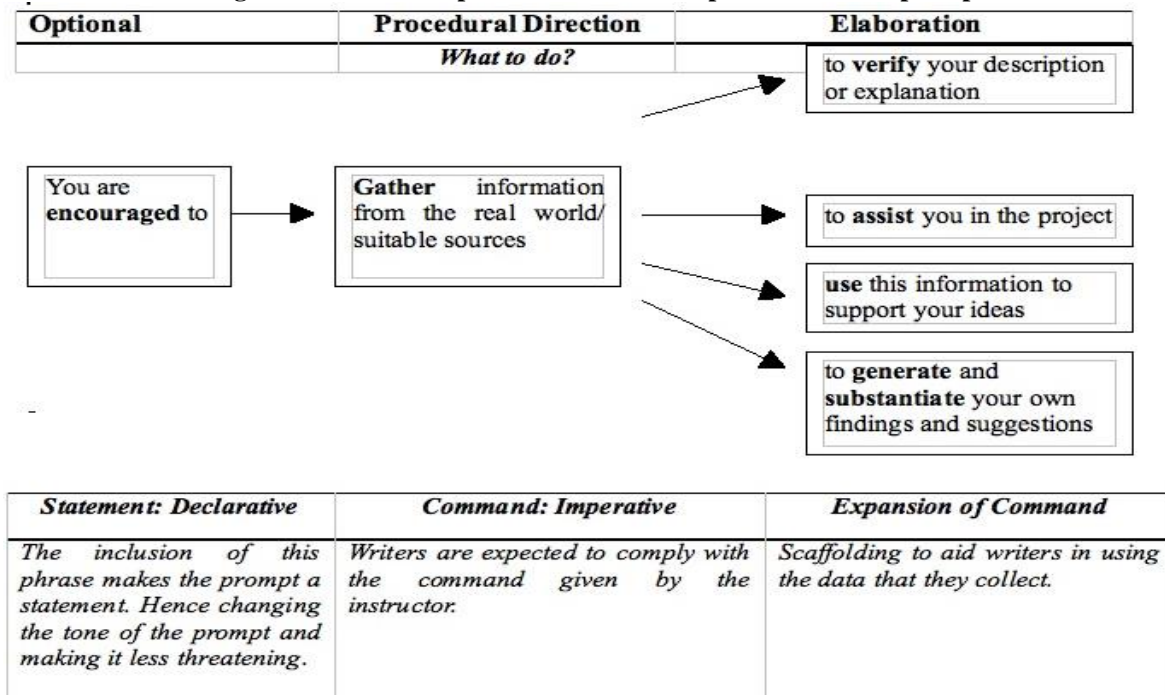
Rishi:	*I like simple yet challenging tasks. I think I am a creative person and someone who always likes to try something new and challenging. I believe I can excel in this task as it is something which is straight forward and give the mind the challenge it yearns for.* (reflection)
Jamila:	*It requires the prediction of the future. So I think it's kind of challenging for us to think something. Ya. It's like a prediction.*
Researcher:	You found it more challenging than others? Why?
Jamila:	*Ya. The rest doesn't really appeal.*
Researcher	Why didn't the rest appeal to you?
Jamila:	*At first I did history. Then I was looking at it, looking at it, looking at it. This was much broader for me. And I could relate to this thing.* (interview)

Jamila also commented that for a topic to appeal to her, she would have to be able to balance the novelty and challenge factor with being able to draw on some form of prior knowledge about it.

Student research writing and power dynamics

In stressing the importance of being familiar with a topic, to work within their comfort zone, as it were, many of the student writers implicitly suggest that the process of confidence building has only just begun and that an important aspect of the sociocognitive context of student academic writing is likely to be a structural imbalance in power relations connecting the student writers and their instructors. At first glance, the imperatives typically found in task prompts function both as a form of close guidance for writers and as a framework that writers should adhere to in order to complete the tasks. This dual nature can be represented as shown in Figure 1.

