

CHAPTER 5

Results and Discussion 11

5.1 Introduction

In this chapter I will present the results of the analysis on the various sections of the RAs, specifically on the Introduction, Methods, Results, Discussion and Conclusion sections. The description of each of these sections will focus on the rhetorical moves and the constituent steps that make up each of these moves and a discussion of the findings in light of what is already known in this area of investigation.

5.2 Analysis and Discussion of move structure of Introductions in research articles in educational psychology, environmental psychology, and economic psychology

The results of the analysis on the frequency and distribution of moves in Introductions across the three disciplines is given in Table 5.1 below.

Twenty eight introductions (93%) in EdP contained the three moves proposed in the Swales' (2004) model. Two introductions in the corpus did not have a clearly demarcated Move 2. Except for one introduction which had the Move 1-2-3 sequence in which the writers first establish the territory (i.e. research topic) in Move 1, then establish the niche in Move 2, and end their introductions by presenting their work in Move 3, the remaining twenty nine introductions deviate significantly from the model in terms of the sequential order of the moves. These results clearly show that the majority of writers in EdP research do not employ the move structure M1-M2-M3. The rhetorical structure of the Introductions in this corpus showed different variations of move cycles, ranging from a maximum of twenty nine moves to a minimum of three moves, with

introductions containing fourteen moves falling in the intermediate range. Therefore, a predominant pattern of move cycles was not observed, meaning that there appears to be no generally agreed pattern in the organisation of RA introductions in EdP.

Table 5. 1 : Frequency of Moves/Steps in Introduction sections of RAs across the three disciplines

Moves	Steps	Frequency of Moves/Steps			No. of articles used			%		
		EdP	EnP	EcP	EdP	EnP	EcP	EdP	EnP	EcP
Move 1	Establishing a territory (citations obligatory) <i>Topic generalization of increasing specificity</i>				30	30	30	100	100	100
Move 2	Establishing a niche (citations possible) <i>Step 1A: Indicating a gap</i>	89	58	56	28	30	28	93	100	93
	Or <i>Step 1B: Adding to what is known</i>	2	0	5	2	0	5	7	0	17
	<i>Step 2 : Presenting positive justification</i>	14	10	7	14	10	7	47	33	23
Move 3	Presenting the present work (citations possible) <i>Step 1 Announcing present research descriptively and/or purposively</i>	88	64	57	29	28	28	97	93	93
	<i>Step 2: Presenting RQs and hypothesis</i>	82	48	63	29	23	26	97	77	87
	<i>Step 3 Definitional clarifications</i>	33	19	13	13	12	8	43	40	27
	<i>Step 4: Summarizing methods</i>	50	31	23	23	18	15	77	60	50
	<i>Step 5: Announcing principal outcomes</i>	0	0	2	0	0	2	0	0	7
	<i>Step 6 Stating the value of the present research</i>	42	20	15	22	15	10	73	50	33
	<i>Step 7 Outlining the structure of the paper</i>	1	5	6	1	5	6	3	17	20

All the introductions in the EnP corpus contained the three moves proposed by the Swales (2004) model. No introduction with the M1-M2-M3 sequence was found. The Introductions deviate significantly from the model in terms of the sequential order of the moves. These results also suggest that the majority of writers in EnP research do not employ the move structure M1-M2-M3. The rhetorical structure of the introductions in the EnP corpus also showed different variations of move cycles, ranging from a maximum of eighteen moves to a minimum of four moves, with introductions containing nine moves falling in the intermediate range. A predominant pattern of move

cycles was also not observed, that is, there appears to be no generally agreed pattern in the organisation of RA introductions in EnP.

Twenty eight introductions (93%) in the EcP corpus contained the three moves proposed by the Swales (2004) model. Two introductions in the corpus did not have a clearly demarcated Move 2. No introduction with the Move 1-2-3 sequence was found. The introductions deviate significantly from the model in terms of the sequential order of the moves. These results also suggest that the majority of writers in EcP research do not employ the move structure M1-M2-M3. Similar to the disciplines discussed above the rhetorical structure of the introductions showed different variations of move cycles, ranging from a maximum of twenty six moves to a minimum of four moves, with introductions containing ten moves falling in the intermediate range. A predominant pattern of move cycles was also not observed in the organisation of RA Introductions in EcP as well.

Since only one introduction in EdP contained the Move 1-2-3 sequence, it is evident that the majority of researchers across these disciplines do not employ the move structure, M1-M2-M3, in writing their introductions. In other words, these writers indeed use much recycling and add rhetorical flourish or elaboration instead of being “straight-shot” (Swales 2004:232).

Deviations of these introductions from the Swales (2004) model lie in the cyclical nature of the moves employed, where moves are repeated in a series of instances throughout the same introduction. The cyclical nature of Moves 1, 2 has also been observed in RA introductions in computer science (Posteguillo, 1999) and the cyclicity of Moves 1, 2 and 3 in, biology (Samraj, 2002), and biochemistry (Kanoksilapatham,

2005). Further, it is noted that the Swales (2004) model provides for the cyclical nature of Moves 1 and 2 but not for the recycling of Moves 1 and 3 which are quite prevalent in the introductions across these three disciplines, which will be highlighted and discussed in the relevant sections below.

Variations are also observed in terms of the number of move cycles employed by the writers in the disciplines. A maximum of 29 moves, a minimum of 3 moves, with introductions containing 14 moves falling in the intermediate range were observed in the EdP corpus. In EnP, there was a maximum of 18 moves, a minimum of 4 moves, with introductions containing 9 moves falling in the intermediate range. The EcP corpus contained a maximum of 26 moves, a minimum of 4 moves, with introductions containing 10 moves falling in the intermediate range. The results suggest that writers in EnP research appear to employ lesser moves in writing their introductions compared to writers in EdP and EcP research, thus showing that there are differences in the structural organisation of RA introductions in these disciplines. These results support previous research, such as that of Crookes (1986) who observed variations in the rhetorical organization in the introductions in hard sciences and biomedical sciences as opposed to social sciences; Swales and Najjar (1987) who found introductions in educational psychology to be longer than introductions in Physics, Holmes (1997) who found variations across the hard sciences and the social sciences, Samraj (2002) who found variations across related disciplines in biology and more recently, Ozturk (2007), where differences in the structural organisation of RA introductions were observed in second language acquisition research and second language writing research, two disciplines of applied linguistics.

5.2.1 Analysis of Move 1 as the opening move in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

In the EdP corpus, Move 1 occurs as the opening move in 26 (87%) (the remaining 4 begin with a Move 3) introductions with a minimum of 24 words to a maximum of 1185 words, with the intermediate range falling in about 240 words and written in a minimum of one paragraph to a maximum of twelve paragraphs. In the EnP corpus, Move 1 occurs as the opening move in 29 (97%) (1 begins with a Move 3) introductions with a minimum of 45 words to a maximum of 1926 words, with the intermediate range falling in about 295 words. This move is placed in a minimum of one paragraph to a maximum of twelve paragraphs. In the EcP corpus, Move 1 occurs as the opening move in 27 (90%)(remaining 3 begin with a Move 3) Introductions with a minimum of 42 words to a maximum of 766 words, with the intermediate range falling in about 255 words. This move is written in a minimum of one paragraph to a maximum of seven paragraphs. The results indicate similarities in the use of Move 1 as the opening move across the three disciplines and that, this move is usually well developed and occupies an important position in the introductions.

Swales (2004), posits that Move 1 which is used to “establish the territory” is realized through “topic generalizations of increasing specificity”. In the corpus, Move 1 is used as the opening move to establish the territory by asserting the importance of the topic being discussed and/or by highlighting the intensity of research in the area concerned. In realizing this move, the level of specificity increases as the discussion of the particular topic of interest proceeds. Given below is a sample from EnP for illustration purposes.

*1 The success of land management programs often depends on adequate public acceptance in the face of conflicting interests and ideologies (R).
2 This effected by the causes and methods of change, the actors involved, the risks, context, available options, perceived viability, aesthetics, and*

trustworthy planning processes (R). 3 While decision processes often revolve around points of law and gamesmanship among activists and interest groups, the viability and durability of management choices is also founded on understanding and gaining general public support, no matter how much choices may be technically justified, legally correct, settled among powerful agents, or supported by meritorious beneficiaries (R). 4 A common example of conflict in forest management involves choices involving timber harvesting versus forest preservation (R), or between clearcutting and other harvest types (R). 5 Recent efforts to address these conflicts have focused on “New Forestry” silvicultural systems (R), which seek to provide harvests while also sustaining ecosystem functions. 6 These retain various amounts and types of green trees and other “ecological legacies” within stands and across the landscape as timber harvests are implemented (R). 7 A seminal, prominent example of conflict over forest management and implementation of New Forestry is found in the public forests of the US Pacific Northwest (R). 8 There, issues of forest health, sustaining habitats, sustaining timber and other resource harvests, reducing fuel loads, and providing amenity values for urban populations are all in complex and lively play. 9 The impact of timber harvesting on ecosystems is a focus of public contention (R). 10 An attempted resolution has been implemented via the Northwest Forest Plan, or NWFP (R). 11 This plan favors silvicultural systems within certain areas that retain green trees, down wood, riparian forests, and other habitat features. 12 Nevertheless, timber yields governed by the NWFP have been much lower than originally intended and often remain controversial, even when proposed within the plan's constraints (R). 13 Perceptions of timber harvesting in the US Pacific Northwest have been largely conceived along a dichotomy between intensive harvesting versus forest preservation without appreciable management (R) 14 M2s1A Little is known about general public perceptions of timber harvests between these extremes....

(EnP 7)

In this introduction Move 1 is made up of about 316 words running through sentences 1 to 13 in three paragraphs. Later in sentence 13 comes Move 2. The restructuring of Move 1 in the Swales (2004) model appears to have eliminated the difficulty of distinguishing topic generalizations from reviews of previous research (the two steps included in the Swales (1990) model) as encountered by Samraj (2002) (although not highlighted in any previous research) as the topic generalizations of increasing specificity step in the present model provides a clear basis for distinguishing Move 1.

5.2.2 Occurrence of Move 1 with Moves 2 and 3 and the constituent steps.

Move 1 with Move 2 Step 1A

Swales (2004) provides for the potential recycling, or iteration of Move 1 and Move 2 Step 1A and Step1B sequences to cater for the presence of such occurrences in previous research (e.g. Crookes,1986; Hopkins & Dudley-Evans,1988; Posteguillo 1999; Samraj, 2002). In the present corpus, it was observed that topic generalizations of increasing specificity is also used to subordinate and aid in the realization of constituent steps in Move 2. For instance, it is used with Move 2 Step 1A as a prelude to indicate the lack of knowledge or weaknesses in previous research in a certain area of investigation, as also noted in Samraj (2002). There were 53 such occurrences in 21 introductions in the EdP corpus, 32 occurrences in 22 introductions in EnP and 19 occurrences in 17 introductions in EcP. Writers in EdP research seem to employ more of this feature than writers in EnP and EcP research. The following are three such examples:

MI Providing authentic and meaningful tasks has also been related to motivation. If students are given choice and tasks are connected to their personal lives,..... M2S1A Unfortunately, not much research has examined the connection between these two areas.

(EdP 7)

MI A widely used measure in research on EC is the New Ecological Paradigm (NEP) revised by (R) from their New Environmental Paradigm (R)..... M2S1A Indeed, there has not been a previous empirical investigation into which of the two scales has better reliability and dimensionality.

(EnP 6)

MI Regret is the most relevant emotion in domain of decision making (R). It stems(R). M2S1A Although it has often been argued that regret is a relevant emotion in the life of investors (R), we do not know of any study actually investigating investors regret.

(EcP 3)

Move 2 Step 1A with Move 1

Move 1 is also used after Move 2 Step 1A to provide support for and or elaborate on the claim that there is indeed a gap in research in a certain area of investigation. There were 30 such occurrences in 22 introductions in the EdP corpus, 14 occurrences in 10 introductions in the EnP corpus and 9 occurrences in 8 introductions in the EcP corpus.

The following are three examples.

M2S1A However much of this research was based on only a limited number of expertise levels: Beginner, Intermediate, Expert. M1 Findings in the medical domain have shown.....

(EdP 1)

M2S1A There is, however, almost no knowledge of the impact of environmental noise in the home environment on children's opportunities for restoration and good sleep quality. Very few studies are available onM1 (R) concluded that children are less prone to awakenings due to aircraft noise than adults, while (R) showed that

(EnP 8)

M2S1 Previous research did not examine framing effects and the risk-taking behavior of individual investors in the context of investment portfolios. M1 A few experimental studies concerning the framing of lottery portfolios have shown that

(EcP 13)

Move 2 Step 2 with Move 1

Move 2 Step 2, “presenting positive justification”, is a new addition in the Swales (2004) model. There were 3 instances of Move 1 following Move 2 Step 2 in both the EdP and the EnP corpus and none in the EcP corpus where it is used to support the justification that is made regarding the necessity to fill the gap in research. It is obvious that this is not a significant feature in the Introductions across the three disciplines. It has to be noted too, that Swales (2004) does not provide for reiteration of Move 1 with Move 2 Step 2. Given below are two examples:

M2S2 *In addition, growth may be dramatic or incremental but it is important to document what can be expected within important developmental periods, such as kindergarten. M1* *Developmental information can be gleaned when growth estimates are included as variables. For example, experimental.....*

(EdP 6)

M2S2 *Therefore, one has to understand both people's attitudes and behavior and develop feasible strategies for sensitizing and motivating people on the needs for developing appropriate environmental practices. M1* *This is important because people look at things through their cultural lenses (R). These aspects help to explain the 'why' and 'why not' of denial and acceptability of proposed sanitation approaches.....*

(EnP 5)

Move 1 with Move 3

Apart from being used to provide the basis for gap indication and to justify the value of filling the gap in research in a particular area of investigation, Move 1 is also used before and after the constituent Steps in Move 3. This propensity for recycling of Moves 1 and 3 is not provided for in the Swales (2004) model.

Move 1 with Move 3 Step 1

There were 23 occurrences in 13 introductions in EdP, where Move 1 is used with Move 3 Step 1, 9 occurrences in 7 EnP introductions and 12 occurrences in 11 EcP introductions. It is used to limit the scope of the study or to state the particular focus of the study in relation to previous studies, to show how the study that is being reported is an extension of previous work, to justify the selection of a particular model, theory or hypothesis in the area, to state the limitation of the present study and to justify the purpose of the study that is being reported as in the following examples.

