A Move Analysis of Problem-Solution Discourse: A Pedagogical Guide for Opinion and Academic Writing

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Abstract
Knowledge about move is fundamental to language learning which prepares students and writing practitioners to understand the natures and the organization of a certain discourse and genre. Teachers, consequently, need to familiarize students with a framework of moves that enable them to produce well written work. Consequently, the author conducted a genre analysis on a corpus of 50 problem-solution (PS) articles in the opinion columns of two online newspapers to identify the move characteristics and the move structure of the problem-solution discourse in the genre. The study used a genre analysis methodology relying on Hoey (1983)'s framework of rhetorical organization for the problem-solution discourse. The findings have implications for the writing instruction. They include a set of move features which is a practical guide and a ready-made template for writing the problem-solution discourse. The findings also show that the *Problem* move is the nucleus move followed by the *Response* move. Regarding the move structure, the study unfolds that the *Problem* move and the *Response* moves are moves that are most used to start and to end the articles, respectively. The identification of move characteristics and move structure provides language learners, writing practitioners, and especially English language teachers with empirical results beneficial for a writing practice and for material designs.
Keywords: content-based academic writing, EAP writing, move structure, opinion writing, problem-solution discourse

Introduction

Writing various types of paragraphs and essays is a conventional writing task for English as a foreign language (EFL) university students whose expertise differ according to their areas of study. If English teachers assign a writing task which challenges students to produce a piece of writing on a topic in their area of study or on a substantial issue, it is necessary to encourage students to use their critical thinking skills. Assigning students to write a problem-solution article requiring students to use knowledge in an area of their expertise is a good example of content-based writing which helps students develop both their critical thinking skills and language performance.

Hyland (1990) expresses a classic concern over difficulties concerning a writing organization EFL students have encountered saying that the difficulties are due to a lack of understanding of text organization. Undoubtedly, the problem-solution genre is no exception. Students are not well trained to understand the rhetorical move structures of the problem-solution genre. Teachers, then, should familiarize students with the text organization or the move structure, including the problem-solution pattern, as an important tool to help them write logically and effectively (Aghagolzadeh & Khanjani, 2011; Hyland, 2007; McCarthy, 1991; Yin, 2007). Flowerdew (2003) uses the word "sensitize" to explain the need for students to sensitize themselves to textual or move structures. Generally speaking, the success and progress of a well-organized text is to "enable the reader to extract the writer's intended meaning effectively" (Celce-Murcia & Olhstain, 2000, p. 143).

This study is one of many other attempts to respond to this concern. There have been several studies on the problem-solution genre (Aghagolzadeh & Khanjani, 2011; Ali, 2013; Flowerdew, 2003; Galan & Perez, 2003; Handford & Matous, 2014; Hoey, 1986; Yin, 2007); however, the data used and the context of each study are different. The problem-solution texts previously studied are, therefore, considered different from those in this study, not different variants of the same text type. Therefore, we need to build upon existing knowledge about the move structure of problem-solution articles across a representative sample of texts from the genre of opinion column in which writers aim to discuss problems and suggest solutions to the problems.

Analysis Framework

Problem-Solution Moves and Move Structure

An analysis of problem-solution discourse using Michael Hoey's analytical framework is a data-driven analysis which can classify and describe texts according to the embedded communicative purposes (Flowerdew, 2003). The classification shows a textual interaction in the form of a problem-solution (PS) pattern. The textual interaction includes four communicative stages or moves; that is, a situation, a problem, a response, and an evaluation (SPRE). The interaction involves and usually starts with situations or background information relating to a problem and then leads to a discussion of the problem issue with an attempt to answer questions that a reader may have. The third move concerns proposing solutions to the problem before discussing the consequences of the suggested solutions or giving an evaluation (Fairclough, 1999).