Figure 1. Function of procedural directions provided in task prompts

Optional	Procedural Direction	Elaboration
	What to do?	to **verify** your description or explanation
You are **encouraged** to	**Gather** information from the real world/ suitable sources	to **assist** you in the project
		use this information to support your ideas
		to **generate** and **substantiate** your own findings and suggestions

Statement: Declarative	*Command: Imperative*	*Expansion of Command*
The inclusion of this phrase makes the prompt a statement. Hence changing the tone of the prompt and making it less threatening.	*Writers are expected to comply with the command given by the instructor.*	*Scaffolding to aid writers in using the data that they collect.*

Note that the potentially authoritarian nature of these instructions can in principle be softened through hedging, as in the use of the declarative (e.g., *you are encouraged to...*). However, this form of hedging was only used once in the database, whereas the prompt writers made overwhelming use of imperative commands in guiding the student writers. In this sense, university writing prompts appear to perpetuate the traditional practice of signalling a strongly unequal instructor-writer relationship.

Furthermore, as shown in Figure 1, the commands used in the task prompts not only direct the student writers explicitly but also restrict their options as they outline what student writers should do with the information they have gathered (refer to Table 10).

Table 10. Expression of instructor's power through the use of imperatives

Modality	Examples	Analysis
Command	▪ Explain the concept/theory ▪ Research its application in at least two subjects ▪ Investigate a phenomenon, a trend, or an observation ▪ Explore a dilemma	Writers are instructed to complete their tasks following step-by-step instructions

In brief, the use of imperative modality indicates an unbalanced power relationship between the instructor and novice, which is likely to prompt student writers to take on the very persona of a student writer and hence of an outsider or peripheral member of the research area. Rishi, for instance, commented during the interview that he "broke down the requirements of the task prompt as a checklist" and organized his research paper closely to the structure of the task prompts. This mind-set may hinder rather than encourage the development of these student writers as increasingly confident and self-reliant analysts.

Conclusion

The overall impression created by an examination of the student's own reactions is that, despite the difficulties faced, the novelty of being student researchers with sufficient autonomy to embark on their own research resonates with the writers' natural enthusiasm for extending their knowledge and in helping them to overcome their hesitations. The difficulties that they face can be addressed by addressing the cognitive demands of the prompt, scaffolding students' understanding of the task requirements in the classroom and by giving them greater autonomy in the area of research focus.

In terms of addressing the cognitive demands, in general, student writers indicated that they found some of the instructional wordings challenging and the scaffolding provided in the prompts very useful in carrying out the research and in writing it up. Some writers indicated that they would have preferred to have more guidance on the more cognitively challenging prompts (especially in the area of mental processes), which the prompts generally did not provide. Most likely, student writers were unsure of how to shape the research paper when more mental processes were used compared with relatively less cognitively demanding verbal or material processes. However, the evidence suggests that the writing of the research papers was scaffolded in the guidelines (including the use of elaboration in the prompts) provided to the students. One such recommendation is that EAP instructors need to demonstrate in class how tasks containing instructional verbs reflecting mental processes may be attempted by making it clear to students how to 'critically evaluate' or 'analyse'. This will enable student researchers and writers to develop a better understanding of task requirements.

In relation to scaffolding the research and writing process, the findings indicate that students were more confident working with topics that they were familiar with and that they relied on the instructional verbs to guide their research and writing process. This is not to suggest that writers will for the most part know how to carry out the research task or that explicit guidance on what doing research and analysing data entails is superfluous or constitutes a barrier to writer development. Nor does it guarantee that writers will know how to present the findings to the reader. Essentially, "the student has to learn to speak our (academic) language, to speak as we do, to try on the peculiar ways of knowing, selecting, evaluating, reporting, concluding, and arguing that define our community" (Bartholomae, 1985, p. 134).

As student writers, they are generally not privy to other research discourse community activities nor would they be ready to engage in these activities in a meaningful manner at this stage. However, it is essential that they begin to engage in some of the activities to understand institutional expectations and acquire knowledge of appropriate genres. A range of activities such as poster presentations of research projects, conference presentations, writing clinics, and opportunities to engage with more experienced writers and researchers could be designed for these student writers. This would provide them with a window into the academic world that they wish to emulate in their writing and encourage them to work on unfamiliar topics in the future.