M1 *In (R) study described above, all participants received the same instructions..... M3S1* *Pertinent to our study are the results from research regarding the effects of task instructions on cognitive and affective aspects of learning. It is not within the aim of this paper to review all the extant research in this area.*

(EdP 2)

MI *The five TP dimensions are past-negative, present-hedonistic, future, past-positive, and present-fatalistic, as described above. (R) major value clusters are self-transcendence, self-enhancement, openness to change, and conservatism. Nonetheless, the.....* **M3S1** *Therefore, five value clusters were examined in this study: self-enhancement, openness to change, conservatism, biospheric, and altruistic.*

(EnP 18)

MI *(R) described psychological mechanisms underlying a phenomenon which Fisher called money illusion (R). It consists in the fact* **M3S1** *Our research focuses on two factors which, according to the corresponding theories, should modify the strength of money illusion. These are: (1) the emotional attachment to a currency, and (2) the level of gains and losses.*

(EcP 10)

MI *Stage models that resemble our approach in analyzing expertise are those of(R). The six-stage model as developed by (R) assumes that an individual goes through six stages of acquiring problem-solving skills, before expertise is acquired.....* **M3S1** *We will mainly discuss the cognitive dimensions knowledge and strategies, the focus of our study.*

(EdP 1)

MI *An advantage of this approach is that judgments on domain satisfaction that are central to determining happiness reflect both subjective factors of the type emphasized in psychology and objective circumstances stressed by economics. Another advantage is that* **M3s1** *It is these four domains – economic, family, health, and work that are studied here.*

(EcP 7)

MI *These hypotheses were upheld by (R) study. Participants in the most supported drawing condition scored higher on free recalls than did participants in the control condition.* **M3S1** *The study reported in this article is a continuation of the research reported by (R).*

(EdP 10)

MI *Of course, this is not the only theory that could serve as a basis for such an assessment. There are many others (R) that might also serve as a basis for augmentation of existing tests. M3S1* *We chose the theory of successful intelligence, in particular, because (a) it has been validated through(b) it has rather clear implications for operationalization in the (c) past studies had shown incremental validity for ...*

(EdP 8)

MI *To legitimize the study of sound symbolism as a possible route to word learning one needs to accept only that there are language-specific*

sound symbols and that this phenomenon is present in most of the world's languages.M3S1 Though sound symbolism has been shown to be present in many of the world's languages this research will bypass the universal, language-specific debate and examine only words from the English language.

(EdP 14)

MI If new approaches to sanitation are to be promoted, we need to understand how to introduce these ideas and motivate people to adopt or adapt them (R). M3S1 In this paper we document the process of introducing new ideas of sanitation to a rural Muslim community and how they have adapted these ideas to their culture and environment.

(EnP 5)

MI The theoretical framework is (R) model of Human–Environment Interaction (the HEI-model), which is based on a four-step basic emotional process linked to the neuropsychological operation of the central nervous system.M3S1 In the present research the model was used to structure the findings of previous studies on children's travel and to formulate hypotheses for an empirical study.

(EnP 12)

Move 3 Step 1 with Move 1

Move 1 is also used after Move 3 Step 1 to elaborate or explain the theory that is selected for the study that is being reported and to justify the selection of particular variables that are of interest in the study. There were 12 such occurrences in 10 EdP introductions, 5 occurrences in 4 EnP introductions and once each in 8 EcP Introductions. Given below are three examples.

M3S1 This study examines the academic culture of the learning environment within the framework of achievement goal theory proposed by (R). MI Central to this theory is the meaning and definition of “success” in a learning environment. Success can be defined in terms of improvement, progress, and intellectual development.

(EdP 4)

M3S1 The aim of the present study is to extend this work on the CNS to objective self-awareness (OSA) theory. MI As originally presented by (R) and extended and refined (R), OSA theory distinguishes between two states of consciousness:.....

(EnP 13)

M3S1 Our purpose in this article is to understand some of the mental accounting rules that allow people the flexibility to value things in multiple, fluid, and inconsistent ways while still providing a modicum of discipline and authenticity. M1 Numerous past studies have documented related tendencies. We know, for example....

(EcP 6)

Move 1 with Move 3 Step 2

Move 1 is also used with Move 3 Step 2. There were 25 such occurrences in 11 EdP introductions, 15 occurrences in 6 EnP introductions and 22 occurrences in 13 EcP introductions. It is basically used to cite previous results as evidence that form the basis for the formulation of hypotheses or research questions in the present study. The following are a few examples.

M1 Research in the social sciences on experts' problem-solving has demonstrated that..... M3S2 Considering these results we hypothesize: Managerial experts will provide fewer but more accurate solutions than management students.

(EdP1)

M1 The affiliation motive can be defined as concern for social acceptance, or a desire to establish and/or maintain interpersonal relations (R).M3S2 We hypothesize that the same association will be found in Pittsburgh students.

(EnP 13)

M1 The results of previous studies on..... M3S2 Based on these results, I hypothesize that aggregated framed investment portfolios are preferred to segregated framed investment portfolios.

(EcP 13)

MI We are currently witnessing a growing concern regardingM3S2 In fact, what value can we give to this commitment? Is the adoption of new professional practices that protect the environment accompanied by a raised environmental awareness? What are the socio-cognitive consequences of such commitments for farmers?

(EnP 4)

Move 3 Step 2 with Move 1

There were no occurrences of Move 3 Step 2 with Move 1 in the EdP and EnP introductions. In three instances in the EcP corpus M1 is used after Move 3 Step 2 to provide support for the hypothesis or the research question that is posed in the study as in the following examples:

***M3S2** It seems plausible to assume that the meaning that people ascribe to money will also have an influence on their willingness to invest in stocks. **MI** Private investors also make stock purchasing decisions with ethical considerations in mind (R).*

(EcP 24)

***M3S2** A question we investigate in the present manuscript is, “Is investors’ regret also elicited when the outcomes fail to meet their expectations?” **MI** We have reason to believe that this is the case. Not only on the basis of the research referred to above, but also on basis of the findings of (R) that unexpected outcomes evoking greater counterfactual activation.*

(EcP 3)

Move1 with Move 3 Step 3

There is no evidence of Move 1 occurring with Move 3 Step 3 in the EdP Introductions. There were 8 occurrences of Move 1 with Move 3 Step 3 in the EnP corpus and 4 instances in the EcP corpus. M1 is used with Move 3 Step 3 to provide a basis for subscribing to particular definitions or to provide a scope for the definitions employed in the study as in the following examples.

***MI** In particular, a high degree of residential stability in old age reflects an accumulation of home experience over time. Housing contributes to everyday life at home in terms of**M3S3** In the rest of this article, we use the term perceived housing to address the totality of subjective phenomena of experiences and symbolic representations related to living at home.*

(EnP 1)

MI Demand appraisal refers to an individual's monitoring of events with regards to his or her well-being (R). Personal well-being can be threatened if a situation is appraised as impairing or threatening personal goals, health or identity (ego involvement). A range of studies have demonstrated that environmental problems are frequently appraised asM3S3 Likewise, in our adaptation of cognitive stress theory, demand appraisal (in the form of threat and harm appraisal) is seen as a distal determinant of pro-environmental behavior (R).

(EnP14)

MI Surprisingly, there is little agreement on how happiness varies, on average, over the life courseM3S3 Here and subsequently the terms happiness, life satisfaction, and affect balance are used interchangeably; although the concepts are not identical, they are highly positively correlated.

(EcP 7)

MI Group dynamics research suggests that self-efficacy is important inM3S3 Although self-efficacy may refer to several aspects (R), we define self-efficacy in the context of MGC as the consumer's judgment of his or her knowledge and skill regarding the service. Stated differently, it is the consumer's confidence in his/her extended role of providing input to the electronic service delivery process.

(EcP 15)

Move 3 Step 3 with Move 1

There is no evidence of Move 1 occurring with Move 3 Step 3 in the entire corpus.

Move 1 with M 3 Step 4

Move 1 is also used with Move 3 Step 4. There were 9 such occurrences in seven introductions in EdP introductions, 2 occurrences in 2 introductions in EnP and once in the EcP corpus. It is used to justify the selection of the time frame or model for the study, and to provide support for the selection of variables in the study. Given below are three examples.

MI During kindergarten, especially the second semester...., M3S4 and, thus, is the time period selected for this investigation.

(EdP 6)

MI Visual maps may be particularly beneficial for pre-trip planning while auditory interfaces facilitate wayfinding (R).M3S4 We chose to exclude visual formats from this investigation in order to focus attention on the impact of auditory only guidance formats.

(EnP 11)

MI The basic risk-return profile implies that an investment decision is made in terms of the expectation that the investment will become less risky and generate a higher level of return (R). This indicates the key roleM3S4 The present study adopted this two-dimension psychometric model as a measure of risk perception for investors.

(EcP 2)

Move 3 Step 4 with Move 1

There were no occurrences of Move 3 Step 4 with Move 1 in the corpus.

Move 1 with Move 3 Step 5

There were no occurrences of Move 1 with Move 3 Step 5 and Move 3 Step 5 with Move 1 in the corpus.

Move 1 with M 3 Step 6

Move 1 is also used with Move 3 Step 6. There were 13 such occurrences in 10 introductions in the EdP corpus, 8 occurrences in 8 EnP introductions and 6 occurrences in 5 EcP introductions. It is used to justify the urgent need for the present research vis a vis past research, and/or to show the significance of the study compared to previous work in the area as shown in the examples below.

MI Considering that low-income, minority students are less likely to attain post-secondary education and more likely to experience high school dropout (R), M3S6 we need more research that focuses on the factors that help low-income, minority students successfully navigate the transition to high school.

(EdP 17)

M1 The AC Beliefs scale, which consists ofM3S6 Thus a comparison of the two scales is theoretically and practically useful.
(EnP 6)

M1 The United States is often assumed to be a very mobile society (R). Historically, as many as M3S6 As communities respond to young adults leaving their region or to such individuals moving in from elsewhere, it is important to better understand the factors that influence migration decisions.
(EnP 13)

M1 Several countries try to stimulate household savings byM3S6 Knowing how participation in such plans relates to income, wealth and other household characteristics is crucial for understanding the implications for the distribution of savings, wealth, and future income and consumption. Analyzing the reasons for non-take-up is helpful to design the plans in such a way that they will be used by the households they are aimed at.
(EcP 8)

Move 3 Step 6 with Move 1

There were no occurrences of Move 3 Step 6 with Move 1 in the corpus

Move 1 with Move 3 Step 7

There were no occurrences of Move 1 with Move 3 Step 7 and Move 3 Step 7 with Move 1 in the corpus.

5.2.3 Analysis of Move 2 in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

Swales (2004) posits Move 2 – Establishing a niche – to be realized via indication of gap (Step1A) or adding to what is known (Step 1B) and presenting positive justification (Step 2). Discussed below is the occurrence of Move 2 and the constituent Steps in Introductions across the three disciplines.

Move 2 Step 1A in Introductions in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

Move 2 Step 1A is present in twenty eight (93%) EdP Introductions. This step occurs 89 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 8 times. Move 2S1A is present in all the EnP Introductions. This step occurs 58 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 6 times. Move 2S1A is present in twenty eight (93%) EcP Introductions. This step occurs 56 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 4 times. By employing this step the writers make their research significant by pointing out a gap, limitation, weakness, or what is lacking in previous research. Following below are the relevant examples.

None of these studies explicitly sought to simultaneously evaluate teacher- and student-level observations and their joint influence on literacy outcomes. Some studies only examined basal readers as proxies for teacher observations (R). Others made detailed observations of teacher behaviors in small samples with no formal modeling on either teacher characteristics or student behaviors (R).

(EdP 15)

Indeed, there has not been a previous empirical investigation into which of the two scales has better reliability and dimensionality.

(EnP 6)

While previous research clearly indicates that family socialization plays a large part in adolescent behaviour, there has been little exploration of the effects of peer socialization.

(EcP 23)

In 8 EnP Introductions the authors justify their research both in terms of the real world and the research world by highlighting problematic situations as in the following examples:

*However, despite the rapid development and improvement of these approaches in the face of economic constraints, changes in farming practices seem difficult to bring about and remain a minority (R).
(EnP 4)*

*However, despite its many positive aspects, the system also faces a number of challenges. In areas where people have many other pressing needs and the sanitation awareness is low, the adoption of new excreta handling approaches, which may be at odds with the prevailing cultural understanding and practices may not be readily welcomed (R).
(EnP 5)*

The results indicate that Move 2 Step 1A is pervasive in the entire corpus and is predominantly realized by pointing out a gap, limitation, weakness, or what is missing in previous research across the three disciplines, similar to introductions in Biology (Samraj, 2002), Computer Science (Posteguillo, 1999), and Biochemistry (Kanoksilapatham, 2005). However, the justification of their research both in terms of the real world and the research world as problems that need the attention of researchers present in the EnP introductions which is similar to occurrences in Conservation Biology Introductions analysed by Samraj (2002) is noted. Further, no justification for the study, in terms of real world problems or practices as in Conservation Biology introductions (Samraj, 2002), is found in the corpus.

Move 2 Step 1B: Adding to what is known is not a frequent element in the corpus occurring twice in EdP and 5 times in EcP. Given below are three examples:

*Our research contributes to a better understanding of motivation in writing by positing the existence of implicit writing beliefs.
(EdP 30)*

*..... is to continue this line of research focusing on possible moderating factors, in particular the role of income.
(EcP 20)*

The present research attempts to further our understanding of the development of children's saving behaviour.

(EcP 28)

Move 2 Step 2 in Introductions in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

In 14 (47%) EdP, 10 (33%) EnP and 7 (23%) EcP introductions, writers explicitly provide positive reasons for conducting the study, or the value of the research that is being reported, immediately after pointing out a gap, limitation or weakness in previous research. Given below are three examples.

Given the extent to which computers have been introduced into the classroom environment, as well as the degree to which students are required to read and process online texts, it seems that the study of the interaction of computers and motivational factors in the processing of persuasive texts is imperative.

(EdP 22)

Quantitative measures allow for easier testing of complex models that simultaneously consider the influence of many variables and the relationships between them.

(EnP 23)

The study we report here is a first attempt to obtain insight in such regrets. We think these regrets are of particular interest because of the different reference points that are naturally associated with investment decisions.

(EcP 3)

There is indeed evidence (although it appears to be more common in EdP and EnP than in EcP introductions) that writers across the three disciplines provide positive reasons or state the value of the study that they are reporting immediately after indicating the gap that they are addressing. Previous studies have not highlighted this occurrence, except Samraj (2002), who had observed this feature in Wildlife Behaviour introductions. Swale's (2004) model provides for this occurrence.

5.2.4 Analysis of Move 3 in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

Swales (2004) posits Move 3 - Presenting the Present Work - to be realized via seven steps. Step 1 within this move - Announcing present research descriptively and/or purposively is obligatory.

