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# Application of native speaker models for identifying deviations in rhetorical moves in non-native speaker manuscripts

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## Abstract

**Introduction:** Explicit teaching of generic conventions of a text genre, usually extracted from native-speaker (NS) manuscripts, has long been emphasized in the teaching of academic writing in English for specific purposes (henceforth ESP) classes, both in theory and practice. While consciousness-raising about rhetorical structure can be instrumental to non-native speakers (NNSs), it has to be admitted that most works done in the field of ESP have tended to focus almost exclusively on native-speaker (NS) productions, giving scant attention to NNS manuscripts. That is, having outlined established norms for good writing on the basis of NS productions, few have been inclined to provide a descriptive account of NNS attempts at trying to produce a research article (RA) in English. That is what we have tried to do in the present research.

**Methods:** We randomly selected 20 RAs in dentistry and used two well-established models for results and discussion sections to try to describe the move structure of these articles and show the points of divergence from the established norms.

**Results:** The results pointed to significant divergences that could seriously compromise the quality of an RA.

**Conclusion:** It is believed that the insights gained on the deviations in NNS manuscripts could prove very useful in designing syllabi for ESP classes.

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## Introduction

Research articles (RAs) as primary channels of presenting first-hand scientific information are viewed as a “prestigious genre”,<sup>1</sup> with the academicians’ specialist knowledge and their academic English ability (especially in non-English speaking communities) alongside the ranking or quality of their affiliated universities often being benchmarked against the academicians’ accomplishments in producing RAs in English, which are published in internationally recognized high impact value journals. As a result, there have been a lot of efforts directed at detailing the features of RAs written in English so as to provide guidelines for non-native speaking scholars to follow in writing their manuscripts in English. The earlier works done in this area were mostly concerned with aspects of medical discourse, focusing almost solely on the syntactic characteristics of texts,<sup>2</sup> with only a few studies<sup>3</sup> showing rhetorical sensitivity and attempting any kind of detailed examination of the rhetorical organization of medical research reports. However, the main bulk of research in the

field, as we will see below, has analyzed different sections of RAs in terms of rhetorical moves initially posited by Swales,<sup>4</sup> while there still are many other works on RAs investigating rhetorical structure<sup>5</sup> and focusing more on specific linguistic features, such as hedging<sup>6</sup> and voice.<sup>7</sup> Most contrastive studies carried out in Iran tend to investigate a particular feature or features as used by Iranians and native-speaker (NS) of English, or focus on how a particular feature might be employed differently in different subgenres. For example, Behnam et al<sup>8</sup> analyzed differences in the way mitigators are used in qualitative and quantitative research, and Mohammadi Khahan<sup>9</sup> studied the kinds and frequencies of hedges and boosters utilized in 120 RAs authored by English and Persian native speakers (ENS and PNS). Overall, the results of this line of research have persuasively shown considerable variation in the articulation of some interpersonal values in academic discourse written in both English and other languages. The present work, rather than contrasting a particular feature used by PNS and ENS, is an attempt to investigate

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the overall organization of the papers produced by Iranian scholars in two sections of their manuscripts and determine their deviations from the major models delineating the organization of those two sections in the field. Our work can thus be considered an ESP analysis as associated with Swales,<sup>14</sup> whose primary concern has been to address the needs of advanced non-native English speakers learning to read and write RAs, as well as to help NNS professionals who want to publish their articles in English. Swales<sup>1</sup> argues for the significance of “sensitizing students to rhetorical effects, and to the rhetorical structures that tend to recur in genre-specific texts” and suggests that “consciousness-raising about text-structure will turn out to be as important as it has been shown to be for grammar.” Such emphasis is arguably not unwarranted, and as Dudley-Evans<sup>10</sup> observes it is probably the most efficient way to equip international students with the skills to study in an English medium situation and prepare them for the variety of tasks needed to practice “genre knowledge” of the varied texts that they must be able to control.

