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A CONTRASTIVE STUDY OF THE INTRODUCTION SECTION GENRE OF ENGLISH AND PERSIAN MEDICAL RESEARCH ARTICLES

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Introduction

It has been difficult to avoid the word genre in language education in recent years. Many studies have been carried out to investigate the effect of genre awareness on producing straightforward and sound types of research articles. University students need to both write and comprehend research articles. Within this text type, the introduction section of research article is a genre in itself (Swales 1990, Bhatia 1993) as distinct from other sections of research articles. The introduction sections of research articles have been widely studied because, as Swales (1990) puts it, they are the most difficult part for writers, because they are forced with numerous options and decisions in this section: the amount of background knowledge, the authoritative *versus* sincere tone, the winsomeness of the appeal to readers, and directness of the approach they should incorporate into their writing. This study is an attempt to investigate the introduction section genre of American-English and Persian medical research article. The study aims to find out whether there is any difference in the introduction sections of these two languages as far as the frequency of moves and steps are concerned.

Method

Swales' (1990) CARS model was utilized for the analysis. The model could effectively explain the introduction section genre of English and Persian medical research article. Swales (1990:141) posits a three move pattern for article introduction, as shown below.

MOVE 1:	ESTABLISHING A TERRITORY
Step 1	Claiming centrality and/or
Step 2	Making topic generalization and/ or
Step 3	Reviewing items of previous research
MOVE 2:	ESTABLISHING A NICHE
Step 1A	Counter-claiming or
Step 1B	Indicating a gap or
Step 1C	Question-raising or

Step 1D	Continuing a tradition
MOVE 3:	OCCUPYING THE NICHE
Step 1A	Outlining purposes or
Step 1B	Announcing present research
Step 2	Announcing principal findings
Step 3	Indicating RA structure

The Corpus

Two hundred introduction sections of research articles were randomly extracted from three English and three Persian medical journals, (100 per each language). The data obtained for analysis were drawn from the English journals namely, *American Journal of Medicine*, *Pain*, *Medicine* and the Persian Journals namely, *Pazhoohande* (Research Medical Journal of Shahid Beheshti University), *Research Medical Journal of Ahvaz University*, *Research Medical Journal of Kerman University*.

Criteria for Article Selection

To choose the articles, the following criteria were taken into account. First due to dynamic nature of genre, the corpus was restricted to a period of seven years (1997-2003). Second, all English journal articles were published in the US and all writers assumed to be English native speakers as far as it could be inferred from their names, affiliations, and occasionally biographical notes attached to the articles, and their native-like command of English. On the other hand, the Persian articles were written by Iranians, so we expect Persian to be the writers' native language. It should be noted that there was no instance of translation in the Persian articles. Third, experts of this field (medicine) were consulted to choose journals with high importance, reputation, and readership. Their suggestions were of great help in deciding on the number of articles to be included in the study. For example, 57 articles were selected from one journal, but only 8 from another. Fourth, to keep the naturalness of the sampling, the length of the introductions was not controlled. Fifth, the introduction sections were from articles which had the traditional Introduction, Method, Result, and Discussion (IMRD) sections.

The Identification of Moves

To find the communicative purpose of each sentence, the texts were meticulously read sentence by sentence, because sentences were considered to be the unit of analysis and communicative purpose was the identifying feature of each move (Bhatia, 1993). The process of identification of moves involved focusing on formal clues such as explicit

lexemes and expressions, verb forms, discourse conjuncts, etc. and focusing on function of sentences. Of course in some cases there were some instances of discrepancy between the two formal and functional approaches. In such cases, priority was given to the function of the fragment.

Results

Move and step frequency across the corpus were statistically analyzed. Then inter-rater and intra-rater reliability of the judgments were estimated.

Move and Step Frequency

The frequency of moves and their constituent steps were analyzed in the corpus. Tables 1 and 2 show the move and step frequencies in the corpus.