Move 3 Step 1 in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

This step occurs in 29 EdP introductions. This step occurs 88 times in this corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 8 times. This step occurs in 28 EnP introductions. This step occurs 64 times in this corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 4 times. In the EcP corpus this step occurs in 28 introductions. This step occurs 57 times and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 4 times. Given below are the relevant examples.

Thus, in keeping with the theoretical tenets of social cognitive theory and prior research findings earlier reviewed, the purpose of this study was to examine the influence of the four hypothesized sources of self-efficacy on students' beliefs about their academic capabilities and self-regulatory strategies.

(EdP 9)

Overall, this inquiry attempts to examine possible relations between use and importance of a neighborhood setting and to further identify some specific attributes and core behaviors in the setting most relevant to the children's place-space distinction and the formation of such important places.

(EnP 17)

This paper reports on an exploratory study in which an attempt was made to acquire a deeper understanding of children's and adolescents' ideas of the consumption and saving behaviour of adults within different occupations.

(EcP 27)

The step - announcing present research descriptively and/or purposively - appears in almost all the introductions, therefore indicating a similarity in the use of this step rather than a variation across the three disciplines. Swales (2004) model accounts for this presence. A widespread occurrence of this move is also observed in Wild Life Behaviour and Conservation Biology Introductions (Samraj, 2002), Computer Science Research Articles (Posteguillo (1999) and Biochemistry RAs (Kanoksilapatham, 2005). However, the possibility of multiple occurrence of Step 1 of Move 3 has not been mentioned in previous studies and in the Swales (2004) model as well.

Move 3 Step 2

Step 2 within this move – Presenting research questions or hypothesis is posited as optional in the Swales (2004) model.

Move 3 Step 2 in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

This step occurs in 29 EdP Introductions. This step occurs 82 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 8 times. Step 2 occurs in 23 EnP introductions. This step occurs 48 times in the EnP corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 8 times. This step occurs in 26 EcP Introductions. This step occurs 63 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 8 times.

Given below are the relevant examples:

We asked two questions: (a) Do American and Chinese 3rd grade mathematics teachers differ in the three domains of pedagogical expertise (SMK and PCK in the area of fractions; general pedagogical knowledge)? and (b) Can experience (defined as years of teaching) help

develop expertise in these areas, given the strong correlation between experience and expertise in research (R)?

(EdP 3)

Based on findings from previous studies it was predicted that road traffic noise exposure affects sleep through physiological and perceived arousal and perceived road traffic noise interference, which may cause physiological and perceived effects on sleep such as prolonged time for falling asleep, more shallow sleep, increase in body movements, awakenings, and reduction in sleep minutes with sleep. This will lead to reduced sleep quality (perceived and physiological) and greater tiredness or sleepiness next day. Noise may, furthermore, lead to behavioural effects such as keeping bedroom windows closed to avoid noise.

(EnP 8)

A question we investigate in the present manuscript is, “Is investors’ regret also elicited when the outcomes fail to meet their expectations?”

(EcP 3)

Move 3 Step 2, therefore, appears in almost all the Introductions, therefore indicating a similarity in the use of this step rather than a variation across the three disciplines. The Swales (2004) model accounts for this presence. The occurrence of this move is similar to that of Wild Life Behaviour introductions but not Conservation Biology Introductions where a list of hypothesis to be verified is generally absent (Samraj, 2002).

Move 3 Step 3

Step 3 within this move – definitional clarifications is posited as an optional step in the Swales (2004) model.

Move 3 Step 3 in Introductions in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

This step occurs in 13 EdP Introductions. This step occurs 33 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 9 times. This step is used in 12 EnP Introductions. This step occurs 19 times in the corpus and the frequency of occurrence of this move in each

article varies, occurring at least once and to a maximum of 3 times. This step occurs in 8 EcP Introductions. It occurs 13 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 3 times.

Given below are the relevant examples:

Sound symbolism, as examined in this study, is the general idea that there can be a relationship between a word's sounds and its meaning. This relationship does not have to be imitative in nature, like onomatopoeias. Thus, sound symbolism is not just onomatopoeia.

(EdP 14)

Based on these arguments, then, we view this modern sense of self, which is object-like, separate from, and above the rest of the natural world, as problematic: this manifestation of the object self makes it easier for people to harm nature without feeling the distress that a sense of connectedness with nature would potentially create (R).

(EnP 22)

We define the meaning of a cultural practice to be the information an observer receives about someone's identity after observing that person engage in some practice. The task of imbuing cultural practices with meaning is a game with multiple equilibria. Indeed, since the mapping between cultural practices and social meanings is mostly arbitrary (what logic requires that black clothing be hipper than pastels?) this may be the prototypical game with multiple equilibria.

(EcP 4)

The step appears in less than half of the Introductions across the three disciplines. The results point to similarities in the use of this step in the EdP and EnP introductions but not in the EcP corpus where it is used least. The results indicate this step to be optional in the introductions across the three disciplines. The Swales (2004) model thus accounts for the optional presence of this step.

Move 3 Step 4

Step 4 within this move – summarizing methods is posited as optional in the Swales (2004) model. The results point to variations in the use of this step across the

disciplines. The results indicate this step to be obligatory in the EdP and EnP introductions but not in the EcP introductions.

Move 3 Step 4 in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

This step occurs in 23 EdP Introductions. It occurs 50 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 6 times. This step occurs in 18 EnP Introductions. This step occurs 31 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 3 times. This step occurs in 15 EcP Introductions. This step occurs 23 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 3 times.

Given below are the relevant examples:

To this end, we modified a traditional agent-less multimedia science program that had been shown to be effective in promoting student learning (R) so that students were given the choice to learn with an APA of different gender and ethnic representations.

(EdP 12)

To address this concern, in the present study we use a naturalistic manipulation to vary attentional fatigue. Our participants completed the procedure either in the morning just before a lecture or in the afternoon, just after a lecture, which itself came after the passage of time and the other activities of the school day. Note that this manipulation involves less extreme, more frequently occurring, conditions of fatigue versus its absence than those we had represented with the scenarios in our earlier experiments.

(EnP 3)

We have investigated these questions in large survey with over two hundred real investors, reflecting on their personal investment decisions.

(EcP 3)

Move 3 Step 5

Step 5 within this move –announcing principal outcomes is posited as probable in some fields in the Swales (2004) model.

Move 3 Step 5 in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

This step is absent in the EdP and EnP introductions but occurs twice in the EcP Introductions as shown below. It appears that the announcement of the principal findings is withheld until the results and discussion sections by the writers in these disciplines. The results therefore indicate that this step is not probable in introductions across the three disciplines. The results are similar to introductions in Wildlife Behaviour in Samraj (2002) where it was found in only 25% of the introductions analysed but dissimilar to Introductions in Computer Science RAs analysed by Posteguillo (1999) where it is an obligatory step and in Biochemistry RAs analysed by Kanoksilapatham (2003).

The raw data show that in the initial years, about 80% of all employees had access to ESSPs, but only 67% of those with access actually bought them. About 23% of those who acquired ESSPs spent less than the full tax-favored amount. About 14% of the participants reported that participating in ESSPs induced them to reduce their other financial savings.

(EcP 8)

This research also asserts that emotional states may moderate the endowment effect, and two experiments prove the endowment effect only occurs with positive emotions – not with negative emotions.

(EcP 14)

Move 3 Step 6

Step 6 within this move – stating the value of the present research is posited as probable in some fields in the Swales (2004) model.

Move 3 Step 6 in Introductions in research articles in educational psychology, environmental psychology, and economic psychology

The results point to variations in the use of this step across the disciplines. The results indicate this step to be probable in the EdP introductions but not in the EnP and EcP introductions. The Swales (2004) model thus accounts for the probable presence of this step. Move 3 Step 6 occurs in 22 EdP Introductions. This step occurs 42 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 5 times. Move 3 Step 6 occurs in 15 EnP Introductions. This step occurs 20 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 3 times. This step occurs in 10 EcP Introductions. This step occurs 15 times in the corpus and the frequency of occurrence of this move in each article varies, occurring at least once and to a maximum of 3 times. Given below are the relevant examples.

Clearly, this is a critical time for researchers to examine how the sources of academic self-efficacy unique to young adolescents influence the development of their self-beliefs.

(EdP 9)

As communities respond to young adults leaving their region or to such individuals moving in from elsewhere, it is important to better understand the factors that influence migration decisions.

(EnP 13)

Knowing how participation in such plans relates to income, wealth and other household characteristics is crucial for understanding the implications for the distribution of savings, wealth, and future income and consumption. Analyzing the reasons for non-take-up is helpful to design the plans in such a way that they will be used by the households they are aimed at.

(EcP 8)

Move 3 Step 7

Step 7 within this move – outlining the structure of the paper is posited as probable in some fields in the Swales (2004) model.

Move 3 Step 7 in Introductions in research articles in educational psychology, environmental psychology and economic psychology

This step is found in only 1 EdP Introduction, 5 EnP Introductions and 6 EcP Introductions. The results do not point to a significant variation in the use of this step across the disciplines as its use is very restricted unlike the computer science RAs in Posteguillo (1999). The Swales (2004) model thus accounts for the probable presence of this step and shown below are the relevant examples.

Hence, we will first introduce our process model. Second, we will briefly present the concept and contentsThird, we will describe the...
(EdP 18)

In the following paragraphs, we first review previous research on fear of nature. Next, we discuss the evidence for
(EnP 26)

*The article proceeds as follows. We open with**First, we find that..... We then explore a variety of factors..... We discuss the data and their implications, and conclude with some brief remarks.*
(EcP 6)

5.3 Analysis of the Methods Section in research articles in educational psychology, environmental psychology, and economic psychology

The EdP corpus consisted of 22 RAs with a single Methods section, 6 RAs with 2 Methods sections and 2 RAs with 3 Methods sections. The EnP corpus consisted of 25 RAs with a single Methods section, 3 RAs with 2 Methods sections, and one each containing 3 and 4 Methods sections. The EcP corpus consisted of 21 RAs with a single

Methods section, 6 RAs with 2 Methods sections and the remaining 3 RAs with 3 Methods sections. As in previous studies (e.g. Kanoksilapatham, 2003; Weissburg & Bucker, 1990; Wood, 1982) the Methods section is divided into multiple subsections ranging from 2 to 7 subsections in EdP, 2 to 8 subsections in EnP and 2 to 5 subsections in EcP. A subsection is further divided into sub-subsections ranging from 3 to 6 sub-subsections in EdP, 2 to 6 sub-subsections in EnP and 2 to 4 sub-subsections in EcP. These subsections and sub-subsections are labeled explicitly in bold and are structured linguistically as noun phrases. This section is written in as many as 2856, 2882, and 2269 words in EdP, EnP and EcP respectively and appear to be elaborate (Swales, 2004). The shorter versions are written in 878 words in EdP, 441 words in EnP and 486 words in EcP.

5.3.1 Characteristics of Moves in Methods sections in research articles in educational psychology, environmental psychology, and economic psychology

The results of the analysis on the frequency and distribution of moves in the Methods section across the three disciplines is given in Table 5.2 below. The Methods section across the three disciplines are mainly concerned with providing a description of the research method(s) utilized in experimental research, co-relational research, and causal-comparative studies. This section of the RAs, is most often given the subheading “Method”, “Methods”, or “Methodology”. Other subheadings used are “Experimental design”, “Experimental studies”, “Empirical study”, “Design and procedures of the experiment” and “Material and methods”. The analysis results in the identification of 5 different Moves and is dissimilar to RAs in management where only 3 major moves were identified (Lim, 2006). The moves identified are: Move 1 - Providing an overview of research method(s), Move 2- Providing details of the sample/population, Move 3- Delineating tools and data measures, Move 4- Detailing data collection procedures and

Move 5- Elucidating data analysis procedure/s. The first is optional and the other four are obligatory.

Table 5.2: Frequency of Moves/Steps in Methods sections of RAs across the three disciplines

Moves	Steps	Frequency of Moves/Steps			No. of articles used			%		
		EdP	EnP	EcP	EdP	EnP	EcP	EdP	EnP	EcP
Move 1	Overview of research method(s) via Providing an overview of the design	5	11	10	5	10	14	17	33	47
Move 2	Providing details of sample/population Step 1: Describing sample/ population (a) Describing location of the sample (b) Describing the size of the sample/population (c) Describing specific characteristics of the sample Step 2 Describing sampling technique or criterion Step 3: Stating importance/ advantages/relevance /representativity of sample Step 4 Stating compensation for participants	30	30	30	30	30	30	100	100	100
Move 3	Delineating tools and data measures Step 1: Specifying tools used for data collection (a) Specifying source(s) of instruments/ materials (b) Describing instrument(s)/ materials (c) Specifying or providing examples of items in/material /instruments/databases/interviews (d) Stating importance/ validity/ reliability of instrument/ material. Step 2: Elucidating method/s of measuring variables (a) Describing methods of measuring variables (b) Justifying the methods selected/ acceptability of the method/s	30	30	30	30	30	30	100	100	100
Move 4	Detailing data collection procedures Step 1: Describing data collection procedures (a) Stating time of data collection/administration of instrument/ material (b) Administrators of instrument(s) materials/ interviews/observations (c) Instructions given or requests made to sample/participants (d) Duration of data collection/experiment (e) Sequence followed in administration of instrument/material /collection of data (f) Stating specific location of data collection Step 2: Justifying data collection procedures	30	30	27	30	30	27	100	100	90
Move 5	Elucidating data analysis procedure/s Step 1: Recounting data analysis procedure/s (a) Stating number of samples instruments/ materials/interviews responses collected or analysed (b) Stating procedures followed for data analysis (c) Stating analyzer of data Step 2 Justifying data analysis procedure/s	22	22	19	22	22	19	73	73	63

Move 1 realized via ‘Providing an overview of research method(s)’ occurs in 5 EdP, 10 EnP and 14 EcP sections and appears to be optional across the three disciplines. Move

2: Providing details of the sample/population occurs in all the sections and appears to be an obligatory element. Move 3: Delineating tools and data measures, occurs in all the sections and is an obligatory element too. Move 4: Detailing data collection procedures occurs in all EdP and EnP and 27 EcP sections and may therefore be considered an obligatory element. (The remaining three sections in ECP report on analysis of data collected by other sources and used in the study. For instance, in EcP 7, the data was obtained from the United States General Social Survey which is a nationally representative survey). Move 5: Elucidating data analysis procedure/s occurs in 22 EdP, 22 EnP and 19 EcP sections. As such it appears to be obligatory across the three disciplines. Following below are details regarding the steps utilized in realizing each of these moves.