However, such conscious teaching of rhetorical moves on the basis of NS manuscripts might be significantly optimized if it is supplemented by information on points of divergence from the established norms in terms of the move structure as evidenced in non-native speaker (NNS) manuscripts produced by a particular group of learners. In other words, if NS manuscripts are valuable in setting exemplary models for NNS learners to adopt in English for specific purposes (ESP) writing classes, NNS manuscripts, if adequately explored, can have their own value through pointing to the major problem areas by revealing deviations from those established models.

In view of the fact that there is surprisingly little work on NNS productions in terms of (their divergence from) the rhetorical structure of particular sections of RAs, we set out to fit the NNS manuscripts into the rhetorical moves identified by Brett,<sup>11</sup> and Hopkins & Dudley-Evans<sup>12</sup> for results and discussion sections, respectively. It is believed that accommodating our data within the exemplary models of move structure could provide practically useful information on the points of deviation in our data, which can serve to inform programs of instruction designed for teaching academic writing in the future.

Before we go on to the next section, some brief background on “move analysis” is in order. Move analysis is a top-down approach to text analysis that is commonly associated with the ESP branch of genre analysis. Primarily credited to Swales,<sup>1</sup> move analysis has been adopted, redefined and successfully adapted to many disciplines (e.g. physics, medicine, social sciences, etc.). Swales<sup>4</sup> defines move in genre analysis as a discursive or rhetorical element that executes a clear communicative operation in discourse, both spoken and written. And Mauranen<sup>13</sup> thinks of a move as a functional unit that serves a clear rhetorical purpose. She notes that moves can be various sizes, but they generally include no less than one proposition and display internal coherence. Regarding the length of a move, Swales<sup>4</sup> remarks that a move can be as short a

clause or as long as several sentences, and as a unit it is functional, not formal. Perhaps the most revealing definition is provided by Nwogu,<sup>14</sup> who defines a move as “a text segment made up of a bundle of linguistic features (lexical meaning, propositional meanings, illocutionary forces, etc.) which give the segment a uniform orientation and signal the content of discourse in it.” Elaborating on the structure of the move in the same work, Nwogu<sup>14</sup> notes that each move embodies various “constituent elements” or sub-moves, which together comprise information in the move. What Nwogu<sup>14</sup> calls constituent elements, Swales<sup>1</sup> calls “steps” and Bhatia<sup>15</sup> calls “strategies”; but the general consensus is these so-called constituent elements of a move primarily function to achieve the purpose of the move to which it belongs.

Christie and Martin<sup>16</sup> note “[move] structure represents the positive contribution genre makes to a text: a way of getting from A to B in the way a given culture accomplishes whatever the genre in question is functioning to do in that culture.” However, the staged unfolding of content is not equally emphasized in the definition of genre by other SFL scholars, such as Eggins<sup>17</sup> who views the schematic configuration and linguistic aspects as dimensions to the realization of genres, and holds that in determining genre membership, primacy should be given to purpose.

Biber et al<sup>18</sup> posit two primary goals for move analyses: to identify the major communicative purposes found in the texts from a genre, and to identify the individual moves that comprise particular texts from that genre. While there is almost a unanimous consensus that moves contribute both to the local and overall communicative purpose of a text, the fact remains that the identification of individual moves objectively has been not quite easy. In other words, moves do not generally have distinct linguistic boundaries that can be objectively utilized for their demarcation, and moves and their constituent elements have to be determined partly by making inferences from context by reference to linguistic clues in the discourse. Thus, one has to admit that some degree of subjectivity may be inevitable with actual move-based analysis of texts.<sup>19</sup>