According to Hoey (2001), the reader generally has questions about an issue under discussion and it is the writer's responsibility to presuppose the questions and provide answers together with other information that the writer thinks the reader needs to know in a text the writer
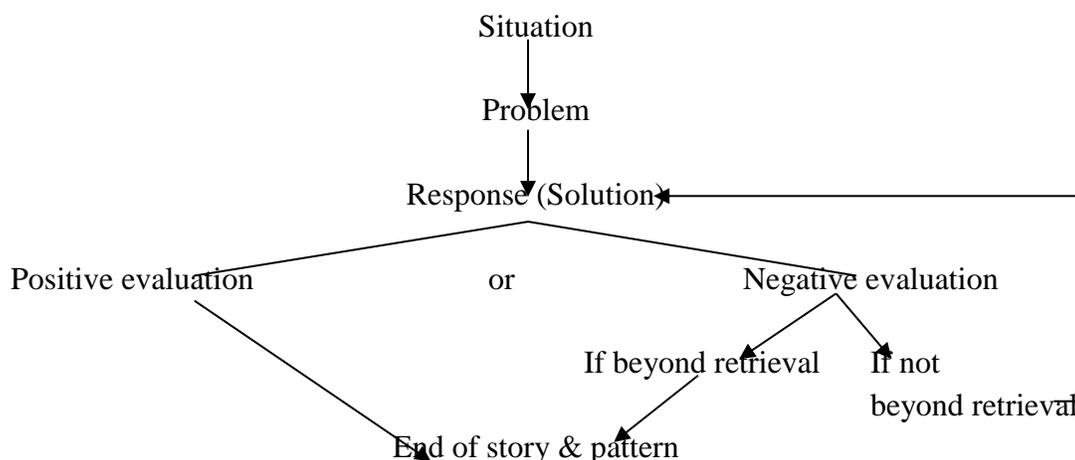
is going to produce. This process is an interaction between the reader and the writer that helps determine the way text is structured (Hoey, 2001). It means that the text becomes the evidence of a purposeful interaction.

The rhetorical structure of problem-solution discourse, SPRE, was proposed by Michael Hoey in 1983 and was characterized in his book "*Textual Interaction: An Introduction to Written Discourse Analysis*" in 2001. The following structure includes the four moves of PS discourse and their definitions as given by Hoey (2001).

Move structure of problem-solution discourse and definitions of the moves

Situation: Background information on situations; facts about people, issue, event, place involved in the issue of discussion

Problem: Aspect of a situation requiring a response, need, dilemma, puzzle, or obstacle under discussion; weaknesses inherent to the current situation

Response: Solution(s) to the problem; discussion of a way(s) to deal or to solve the problem

Evaluation: Assessment of the effectiveness of the proposed solution(s); if there is more than one solution, which solution is the best?

Sometimes a writer might conduct his/her discussion in a different way from the SPRE pattern. In such case, the writer will modify the organization of a text that makes it look different from SPRE. That is, when the writer evaluates a solution raised and finds that it cannot completely solve the problem, a negative evaluation, the writer will propose a new solution to fill in the gap. The move will then be recycled until the problem is completely solved and the evaluation shows a positive consequence or shows no possibility of retrieval (Hoey, 2001). Figure 1 shows an alternative flow of PS discourse.

Situation

Problem

Response (Solution)

Positive evaluation   or   Negative evaluation

If beyond retrieval   If not beyond retrieval

End of story & pattern

Figure 1. **Alternative flow of problem-solution discourse**

The followings are move elements of the alternative structure and their definitions.

Alternative structure of problem-solution discourse and definitions

Situation:	Background information on situations
Problem:	Criticisms of or weaknesses of the current situation
Partial solution:	Discussion of a way(s) to deal or to solve the problem
Negative evaluation:	Assessment of the effectiveness and ineffectiveness of the proposed solution(s)
New solution:	Discussion of a new way(s) to deal or to solve the problem
Evaluation:	Assessment of the effectiveness of the proposed solution(s)

Upon analyzing a text structure, the text will be categorized into different moves according to their communicative purposes, and this is how each move is realized. However, when examining contents embedded in each move, we will find that in order to achieve communication purposes, moves are supported by 'a set of certain elements' that carries different purposes, and it is these elements that mutually form each move. In this study, the term *"move features"* is used as an element that writers strategically use to construct certain moves and as an element that we use to realize each SPRE move. The move feature is considered an element which attaches to each SPRE move.

Literature Review
Problem-Solution Move Identification

Not all study using Hoey's framework of PS move structure identifies all the four SPRE moves. Ali (2013) studies a move structure of business journalistic texts of two English magazines. She categorized the texts into two move categories, the *Problem* and the *Response* moves. The *Situation* and the *Evaluation* moves were not shown as two separate moves since the researcher categorized a communicative act, '*explicating the problem*', pertaining to the *Situation* move under the *Problem* move and also categorized two communicative acts, '*evaluating in solution*' and '*prediction in solution*' pertaining to the *Evaluation* move under the *Response* move.