Where providing room for negotiation in research focus is concerned, the examination of task prompts carried out in this study reveals that despite the prescriptive tone of many of the instructions (use of imperatives, modality of obligation, etc.) and the heavy cognitive demands made on student writers requiring them to identify, analyse, and evaluate information, propose solutions, and write up the result as a coherent whole, the prompts do

not appear to alienate these student writers, who were on the whole receptive to the requirements specified by the instructors.

Evidently, even in prompts characterized by a high frequency of directives and specific instructions on how to proceed, there is room for negotiated meaning-making as well as opportunities for writers to exhibit their own innovativeness by selecting appropriate topics on their own terms. In order to support this, it is advisable for EAP instructors to set tasks that are related to the students' discipline or use generic multidisciplinary prompts as those in this study (refer to the Appendix) to give students the autonomy to respond as content experts.

Learning how to write a research paper requires student writers to conduct and present to an instructor a piece of research in a largely canonical format. Yet, this study supports earlier studies in confirming that the rhetorical demands of task prompts tend not to be immediately evident in the prompts, thus creating an additional challenge for the student writers. A key pedagogical implication is that procedural information and advice by instructors will facilitate student writers' understanding of socio-cognitive demands of the research task and the gradual acquisition of the necessary academic skills. Further research could focus specifically on the impact of these implicit demands on students writing by examining students' responses to various prompts as well as document their development as writers.

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Appendix: Some of the multidisciplinary prompts used in this study

Prompt 1: Synergy

This group task encourages you to study real life situations and suggest strategies for groups to work together in a way that would benefit the groups themselves and others.

- Study the needs of two or more groups of people and organizations or countries and propose a plan for them to work together for mutual gain and for the benefit of others.
- You are to identify and explain clearly the needs of two or more groups of people, organizations, or countries that could potentially work together
- Based on these needs, you are to identify areas for them to work together and propose a plan for these groups to cooperate for their mutual benefit. Also you are to discuss how a third party would gain from this cooperation.
- You are to critically evaluate the impact of your plan on all three parties concerned.
- You are to gather information from the real world (e.g., via experiment, interview, observation, survey) to assist you in this project.
- You should give due consideration to each part of the task and the criteria for assessment.

Prompt 2: Far Horizons

This project task provides you with the opportunity to observe an aspect of society that is evolving and to predict further development in the near future.

- Describe and analyse an aspect of society (e.g., the arts, lifestyle, science, technology) that is evolving.
- Use this analysis to predict how this aspect could develop in the next 10 years' time.
- Based on this prediction, propose a course of action that could be taken to change the direction of this development for the benefit of society.
- Gather information from the real world (e.g., via experiment, interview, observation, survey). Use this information to support your ideas (e.g., choice of topic, observation of development, prediction of impact).
- Give due consideration to each part of the task and the assessment criteria.

Prompt 3: Natural Forces

The project task allows you to show how an understanding of nature may be used to create an effect on the community.

- Identify any aspect of nature (e.g., ecology, cosmology, the physical elements, naturally occurring events etc.) and describe its characteristics.
- Suggest how these characteristics may be used to develop a product or service that will have an effect on the community (e.g., by drawing up a proposal, designing a program, planning an activity/series of activities etc.)

Prompt 4: To Be or Not to Be

This project task develops your awareness of a dilemma which presently faces your society, country or the world. It also encourages you think creatively and critically when suggesting realistic and relevant resolutions to the dilemma. Based on evidence and your own investigations, explore a dilemma which presently faces a group of people of your choice. Examine its implications and propose a plan to resolve this dilemma.

- You are to describe and explain clearly a dilemma that presently faces a group of people of your choice.
- You should consider the implications (e.g., ethical, social, political or scientific implications) and propose a plan to resolve this dilemma.
- You are to gather information from the real world (e.g., via literature review, survey, observation, interview) to assist you in this project.
- You are to critically evaluate the possible impact of your plan on this group of people and on other areas (e.g., environment, society, individuals).
- You should give due consideration to each part of the task.