Moves	Move 1	Move 2	Move 3
English	155	109	104
Persian	153	102	96

Table 1: Move frequency of introduction section of medical research articles

Steps	1.1	1.2	1.3	2.1A	2.1B	2.1C	2.1D	3.1A	3.1B	3.2	3.3
English	87	133	116	11	98	0	3	41	93	12	4
Persian	94	169	140	24	81	9	2	51	83	2	0

Table 2: Step frequency of moves in the introduction section of medical research articles

Chi-squares showed no significant difference between introduction sections of English and Persian medical research articles as far as their move frequency were concerned. But the results of chi-square tests for step frequency showed that there is a significant difference between introduction section genre of English and Persian medical research articles concerning the frequency of steps. Tables 3 and 4 show the results.

	Significance	D.F	χ^2. Value	χ^2. Critical
Moves	.05	2	.163	5.99

Table 3: The Chi-square indicating the significant difference of move frequency across the corpus

	Significance	D.F	χ^2. Value	χ^2. Critical
Steps	.05	10	32.128	18.3070

Table 4: The Chi-square indicating the significant difference of step frequency in the moves across the corpus

The results showed that there is no significant difference between move frequency of introduction sections of English and Persian medical research articles, but there is a significant difference between their step frequencies. This means that both English and Persian writers utilized the three moves with similar frequencies, but the realization of these three moves was different in these two languages. In order to realize the three moves, both English and Persian writers utilized the Eleven steps, but with different frequencies. In order to gain a better understanding of the issue a review over the features of each move and its constituent steps along with examples from each language are presented here.

Move 1

Every research to be reported needs to create the general territory in which it operates. The analysis revealed that 100 percent of English and 100 percent of Persian RAs included move 1 in order to establish a territory. Percentage of occurrence of move 1 and its steps are summarized in the following table.

Move 1: Establishing a Territory	Percentage of occurrence	
Steps	English	Persian
Establishing a Territory	100	100
1) claiming centrality and/or	87	94
2) making topic generalizations	86	99
3) reviewing items of previous research	79	85

Table 5: Percentage of occurrence of move 1 and its steps

To establish a territory of the research to be reported, both English and Persian authors tried to assure the readers of the importance, relevance, and recency of their research project. To achieve this, they made centrality claims, topic generalizations, and reviewed items of previous research. The ultimate goal was to re-establish the significance of the research field for the discourse community.

Examples of steps of move 1 across the corpus

Step 1.1: Claiming Centrality

> English RA.No. 85: Diagnostic and Interventional procedures using radiocontrast media are being performed with increasing frequency.

مقاله پژوهشی شماره 84: روغن ذرت یکی از موادی است که بطور روزافزون مورد استفاده مردم قرار

می گیرد.

Step 1.2: Making topic generalization

> English RA.No. 2: Because of the efficacy of multiagent combination chemo therapy, a significant proportion of patients are cured by current approaches.

> مقاله پژوهشی شماره 31: امروزه معتقدند که علاوه بر علائم اصلی پنجگانه فوق، بیماری کلیوی نیز در سندروم باردت – بیدل یک گرفتاری تقریباً ثابت است که در 15 تا 55 درصد موارد، این درگیری شدید است.

Step 1.3: Reviewing items of previous research

> English RA. No. 76: Initial studies found that IL.1B produces hyperalgesia, following either peripheral or central administration. (Ferreira *et al.*, 1988; Oka *et al.*, 1993; Watkins *et al.*, 1994)

> مقاله پژوهشی شماره 15: برخی تحقیقات ارتباط بین ناخواسته بودن حاملگی را با میزان مرگ و میر نوزادان، اسکیزوفرنی در کودکان، سوء استفاده و آزار کودکان نشان داده اند. (دکتر علی رضا سینا، 1372 و دکتر مژگان مینایی، 1373)

Move 2

In move 2, there is a transition from the generally established context by focusing on inadequacy in previous research that needs new investigation. Percentage of occurrence of move 2 and its steps are presented in table 6.

Move 2: Establishing a niche	Percentage of occurrence	
Steps	English	Persian
Establishing a niche	79	72
1A) Counter-claiming	11	20
or 1B) Indicating a gap	73	58
or 1C) Question raising	0	9
or 1D) Continuing a tradition	3	2

Table 6: Percentage of Occurrence of Move 2 and its steps

As shown in table 6, 79 percent of English and 72 percent of Persian authors established a niche for their study. To attain this objective, they resorted to one or to a combination of steps included in move 2. Considering both English and Persian RAs,

indicating a gap (step 1B) was the most favorite step, while question raising (step 1C) for English RAs and continuing a tradition (step 1D) for Persian RAs were the least. A possible interpretation can be that the authors avoid direct, explicit, and strong challenges to previous research, and they try to state the necessity of current research indirectly. 21 percent of English and 28 percent of Persian RAs did not include move 2 at all. In other words, the authors of these RAs have not stated any negative attitude or challenge to the previous research because they did not feel any need.