Having more than one opinion column under a newspaper issue can be a factor formulating the objective and the central move of each opinion column. Belmonte (2009) studies textual patterns of editorials and op-eds columns which are both opinion columns of *USA TODAY* newspaper. The results show that the objective of an editorial is to give readers well-rounded pictures of the problem under discussion. The text mostly employs the *Problem* and the *Evaluation* moves and has the *Problem* move as a nucleus of the text. In comparison, the op-ed column articulates around the *Evaluation* move. The text mainly reflects consequences of previous or present solutions of the problem while assuming that readers are provided with background information of the problem from the editorial. The *Response* move is scarcely presented in both editorials and op-eds. Readers of the columns are positioned to have their own opinion on the problem issues being discussed.

A different cultural background is another factor effecting how one can produce a well-structured PS discourse. Aghagolzadeh and Khanjani (2011) reveal that Iranians use less PS moves than native speakers of English when writing English PS newspaper articles, while they use more when writing PS articles in their Persian language.

Problem-Solution Move Sequences and Structures

Galan and Perez (2003)'s work confirms the need for EFL teachers to explicitly teach students PS move structure as well as the need to make them aware of an importance of using PS move structure as a writing template. The teachers' explicit teaching and the students' awareness both play an important role in helping students write a well-organized PS discourse. Teaching a move structure, including the one for PS discourse, helps students organize their ideas. A move pattern acts as a ready-made template which students can adhere to although good writing does not result from following the move pattern exactly; for example, starting in the conventional way with a situation move (S), and then going on to – a problem move (P) – and a response move (R), and finally an evaluation move (E) for a PS text (Hoey, 2001).

In practice, the order of the move pattern is not fixed (Hoey, 2001). Paltridge (1996) found that; for example, the move *evaluation* does not always occur at the end of a PS text as in the study of letters of complaint, which shows all the four moves of the PS discourse in the order of S – P –E – R – S, instead of the conventional move series S – P – R – E (Hammond et.al., 1992). Similar cases of no one-to-one mapping communicative functions are also confirmed by other scholars in genre analysis that the moves sometimes do not occur in the exact order (Ali, 2013; Flowerdew, 2003; Jordan, 1984).

Jordan (1984) confirms the same findings and adds that although the moves do not follow the convention of SPRE, they are organized in such a way that coherence between sentences creates a rhetorical pattern. Parts of text with certain purposes and moves will logically link to the next move. Hoey (1986) gives a reasonable explanation for the no one-to-one mappings of communicative functions that "the real nature of the pattern is the sense of order perceived by a reader" (p. 190).

Since the existing knowledge about SPRE moves of the PS discourse of the genre may not adequately contribute to the writing instruction of the PS discourse, the researcher then sees the need to conduct this research to fill the gap. This study is consequently conducted with the research objective to identify the move characteristics and the move structures of the problem-solution discourse in opinion columns of English written newspapers.

Methodology
Data Collection

Fifty English articles focusing on the discussion of a problem leading to suggestions or solutions to the problem were purposively sampled from the opinion columns of two leading online newspapers, twenty-five articles from China Daily and another twenty-five from The New York Times to study moves of PS discourse. The corpus studied covers a span of two years (from March, 2014 to March, 2016). These two online newspapers were ranked two of the top ten English online newspapers in Asia and America by the website www.onlinenewspapers.com. The information was retrieved from the website in July, 2015. The data is a cross disciplinary collection, including education, medical care, living standard, human rights, social issues, economic issues and communication and technology, with seven to eight articles for each issue, making up a total of fifty articles of approximately 40,000 words. Before analyzing the articles and identifying the move structure of all the fifty articles, the researcher examined all of them first to make sure that they are problem-solution discourse with the move structure that includes the situation, the problem, the response and the evaluation (SPRE) moves.

As for the writers of all the fifty articles, the research is well aware of the fact that they should be experienced writers of the PS discourse as well as being the experts in the issues discussed so that the PS articles studied are effectively written. As a result of the purposive sampling, the writers of twenty-five articles (50%) were the editors and columnists of the opinion columns while the other twenty-five articles (50%) were experts in the field of issues discussed. It includes two university presidents, five university professors, three book authors, three physicians; and three writers each in the groups of experts in the field of health science, finance, education and social development.

Data Analysis

The study used a genre analysis methodology relying on Hoey's framework of rhetorical organization for the problem-solution discourse consisting of situation, problem, response and evaluation or SPRE moves. Hoey's SPRE framework of analysis identifies different moves embedded in the PS discourse.