Despite possible criticisms and the differences in the way moves are conceptualized, as noted above, this branch of genre analysis has successfully been adapted and extended to the analysis of RAs in many fields, as well as to different sections of RAs. Drawing on the main definitions of moves, given above, Brett<sup>11</sup> posited three broad classes consisting of 16 categories; (a) Meta-textual Categories: 1. Pointer, 2. Structure of Section, (b) Presentation Categories: 3. Procedural, 4. Hypothesis Restated, 5. Statement of Finding, 6. Comparison, 7. Time-related Change, 8. Relationship Between Variables, 9. Substantiation of Finding, 10. Non-validation of Finding, (c) Comment Categories: 11. Explanation of Finding, 12. Comparison, 13. Evaluation of Finding, 14. Further Question(s) Raised by Finding, 15. Implications of Finding, 16. Summarizing. Similarly, Hopkins and Dudley-Evans,<sup>12</sup> in their study of natural science discussion sections, identified 11 moves that can be observed in Discussion sections. The moves

are: (1) Background Information, (2) Statement of Result, (3) (Un)expected Outcome, (4) Reference to Previous Research (Comparison), (5) Explanation of Unsatisfactory Result, (6) Exemplification, (7) Deduction, (8) Hypothesis, (9) Reference to Previous Research (Support), (10) Recommendation and (11) Justification.

### Materials and Methods

Our corpus consisted of 20 articles published in the Journal of Dental Research, Dental Clinics, and Dental Prospects. Limitations on the selection of RAs were that the RAs had appeared in the 2009-2013 volumes as regular papers. The primary criterion for inclusion in the corpus was that the papers had the standard format of IMRD, and papers that did not have this format, e.g., case reports, were not included. Because of these imposed limitations, the procedure for selection of the RAs was thus not as random as outlined by Crookes.<sup>20</sup> However, as refereed, published articles, these NNS products of a highly-conventionalized genre may be taken as representative of the problems experienced by NNS academicians when they write in English.

The notion of rhetorical moves employed in this study was essentially that developed by Swales<sup>1</sup> of distinct propositional content that a text segment seemed to carry or the message that it seemed to develop in light of the communicative purpose of the particular section where it was located. As valuable as Nwogu's<sup>14</sup> model might be in depicting the overall move structure of RAs, it was not really comprehensive enough as a depiction of the rhetorical moves in results and discussion sections, at least not as comprehensive as the models specifically developed to explicate the rhetorical structure of particular sections of RAs, namely Brett<sup>11</sup> for the results section, and Hopkins and Dudley-Evans<sup>12</sup> for the discussion section. Trying to make our data fit the models adopted for these sections, however, we agreed to create the category "irrelevant" for the elements that simply did not fit the related sections, e.g., the identification of statistical means. We also had to create a category named "background" for the results section to accommodate certain introductory sentences that, though related, did not seem to be performing any of the functions posited for the beginning of this section.

In view of the degree of subjectivity inherent in move analysis and the limitations and problems peculiar to our work, we endeavored to enhance the reliability of our work by involving another rater in determining the move boundaries in addition to a subject expert who provided help when either the researcher or the other rater was not sure about the function of a particular text segment. The calculated inter-rater reliability for the present research was 0.856, which indicates quite a high degree of overlap in the move identification between the two raters. The inter-rater was a full professor of applied linguistics who provided truly insightful comments in the course of move identification. Upon noticing differences or possible disagreements on identifying different moves, the researcher went through the text with the rater, and through a pro-

cess of negotiation and exchange of justifications for the choices made, the differences were resolved. As the rater was an undisputed expert in the field, in certain cases of ambiguities, his counseling proved to be very useful in resolving the indeterminacies, e.g., introducing the category IE.

We also decided to provide information on the move length, the number of T-units used in each move, as peripheral information that might come in handy sometime.

### Results

#### *Move one: meta-textual categories*

Articles 1, 2, 18 and 19 had introductory sentences beginning this section, and we did not put these introductory sentences into the "irrelevant" category because we wanted this to stand out for possible future designing of syllabi on move structure. Unlike what the tables show, and based on our personal experience, the tendency to begin a section with introductory statements can be overwhelming for a lot of learners. It appears that the first move has been followed in 10 RAs (50%), which may not be considered too bad for NNS writers. However, upon closer inspection, we find that the meta-textual elements employed were exclusively of the "pointer" type (step 1), with no meta-textual element dedicated to illustrating the structure of the section (step 2). Furthermore, the "pointer" category was probably used to the extent mentioned because it involved formulaic expressions (see Table 1).