5.3.2 Methods: Move 1: Overview of research method(s)

Move 1 which is normally a general statement of the type of design that was used is realized via the Step “Providing an overview of the design” is used in 5 EdP, 10 EnP and 14 EcP sections. Subheadings used to signal this move include “Design”, “Methodology”, “The Study”, “Project Context”, “Design and Methods” and “Overview” In this move the writers provide the reader with information on the overall research method(s) that were employed to obtain the necessary data as illustrated in the following examples.

A four group experimental design..... The distribution of participants to condition was..... Within classrooms, participants were.....
(EdP 10)

The archive of environmental studies at the.....from the period of 1987 to 2001. Fourteen of these studies, totaling..... were selected...
(EnP 16)

We used the data collected for..... This survey includes.....

(EcP 19)

5.3.3. Methods: Move 2: Providing details of the sample/population

Move 2 is realized through 4 main steps, namely, Step 1: Describing sample/population, Step 2: Describing sampling technique or criterion, Step 3: Stating importance/ advantages /relevance /representivity of the sample and Step 4: Stating compensation for participants. Subheadings generally used to signal this move other than the most common 'Participants' include 'Participants and setting', 'Sample', 'Sample characteristics', 'Study participants', 'Subjects', 'Study site and participants', 'Study areas and sampling', 'Respondents', 'Study areas', 'Sample and data collection' and 'The data'.

Step 1- 'Describing sample/population' is a step that includes statements on: (a) the location of the sample, (b) the size of the sample/population, (c) specific characteristics of the sample.

Step 1a: Describing the location of the sample

The statement describing the location or the site where the respondents providing the necessary data were located is used in 30 EdP, 27 EnP and 14 EcP sections and given below are illustrations taken from across the three disciplines.

..... at Bernardinus College, an academic high school in Heerlen, The Netherlandsparticipated in this study.

(EdP 11)

We tested..... with a sample of the University of Pittsburgh undergraduates

(EnP 13)

*There were from British Columbia, from the Prairie provinces,
and from the Atlantic provinces.*

(EcP 23)

Step 1 b: Describing the size of the sample

The statement describing the size of the sample is used in 29 EdP, 29 EnP and 24 EcP sections and given below are the relevant examples.

The participants were 56 undergraduate students.....

(EdP 12)

Sample sizes by year varied from 137 in 1991 to 394

(EnP 13)

A total of 200 students from the University

(EcP 18)

Step 1 c: Describing specific characteristics of the sample

This statement describing specific attributes or features of the sample such as age and gender of the respondents is used in 30 EdP, 24 EnP and 24 EcP sections as in the three following examples.

*All students were performing poorly in mathematics, four of the five
being in remedial mathematics classes.*

(EdP 13)

Participants were undergraduate students....

(EnP 14)

In all, there were 937 females and 869 males

(EcP 23)

Step 2: Describing sampling technique or criterion

In this step writers describe the specific procedures that were followed in the selection of the sample and is used in 18 EdP, 20 EnP and 10 EcP sections as illustrated below.

10–12 students were randomly selected from each classroom to participate in the student assessment.

(EdP 15)

A randomly selected sample, 20–75 years of age,.....

(EnP 15)

Selection of the taxpayers was based on ATO's database, "reported" evidence of tax compliance or non-compliance

(EcP 9)

Step 3: Stating justification, importance / advantages/relevance/representivity of sample

In this step, the writers justify the selection of the study sample/population by stating the importance, advantages, relevance and or representivity of the sample. It is used in 16 EdP, 17 EnP and 9 EcP sections as shown below.

There were five males and five females intended to represent each one of the five ethnic categories.

(EdP 12)

Procedural problems forced us to exclude seven participants. Six participants assigned..... We have used their data in the checks on the fatigue manipulation but excluded them from all other analyses. We excluded from all analyses the data from one participant. as his lecture ended early and he took a walk just before the experiment, undermining....

(EnP 6)

Pre-tests indicated thatAs a result, it was anticipated that business students are an appropriate customer group ...and most respondents would find..

(EcP 15)

Step 4: Stating compensation for participants

This statement describing compensation given to respondents for participating in the study such as cash incentives, certificates and gifts is used in 10 EdP, 6 EnP and 10 EcP sections and is illustrated below.

As compensation for their participation they received a music compact disc of their own choice.

(EdP 11)

...returned questionnaires were included in a prize draw of approx £20/US\$35 per school.

(EnP 12)

They received the equivalent of approximately US \$7 in compensation for their participation.

(EcP 11)

It is noted that in realizing this move, writers do not follow a uniformed sequential order of Steps 1a through 1c -Step 2 -Step 3 –Step 4. These elements are interwoven and it is invalid to presuppose that one element supersedes the other. The following excerpt, to a certain extent illustrates this point.

***21b** Forty-two undergraduates (**21c** 24 women and 18 men) **21a** at Göteborg University **2S2** volunteered to **2S4** participate in return for the equivalent of approximately USD 5. **21c** Their mean age was 26.4 years (ranging from 19 to 62 years) .**2S2** Equal numbers of participants were randomly assigned to two groups.*

(EcP 5)

5.3.4 Methods: Move 3: Delineating tools and data measures

Move 3- Delineating tools and data measures is realized through 2 steps, namely, Step 1: Specifying tools used for data collection and Step 2: Elucidating method/s of measuring variables. Subheadings generally used to signal this move are ‘Instruments’,

'Material(s)', 'Measures', 'Instruments and variables', 'Materials and apparatus', 'Stimuli', 'Questionnaires', 'Measurement instruments', 'Experimental manipulations', 'Instruments and measures, and 'Survey questions'.

Step 1: Specifying tools used for data collection is a step that includes statements regarding: (a) source(s) of instruments/materials, (b) description of instruments/materials, (c) examples of items in/material/instruments/databases/interviews and (d) importance/ validity/ reliability of instrument/material.

Step 1a: Specifying source(s) of instruments/ materials

The statement specifying the source(s) from which the instruments/ materials were obtained is used in 24 EdP, 16 EnP and 11 EcP sections and following below are illustrations taken from across the three disciplines.

To assess students' phonological segmentation abilities in an untimed format, the Elision subtest of the Comprehensive Test of Phonological Processing CTOPP; Wagner, Torgesen, & Rashotte, 1999) was administered

(EdP 6)

The social aspects of the neighbourhood were assessed by the parent with an adapted version of Chavis, Hogge, McMillan, & Wandersman's (1986) sense of community scale.

(EnP 12)

The questions was created from a combination of different surveys (more specifically Air Force Community Needs Assessment Survey, 2000, Air Force Financial Status Survey, 2001, Survey of Consumer Finances, 1995, Survey of Consumer Finances, 1998 and Survey of Active Duty Personnel, 1999).

(EcP 12)

Step 1b: Describing Instruments/materials

The statement providing a general description of instruments / materials used in the study to collect the necessary data is used in 29 EdP, 17 EnP, 24 EcP sections. This element is illustrated below.

The first of these texts discussed a court decision to legalize doctor-assisted suicide for terminally ill patients. This article referred to.... The second text addressed the topic of ... The computerized text was exactly the same as.....

(EdP 22)

It contains 56 items that measure five TP dimensions: past-negative, present-hedonistic, future, past-positive, and present-fatalistic

(EnP 18)

The experimental materials were 4 half page cards with the picture of a different occupation: a physician, a teacher, a secretary and a mason

(EcP 27)

Step 1c: Specifying or providing examples of items in material/instruments/databases/interviews

In this statement, writers go beyond a general description and give specific examples of items found in the instrument/ materials and is used in 20 EdP, 18 EnP and 16 EcP sections.

Parents were asked, "What do you think are the three most important goals for your child to reach in school this year?"

(EdP 16)

In relation to each TDM measure, the respondents were asked questions about perceived fairness, effectiveness, expected reduction in own car use, expected consequences for own freedom to choose travel mode, and acceptability.

(EnP 15)

Immediately after the emotion was induced, participants were asked, "How happy do you feel right now?"

(EcP 14)

Step 1d: Stating/justifying importance/validity/reliability of instrument/material

In this statement writers justify the use of the selected instrument/material through various ways such as giving expert opinion(s), through pilot testing of instrument/material, statistical analyses and citing sources. It is used in 25 EdP, 10 EnP and EcP sections. The following examples illustrate this element.

These measures have been used in numerous studies of both White and African American middle and high school students (e.g., Freeman et al., 2002, Middleton and Midgley, 2002 and Pintrich, 2000).

(EdP 17)

Cronbach's alpha (α) was calculated.... Though the reliability of the PRS short version was lower than the PRS original version it can be considered a reliable instrument.

(EnP 25)

All items loaded significantly.... In addition, discriminant validity was evaluated by testing... Chi-square difference tests with one degree of freedom were used to test.....All tests were significant....

(EcP 15)

Methods: Move 3: Step 2: Providing details on method/s of measuring variables

Step 2: Providing details on method(s) of measuring variables is a step that includes statements related to: (a) methods used to measure variables and (b) justifying the acceptability of the selected method(s).

Step 2a: Describing methods of measuring variables

Writers use this step to shift from discussing the instruments that were used to collect the necessary data to a discussion of the variables to be measured in the overall design of the research. This element where writers describe in detail the methods that were used to measure each of the variables under study is used in all the sections across the three disciplines. Following are the relevant examples:

Letter name fluency measured the number of correctly identified upper and lower case letters of the alphabet per minute. Upper and lower case letters (n = 52) were presented in random order on an 8.5 × 11 in (standard) paper. This measure was modified to include only one upper case and one lower case letter per probe.

(EdP 6)

The 24 h equivalent noise levels at the apartment's most exposed side, $L_{Aeq,24h}$, were calculated using the Nordic calculation method. This method adds 3 dB due to reflection from the façade (R). In most cases, the noise was calculated from one or two dominating streets.

(EnP 16)

Respondents chose between these two plans on a six point scale ranging from “very strongly prefer plan A” to “Very strongly prefer plan B”.

(EcP 16)

Step 2b: Justifying the acceptability of the selected method/s

In addition to explaining the methods used to measure the variables concerned the writers across these subjects justify their use of the methods to convince the readers of its acceptability. This is accomplished by citing sources to support the use of such methods and also to show that past studies have used the method and as such these have been tested and proven in prior research. It is used in 18, 15 and 11 EdP, EnP and EcP sections respectively. Given below are three examples:

As noted in the literature, before students develop a reliance on retrieval they often use different strategies on the same basic addition problem ..(R). The design of the study enabled student's variable strategy use on each problem to be examined, as they performed the same problem on five different occasions.

(EdP 13)

The final version of the questionnaire covered the different aspects of the HEI-model.

(EnP 12)

We use a more stringent and more differentiated measure of what constitutes a correct explanation than Thompson(2000).

(EcP 26)

5.3.5 Methods Move 4: Detailing data collection procedures

Move 4- Detailing data collection procedures is realized through 2 steps, namely, Step 1: Describing data collection procedures and Step 2: Justifying data collection procedures. Subheadings generally used to signal this move are: 'Procedure', Procedure and instructions Research procedures.

Step 1: Describing data collection procedures includes statements regarding: (a) time of data collection/administration of instrument/ material, (b) administrators of instrument(s) materials/interviews/ observations, (c) instructions given or requests made to sample/participants,(d) duration of data collection/experiment, (e) sequence followed in collection of data (f) Stating specific location of data collection.

Step 1a: Stating time of data collection

The statement specifying the time of data collection is used in 15 EdP, 16 EnP and 10 EcP sections. Following below are illustrations taken from across the three subject areas.

A ..was administered approximately one week prior to experimental sessions.
(EdP 10)

Between April 10 and May 31, 2004, a team of
(EnP 17)

... responses to a mailed questionnaire sent to participants in February,2003.
(EcP 16)

Step 1b: Administrators of instrument (s) materials/interviews/observations

In this statement the writers specify the administrators of instrument(s)/ materials or the people involved in conducting the relevant interviews and observations. It is used in 12 EdP, 9 EnP and 10 EcP sections as in the following examples.

In each session trained proctors administered the instruments

(EdP 27)

... a team of two researchers (interviewer and assistant) conducted 91 field interviews of 7-to 12-year old children living in the study site.

(EnP 17)

The experimenter, a young woman very experienced in working with young children, engaged in

(EcP 26)

Step 1c: Instructions given or requests made to sample/participants

In this statement the writers state the specific instructions given to the sample in the process of data collection and is used in 14 EdP, 4 EnP and 11 EcP sections as in the following examples.

The children were told that they would play....They were also told that

(EdP 20)

... participants were asked to complete several pre-measures before doing the tracing task.

(EnP 22)

Participants were told that....

(EcP 4)

Step 1d: Duration of data collection/experiment

In this statement the writers provide information regarding the time taken to collect the necessary data and is used in 18 EdP, 8 EnP and 15 EcP sections. Given below are the examples.

The experimental task, including the posttest, required approximately 1 hour.
(EdP 10)

Each session took 40 min or less
(EnP 3)

... professional survey company carried out 15-min phone interviews
(EcP 21)

Step 1e: Sequence followed in data collection

In this statement the writers recount the steps or sequence followed in collecting the relevant data to highlight certain details of the procedure either in full or briefly. This element appears in 23 EdP, 12 EnP and 19 EcP sections.. Following below are the examples.

The classroom teacher began sessions byThe teacher then turned the class over to experimenters but An experimenter told participants that..... The experimenter told participants theyParticipants were told it was important.....
(EdP 10)

Behaviors were recorded on behavioral maps, photographs, and notes. At the end of the day's observations, the observers held a discussion, cross-validated the records, and compiled the data. Only the data that were recorded by all three independent observers were analyzed for the study.
(EnP 17)

The participants were randomly assigned to four groups of approximately the same size in an experimental design crossing knowledge vs. no knowledge of income with high vs. low nominal value.
(EcP 11)

Step 1f: Stating specific location of data collection

In this statement the writers state the specific location where the data was collected. It is used in 3 EdP, 6 EnP and 8 EcP sections and following are the examples.

Studentsread and completed their tasks in a computer laboratory setting, while students in the paper-only condition read and completed their tasks in an adjoining classroom.

(EdP 22)

The laboratory study was performed in the occupational medical simulation facility (AMSAN) of the DLR.

(EnP 9)

The third experiment was carried out during a lecture in April 2005 at Leipzig University

(EcP 13)

Step 2: Justifying data collection procedures

In this statement the writers justify the manner in which the necessary data was collected to convince readers regarding the procedures used in data collection. It is used in 5 EdP, 4 EnP and 3 EcP sections. Following below are the examples.