Since the shared communicative purposes of a written text are considered a central notion of genre analysis (Hyland, 1990), this study used the communicative purposes embedded in each article as an analytical tool for the SPRE move realization. Theoretically, texts can be distinguished according to their communicative purposes, and this determines how they are structured in a certain genre (Hyland, 1990). In light of this theoretical foundation, in this study, the texts were analyzed and divided into four different moves (SPRE) according to the communicative purposes connected with each move. Beside each SPRE move, their supporting move features were treated in the same way; that is, communicative purposes were also used to identify move features within each SPRE move. This study also used a quantitative analysis to show move occurrence by calculating the total frequency, the average value, percentage, and ratio of the moves identified.

All identified move features were classified as either conventional or optional move features, according to their frequencies of occurrence. The cut-off frequency used to distinguish a conventional move feature from an optional move feature is 60% of the corpus of 25 articles; that is, 15 times of occurrence for each corpus following the practice of Kanoksilapatham (2005). To illustrate the point, if a certain move or move feature in each corpus occurs more than 15 times, it is classified as a conventional move feature; on the other hand, if it is less than 15 times, it is considered an optional move feature.

Intra-coder and inter-coder reliability assessment are a necessary procedure in studies of this kind. The researcher reanalyzed and recoded all the data two months after the first analysis using the same analytical frameworks. The intra-coder reliability was 86.40%. Then the researcher identified SPRE moves and embedded move features of the randomly selected ten articles-- five articles for each online newspaper or twenty percent of the data-- while having an English-native speaking scholar of EFL who is well-versed in move analysis independently analyze and inter-code the same set of data. Then the results of the inter-coding were compared. The inter-coder reliability rate was 84.52%.

Results
Problem-Solution Move Identification

The corpora of PS discourse from the opinion columns of the two online newspapers were analyzed using Hoey's framework for PS move structure. The objective of the study is to identify the move characteristics and the move structures of the PS discourse. The results show that both corpora used Hoey's all four moves: situation – problem – response – evaluation (SPRE).

Definitions of each SPRE move and move feature were systematically and thoroughly reconstructed from the analysis (see Appendix A). Appendix A shows a list of SPRE moves, their move features and definitions found as the empirical results of the corpus study.

Table 1 shows that the most frequent move employed in the newspaper articles was the *Problem* move (35% for China Daily or CHN; and 40% for The New York Times or NYT). The less frequently occurring moves were the *Response, Evaluation* and *Situation* moves or R-E-S, respectively, in both CHN and NYT. In comparison, the frequencies of the *Response, Evaluation* and *Situation* moves in CHN were 26%, 20% and 19%; and the numbers in NYT were 24%, 20% and 16%, respectively. The frequencies and proportions of the four moves as well as the move features employed in PS articles in both newspapers were comparatively close and were almost congruent. The same values for the corpus of all the fifty articles can be arranged in order of frequency as 38%, 25%, 20% and 17% for Move 2 *Problem* move, Move 3 *Response* move, Move 4 *Evaluation* move, and Move 1 *Situation* move or P-R-E-S, accordingly.

Table 1. *Frequency of occurrence of moves and the move features in the corpus of problem-solution articles*

Moves and Move features	China Daily (25 articles)			The New York Times (25 articles)			The corpus of 50 articles		
	Total	Average	Percentage[a]	Total	Average	Percentage[a]	Total	Average	Percentage[a]
MOVE 1: Situation	**32**	**1.28**	**19**	**31**	**1.24**	**16**	**63**	**1.26**	**17**
F1: Present situation of the problem issue	17	0.68	10	16	0.64	8	33	0.66	9
F2: Background information of the problem issue	15	0.60	9	15	0.60	8	30	0.60	8
MOVE 2: Problem	**60**	**2.40**	**35**	**76**	**3.04**	**40**	**136**	**2.72**	**38**
F1: Specific problem issue	22	0.88	13	26	1.04	13	48	0.96	13
F2: Causes of the problem	16	0.64	9	18	0.72	10	34	0.68	9
F3: (Broad problem issue)	9	0.36	5	13	0.52	7	22	0.44	7
F4: (Ineffective previous problem solving)	7	0.28	4	12	0.48	6	19	0.38	6
F5: (Criticism on problem & people concerned)	6	0.24	4	7	0.28	4	13	0.26	4
MOVE 3: Response	**44**	**1.76**	**26**	**45**	**1.80**	**24**	**89**	**1.78**	**25**
F1: Call for action	17	0.68	10	15	0.60	8	32	0.64	9
F2: (Propose solutions effective for the long run)	8	0.32	5	9	0.36	5	17	0.34	5
F3: (Refer to supporting laws & rights)	8	0.32	5	8	0.32	4	16	0.32	5
F4: (Encourage changes in attitude & behavior)	6	0.24	4	7	0.28	4	13	0.26	4
F5: (Refer to expert opinions & research findings)	5	0.20	2	6	0.24	3	11	0.22	3
MOVE 4: Evaluation	**34**	**1.36**	**20**	**36**	**1.44**	**20**	**70**	**1.40**	**20**
F1: Consequences of problem solving	19	0.76	11	18	0.72	10	37	0.74	10
F2: Anticipated positive consequences	15	0.60	9	18	0.72	10	33	0.66	9
Total number of moves	**170**	**6.80**	**100**	**188**	**7.52**	**100**	**358**	**7.16**	**100**