#### *Move two: presentation categories*

This move is obviously dominated by "statement of finding" (step 5), which contains a sizable portion of all sentences used in the move being followed in every single article, most of the time appearing in a cyclical fashion. The other two steps taken occasionally are steps 5 and 8, that is "comparison" and "relationship between variables," each taken in 6 RAs (30% each).

Oddly enough, this move contains 8 moves that are optional steps, five of which were never used in the whole data (see Table 1) and one move, mentioned above, which appears in all articles, cyclically on most occasions. Knowing about the centrality of the step "statement of finding" in the results section, it must be noted that taking this step is one thing, but equating the whole section with this step is another. Admittedly, one has to be cautious when drawing conclusions on the basis of NNS productions alone, but it might be safe to conclude from this observation that the writers in our study considered "statement of finding" as the one main step to take with little concern about (non) validating their finding or restating their hypotheses in light of the finding, etc.

The reason might be partly due to overemphasizing "statement of finding" in ESP classes, which seems to have made the impression that it is the one and only step in the result section that matters, the rest being unnecessary. Such overemphasis on statement of results alone without situating it within frontiers of knowledge that can either validate or cast doubt on the work is in a sort of stark contrast

**Table 1.** Rhetorical moves in the Results section

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
a. Meta-textual categories	Background	1	3																3	2	
	1.Pointer								6			1	1	1		1	1	3			
	2. Structure of Section																				
	3. Procedural																				
b. Presentation categories	4. Hypothesis Restated																				
	5. Statement of Finding	4	3	2	4	10	3	3	9	11	8	8	4	3	3	3	1	12	6	3	2
	6. Comparison											1			7			6	3	1	2
	7. Time-related change					2															
	8. Relationship Between Variables	12		3			2		5		1	1		2							
	9. Substantiation of Finding																				
	10. Non-validation of Finding																				
c. Comment categories	Irrelevant			2			3	3	1	2	1					4	1				
	11. Explanation of Finding		3					1	1	3					3						
	12. Comparison																				
	13. Evaluation of Finding																				
	14. Further Question(s) Raised by Finding																				
	15. Implications of Finding																				
	16. Summarizing.																				

with the developmental and tentative basis of science in the modern age. That is to say, when a scientist begins to learn how to state his findings, he must also learn how to relate himself to the work done in the field earlier, with the value of the former hinging on the clarity and soundness of the latter. This seems to be a significant point that is neglected in the ESP classes, at least on the basis of the data in our manuscripts.

### **Move three: comment categories**

This move was seldom observed in our data, and when this move was touched at all it was through step 11 “explanation of finding,” which happened in 6 RAs (30%) Very much to our surprise, this explanation was often provided within a single sentence or in a maximum of three. However, one wonders what good can a statement of finding do when the statement is not explained or evaluated, does not lead to further questions or clear implications, etc. Is it not that such oversights or negligence of the proper steps are the true culprits when the papers are rejected by NS reviewers? After all, it might not be an exaggeration to say that all the academic staff members have, one way or another, mastered the ways of stating their findings; however, the biggest obstacles they are running into seem to be the steps that are noticeably absent from the data. Even a cursory glance at the steps skipped, or avoided if you will, would reveal that the writers’ biggest problems emerge when they are supposed to establish a relationship with the reader and openly guide them, or when they are supposed to give expression to their own thinking and evaluation; that is, when they need to get themselves heard.