The participants in this study were asked to read the words in written context. Thus, the words in the scale were presented visually to the participants in this study, as apposed to auditorially. This was done for several reasons. First, it was assumed that adult college students would naturally be exposed to more unknown words in written context, such as textbooks, than in oral context. In addition, studies have shown reading comprehension exceeds listening comprehension for this age group (R). Lastly, this format allowed all participants to work through the scale at their own pace.

(EdP 14)

To avoid possible biases of observation time and day, the observers conformed to a systematically constructed observation schedule.

(EnP 17)

In this way, the circle-tests can measure whether the attitude of a subject towards a group member is influenced by the behavior of this group member in the public good game. For example, one would expect a more positive (less negative) angle towards a member who contributed more in the game.

(EcP 22)

5.3.6 Methods Move 5: Elucidating data analysis procedure/s

Move 5: Elucidating data analysis procedure/s is realized through 2 steps. Step 1 is recounting data analysis procedures and Step 2: Justifying data analysis procedure/s. Subheadings generally used to signal this move are ‘Analysis’ ‘Data analysis’, ‘Scoring’, ‘Statistical analysis’ and ‘Coding and statistical methodology’

Step 1: Relating (or ‘recounting’) data analysis procedure/s

This step is realized through elements which state: the number of samples instruments/materials/interviews responses collected or analysed (Step1a), Stating procedures followed for data analysis (Step 1b) and Stating analyzer of data (Step 1c).

Step 1a: Stating number of samples instruments/materials interviews responses collected/analysed.

The statement specifying the number of samples instruments/materials/ interview responses collected /analysed is used in 2 EdP, 13 EnP and 7 EcP sections. Following below are illustrations taken from across the three subject areas.

*The experimental group consisted of 21 individuals. The observation period lasted 5 weeks = 35 days. Therefore, the maximum value that could be obtained for the whole number of diaries was $21 * 35 = 735$. From these 735 potential diaries, we collected 724. In 318 (43%) diaries, the students wrote that they did not study.*

(EdP 18)

Application of these criteria reduced the original number of returned questionnaires to N=191

(EnP 14)

The sample used in the first analysis, the “adult” sample, consisted of 1038 men and women under the age of 50.

(EcP 19)

Step 1b: Stating procedures followed in data analysis

The statement stating procedures followed for data analysis, which normally describes the tools used is used in 18, EdP, 16 EnP and 8 EcP sections. Following below are illustrations taken from the three subject areas.

Third, we employed hierarchical linear modeling (HLM) to analyze end-of-year reading and spelling outcomes for these students.

(EdP 15)

For the laboratory results, two logistic regression models were developed for the (1) maximum noise level $L_{AS,max}$ combined with the number of aircraft noise events and for the (2) energy equivalent noise level $L_{AS,eq\ event}$.

(EnP 9)

The average trend of happiness and each domain satisfaction variable from ages 18 to 89 is established by regressing happiness on age controlling for year of birth (birth cohort), gender, race, and education. The technique is essentially a statistically refined variant of demographers' birth cohort analysis.

(EcP 7)

Step 1c: Stating analyzer of data

The statement stating the analyzer of the relevant data is used in 11 EdP, and none in EnP and EcP sections as in the following example.

For 81 of the 112 classes, one math lesson was videotaped, and the teacher's TFR was assessed by trained observers.

(EdP 24)

Step 2: Justifying data analysis procedure/s

The statement to justify the selected data analysis procedure(s) is used in 14 EdP, 9 EnP and 6 EcP RAs. The following three are the examples.

Two authors scored a subset of 30 responses to each problem with interrater agreement exceeding 90%. The first author scored the remaining problem solutions. The two problem solving scores were added to calculate total problem solving scores.

(EdP 10)

(R) noted that the essence of an interview is to “understand the world from the subject's point of view, to unfold meaning of peoples’ experiences” (pp. 1–2), and this type of phenomenological approach was applied to data analysis as well. Analysis of qualitative data is focused on “illumination, understanding and extrapolation rather than causal determination, prediction and generalization” (R)

(EnP 20)

A hierarchical linear model, called the multi-level model, is an effective approach to deal with hierarchically nested data structures, i.e., customers within chat groups (R).

(EcP 15)

5.3.7 Discussion of move structure of the Methods section in research articles in educational psychology, environmental psychology, and economic psychology

The moves identified in this section do not occur in a strictly linear order. Move 1, which is normally a general statement of the type of design that was used, is realized via the Step “Providing an overview of the design”, is an optional element in these subject areas. In EdP, this move, when present, is used as the opening move in 4 sections and as the second move in one section (EdP 10) where the writer opens this section with Move 2. In EnP this move occurs as the opening move in 9 sections and as the second move in 2 sections (EnP 4 & EnP 17) after Move 2. In EcP this move occurs as the opening move in all the sections.

Move 2 occurs as the opening move in 26 EdP sections, 17 EnP sections and 15 EcP sections where the writers do not provide an overview of the design. Other moves found as the opening move are Move 6 in 2 EnP and EcP sections and Move 7 in 2 EnP and EcP sections. Thus, it appears that the majority of the Methods sections within these disciplines begin this section with details regarding sampling procedures.

There are cases where Move 4 precedes Move 3. This is found in 7 EdP, 14 EnP and 9 EcP sections. In such cases the writers, after detailing the sampling procedures (Move 2), proceed to a description of the procedures used to collect the data (Move 4) and then only go on to describe the tools used and data measures.

Move 2 of the Methods section ‘Detailing sampling procedure/s’ describes the location of the sample (Step 1a), the size of the sample (Step 1b), specific characteristics of the sample (Step 1c), sampling technique(s) or criterion (Step 2), justifies sample selection procedure/s (Step 3) and states compensation for participants (Step 4). Steps 1a, 1b and 1c are obligatory elements of Move 2 across the three disciplines similar to Method sections in Management where these elements are also present (Lim, 2005). Move 2 Step 2 and Move 2 Step 3 are obligatory elements in EdP and EnP but optional in EcP. Move 2 Step 4 is optional in all the three subdisciplines. This element is not present in Management RAs (Lim, 2005). Move 2 is present in all the sections across the three disciplines of Psychology and may be considered a mandatory move.

Move 3 ‘Delineating tools and data measures’ is realized via 2 steps. Step 1 specifies tools used for data collection and includes statements regarding: source(s) of instruments/ materials (Step 1a), description of instruments/materials (Step 1b), examples of items in /material/instruments/databases/interviews (Step 1 c), stating

importance/ validity/ reliability of instrument / material (Step 1d). Step 1a appears to be obligatory in EdP and EnP and optional in EcP. Steps 1b and 1c are obligatory across the three subdisciplines. Step 1d is obligatory in EdP and optional in both EnP and EcP. Step 2: Elucidating method/s of measuring variables is realized via 2 steps. Step 2a 'Describing methods of measuring variables' is obligatory as it appears in all the sections across the disciplines. This element was found to be obligatory in Management RAs as well (Lim, 2005). Step 2b 'Justifying the methods selected/ acceptability of the method/s' appears to be obligatory in EdP and EnP and not in EcP. Move 3 is present in all the RAs across the three disciplines of Psychology and may be considered a mandatory move

Move 4 'Detailing data collection procedures' is realized via 2 steps. Step 1 specifies data collection procedures and includes statements regarding: time of data collection/administration of instrument/ material (Step 1a), administrators of instrument(s) materials/interviews/ observations (Step 1b), instructions given or requests made to sample/participants (Step 1c), duration of data collection/experiment (Step 1d), sequence followed in the collection of data (Step 1e), and, specific location of data collection (Step 1f). Step 1a appears to be obligatory in EdP and EnP but optional in EcP. Step 1b appears to be an optional element across the three disciplines. Step 1c is also optional. Step 1d appears to be obligatory in EdP but optional in EnP and EcP. Step 1e appears to be obligatory in EdP and EcP but optional in EnP. Step 1f appears to be optional across the three disciplines. Step 2 'Justifying data collection procedures' appears optional across the three disciplines. Move 4 is present in all the RAs across the three disciplines areas of Psychology and may be considered a mandatory move

Move 5: Elucidating data analysis procedure/s is realized through 2 steps. Step 1 is recounting data analysis procedures and Step 2: Justifying data analysis procedure/s. Step 1 includes statements related to the number of samples instruments/materials/interviews responses collected or analysed (Step1a), Stating procedures followed for data analysis (Step 1b) and Stating analyzer of data (Step 1c). Step 1a is appears to be an optional element. Step 1b appears to be obligatory in EdP and EnP but optional in EcP. Step 1c is optional. Move 5 is used in 22 EdP and EnP and 19 EcP RAs and appears to be a mandatory move.

These sections, based on Swales (2004) cline, appear to be highly elaborated and his assumption that the Methods section(s) would be elaborated in education and psychology appears to be true as the writers in these disciplines describe the experimental procedures in detail. This may be due to sociology lacking unanimity as to methodological practice (Brett, 1994, cited in Swales, 2004).

5.4 Analysis and Discussion of move structure of the Results section in research articles in educational psychology, environmental psychology, and economic psychology

The results section is written in a maximum of 5142 words in EdP, 4044 words in EnP and 2887 words in EcP and to a minimum of 507 words in EdP, 167 words in EnP and 492 words in EcP. It was also found to be written in as many as 6 subsections in EdP and EcP and in 7 subsections in EnP. Typically each subsection has an explicit subheading that focuses on one result. In EdP the conventional section heading *Results* is used for this section in 28 RAs and the remaining two *Results and Discussion* and *Analysis and Results*. In EnP the conventional section heading *Results* is used in 24 RAs and the remaining *Results and Discussion* (5) and *Analysis and Discussion* (1). In EcP the conventional section heading *Results* is used in 21 RAs, *Results and Discussion* (8)

and *Experimental Results* (1). Following Ruiying and Alison (2003) an analysis of the *Results and Discussion* sections did not reveal any notable difference from the other *Results* sections in this corpus as they were only intended to report and comment on results. As such this section was treated as a results section and included in the analysis for this section.

The summary of analysis of this section is shown in Table 5.3 below. Four Moves were identified of which three were dominant – Move1 (Preparatory Information) Move 2 (Reporting Results), Move 3 (Commenting on Results) and Move 4 (Summarizing results). Each identified move varies in frequency of occurrence and has different elements and this is discussed below.

Table 5.3 : Frequency of Moves/Steps in Results sections of RAs across the three disciplines

Moves	Steps	Frequency of Moves/Steps			No. of Subsections			No. of Subsections Used			%		
		EdP	EnP	EcP	EdP	EnP	EcP	EdP	EnP	EcP	EdP	EnP	EcP
Move 1	Preparatory Information	182	166	156	164	128	119	132	93	87	80	73	73
Move 2	Reporting Results	223	236	231				136	110	104	83	86	87
Move 3	Commenting on Results							61	64	56	37	50	47
	<i>Step 1</i> Interpreting Results	79	74	92				59	48	48			
	<i>Step 2</i> Comparing results with literature	16	17	27				10	16	19			
	<i>Step 3</i> Evaluating results	6	5	6				5	5	4			
	<i>Step 4</i> Accounting for results	7	12	21				3	12	12			
Move 4	Summarizing Results	16	6	8				16	6	8	9.7	4.6	6.7

5.4.1 Analysis of Move 1 – Preparatory information

Move 1: Preparatory information was used 182 times in EdP, 166 times in EnP and 156 times in EcP. Its function is to: give a preview of the section or sub-sections before the results are reported (1-3), show location of results (tables and graphs) (4-6), state the procedures that were followed in arriving at the results (7-9), to state the purpose or goal of the research (10-12) to state hypothesis/research question (13-15), and to justify data

analyses procedures (16-18). This move, if present, usually occurs at the beginning of the Results section or at the beginning of the following subsections. It was noted that pointers to location of results also occurs in the middle or end of the subsections of the Results section and such instances were not accorded the “Preparatory information function in this analysis.

(1) The results are reported in four sections. The first section examined.....The second section examined..... The third section used.....The fourth section used

(EdP 17)

(2) The following section combines the results of analysisThe presentation of results is loosely.... Selected transcript passages are organized according to

(EnP 30)

(3) The results from the different analyses are reported below. First, we report the ... We also report the.....Next, we report results from..... Finally, we report the results.

(EcP 19)

(4) The means and standard deviations of all the variables are presented in Table 1 and correlation of student-level variables in Table 2

(EdP 4)

(5) Table 3 shows the results on ... and Table 4 gives results for..... parents...

(EnP 8)

(6) Mean importance scores investors gave to the seven information types when making investment decisions are presented in Table 2.

(EcP 2)

(7) To assess (H_6), we calculated correlations between (a) the use of different knowledge types, and (b) diagnostic and problem-solving performance (see Table 3) for students and post-graduates separately.

(EdP 1)

(8) *To determine the underlying factor structure of perceived...., an exploratory factor analysis was conducted.....*
(EnP 1)

(9) *We used hierarchical regression to test the hypotheses..... In addition, we performed a*
(EcP 3)

(10) *The purpose of this investigation was to explore the.....*
(EdP 22)

(11) *The study of the structure of the social representation of the environment by farmers based on their practices consists of*
(EnP 4)

(12) *The aim of this study was to examine...*
(EcP 9)

(13) *As a research question we also posed the possibility....*
(EdP 24)

(14) *We also expected that our participants would on average....(Hypothesis 3b)*
(EnP 3)

(15) *Do the domains studied here play an important role in shaping the life cycle pattern of overall happiness? To answer this,.....*
(EcP 7)

(16) *Due to the uneven number of males and females, we weighted our student sample to....*
(EdP 1)

(17) *On the one hand, this method is more straightforward thanOn the other hand, a direct comparison of results derived from the laboratory and the field (see below) is facilitated by this method.*
(EnP 9)

(18) *Structural equation modeling (SEM) is currently the most widely-adopted method to (XXXX: 1999).*
(EcP 2)

The Results section is typically written in a number of subsections (following a preview to the section, if present) and each subsection aims at presenting at least one result. As done in Kanoksilapatham (2003) the total number of subsections in the corpus was

calculated. Then the frequency of occurrence of each identified move was determined against the total number of subsections. The Results corpus consists of a total of 164 subsections in EdP, 128 subsections in EnP and 119 subsections in EcP. Move 1 is used in 132 (80.4%) subsections in EdP, 93 (72.6) subsections in EnP and 87 (73.1) subsections in EcP. It appears that there is no significant difference in the use of this move in the Results section of RAs in these disciplines. It also appears that Move 1 is a conventional or obligatory move in this section as it is present in more than 60% of the subsections.