(   ) Optional move features with a move frequency below a cut-off rate of 60% equaling or below 15 move occurrence
[a] Percentage: the percentage for the average number of moves and move features in one article

Interestingly, the results also show that each corpus included the same sets of conventional and optional move features. For both corpora, the *Situation* move included two conventional move features; the *Problem* move included two conventional move features and three optional move

features; the *Response* move included one conventional move feature and four optional move features; and the *Evaluation* move included two conventional move features.

The total of fourteen move features, consisting of seven conventional move features and seven optional move features, was identically realized from the two corpora. The conventional move features and their average value per one article arranged in order of occurrence included M2F1 *Specific problem issues* (0.96); M4F1 *Consequences of problem solving* (0.74); M2F2 *Causes of the problem* (0.68); M1F1 *Present situation of the problem issue* (0.66) equaling M4F2 *Anticipated positive consequences* (0.66); M3F1 *Call for action* (0.64); and M1F2 *Background information of the problem issue* (0.60).

The average values in parentheses in Table 2 show the average number of move employed per article. These average values were calculated to show the ratios of move employment in both corpora. It is obvious that both corpora employed almost the same proportion of move number, 1:1. An exception can be seen in the *Problem* move which China Daily possessed a slightly lower average number of move employment than The New York Times, 4:5.

Table 2. *Number and ratio of move features in the corpus*

Corpus/Move T (A) T (A) T (A)	Problem T (A)	Response T (A)	Evaluation	Situation	Total
China Daily (25)[a]	60 (2.40)	44 (1.76)	34 (1.36)	32 (1.28)	170 (6.80)
The New York Times (25)[a]	76 (3.04)	45 (1.80)	36 (1.44)	31 (1.24)	188 (7.52)
CHN:NYT Ratio[b]	4:5	1:1	1:1	1:1	6:7

T: Total number of move features   A: Average number of move per problem-solution article
[a] A corpus of 25 problem-solution articles   [b] The ratio of the average number of move per article in China Daily and The New York Times

Problem-Solution Move Sequences and Structures

Of all the fifty articles in the corpus, 27 articles (54%) used the *Problem* move to start the PS articles, while the other 23 articles (46%) started with the *Situation* move (see Table 3). The *Response* and *Evaluation* moves were not employed as an opening move.

Table 3. *Number of moves used to start the problem-solution articles*

Corpus/Move	Situation		Problem		Response		Evaluation	
	T	%	T	%	T	%	T	%
China Daily (25) [a]	12	48	13	52	0	0	0	0
The New York Times (25) [a]	11	44	14	56	0	0	0	0
Total (50)[b]	**23**	**46**	**27**	**54**	**0**	**0**	**0**	**0**

[a] A corpus of 25 problem-solution articles   [b] A corpus of 50 problem-solution articles
T: Total number of move occurrence   % Percentage of move occurrence

As Table 4 shows, the moves did not occur in a fixed and predictable order as the finding revealed that a total of forty-two different move sequences was employed to formulate fifty PS articles. While most articles (54%) started with the *Problem* move, the most frequent move sequences started with the S-P-R moves or the *Situation-Problem-Response* moves (see Table 4). Of all the fifty PS articles, twelve articles (24%) started with the S-P-R moves and there were seven different move sequences starting with the moves S-P-R. The second frequently used move sequences started with the P-S-P moves (*Problem-Situation-Problem*). They accounted for 7/50

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PS articles (14%) and had six different move sequences. In general, the texts in the corpus studied were found to be differently organized in terms of move sequence or structure.

As for the move ending, thirty-four move sequences (68%) ended with the *Response* move, while sixteen of them (32%) ended with the *Evaluation* move. Besides, moves recycled when there was a negative evaluation (E^N). In such case, the writers furthered their discussion by articulating around either the *Response* or the *Problem* moves or both of them.

