Comparative Genre Analysis of Interactive Metadiscourse Markers in Research Article Abstracts of Medical Law and IT Law

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Abstract:

The aim of the present study was to investigate the use of interactive metadiscourse markers (MMs) in two legal hybrid disciplines: medical law and IT law. Moreover, it aims at exploring the similarities and differences between the two disciplines. To collect data, corpus-based genre analysis was applied and structured open-ended e-mail interview was conducted. While Hyland's (2005) model for MMs was employed to analyse the randomly chosen 150 RA abstracts extracted from two highly ranked journals ("*Health and Justice*" and "*International Journal of Cyber Criminology*), thematic analysis was employed to analyse the responses of seven well-known scholars of genre analysis.The results revealed that medical law abstracts tended to resemble those of hard disciplines whereas IT law abstracts seemed to balance between hard and soft disciplines features in their use of interactive (MMs). These results can provide researchers, ESP teachers and curriculum designers of significant insights on writing abstracts in legal hybrid disciplines. Future research should focus on conducting more comparative studies between hard-soft disciplines to build a stronger understanding of their characteristics that would impact the communication strategies adopted in their RA abstracts.

***Keywords*:** legal hybrid disciplines, medical law, IT law, genre analysis, research article abstracts.

تحليل مقارن لنوع علامات الخطاب التفاعلية في ملخصات مقالات الأبحاث في مجالي القانون الطبي وقانون تقنية المعلومات

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الملخص:

هدفت الدراسة الحالية إلى فهم استخدام أدوات الخطاب التفاعلية في اثنين من التخصصات القانونية المختلطة: القانون الطبي وقانون تقنية المعلومات. كما هدفت الدراسة إلى التعرف على أوجه التشابه والاختلاف في كتابة ملخصات مقالات الأبحاث في التخصصين. جمعت البيانات بواسطة تحليل نوع الخطاب في النصوص، وإجراء مقابلات ذات أسئلة مفتوحة عبر البريد الإلكتروني مع سبعة من الباحثين البارزين في مجال تحليل نوع الخطاب. كما حُلل 150 ملخصًا لمقالات بحثية اُختيرت عشوائيًا من مجلتين ذواتي تصنيف عالٍ: مجلة الصحة والعدالة والمجلة الدولية لعلم الجريمة السيبرانية باستخدام نموذج هايلاند (2005) لتحليل علامات الخطاب التفاعلية وحُللت ردود الباحثين في المقابلات باستخدام أسلوب التحليل الموضوعي. كشفت النتائج أن ملخصات القانون الطبي تشبه ملخصات التخصصات العلمية البحتة، بينما أظهرت ملخصات قانون تكنولوجيا المعلومات توازنًا بين سمات التخصصات العلمية البحتة وتخصصات العلوم الإنسانية في كيفية استخدام أدوات الخطاب التفاعلية. تقدم نتائج الدراسة الحالية للباحثين ومدرسي اللغة الإنجليزية لأغراض متخصصة ومصممي المناهج رؤى مهمة حول كتابة الملخصات في التخصصات القانونية المختلطة. لذا، يجب تركيز الأبحاث المستقبلية على إجراء المزيد من الدراسات المقارنة بين تخصصات العلوم البحتة والعلوم الإنسانية لفهم أعمق لخصائصها التي قد تؤثر على استراتيجيات التواصل المستخدمة في ملخصات الأبحاث الخاصة بها.

الكلمات المفتاحية: التخصصات القانونية المختلطة، القانون الطبي، قانون تقنية المعلومات، تحليل نوع الخطاب، ملخصات المقالات البحثية.

1. Introduction:

1.1 General Background.

The main goal of ESP is to equip its learners with the required skills to communicate in different situations when they study or work. Genre analysis can contribute to achieving this goal by enabling the learners to use English in its target contexts (Hyon, 2018). To clarify, it is the abundance of responses produced by genres that facilitates communication (Hyland, 2007). Hutchinson and Waters (1987) demonstrate that it is a fundamental task in ESP to identify the purpose of deciding what type of English to use. Using genre analysis would help to recognise the writing conventions of the members of a specific discourse community and to improve learners' competence in academic writing in those disciplines.

A significant question can be raised here: what genre and what discipline or disciplines need to be investigated? In the academic domain, understanding the role played by an abstract in RAs would contribute to creating well-written abstracts. The abstract provides readers with the main characteristics and findings of RA (Mosteller et al., 2004). According to Cuschieri (2022), it always summarises the whole RA by highlighting its different sections, especially the results and conclusions.

Recently, there has been a tendency for interdisciplinarity in many disciplines. Among all disciplines, law seems to exist widely in many fields. Law, by nature, tends to solve problems, and that is why its presence in many fields is inevitable. Throughout legal history, law has been a dependent discipline that is affected by other disciplines (Weifang et al., 2012). Therefore, this discipline has been hybridised with many disciplines. As a result, the present study was conducted to explore whether RA abstracts in two legal hybrid disciplines, medicine law and IT law, are dominated by the writing conventions of one discipline or adopt a mixture of the conventions of their component disciplines.