5.4.2 Analysis of Move 2 – Reporting results

This move was used 223 times in EdP, 236 times in EnP and 231 times in EcP. Writers in these disciplines accomplish this move through a direct and brief statement of the results. Its function is to present the results of a study with relevant evidence such as statistics /percentages /frequencies (1-3), and observations (4-6), objectively. Examples of this move found in the corpus follow below.

(1) Results indicated a significant culture × years of teaching interaction ($F(1, 3) = 4.37, p < .01, d = .08$) for Question 1, and significant main effects of culture for Question 2, $F(1, 152) = 9.32, p < .01, d = .15$ and for the content portion of Question 5, $F(1, 152) = 12.61, p < .001, d = .17$.

(EdP 3)

(2) The mean values show that on average 50% of the children's journeys to leisure activities were made by car, 30% by independent travel and only 14% by walking or cycling together with an adult. the three variables are negatively correlated (car journeys/independent journeys: Pearson $r = -.67, p < .001$, car journeys/accompanied journeys: Pearson $r = -.41, p < .001$, independent journeys/accompanied journeys Pearson $r = -.12, p < .001$.

(EnP 12)

(3) 83.9% of respondents thought that they had some investment knowledge. Only 28.2% of them believed that they had an expertise in

technical analysis. 12.5% of respondents admitted that they had a limited amount of investment knowledge. 3.6% of respondents did not even know that stock selection should be based on fundamental and technical analysis.

(EcP 2)

(4) The analyses showed that increased tax was perceived to infringe on the freedom to choose, while improved public transport was perceived to increase freedom.... the information campaign was perceived to be a minor infringement on freedom.

(EnP 15)

(5) Table 2, shows that economic socialisation is associated with future orientation, education level, and a preference for saving rather than spending left-over-money. Economic socialisation is also associated with control over expenditure and bank saving.

(EcP 19)

(6) The reasons for importance of place given by the respondents were varied but short and simple such as, "It is just in front of my home" or "It is large and appropriate for soccer games we often play."

(EnP 17)

Move 2 is used in 136 (82.9%) subsections in EdP, 110 (85.9%) subsections in EnP and 104 (87.35) subsections in EcP. It appears that there is no significant difference in the use of this move in the Results section of RAs in these disciplines. Move 2 is therefore a conventional or obligatory move in this section.

5.4.3 Analysis of Move 3 – Commenting on results

The analysis reveals that the writers in these disciplines do not exclusively present the results of the study but also subjectively evaluate and comment on them. Therefore, Move 2 – Reporting results is often accompanied with Move 3- Commenting on results. This move functions to extend beyond the objective results presented in the previous move by indicating the meaning and significance of the results to the relevant field. This

involves the interpretation of the results in relation to the purpose of the study, the contribution of the result to the relevant field by comparing the results with that which is already available in related literature, the underlying reasons for the results obtained, and/ or comments about the strengths, limitations and generalizability of the results. In the corpus, Move 3 typically follows the preceding 'Reporting results' move. Also noted is if a subsection reports more than one result, this move is often interspersed, following the report of each result and this creates a cyclical pattern between these two moves as in the following example.

***M2** The reasons for importance of place given by the respondents were varied but short and simple such as, "It is just in front of my home" ...
3S1 Yet, it was noteworthy that influences of these negative factors should not be ignored **M2** Data showed that a setting became important because it was **3S1** It could be that the reasons were related to various features...* EnP 17

Move 3 Step1- Interpreting results, is the most frequent step occurring 79 times (in 59 subsections) in EdP, 74 times(in 48 subsections) in EnP and 92 times(in 48 subsections) in EcP. This is followed by Step 2- Comparing results with literature occurring 16 times(in 10 subsections) in EdP, 17 times (in 16 subsections) in EnP and 27 times (in 19 subsections) in EcP. Step 3- Evaluating results occurs 6 times (in 5 subsections) in EdP, 5 times (in 5 subsections) in EnP and 6 times (in 4 subsections) in EcP. Step 4- Accounting for results is used 7 times (in 3 subsections) in EdP, 12 times(in 12 subsections) in EnP and 21 times (in 12 subsections) in EcP. Following below are examples of each of these elements.

Move 3 Step 1 - Interpreting results

Based on the argument presented earlier in this paper, correct counting practice by these students on smaller simple addition problems would not be expected to lead.....

(EdP 13)

Thus, the suggestion that the biospheric items may represent two separate value orientations towards plant life and animal life was supported.

(EnP 6)

This finding is in the direction opposite from that expected. Whatever the source of the difficulty children experience with our questions, it does not stem from the opacity.....

(EcP 26)

Move 3 Step 2- Comparing results with literature

While this may seem like a low rate for invention, it exceeds expectations as compared to the results of prior researchIn particular, Lewis (1981) found that undergraduates were likely to.....

(EdP 5)

This finding is consistent with previous studies on aircraft noise effects (e.g. xxxx. _xxx....)

(EnP 9)

However, in the literature not much support is found for this hypothesis: Xxxx (xxxx) only finds a small positive correlation between smoking and the rate of time preference ('implicit interest rate').

(EcP 8)

Move 3 Step 3- Evaluating results

As was..... ,the statistically significant difference in text interestingness should be interpreted with extreme caution due to the rather low-effect size.

(EdP 22)

Results based on those scales, therefore, should be interpreted with caution.

(EnP 18)

Nevertheless, this selection bias plus the fact that observations for persons over age 75 become increasingly scarce suggest that the present results for ages over 75 be viewed as rather tentative.

(EcP 7)

Move 3 Step 4 - Accounting for results

It is understood however that by reducing the number of stages, the possibilities for variance within the data were also reduced; consequently it became harder to arrive at significant differences.

(EdP 26)

This contrast may be partially explained based on the fact that all of the adjectives located near the right-hand pole of the graph (corresponding to cluster 1) are more closely related to the self in the here-and-now than to the dispositional traits of the self.

(EnP 3)

This could be due to the fact that ESSPs were widely advertised and that acquiring only required filling out a simple form. Employers provided extensive information and took care of the administrative work.

(EcP 14)

The analysis also shows that a result which is presented in Move 2 may be accompanied by a particular step in Move 3 as in the first example below -M2-M3S1- or by more than one step M2 -3S1-3S2 as in the second example. The co-occurrence of these steps of Move 3 can happen in many possible orders and as such no distinct patterns can be determined.

M2 *The results showed a significant effect of context type, $F(1, 60) = 350.94, p < .01, \eta^2 = .85$, with the words presented in context yielding more correct word definition scores....* **3S1** *Thus, even with the possible influence of sound association removed, participants were....*

(EdP 14)

M2 The amplitude of the changes in satisfaction with particular aspects of life are, on average, considerably greater..... 3S1 So while the life cycle pattern of happiness seemingly gives some credence..... 3S2 The pattern for satisfaction with family life, can be seen to parallel roughly life cycle trends in Delbes and Gaymu,(2002) and Waite, (1995).

(EcP 7)

Move 3 is used in 61 (37%) subsections in EdP, 64 (50%) subsections in EnP and 56 (47%) subsections in EcP. It appears that there is no significant difference in terms of the use of this move in the Results section of RAs within these disciplines as it is an optional element in this section as there are instances where a Move 2 is not followed by a Move 3. Also this move is used in less than 60% of the subsections. The lower occurrence of this move may be attributed to the writers in these disciplines focusing more on their communicative purpose of reporting the results of the study and reserving their comments for the Discussion section that follows in the RAs.

Move 4 - Summarizing results is used in 16 (9.7%) subsections in EdP, 6 (4.6%) subsections in EnP and 8 (6.7%) subsections in EcP and as such this move can be considered an occasional element in Results sections across these disciplines. Below are 3 examples of this move.

In sum, these analyses revealed that the variables which built the intervention focus, showed significant.....thereby providing a valid basis for the present treatments.

(EdP 18)

The overall pattern of data suggests that the two hypothetical paths, socio-emotional and cultural capital, predicted to facilitate civic involvement, may be represented by two distinct groups of people.

(EnP 19)

The results to hypothesis H₁ are summarized as follows:

- *There is a significant interaction ...*
- *There is a significant interaction between ...*

(EcP 13)

5.4.4 Cyclical nature of Moves in Results section in research articles in educational psychology, environmental psychology, and economic psychology

As indicated by the frequency of these Moves and Steps, the Results section in these disciplines is highly cyclical following the M1-M2 (103 subsections in EdP, 84 in EnP and 75 in EcP), which is the core pattern of a cycle and is repeated as different results are presented, followed by the M1-M2-M3 cycle (in 52 subsections in EdP, 49 in EnP and 47 in EcP) and M2-M3 (in 8 subsections in EdP, 19 EnP and 11 EcP) To illustrate this cyclical nature are the following examples.

***M1** To answer this question, the data were subjected to a multivariate analysis of variance (MANOVA)..... **M2** No significant differences were found on the choice factor, Wilks' $\lambda = .96$, $F(3,70) = 1$, , **3S2** These findings are contrary to the SAH predictions for ethnicity of students (*Fuson, XXXX*) who choose **M1** Finally, we examined the simple main effects for the choice factor. **M2** The results revealed that, for group SE, **3S1** These findings support the choice hypothesis for different-ethnicity agents on transfer measures.*

(EdP 12)

***M1** Six settings (three pairs) were selected and observed which included three popular places and three counterpart settings (see [Fig. 3](#)). A total of 148 behaviors were recorded, of which..... **M2** showed that behaviors in the place group differed from those in the counterpart group ($\chi^2=39.4$, $df=10$, $p<0.001$). **3S1** In general, places together tended to show a variety of plays including many social behaviors and purposive activities, **M1** Third, a cross-tabulation analysis of setting by age evidenced that another difference between the two groups **M2** was in the number of children's behaviors (and, presumably, in the number of children present in the settings as well) ($\chi^2=10.79$, $df=2$, $p<0.005$):...**3S1** This finding demonstrated again that a setting psychologically important to children was also a setting being frequently used...*

(EnP 17)

***M1** There has been a vivid policy debate in the United States as to whether**M2** An overwhelming majority of ESSP participants, 85.7%, answered this question with no....**3S1** Thus for those whose financial situation is reasonably good, ESSPs have clearly served as an incentive to save more. **M1** Controlling for these financial situation variables, financial wealth and real wealth **M2** are insignificant separately as well*

as jointly. The marginal tax rate dummies are jointly significant at the 10% level..... **3S1** They may have higher tax advantages and will more often substitute other savings by ESSPs.

(EcP 8)

If Move 1 is present as a preview to the sections that follow then the following subsection or cycle begins with a Move 1 then goes on to Moves 2 and 3 as in the following examples.

M1 The results are organized as follows. In the first section,..... In the second section, we discussIn the third section,

2.2.1. Correlational analyses

M1 Absences and importance of algebra were uncorrelated with any of the other variables and therefore dropped from the analysis. Descriptive statistics for the remaining variables.....**M2** Working one-on-one with the teacher was negatively correlated with prior knowledge, achievement, frustration, and enjoyment,..... **M3S1** Although the coding does not reveal who initiated the one-on-one work, it makes sense that

(EdP 7)

3.1 M1 Through the on-site investigation, 11 sound components were recorded and identified.....

3.2. Sound pressure level

M1 The results of sound pressure level $L_{A,eq}$ measured are listed in [Table 2](#). $L_{A,eq}$ is the**M2** We found that among the eight areas, the differences of sound pressure level are**3s3** This could be explained mainly by the

(EnP 24)

3.1 M1 The aim of this study was to examine the ...

3.2. Willingness to cooperate as mediator for tax compliance

M1 Second, mediation was computed by a logistic regression ...**M2** Only willingness to cooperate reached significance (Nagelkerkes $R^2 = 03$; $p < 0.001$). **3S1** This result suggests a mediating effect of willingness to cooperate.

(EcP 9)

In cases where a preview to the Results section is absent the writer begins a subsection with a Move 1, to prepare the reader for the results that is to be announced, and ends the cycle with a Move 3 as illustrated below.

***M1** The results are organized by research question.**M2** The 50th percentile scores for LNF were 33 and 43 for **M3S1** Based on the available normative evidence the sample may be characterized as.....*
(EdP 6)

***M1** A mean value for the experts' assessments of the quality of traffic environment, foothpaths and cycle paths and maintenance was calculated **M2** The inter-observer reliability between the five experts' assessments was, however, rather low.... **3S3** The most likely reason for these results is that...*
(EnP 12)

***M1** Can the life cycle patterns for the domain satisfaction variables taken together actually explain the observed life cycle pattern of happiness? To answer this,..... **M2** The outcome is that the four domain satisfaction variables predict fairly closely the actual pattern of life cycle happiness ([Fig. 3](#)).... **3S1** The correspondence between predicted and actual life cycle happiness supports the "bottom-up" view of the determinants of happiness.*
(EcP 8)

In cases where Move 1 is absent in a subsection then Move 2 is the initial element followed by a Move 3 as in the texts below which begin with a Move 2 and end with a Move 3.

***M2** We found significant differences between the groups concerning the number of accurate diagnoses [$F(8, 91) = 2.22$; $MS_e = 1.12$, $p = .033$. $ES = .69$]. A significant linear component was found ($p = .001$), **M3S1** The results of this analysis confirm hypothesis 1: accurate diagnostic performance shows a positive relationship with level of expertise.*
(EdP 1)

***M2** Ninety-one children who participated in the interviews named 269 settings they believed to be important to them, The number of places each child presented varied from 1 to 7. **3S1** It was clear that the children tended to find their important places among proximate neighborhood open spaces...*
(EnP 17)

M2 *The prices expressed in Italian lira were perceived as the highest, next the prices expressed in Polish zloty, then in euro. However, while the dollar was the strongest currency unit at the time of the research,*
3S1 *Thus, the money illusion effect, which occurred for three currencies...*

(EcP 10)

5.4.5 Discussion of move structure of the Results section in research articles in educational psychology, environmental psychology, and economic psychology

In sum three main rhetorical moves consistently found within these Results sections are the ‘Preparatory information’ Reporting results’ and ‘Commenting on results’ moves. While the first two are relatively simplistic and obligatory, the third move, ‘Commenting on results’ is present but is an optional element and is realized via one or four possible steps. ‘Interpreting results’ is the most frequent step followed by the ‘Comparing results with literature’, ‘Accounting for results’ and ‘Evaluating results’ Steps. This addresses Swales’(2004) concern as to the nature of the commentary move in Results sections. These findings on the frequency of Moves and Steps in the Results sections and that the Results sections not only report results but also comment on them appears to be true for these disciplines of and also to the results section in Sociology (Brett, 1994), Computer Science (Posteguillo, 1999), Medicine (Ngowu, 1997), Applied Linguistics (Ruiying & Allison, 2003) and Biochemistry (Kanoksilapatham, 2003) RAs, but dissimilar to Results sections in medical journal articles (Williams,1999) which are “less prone to ‘substantiations’ and ‘commentaries’ such as comparisons and interpretations” (Swales, 2004: pp 225).