Table 4. *Problem-solution move sequences of all 50 articles: Ending with the Response move and the Evaluation move*

PS move sequences ending with the *Response* move	Number	PS move sequences ending with the *Evaluation* move	Number
S + P + R	**8**	**S + P + R**	**4**
1. S + P + R	3	1. S + P + R + E	3
2. S + P + R + P + E + R	2	2. S + P + R + E + R + E	1
3. S + P + R + E + R	1		
4. S + P + R + E + R + E + R	1		
5. S + P + R + P + E + P + E + P + R	1		
P + S + P	**4**	**P + S + P**	**3**
6. P + S + P + E^N + R	1	3. P + S + P + E	2
7. P + S + P + R + E + R	1	4. P + S + P + S + P + R + E	1
8. P + S + P + E^N + P + E^N + P + E^N + P + R	1		
9. P + S + P + R + E + P + R + E + R + E + R	1		
S + P + S	**3**	**S + P + S**	**3**
10. S + P + S + R	1	5. S + P + S + R + E	2
11. S + P + S + P + E^N + P + R	1	6. S + P + S + P + R + E	1
12. S + P + S + P + E + R + E + R	1		
P + S + R	**4**	**P + S + R**	**1**
13. P + S + R	1	7. P + S + R + E + P + R + E	1
14. P + S + R + P + R	1		
15. P + S + R + E + R	1		
16. P + S + R + E + P + R + E + S + P + R + P + R	1		
P + R + E	**3**	**P + R + E**	**1**
17. P + R + E + R	1	8. P + R + E	1
18. P + R + E + P + R + P + R	1		
19. P + R + E + R + E + R + E + R	1		
P + E + P	**2**	**P + E + P**	**1**
20. P + E^N + P + R	1	9. P + E^N + R + P + E	1
21. P + E^N + P + E^N + P + R + P + E^N + R	1		
Miscellaneous	**10**	**Miscellaneous**	**3**
22. P + R	2	10. P + S + E^N + R + E	1
23. P + S + E^N + P + E^N + P + E^N + R	1	11. P + R + S + E	1
24. P + R + S + P + E^N + R	1	12. S + P + E^N + R + E^N + P + E	1
25. S + P + E^N + P + E^N + R	1	**SUB-TOTAL**	**16**
26. S + E^N + P + R	1		
27. S + E^N + P + S + E^N + R	1		
28. P + R + P + R	1		
29. P + E^N + P + R + P + R	1		
30. S + R + P + S + R + E + S + R + E + R	1		
SUB-TOTAL	**34**	**TOTAL**	**50**

E^N: Negative evaluation

In conclusion, concerning the PS move characteristics identified, the study shows that SPRE moves were proportionally used. In both corpora, the *Problem* move was a nucleus of the PS discourse followed by the *Response*, the *Evaluation* and the *Situation* moves, respectively. Both corpora shared the same sets of conventional and optional move features. The numbers and ratios of move employment in both corpora were almost congruent. The conventional move features commonly used in the PS discourse studied were arranged in order of occurrence as follows: M2F1 *Specific problem issue*; M4F1 *Consequences of problem solving*; M2F2 *Causes of the problem*; M4F2 *Anticipated positive consequences*; M1F1 *Present situation of the problem issue*; M3F1 *Call for action*; and M1F2 *Background information of the problem issue*.

Regarding the move structure, forty-two move sequences were reconstructed from all the fifty PS articles; 54% of them started with the *Problem* move and 46% started with the *Situation*

move. Most move sequences (68%) ended with the *Response* move; while 32% ended with the *Evaluation* move. In case of a negative evaluation, there was a move recycle followed.

Discussion

EFL students have encountered difficulties in writing a well-organized text since they lack the understanding of text organization required (Hyland, 1990). This study, then, aims to offer insights into a pedagogical implications and to contribute to the international community of ELT professionals by adding to the existing knowledge of genre on move characteristics and move structure.

Remarkably, the findings about the identification of SPRE moves and move features as well as the frequencies of move occurrence and the move sequences of both corpora, China Daily and The New York Times, were almost congruent or very close in all respects. To illustrate the point, the findings reveal that the PS articles in both corpora devote the focus and discussion in a similar way. However, the finding disagrees with Aghagolzadeh and Khanjani's (2011) study showing that Iranians use less PS moves than native-speakers of English when writing English PS newspaper articles.

This study has practical implications for an instruction of PS discourse writing for less experienced writers and EFL students and contributes to the knowledge of move characteristics and move structure of PS discourse in the genre of opinion column as follows.