Of course, failing to (non) validate their findings can have as much to do with the linguistic means of expression as with the requirement to be up-to-date on the research done in the field. Thus, when such categories are simply skipped, it is not easy to decide what is to blame exactly, and it goes without saying that when something has not been said yet, it cannot possibly be edited and rectified. If the ESP classes are informed by the findings of similar studies that clearly show the divergence points in NNS manuscripts from the established norms, and such moves are consciously taught in such classes, we could have an entirely different picture on NNS productions. Only then could we decide, with any certainty, what the major hindrances are in the way of NNS writers trying to produce RAs that would stand the scrutiny of NS reviewers linguistically.

The first move, “background information,” was present in 85% of the cases and only skipped in 3 RAs, which indicates the tendency of the writers to do some stage setting before going on with the expression of the message proper. However, in a few RAs, i.e., 3, 4, 10 and 13, the writers seem to have overdone the elaboration on this preparatory move, dedicating too many sentences to this function. This is a point that merits some attention in our ESP classes; that is, having familiarized the students with the rhetorical structure, we must tell them never to wonder too far from the communicative function of the section.

It makes little sense to talk at great length about the background to the study in the D section, and not even attempt more than three out of eleven moves in the section, e.g. RA 3.

The second move, “statement of result,” was used in 85% of the cases, neglected only in RAs 3, 5 and 12 - an indication that the significance of this move is well recognized by the writers. However, the first two are the only moves taken by an overwhelming majority of the writers.

The third move, “(un) expected outcome,” was only observed in four RAs. The third move serves to situate the work in the context of the research, relating it to what has been said on a particular topic. This could make the findings of the research either confirm or contradict, in either case adding to the originality of the work. However, it is hard to imagine experienced academics having trouble contextualizing their research with the related works done in the field, and it might be more likely that they might not have known that it would be a good option for them to take.

The fourth and the ninth moves, “reference to previous research,” were observed in 80% of the cases, and in light of this evidence one would be tempted to say that “reference to previous research,” as a move, was being followed by the majority of our writers. However, this is probably another case of the figures and numbers disguising the truth. Reference to previous research as a move in the D section is only legitimate if it is for the purpose of comparison or providing support, and there were occasions when the reference did not seem to be doing either of these functions—we will discuss this point with greater detail below.

Move five, “explanation of unsatisfactory results,” was observed only in 25% of RAs (articles 2, 11, 12, 15, 19), with move six, “exemplification,” appearing only in one RA (20). Similarly, moves seven and eight, “deduction” and “hypothesis,” were found to have been used in six and four RAs, respectively, while move eleven, “justification,” was employed in only one article.<sup>11</sup> While move ten, “recommendation,” was observed in nine articles (1, 10, 11, 12, 15, 16, 18, 19, 20), as with moves four and nine, this move was hardly performing its function in the preferred manner, but it could not be placed in the IE category, either.

The fact that the four moves mentioned above (explanation, exemplification, hypothesis and justification) were notoriously underused in our data is worth some attention. These four moves obviously require some sort of originality on the part of the writer, and they have all been virtually skipped by the writers. What this suggests is primarily the writers lacking the necessary resources or self-confidence to express their persona, the “created personality put forth in the act of communicating,”<sup>21</sup> or to communicate “their evaluation [as writers], credibility, reader sensitivity and relationship to the message.”<sup>22</sup>

### **Discussion**

Normally move identification is said to be among the most difficult stages of any work analyzing the rhetorical organization. As Paltridge<sup>19</sup> rightfully criticizes, there have to