5.5. Analysis and Discussion of move structure of the Discussion sections in research articles in educational psychology, environmental psychology, and economic psychology

The Discussion section is found in 29 EdP, 28 EnP and 21 EcP RAs. This section is written in a maximum of 2718 words in EdP, 2387 words in EnP and 1546 words in EcP and to a minimum of 617 words in EdP, 397 words in EnP and 320 words in EcP. It was also found to be written in as many as 7 subsections and 5 subsections in EdP and EnP and in 6 subsections in EcP. In EdP the conventional section headings used are: *Discussion, General Discussion, and General discussion and educational implications*. In EnP the conventional section heading used are: *Discussion, and General discussion*. In EcP the conventional section heading used are: *General discussion, Discussion and implications, General discussion and conclusion, and Discussion and conclusion*. The summary of analysis of this section is shown in Table 5.4 below

Table 5.4 : Frequency of Moves/Steps in Discussion sections of RAs across the three disciplines

Moves	Steps	Frequency of Moves/Steps			No. of Subsections			No. of Sections/Subsections Used			%		
		EdP	EnP	EcP	EdP	EnP	EcP	EdP	EnP	EcP	EdP	EnP	EcP
Move 1	Background Information	40	21	20	84	51	42	40	21	20	47.6	41.1	47.6
Move 2	Reporting Results	84	74	69				43	23	22	51.1	45	52.3
Move 3	Commenting on Results							69	42	38	82.1	82.3	90.4
	Step 1 Interpreting Results	151	102	86									
	Step 2 Comparing results with literature	51	60	29									
	Step 3 Accounting for results	13	12	14									
	Step 4 Evaluating results	2	2	5									
Move 4	Evaluating the study												
	Step 1 Indicating limitations	38	21	8				22	15	6	76	54	29
	Step 2 Indicating significance/advantage	37	38	22				18	17	14	62	60.7	66.6
Move 5	Deductions from the research												
	Step 1 Making suggestions	2	18	10				2	12	6	6.8	42.8	29
	Step 2 Recommending further research	52	39	16				24	18	8	82.7	64.2	38
	Step 3 Drawing pedagogic implications	22	0	0				16	0	0	55	0	0

Five Moves were identified in these Discussion sections. These Moves are: Move 1: Background information; Move 2: Reporting results; Move 3: Commenting on results; Move 4: Evaluating the study and Move 5: Deductions from the research. These Moves and their characteristics are discussed below.

5.5.1 Analysis of Move 1 – Background information

This background information move is used 40 times in EdP, and 21 times in EnP, and 20 times in EcP. It appears to be used in similar frequency across the three disciplines. Writers in these disciplines do more than just provide background information regarding theory or previous research and generalizations derived from previous studies that are important to understand the material that is to be presented. Its function across the three disciplines includes: situating the research within the wider field (as in 1-2); stating the goal/objective/purpose of research (as in 4-5), stating research questions/hypothesis (as in 6-7), stating major conclusions (as in 8-10), stating data collection and data analysis procedures (as in 11-14) and justifying purpose of a study by indicating a gap that warrants the research (as in 15-17).

(1) Practice is a fundamental factor that contributes to the increasing strength..... This includes practice in performing back-up strategies ... as well as practice in performing retrieval itself (Ashcraft, 1992).
(EdP 13)

(2) Purchases that are made and immediately consumed offer little opportunity for creative mental accounting besides the chance for the transaction utility (Thaler, 1985)
(EcP 6)

(3) Our goal was to develop a better understanding of transitory stages in managerial problem-solving....
(EdP1)

(4) Consolidating and extending our earlier work (Staats & Hartig, 2004; Staats et al., 2003), we investigated the need for psychological

restoration as a within-individual determinant of the common preference differential between natural and urban environments.

(EnP 3)

(5) The primary aim of Experiment 1 was to test whether people deplete a resource in order to uphold third-party fairness

(EcP 5)

(6) Research question 1 addressed whether readers' beliefs affect text comprehension. We predicted that either transmission or transaction beliefs could play a role.

(EdP 2)

(7) The present study addresses the question of how a leader managing a scarce resource makes allocation decisions.

(EcP 5)

(8) The results of the present investigation replicate a growing body of previous research showing that attending academically selective educational programs has a negative effect on academic self-concept.

(EdP 24)

(9) Four conclusions can be drawn from these studies.....

(EdP2)

(10) The results demonstrate clearly that the EC scale is superior to the AC Beliefs scale for measurement of egoistic, altruistic, and biospheric ECs.

(EnP 6)

(11) In this study, sublexical accuracy and fluency measures were directly compared by assessing the same skill, one in an untimed accuracy format and one in a timed fluency format.

(EdP 6)

(12) The results of this study are derived from people who responded to a thought-intensive, time-consuming survey likely containing unfamiliar information.

(EnP 7)

(13) Dose–response curves for annoyance reactions to nocturnal aircraft noise exposure were calculated by means of random effects logistic regression. Different physical parameters were considered in the modelling process:....

(EnP 9)

(14) This study used a comprehensive model of achievement to investigate..... Information was collected concerning students' motivation, self-regulation tendencies..... Variables that correlated with achievement were used as predictors

(EdP 7)

(15) In recent years, the development of APAs has been the target of increasing interest as they have been speculated to have significant effects on human motivation and cognition. However, research has not yet found evidence for either ...

(EdP 12)

(16) The dearth of intervention research relating to helping students with Md develop a reliance on retrieval for basic addition is in stark contrast to the number of empirical and theoretical papers published on the topic. A number of older intervention studies lack important methodological details

(EdP 13)

(17) Even though time and values have been long recognized as important constructs for the understanding of environmental issues, few studies have previously attempted to test their combined empirical relations to EAs.

(EnP 18)

The status of Move 1 in terms of frequency of occurrence is not significant as out of a total of 84 subsections in EdP, 51 subsections in EnP and 42 subsections in EcP this Move is used in 40 (47.6%), 21 (41.1%), 20 (47.6%) subsections respectively. This Move may therefore be classified as an optional move as it occurs in less than 60% of the sections in the corpus. This is similar to RAs in Computer Science (Posteguillo, 1999) where the 'Contextualizing the study' Move was found to have a low occurrence rate, and Applied Linguistics (Ruiying & Allison, 2003) where the 'Background information' move also had a low occurrence rate. However, it is in contrast to Biochemistry (Kanoksilapatham, 2004), where a similar move, the 'Contextualizing the study' move is conventional and is most likely to open a Discussion section. Therefore,

to address Swales (2004), concern, this opening move is not a conventional move but optional in these disciplines.

5.5.2 Analysis of Move 2 - Reporting on results

This move is used 84 times in 26 EdP RAs, 74 times in 27 EnP RAs and 69 times in 22 EcP RAs. Its purpose is to present the results of a study with relevant evidence such as observations (1&2), statistics (3).

The Chinese teachers performed significantly better than the American teachers in all three areas of fraction knowledge: basic fraction concepts, computations, and word problems. Moreover, there was no effect for experience for either the Chinese or the U.S. teachers.

(EdP 3)

On both the recognition and the problem solving posttests, mean scores for fourth and sixth grade control participants were nearly identical; the differences were .02 and .01, respectively.

(EdP 10)

In Study 1 the sound symbolic words received significantly fewer non-responses ($M = 9.74$) than the non-sound symbolic words ($M = 12.69$), $t(60) = 2.36$, $p < .01$. In Study 2 the sound symbolic words also received fewer non-responses ($M = 2.24$) than the non-sound symbolic words ($M = 3.94$), $t(53) = 4.28$, $p < .01$.

(EdP 14)

5.5.3 Analysis of Move 3 - Commenting on results

This move functions to extend beyond the objective results presented in the previous move by indicating the meaning and significance of the results or situate the present research within the relevant field. It is principally a follow up move to the previous ‘Reporting results’ move where the writers highlight their interpretation of the results in relation to the purpose of the study (Move 3 Step 1); the contribution of the result to the

relevant field by confirming and / or comparing the results with what is already available in related literature (Move 3 Step 2), the underlying reasons for the results obtained (Move 3 Step 3) and/ or comments about the strengths, limitations and generalizability of the results(Move 3 Step 4). Move 3 Step1- Interpreting results is the most frequent step occurring 151 times (in EdP), 102 times (in EnP) and 86 times (in EcP). This is followed by Step 2 - Comparing results with literature occurring 51times (in EdP), 60 times (in EnP) and 29 times (in EcP). Step 3 -Accounting for results occurs 13 times (in EdP), 12 times (in EnP) and 14 times (in EcP) and Step 4-Evaluating results occurs twice each in EdP and EnP and 5 times in EcP. The following are examples of the use of this move across the three disciplines.

Move 3 Step 1

These findings suggest that a mastery goal orientation may be an important factor in preventing the decline in performance and motivation that typically follows the transition to high school for many low-income, African American students.

(EdP 17)

The so-called “noise adaption” is an important feature in political discussions: while politicians and in part also the affected persons are of the opinion that with time one can “adapt to” the noise and therefore better cope with it, to date, there are hardly any empirically supported indications for such a process.

(EnP 9)

It would be tempting to infer that people are more interested in financially optimal advice with retirement and investment advice because of its importance to their long-term financial gains and losses. After all, investment and retirement decisions are more monetarily important than are telephone and banking services.

(EcP 16)

Move 3 Step 2

This result is in line with previous findings that question the moderating role of perceived ability in the relations of performance-approach goals and adaptive processes (e.g., [Harackiewicz, Barron, Tauer, Carter, & Elliot, 2000](#)).

(EdP 20)

This corresponds to the findings of previous studies on aircraft noise annoyance (e.g. [Björkman et al., 1992](#); [Fields, 1984](#)

(EnP 9)

In this sense these findings are consistent with other work suggesting that people may not be especially effective in understanding what will influence their long-term happiness ([Wilson & Gilbert, 2003](#)).

(EcP 16)

Move 3 Step 3

The slow counting speeds of students in this study may be the result of processing weaknesses relating to number,Alternatively they may be due to a more general deficit in processing speed..

(EdP 13)

The differences between the laboratory and field-specific functions may primarily be attributed to the artificial conditions of the laboratory setting.

(EnP 9)

The reason for the disappearance of the emotional attachment effect might be the fact that....

(EcP 10)

Move 3 Step 4

Whereas these explanations may seem plausible, it should also be acknowledged that our current data cannot form the basi....nor about the...

(EdP 28)

Since our sample is quite large, and the effects we report are relatively small, desires to stay or leave are probably based on other factors we did not measure.

(EnP 13)

Finally, it needs to be noted that both studies use hypothetical scenarios. In neither study are the participants actually..... Hence, care needs to be taken in generalizing...

(EcP 16)

It appears that 'Commenting on results' is used more frequently and repeatedly than 'Reporting results' in the Discussion section across these three disciplines. Within the Results section 'Reporting results' outnumbers 'Commenting on results' in terms of frequency of usage in the subsections (82.9% versus 37.1% in EdP; 85.9% versus 50% in EnP and 87.3% versus 47% in EcP). In contrast in the Discussion section 'Commenting on results' outnumbers 'Reporting on results' (82.1% versus 51.1% in EdP; 82.3% versus 45% in EnP and 90.4% versus 52.3% in EcP). Therefore 'Commenting on results' is given prominence in the Discussion section than in the Results section across these disciplines. A possible interpretation for this is that "in the Discussion section the communicative focus is on 'Commenting on results' whereas the focus is on 'Reporting results' in the Results section"(Ruiying & Allison 2003 p.377). Thus, although the Results and Discussion sections contain these two important moves in common, the two sections are different in their communicative focus similar to writers in Applied Linguistics (Ruiying & Allison, 2003). This Move may therefore be classified as an obligatory move as it occurs in more than 60% of the sections in the corpus.

5.5.4 Analysis of Move 4 - Evaluating the study

In the Discussion section the writers also evaluate their study (Move 4) by making known their views regarding the weaknesses of the study (Move 4 Step1) and the importance, significance or contribution of the study (Move 4 Step 2). Move 4 Step 1 is used in 22 (76%), 15 (54%) and 6 (29%) Discussions in EdP, EnP and EcP respectively. This step therefore appears to be obligatory in Discussion sections in EdP and optional in EnP and EcP. Move 4 Step 2 is used in 18(62%), 17 (60.7) and 14 (66.6%) Discussions in EdP, EnP and EcP respectively and therefore appears to be obligatory in Discussions across the three disciplines. Given below are the relevant examples.

Move 4 Step 1: Indicating limitations

One limitation of the study might be that self-regulation was teacher-rated rather than student-rated or observer-rated.

(EdP 7)

Of course, the correlational nature of this study does not allow to draw definitive conclusions on causal relationships between variables in VBN theory.

(EnP 21)

As a limitation of this study we have to note that our explanation of the effect was not directly tested in this study.

(EcP 18)

Move 4 Step 2: Indicating significance

In this regard, one important contribution of this study is its focus on school-level processes. Most research examining goal structures in the learning environment in relation to student outcomes has occurred primarily at classroom level.

(EdP 4)

In the present study data for both scales were obtained from the same sample, which has not previously been done.

(EnP 6)

We would like to remind people, and have demonstrated in this research, that non-core aspects of a product or service cannot substitute core product quality.

(EcP 12)

5.5.5 Analysis of Move 5 - Deductions from the research

A final Move 5 occurs towards the end of the Discussion section where writers usually make suggestions based on their research findings (Step 1), recommend further research (Step 2) and draw pedagogic implications (Step 3).

Move 5 Step 1 : Making suggestions

‘Making suggestions’ where writers suggest practical usage of research findings for practitioners in the field is used in 2 (6.8%), 12 (42.8%) and 6 (29%) Discussions in EdP, EnP and EcP respectively. It is therefore an optional step across the three disciplines.

Creating this kind of atmosphere in school is particularly important for students who find the daily transition from home to school a stressful and alienating experience.

(EdP 5)

In particular, the current focus on barrier free building standards needs to be widened to encompass a more holistic approach that takes seriously both the objective and subjective, “invisible” aspects of the home. Housing, health and social care professionals need to be aware of the importance of the home in the lives of their clients and to include housing solutions within a multidisciplinary approach to assessment and care planning.

(EnP 1)

We suggest that car rental firms, taxi companies, and especially “car sharing” companies such as iGo might profitably offer pre-paid plans aimed at this market.