Examples of steps of move 2 across the corpus

Step 2.1.A: Counter-claiming

> English RA.No. 37: However, a cross-sectional PCR-based study reported a high prevalence of common respiratory viruses, which was not clearly related to the fatal attack.

> مقاله پژوهشی شماره 64: اما در مورد نقش بالا رفتن سن بر ابعاد حفره رحمی اختلاف نظر وجود دارد

Step 2.1.B: Indicating a Gap

> English RA.No. 19: Surprisingly, the effects of late life anemia have not received much research attention.

> مقاله پژوهشی شماره 19: تا به امروز هیچ مطالعه تشخیصی با استفاده از مصاحبه مستقیم بر اساس
> DSM – IV انجام نشده است.

Step 2.1.C: Question-raising

> مقاله پژوهشی شماره 1: بنابراین این سوال مطرح می شود که آیا نمونه گیری از خون مویرگی را می
> توان جانشین نمونه گیری از خون شریانی کرد؟

Step 2.1.D: Continuing a Tradition

> English RA. No. 12: These analyses were necessary since psychological factors may be related to MFP and bruxism in the absence of disease.

> مقاله پژوهشی شماره 78: این مطالعه به منظور تعیین نقش هلیکو باکترپلیوری و درمان آن در افراد
> مبتلا به NUD.

Move 3

After establishing a territory and niche which are achieved through move 1 and move 2, authors find themselves in a better position to occupy the niche. In fact, by using previous moves, authors pave the way for putting forward their own research. Now

that the reader is convinced about the importance and necessity of the current research, he may wish to be informed briefly about the exact goals of the research, procedure and methodology of the research, principle outcomes, and the structure of the present research. The results showed that 97 percent of English and 91 percent of Persian writers included this move in the RAs. Table 7 shows the percentage of occurrence of move 3 and its steps.

Move 3: Occupying the niche	Percentage of occurrence	
Steps	English	Persian
Occupying the niche	97	91
1A) Outlining purposes	37	51
or 1B) Announcing present research	82	81
or 1C) Announcing principle findings	12	2
or 1D) Indicating RA structure	4	0

Table 7: Percentage of occurrence of move 3 and its steps

Move 3 is typically presented as the final move of the introduction section. In one English RA, this move appeared at the beginning of the introduction. In other words, the writer occupied the niche at the very beginning of the RA. To Swales (1990), this refers to the fact that the author of the RA does not worry about the appreciation of his/her product by the reader. This confidence could be because of the popularity of the author and well establishment of the importance and necessity of the research. In other words, the writer may be a well-known expert member who is reporting an issue which is very significant for other members.

Examples of steps of move 3 across the corpus

Step 3.1.A: Outlining purposes

> English RA. No. 18: The aim of our study was to assess the long-term association of C-reactive protein levels with the risk of death, nonfatal myocardial infarction, and repeat revascularization after coronary angioplasty.

مقاله پژوهشی شماره 46: با توجه به موارد بالا، هدف اصلی این پژوهش، بررسی اثر عامل چاقی بر
کمر درد است.

Step 3.1.B: Announcing present research

> English RA. No. 7: We report the results of a cross-sectional analysis of the association between glycemic control and prevalent cardiovascular disease in patients with NIDDM.

> مقاله پژوهشی شماره 45: در مطالعه حاضر اثر ورا پامیل روی رشد طولی استخوان های دراز در

> دوران رشد در موشهای صحرایی به طور تجربه ای مورد مطالعه قرار گرفت.

Step 3.2: Announcing principle findings

> English RA. No. 5: We found no case in which A.nidulans was a pathogen in patient without CGD, despite the fact that the patient population at NIH is heavily weighted towards immunocompromised groups. These observations show that A.nidulans has distinct mechanisms of pathogenesis that are clinically important in patients with CGD.