Problem-Solution Move Characteristics

Like Ali's (2013) and Belmonte's (2009) studies on the move structure of the journalistic texts and editorial column, the *Problem* move is the nucleus of the PS text. The similarity shows the obvious role and characteristic of the *Problem* move as the central discussion of the PS texts giving readers a thorough information of the problematic issues under discussion.

In addition, the *Response* move plays a significant role in the PS discourse in the genre as well. The finding agrees with Ali's (2013) study on the PS move structure of business journalistic texts. The top and only conventional move feature for the *Response* move is *Calling for action*. As empirically defined, it is the *Calling for action* that the writers demand the government, various sectors concerned and people in charge to solve the problems. This move identification and definition highlight the central role and characteristic of the *Response move* not only as the expert unit offering insights to readers but also as a representative voice calling for actions to solve the problem issues being discussed. Interestingly but contrarily, the finding disagrees with Belmonte's (2009) work of which the *Response* move is scarcely presented in both corpora of editorial and op-ed columns because, according to Belmonte (2009), readers of the two columns are positioned to have their own opinion on the problem issues being discussed.

Another important feature of the PS move is the *Evaluation* move. Though the *Evaluation* move identified is not the nucleus move like the one in Belmonte's (2009) study of the op-ed column, its proportion of move employment is 20% and the average use of its move features per one article is 1.40. It implies that, on average, there must be at least one *Evaluation* move feature in an article. That is, the *Evaluation* move is significantly positioned to readers to show the writers' awareness and responsibility in evaluating the effectiveness of the past and present solutions as well as the effectiveness of the new suggestion the writers make.

All conventional and optional move features identically identified in both corpora are the empirical products of which the data is equally selected from the academicians in the fields of the problems being discussed as well as the columnists of opinion columns. The writers of this corpus are regarded as experienced writers and content experts. As a consequence, the findings can be effectively used as a ready-made writing template for less experienced writers and EFL students in their academic writing. That is, the PS move features identified in this study can be regarded as a practical and pedagogical implication for an instruction of a PS paragraph, essay and article writing in certain areas of students' academic expertise. This contribution is confirmed by Galan and Perez's (2003) study that it is necessary for EFL teachers to explicitly teach students the PS move structure and make them aware of it as a writing template to help them write a well-organized PS discourse.

Problem-Solution Move Sequences and Structures

The average numbers of SPRE move employment per an article of each corpus (Table 1) valuing more than 1.00 reasonably reveal that PS articles are likely to be structured by all four SPRE moves. The finding agrees with Belmonte's (2009) move analysis of texts in both editorial and op-ed columns; however, the proportions of S, P, R, and E moves identified in the texts of these three columns are different. The difference lies in the objectives of each column. The finding of this study shows a good and balanced, though not equal, proportions of S, P, R, and E move employment (see Table 1). The proportion reveals that though the *Problem* move is the nucleus of the PS discourse of the genre of opinion column, the discussion of the other moves, including the *Response*, the *Evaluation* and the *Situation* moves, is well balanced. This proportional move employment gives less experienced writers and EFL students a guideline for PS discourse writing.

The study confirms the theoretical understanding that the order of the move pattern does not occur in the exact order (Ali, 2013; Flowerdew, 2003; Jordan, 1984; Hoey, 2001). In spite of the unpredictable nature of the move structure, this study adds three new insights to the existing knowledge of PS move structure about the moves frequently used to start and to end the PS articles as well as the most move sequence employed. These three findings agree with Hoey's (2001) notion about the writer's interaction with the readers. That is, texts are differently structured according to the writers' presupposition of what the readers should know; as a consequence, the writers' interaction with them will be designed accordingly. This is how moves are rhetorically and purposefully structured.

To sum up, this study contributes to the pedagogical understanding of the move characteristics and the move structure of the PS discourse in the genre of opinion column and meets the research objective. The implications justify the findings as an applicable guide for EFL teachers to developing a writing lesson of PS discourse that would solve the writing difficulties Hyland (1990) addresses; that is, the lack of understanding of text organization.

This study also has pedagogical implications for international community of ELT professionals as well as for writing instruction since teachers, not limited to language teachers, can refer to the findings of this study and apply the knowledge to design a writing lesson on problem-solution discourse. The implications can also be extended to the teaching of English for academic purposes (EAP) and English for specific purposes (ESP) writing courses. In addition, preparing and challenging students to write a PS essay or article of which the topic relates to different fields

of students' expertise will encourage students to express their academic opinions with a focus on a problem discussion leading to suggestions. Practicing a content-based academic writing like this will, not only help students to develop their language performance, but also challenge them to think critically, solve problems, and bring out their academic excellence.