(EcP 6)

Move 5 Step 2 Recommending further research

‘Recommending further research’ where authors urge readers to further research the area under investigation by suggesting changes in methodology, sample and issues and is used in 24 (82.7%), 18 (64.2%) and 8 (38%) Discussions in EdP, EnP and EcP respectively. It may therefore be concluded that this step is obligatory in the Discussions in EdP and EnP but optional in EcP Discussions

Despite the aforementioned limitations, we strongly advocate the use of diaries and process methods in educational research.

(EdP 18)

Further research may be appropriate, however, in samples drawn from other populations.

(EnP 6)

The extent of consumer reaction likely depends on both the perceived value of possible discounts and the inferred motives for the firm’s segmentation strategy. Explorations into these issues may be a fruitful direction for future research.

(EcP 20)

Move 5 Step 3- Drawing pedagogic implications

‘Drawing pedagogic implications’ is used only in 16 (55%) Discussions in EdP and is considered an optional element.

5.5.6 Move recycling in Discussion sections across the three disciplines

The analysis shows that the five identified moves occur in a sequential order if all the moves are present. In this corpus, Move 1 is used as the opening move in 40 EdP, 21 EnP, and 20 EcP subsections respectively. Move 1, if present, is used to open the discussion as in the example below which carries the M1-M2-M3 sequence.

***M1** Consolidating and extending our earlier work (R), we investigated..... **M2** The results of this experiment ... As hypothesized, our participants had... **3.1** That the correlations are not perfect merely suggests that ...*

(EnP 3)

In the absence of Move 1, Move 2 or Move 3 are always present and are most likely to open the section/subsection. Move 2 is used to open the discussion in 24 EdP, 21 EnP and 16 EcP subsections and Move 3 opens the discussion in 14 EdP, 3EnP and 6 EcP subsections. This finding contradicts Hopkins & Dudley-Evans' (1988) who found the discussion section in agricultural science to begin with a Statement on Results. Previous studies (Belanger, 1982; Peng, 1987) have shown the cyclical nature of the Discussion sections. In this corpus the cycle usually involves Moves 2 and 3 where writers first report the results and then comment on them as in the following example. In the first example the writer opens the discussion with a Move 2 and in the second with a Move 3.

***M2** The results of this study are consistent with inferences drawn from the model of drawing processes. First, the prediction that drawing isConsistent with the second hypothesis, this was true only for..... Furthermore, sixth grade participants in the most supportedThere were no significant differences on**3.1** Although the grade by condition interaction was not significant, it is our opinion that*

(EdP 10)

3.1 *The results of Study 1 demonstrate clearly that the EC scale is superior to the AC Beliefs scale for measurement of egoistic, altruistic, and biospheric ECs. M2 The α reliabilities of the three sub-scales were better for the EC scale than for the AC Beliefs scale. Furthermore, in exploratory factor analyses the EC scale gave fairly clear dimensions that agreed with theory, whereas items in the AC Beliefs scale loaded on factors in a haphazard manner*

(EnP 6)

This cycle is repeated if more than one result is presented and discussed. Each cycle may include only one step of Move 3 or may include more than one step of Move 3 as illustrated below.

M2 *Investors may feel regret when they compare..... 3.1the present finding that multiple reference points may influence regret enlarges our understanding of post-decisional regret... 3.2 This conclusion could not be obtained in many previous studies,(R) because. M2 As expected, the best-performing... 3.1 Upward counterfactual thoughts triggered by a negative experience draw our attention to*

(EcP 3)

M2 *The central core of the social representation of the environment does not differ according..... 3.1 This consensus amongst farmers makes it difficult to conclude.... M2 We did not notice any difference in 3.2 According to several studies (R), this seems to be an..... The first is linked to feelings; in other words, These results confirm previous findings..... 3.1 Thus, the egocentric justification for farmers committing to pro-environmental action cannot be denied insofar as*

(EnP 4)

Moves 4 and 5 occur less frequently compared to Moves 2 and 3 and are usually interspersed after a Move 2 or a Move 3 is presented if there is more than one limitation, significance, suggestion or recommendation for further research in the discussion.

M2 *This study showed that the EC scale is superior.... 4.2 In the present study data for both scales were obtained from the same sample, which has not previously been done. 4.1 Issues about the sample should be considered. This was a relatively small sample,7.2 Further research may be appropriate....*

(EnP 6)

M2 Judging from the location of different information types..... 3.3 It implicates the lack of confidence of individual investors 5.1 We recommend that

(EcP 2)

In sum the analysis of the Discussion corpus shows the prevalence of subsections thus addressing Swales' (2004) concern. The analysis also recognises 5 rhetorical moves. Move 1- Background information is used as an opening in 24 EdP and 9 EnP and EcP Discussions. Therefore, to address Swales', (2004) question as to whether writers open the section with the main finding or with a broader introduction, writers in EdP open their Discussion sections with a broader introduction unlike writers in EnP and EcP who start the discussion section with the main finding.

Move 2 - Reporting Results is also an optional move. Move 3 - Commenting on results which is made up of four steps is an obligatory element in the Discussions. This is not surprising as the communicative focus of the Discussion section is to comment on the results that are obtained so that its relevance and applicability to the wider field is made known. Interpreting results is the most frequently used step followed by comparing results with literature, accounting for results and evaluating results. Move 4 - Evaluating the study, made up of two steps, indicating limitations - Step 1- and indicating significance- Step 2. Step 1 appears to be obligatory in Discussion sections in EdP and optional in EnP and EcP. Step 2 appears to be obligatory in Discussions across the three disciplines. meaning, writers in these disciplines indeed practice self advocacy, (Swales, 2004) in making known their findings. Move 5 - Deductions from the research, made up of three steps is also an optional element in Discussions across the three disciplines. Recommending further research is the most frequently used step followed by making suggestions. It can be concluded that this step is obligatory in the Discussions in EdP and EnP but optional in EcP Discussions. The drawing pedagogical

implications step is only used by writers in EdP. As such, writers in these disciplines do make recommendations and state implications (Swales, 2004) of their study but these are not conventional elements in these disciplines.

5.6. Analysis and Discussion of move structure of the Conclusion section in research articles in educational psychology, environmental psychology, and economic psychology

The Conclusion section is found in 11 EdP, 10 EnP and 13 EcP RAs and is written in a maximum of 1018 words to a minimum of 507 words in EdP, a maximum of 1042 words to a minimum of 108 words in EnP and a maximum of 743 words to a minimum of 236 words in EcP. Besides the heading ‘*Conclusions*’ other headings used are *Educational implications* (in EdP only) , *Conclusion and implications*, *Summary and implications*, *Future work and conclusion*, *Future directions and recommendations*, *Final comments and conclusions*, and *Concluding Remarks*. As shown in Table 5.5 four Moves were identified. Providing background information (Move 1), Summarizing the study (Move 2), Evaluating the study (Move 3) and Deductions from research (Move 4).

Table 5.5: Frequency of Moves/Steps in Conclusion sections of RAs across the three disciplines

Moves	Steps	Frequency of Moves/Steps			No of Sections Used			%		
		EdP	EnP	EcP	EdP	EnP	EcP	EdP	EnP	EcP
Move 1	Background Information	10	4	9				90.9	40	69.2
Move 2	Summarizing the study									
	Step 1 Restating major findings	9	8	15	7	7	9	63.6	70	69
	Step 2 Interpreting major findings	11	11	20	8	9	12	73	90	92
	Step 3 Comparing with previous findings	2	0	8	1	0	5	9	0	38
Move 3	Evaluating the study									
	Step 1 Indicating significance	5	8	6	4	10	5	36	100	38
	Step 2 Indicating limitations	3	4	3	2	3	3	18	30	23
Move 4	Deductions from the research									
	Step 1 Making suggestions	2	7	5	2	6	5	18	60	38
	Step 2 Recommending further research	13	9	11	8	6	8	72	60	61
	Step 3 Drawing pedagogic implications	9	0	0	9	0	0	81	0	0

5.6.1 Move 1: Background information

This ‘Providing background information’ move occurs in 10 EdP, 4 EnP and 9 EcP sections. It appears to be an obligatory element in EdP and EcP. As a first move in this section writers restate the importance of the area of investigation as in (1) the reason(s) for doing the research, for instance, by restating gaps in previous research as in (2) and restate the purpose(s) of the study as in (3) below.

(1) Expertise research in general has resulted in few instructional implications (R). Investigating different expertise stages may lead to new insights for instruction. Once different stages are identified in detail, educators can adapt a specific learning strategy to each specific stage (R).

(EdP 1)

(2) Analyses of the correlates of early literacy routinely include accuracy measures with no attention to the potential of fluency measures.

(EdP 6)

(3) Again, the primary purpose of this study was to explore.....

(EdP 22)

5.6.2 Move 2: Summarizing the study

Summarizing the study occurs 22 times in EdP, 19 times in EnP and 43 times in EcP. This move is realized via ‘Restating major findings (Step 1) occurring 9 times in 7 sections in EdP, 8 times in 7 EdP RAs and 15 times in 9 EcP sections and appears to be an obligatory element and shown below are some examples.

In this study, we found that teachers’ knowledge, specifically SMK and PCK, may be a contributing factor.

(EdP 3)

From the interview we found thatdifferent places could give people different feelings to the same sound with the same physical properties.
(EnP 24)

Yet, about one-third of the respondents who had the opportunity to acquire an ESSP in 1995 did not use this opportunity and about one fourth of those who did use it, did not buy the maximum tax-favored amount
(EcP 8)

Step 2: Interpreting major findings occurs 11 times in 8 sections in EdP, 11 times in 9 EnP sections and 20 times in 12 EcP sections and appears to be an obligatory element.

The following are the relevant examples.

In sum, beginning word reading and spelling development is a complex phenomenon that defies a simple explanation. Sublexical accuracy, sublexical fluency, and growth are interrelated, dynamic, and vary across students
(EdP 6)

There are two possible explanations for the mixed results. One is that lower variance in the data sample from the Oslo/Drammen1999 study conceals an existing relationship between income and noise levels, which is shown in the Drammen 1998 study. A more likely explanation is that the research hypothesis, that people may pay themselves out of noise exposure, is too simple.
(EnP 16)

Step 3: Comparing with previous findings, occurs twice in one EdP section and 8 times in 5 EcP sections as in the examples below and may be considered an occasional element in EdP and optional in EcP..

With the results of the present study, we support the claim of [Alexander and Judy \(1988\)](#) that—when students are left to their own devices—strategic processing will often be ineffective and inefficient
(EdP 1)

This interpretation of the observed relationship between habitual decision modes and lottery choice behavior is in line with other research as well. In [Kaufmann's \(2003\)](#) study, people were presented...

(EcP 18)

5.6.3 Move 3 - Evaluating the study

This move is realized via 'Indicating significance (Step 1), occurring 5 times in 4 EdP sections, 8 times in 10 EnP sections and 6 times in 5 EcP sections as in the examples below. This step appears to be obligatory in EnP but optional in EdP and EcP.

Given recent motivation and mathematical learning objectives these results may have important implications for math instruction.

(EdP 17)

An important implication of these findings is that modern society's struggle against the dark side of nature is ultimately psychological, and as such is unlikely to be solved by further scientific or technological developments

(EnP 26)

The existing literature was not afforded the opportunity to analyze and study such a diversified and detailed set of relevant factors assembled in a single data base

(EcP 12)

Step 2 : Indicating limitation, occurs thrice in 2 EdP sections, 4 times in 3 EnP sections and 3 times in 3 EcP sections and appears to be an occasional element across the three disciplines and are shown below.

Although in this study there is an indication that drawing is not effective for younger learners, at this time these findings should not be generalized beyond this study

(EdP 10)

However, this study does have a number of limitations. Qualitative research, like that undertaken in this study

(EcP 20)

This research does not provide insights into when children apply each of these strategies in everyday life and how efficient they are.

(EcP 28)

5.6.4 Move 4 – Deductions from research

This move realized via ‘Making suggestions (Step 1) occurs twice in two EdP sections, 7 times in 6 EnP sections and 5 times in 5 EcP sections and may be considered an optional element and are shown below.

Our findings suggest recommendations for both educators and researchers of cheating behavior. Both groups can benefit from use of concrete, objective criteria such as the two software indicators used here.

(EdP 19)

Thus, a suggestion can be made that researchers and designers may as well consider not only providing the needed affordances but also eliminating such obstacles.

(EnP 17)

As the framing of investment portfolios, such as mutual funds, can influence the individual investors’ decisions, framing effects should be taken into consideration by contractors of bundled finance products

(EcP 13)

Step 2 ‘Recommending further research’ occurs 13 times in 8 EdP sections, 9 times in 6 EnP sections and 11 times in 8 EcP sections and appears to be obligatory in these disciplines as in the examples below.

... future research should focus on investigating the relationship of teacher knowledge and student learning directly.

(EdP 3)

Therefore, future research should continue this line of research by assessing a diversity of people who live in diverse types of places. In addition, assessing...

(EnP 20)

Further research is required to be able to make more comprehensive predictions of the influence of framing on the risk-taking behavior of individual investors, particularly with regard to the evaluation of investments in segregated framing.

(EcP 13)

Step 3 ‘Drawing pedagogic Implications occurs 9 times in 7 EdP sections as in the example below.

In classroom practice, having students read information with the benefits of additional modes of processing (e.g., stimulating discussions and lively exchanges) seems to be necessary if teachers hope to facilitate learning

(EdP 21)

The moves described above are also found in the Discussion section but with some variation in communicative focus. The Discussion section focuses more on commenting on specific results while the Conclusion highlights overall results and interpretations, evaluation of the study and deductions drawn from the research.

These results reveal that the Results, Discussion and Conclusion sections actually differ in terms of communicative focus. The focus in the Results section is on ‘Reporting results’ with relevant evidence such as statistics, observations, and examples. In the Discussion section the focus is on ‘Commenting on results’ which involves the interpretation of the results in relation to the purpose of the study, the contribution of the result to the relevant field by comparing the results with related literature, the underlying reasons for the results obtained and/ or comments about the strengths,

limitations and generalizability of the results. The Conclusion section focuses on summarizing the research by highlighting major findings and interpretations, evaluating the study and pointing out future research directions and suggesting implications for teaching and learning. Although the Moves recur in the different sections they differ in terms of emphasis. These findings appear to be similar to the Results, Discussion and Conclusion sections in Applied Linguistics (Ruiying & Allison, 2003).

5.7 Conclusion

In this chapter I described the rhetorical moves and steps used to realize the Introduction, Method, Results Discussion and Conclusion sections in RAs in EdP, EnP and EcP. Following the presentation of each of the results was a discussion of the findings in light of previous studies conducted in this area of investigation. In the next chapter I present the results on the analysis conducted on titles and new knowledge claims to show how these two elements are realized within these disciplines.