**Table 2.** Rhetorical moves in the Discussion section

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
(1) Background Information		1	10	10	0	1	2	3	2	8	4	5	9		4	3		1	1	7
Irrelevant Elements			1		7			2				2								1
(2) Statement of Result	5	2		1		2	8	5	5	4	2		5	18	3	8	12	9	9	
(3) (Un)expected Outcome			2			3	4	2												1
(4) Reference to Previous Research (Comparison)	8			2	8	1			40	14	5	16	11	23	13	6	9	3	3	3
(5) Explanation of Unsatisfactory Result		4									4	6			3					2
(6) Exemplification																				6
(7) Deduction						2	2		2			3			1	5				1
(8) Hypothesis																	4	8		2
(9) Reference to Previous Research (Support)	11	5		4		8			3	2	6			9	2	5	13	3		
(10) Recommendation	1									1	2	3			3	1		3	2	2
(11) Justification											1									

be both “boundary indicators” and “function indicators” for moves to be identified objectively. As these indicators are not systematically employed in most works, there is assumed to be a degree of subjectivity involved in assigning functions to particular text segments. He elaborates on his point, “there are nonlinguistic, rather than linguistic, reasons for generic staging in texts, and that the search for structural divisions in texts should be seen as a search for cognitive boundaries in terms of convention, appropriacy, and content rather than as a search for linguistically defined boundaries”.<sup>19</sup> Dudley-Evans also criticizes the absence of objective criteria for move identification saying that “they include not only lexico-grammatical features but also cognitive criteria”.<sup>23</sup>

However, the move identification process, though painfully slow at times, did not run into major obstacles. No matter how uncomfortable we felt with the classification of certain vague elements, as the inter-rater reliability in ascribing functions to text segments indicates, when we finally did assign a particular function to a text segment or considered it irrelevant (usually only as a measure of last resort), we found quite a high degree of overlap in the final classification of the moves. Part of the reason for this might lie in the fact that both raters had years of experience in teaching ESP courses, and they thus had developed an intuition regarding what a NNS writer of a shared L1 background was trying to do at a particular stage of his or her writing.

Thus, the real challenge was not so much about move identification or the accommodation of the elements that did not fit the section, rather it was to manage the elements which appeared to be legitimate moves, but did not function in the way such moves are supposed to. For instance, “reference to previous research” (moves four and nine) can occur in the discussion section either for the purpose of “comparison” or “to provide support,” but there were occasions when a writer was found to be making reference to previous research without either of the purposes behind such reference. In another related work by H. Farrokhi and A. Khalili ( Unpublished data, 2016), they had a similar problem in the introduction section where the manuscript writers were sometimes found to be attempting “recycling items of increasing specificity” - a legitimate realization for moves one and two in Swales<sup>4</sup> model-but there was no discernible increasing specificity in the recycled items. They also created the category “recycling items of equal specificity” to highlight this misstep in the manuscripts, but we did not find it easy to lay aside “reference to previous research” as an irrelevant item in our analysis. Thus, we assigned the instances of “reference to previous research,” to either of the relevant two categories upon noticing minimum discernible criteria to aid us with our classification, knowing that they could have been reworded in significant ways to meet the optimal requirements. This is a fact that is easily concealed behind the figures and digits.

In other words, so much criticism is leveled at the subjectivity of move identification, but few seem to notice that

the whole process of move identification is essentially a qualitative matter-rather than a quantitative one-which can easily be misleading if it is too much objectivized. Obviously, we do not mean to argue against those who stress the need for objective criteria in move identification as it is evident that the absence of rules and objective criteria would only lead to chaos and to serious questions of the reliability and empirical validity of the analysis. What we do mean, however, is the fact that even in the presence of formal criteria indicating both function and boundary in text segments, the ultimate judgment regarding the rhetorical categorization of the move should lie with an experienced person, a fact that is inextricably tied up with a degree of subjectivity. In other words, the presence of formal criteria indicating the function and boundary of particular moves can be useful suggestive evidence that can significantly facilitate move identification for a human rater, but they can never be conclusive indicators deciding the functions of moves in a consistent and reliable way.

As for the particularities of our data, if we put the observations of the two sections together, it may not be too difficult to see what the problem areas in these sections are. That is, we have to pay attention to the moves that NS writers have been found to be using in the course of writing their RAs while the writers in our data were found to be deliberately avoiding them altogether or severely underusing them. As Tables 1 and 2 demonstrate, the moves taken and skipped in the two sections seem to have quite a lot in common, almost perfectly matching, with “statement of finding(s)” (SF) being the notoriously dominant move in both sections.