> مقاله پژوهشی شماره 8: موردی از وجود باند آمنیون در دهان و حلق جنین و بلع آن وجود نداشت.

Step 3.3: Indicating RA structure

> English RA. No. 5: *Characteristic morphologic features of A.nidulans are shown in figure 1.*

Reliability

The next step was taking care of the reliability in order to avoid subjectivity in the analysis.

Intra-rater reliability

To this end, a sample of 60 articles (30 from each language) was extracted out of the corpus and was analyzed by the researcher two weeks after the first rating.

The results of spearman rank-order correlation showed that there was high correlation between the researcher's two counting of moves and steps. The details of the correlational analysis are presented in Appendix A.

Inter-rater reliability

In order to avoid subjectivity in the analysis of the data, a sample of 60 articles (30 from each language) were randomly extracted and were analyzed by an MA holder of TEFL, who was familiar with genre analysis (her own thesis was on genre analysis). The results of her analysis were correlated with those of the researcher. The results of spearman rank-order correlation showed that there was high correlation between the frequency of moves and steps counted by the researcher and the second rater. The details of the correlational analysis are presented in Appendix B.

Discussion

The results of this study shed some light on the generic organization of the introduction section of medical research articles across English and Persian and showed that there is no significant difference between them as far as the move frequency is concerned. The results also showed that the frequency of steps in the introduction section of English and Persian medical research articles is radically different. The findings revealed that the introduction section of a journal article serves a set of communicative purposes which could be presented in a specific order: Establishing a Territory, Establishing a Niche, Occupying the Niche.

Introductions are organized in such a structure to persuade the discourse community that the present research is something worthy of attention. In addition, the results obtained in the study show that the moves of the introduction section across the two languages are not of equal frequency. That is Move 1 appeared to be the most frequent moves across the corpus. Move 2 places second, while move 3 is the least frequent move to be presented in the corpus.

The findings also focus on the linguistic features the writers utilize to serve their communicative purposes. For example, Move 2 usually includes some negative forms (negative or quasi-negative quantifiers, lexical negation, negation in the verb phrase) because the writers try to imply that the previous research suffer some limitations, that there is a problem that has not been dealt, and that a question remains unanswered.

Results of this study can help students to write research article introduction in a correct genre. University students need to both comprehend and produce academic prose of various related disciplines. Genre analysis can be of great help to instructors to make learners well-aware of how genres differ from and within each other and how learners can go about discovering these differences. The findings of this study may also contribute to the field of syllabus design because to solve the problem of academic isolation, syllabus designers must also include genre awareness courses to sensitize the students to the features that make the text a good and standard product. Raising genre-consciousness is a key factor in solving the problems that are barriers for scholarly, academic communication.

In addition, it may be of great value if medicine practitioners tend to send the report of their research to medical journals and tend to know the generic organization of introduction section of their field.

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Appendices

Appendix A

Table 8: Intra-rater correlation of English moves

English moves in first and second rating	Significance	D.F	ρ Value	ρ Critical
	.01	1	1	.99

Table 9: Intra-rater correlation of English steps

English steps in first and second rating	Significance	D.F	ρ Value	ρ Critical
	.01	9	.99	.73

Table.10: Intra-rater correlation of Persian moves

Persian moves in first and second rating	Significance	D.F	ρ Value	ρ Critical
	.01	1	1	.99

Table 11: Intra-rater correlation of Persian steps

English steps in first and second rating	Significance	D.F	ρ Value	ρ Critical
	.01	9	.99	.73

Appendix B

Table 12: Inter-rater correlation of English moves

English moves by second rater and researcher	Significance	D.F	ρ Value	ρ Critical
	.01	1	1	.99

Table 13: Inter-rater correlation of English steps

English steps by second rater and researcher	Significance	D.F	ρ Value	ρ Critical
	.01	9	.98	.73

AVISHAN MAHZARI

Table 14: Inter-rater correlation of Persian moves

Persian moves by second rater and researcher	Significance	D.F	ρ Value	ρ Critical
	.01	1	1	.99

Table 15: Inter-rater correlation of Persian steps

Persian steps by second rater and researcher	Significance	D.F	ρ Value	ρ Critical
	.01	9	.99	.73