Limitation and Suggestions for Future Studies

The move analysis of fifty PS opinion articles in English from the two corpora of different cultures revealing almost the same findings in all respects might be a little doubtful even though the researcher considers cross-disciplinary factors concerning the selected discussion topics and writers in the data collection as well as the reliable data analysis methods including intra-coder and inter-coder reliability assessment. Therefore, future investigations can be conducted using the same corpora with a larger sample size and a wider range of discussion topics to better represent the target data and to more effectively generalize the findings, not limited to tentative conclusions. It might also be interesting to examine whether there is any significant difference in the PS articles written by two groups of writers: editorial and column writers and academicians of the same and of the different cultures to test whether there is any possible influence in the selected samples.

Conclusion

This study has fundamental pedagogical implications, especially for the writing instruction. Teachers of EFL and EAP courses as well as teachers of different fields of study can refer to the four moves and their move features identified in this study to design a writing lesson on problem-solution (PS) discourse challenging students to practice writing a content-based academic essay or article. The findings can be effectively used as a ready-made writing template for EFL and EAP writing practices since, first, the corpora studied is equally selected from the opinion articles written by academicians in the fields of the problem issues being discussed and by the columnists of opinion columns and, second, the frequencies of occurrence of the SPRE moves and their move features are almost identical and congruent in the two corpora. Interestingly, considering the average numbers of SPRE move employment per an article of each corpus, the findings show that all PS articles studied are likely to be structured by all four SPRE moves. Although the *Problem* move is a nucleus of the PS discourse, the discussion of the other three moves, including the *Response*, the *Evaluation* and the *Situation* moves, is well balanced.

The purpose of PS discourse is likely to identify the proportion of move employment. This study obviously reveals that the main purpose of PS discourse in the genre of opinion column of online newspapers is to give readers a thorough information of the problematic issues under discussion. It is followed by the purposes of being an expert unit offering insights to readers as well as being a representative voice calling for actions from parties concerned. Interestingly, the average number of the *Evaluation* move employment shows that all articles use at least one *Evaluation* move feature to show the writers' awareness and responsibility in evaluating the effectiveness of solutions the writers make. It is worth a try for teachers to encourage students to practice writing a purpose-driven task that fulfills learning needs.

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Appendix A
Definitions of Moves and Move Features Identified in the Problem-Solution Discourse of Opinion Column

Move & Feature	Definition
Move 1:	Situation The writer provides background information related to problem issues.
Feature:	1. Present situation of The writer provides information, with or without statistical support, on present situations
the problem issue	and aspects related to problem issues so as to support the problem analysis and suggestions to be given.
2. Background information	The writer provides background and situations, with or without statistical support, of what happened in the past that related to problem issues so as to support the problem analysis and suggestions to be given.
Move 2: Problem requiring response.	The writer introduces problem issues or aspects of the situation
Feature: 1. Specific problem issues	The writer discusses problem issues, deficiencies, inferior situations that need to be solved.
2. Causes of the problem	The writer analyzes causes and factors possibly leading to problem issues with or without research and statistical support.
3. Broad problem issues	The writer refers to problematic situations in general before specifying certain problem issues.
4. Ineffective previous problem solving	The writer refers to previous unsuccessful problem solving attempts.
5. Criticism on problems & people concerned	The writer criticizes issues and people concerned with the problem.
Move 3: Response raised.	The writer suggests a wide range of solutions for the problems
Feature:	1. Call for action The writer calls for various sectors concerned and people in charge to solve problems.

2. Propose solutions   The writer proposes solutions to overcome deficiencies or
                                        complications for
     effective for the long run   long-term effects.
3. Refer to supporting The writer refers to laws and rights as a shared standard which
                                        members of society have
     laws and rights   to follow in order to solve problem issues.
4. Encourage changes in   The writer encourages changes in attitudes and behaviors as
                                        a choice for problem solving.
     attitudes & behaviors
5. Refer to expert opinions   The writer refers to expert opinions and research findings
                                        as a reliable solution.
     and research findings

Move 4: Evaluation   The writer discusses possibilities of success in solving problems.
Feature: 1. Consequences of   The writer reviews and reflects on ideas
                                        about effective and ineffective solutions and
     problem solving   possible consequences from previous and present solutions.

     2. Anticipated positive   The writer anticipates the effectiveness and possible
                                        consequences of solutions
     consequences   the writer suggested.