As the writers in our study are academic staff members of Iranian universities, most of whom are assumed to have taken at least one ESP class on RA writing, their preoccupation with the SF at the cost of evaluating, emphasizing or in one word polishing those findings might have resulted from this move being overemphasized in those classes. Or possibly, as faculty members with their vast experience of reading RAs and perhaps writing in their mother tongue, the writers could easily be presumed to have picked up or internalized some formulaic expressions and structures for the expression of their results along the way—hence the overuse of SF in our data.

However, the obsession with rather dry and mechanistic expression of a move (SF), as well as the tendency to virtually neglect or skip some others consistently could be indicative of a much bigger problem, too. The mere observation that a particular move in the R/D section was used by every single one of 20 different authors, or the reverse, could be no coincidence and merits closer examination. Could it be that Swales genre analysis, widely adopted throughout the world, in its emphasis on prototypical exemplars and learners’ convergence has forfeited the requirement to consider the uniqueness that is the characteristic of language-in-use? As Devitt<sup>24</sup> notes, Swales’ method of genre instruction increases genre awareness and is useful for those being introduced to a genre task or lacking knowledge about a genre’s contexts. He adds, how-

ever, that it can be a useful initial step and this tradition seems to have no clear plans as to how to guide learners in moving forward and taking the next steps. He notes, “How do writers move from the linguistic and rhetorical patterns of a genre to the specific, unique textual instance of the genre that they have to produce?”<sup>24</sup> Devitt<sup>24</sup> makes some telling observations: “Teachers discern and teach even the most sophisticated rhetorical moves in ways that, necessarily, simplify the complex rhetorical decisions that experts in that genre make. Once students have discovered the relatively simplified patterns, once they understand a basic rhetorical move, how do we help learners move on to the independent judgments they can and must make in their unique responses to writing tasks?” Extending the competence/performance distinction from linguistics to genre studies, Devitt<sup>24</sup> criticizes genre instruction for being overly concerned with “genre competence,” for it hinders students’ expression of “identity,” “affect” and “cognition.”

It seems that we have encountered actual living examples of the concerns that Devitt<sup>24</sup> raises in theory. The authors’ unanimous use of the SF could be the initial first step that genre instruction in its current form takes the learners to, and the other neglected moves, including “evaluating,” “implications of findings,” “explanation of unsatisfactory results,” “exemplification,” “deduction,” “hypothesis,” “justification” and “recommendation,” are apparently the steps that genre-based instructions have yet failed to take the learners to. If we were to find words to apply to the skipped moves above, “identity,” “affect” and “cognition,” or “individuality and originality” might be the best candidates.

The implications of these observations are partly obvious; first and foremost, if any genre-based instruction are to be planned for the ESP writing classes, the points to receive particular attention have been singled out through identifying the moves not even tried by the authors in our data. Second, the emphasis on the neglected moves would imply recognizing the authors’ own identity and individuality, and if a program can provide for their successful expression along with other points already covered in ESP classes, one might witness tangible improvements in the quality of NNS manuscripts.

### Conclusion

Contrasting the NNS manuscripts with the models posited for NS models revealed significant points of deviation. The rhetorical moves that the authors had systematically avoided in our data might be the true problem areas that demand attention. The fact that there was a considerable degree of overlap between the particular moves adopted and the ones avoided in both sections among an overwhelming majority of the writers might be indicative of the problems inherent in Swales genre analysis, as noted by Devitt.<sup>24</sup> If the neglected moves are given the required attention in the future and the learners actually manage to successfully take those moves, they would be involved in the individualized aspects of performing a genre, which

could be a major breakthrough for all programs of instruction based on ESP genre analysis.

### Ethical approval

Not applicable.

### Competing interests

None to be declared.

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