1.2 Statement of the Problem.

Of all the disciplines, law seems to receive less attention with respect to legal RA abstracts in hybrid disciplines. Therefore, the present study aims to analyse 150 legal RA abstracts: 75 abstracts in medicine law and 75 abstracts in IT law, for the sake of investigating the frequency of interactive MMs. In addition, the present study aims to explore the similarities and differences between these hybrid disciplines and to explain why they exist. The corpus of the present study was selected from two prestigious journals in the fields of medicine law and IT law (*Health and Justice* and *International Journal of Cyber Criminology*) that were published during the period 2017-2023.

1.3 The Questions of the Study.

The present study aims at answering the following questions:

1. What are the frequencies of interactive MMs used in legal RA abstracts in medical law and IT law?

2. What are the similarities and differences between legal RA abstracts in medical law and IT law in terms of interactive MMs?

3. Do medical law and IT law RA abstracts show statistically significant differences with reference to interactive MMs?

2. Literature Review:

2.1 Theoretical Background.

It can be said that genre analysis is an expansion of genre theory used in literature to classify literary works. In applied linguistics, genre analysis can be the clear manifestation of scholars' efforts to facilitate the process of teaching and learning EFL initiated in the 1980s. It was, according to Paltridge (2007), the period when genre analysis first emerged in ESP. When it made its baby steps, genre analysis was simply regarded as a very effective tool exploited to categorise and highlight the disparities between any studied genres and their sub-forms (Dudley-Evans, 1987). The strength of this approach lies in providing information about the cognitive dimension and social dimension of teaching a written discourse; this contributed to ensuring that it is in the lead of the other pedagogical approaches. (Hyland, 2004) In 2005, Hyland developed a model that can enable researchers to learn more about interactive MMs namely how writers in the academic discourse community manage their positions, build credibility, and engage their readers.

2.2 Previous Studies.

Considering that a writer's culture would influence employing interactive MMs in RA abstracts in hard disciplines, Wei and Duan (2018) analysed the interactive MMs of 60 English RA abstracts, adopting Hyland's (2005) model for the analysis. The abstracts were written by Chinese and English writers in biology, chemistry and physics. Wei and Duan (2018) indicated that Chinese writers paid more attention to guiding their readers through their abstracts. That is why there were more interactive MMs in their abstracts than those in native speakers' abstracts, namely code glosses.

Exploring the use of interactive MMs in RA abstracts in soft disciplines was the objective of many studies. However, each one of them attempted to shed light on a different factor that could affect these markers' use, such as the writer's culture and discipline. In their study, Shafique et al. (2019) selected 100 RA abstracts from five soft disciplines: linguistics, literature, sociology, psychology, and management. Hyland and Tse's (2004) model of metadiscourse was employed to analyse the corpora that were written by native English

speakers and Pakistani writers. The results indicated that Pakistani writers used more interactive MMs than English native speakers. This would demonstrate that Pakistani writers wrote clearly to facilitate reading their abstracts for readers. Like Shafique et al. (2019), Kirisci and Duruk's (2022) investigated the interactive MMs in 300 RA abstracts, which were written by native English speakers and Turkish speakers in special education and preschool education. The findings revealed that code glosses were the most frequently appearing interactive MMs in English native speakers' abstracts, whereas Turkish speakers preferred frame markers. Results of chi-square test indicated that there were statistically significant differences between the corpora in terms of the use of code glosses.

So far, the analysis in the earlier studies has either focused on hard disciplines or soft disciplines. However, Mansour et al. (2016) and Indarti (2022) carried out their research with the primary goal of determining whether there were differences in the use of interactive MMs across soft and hard disciplines. Mansouri et al. (2016) examined the effect of language and discipline on the application of interactive MMs. For this purpose, twenty RA abstracts in both Persian and English were selected from the fields of computer engineering and applied linguistics. The results of the analysis indicated that the writers of soft disciplines preferred to provide the readers with more information. They achieved this by applying more interactive MMs. In addition, Indarti (2022) conducted a study wherein 10 RA abstracts from several fields were analysed. The findings showed that "logical markers" and "code glosses" were employed in all RA abstracts collected from five Indonesian Scopus Q1 and Q2 indexed journals, with no discernible variation between them, which were regarded by Indarti (2022) as patterns of abstracts in these types of Indonesian journals. Overall, many studies investigated interactive MMs in pure soft and hard disciplines; however, hybrid disciplines received scant attention. The present study would fill the gap in the literature and highlight the significance of doing more research on hybrid disciplines.

3. Method:

Considering the descriptive nature of the questions in the present study, a mixed-methods approach was used. Moreover, methodological triangulation was employed by applying genre analysis and thematic analysis to lessen the possibility of researcher bias in research findings.

3.1 Data Collection.

3.1.1 Corpus.

In the current study, the corpora were collected based on Nwogu's (1997) three criteria: representativeness, reputation and accessibility. The selection of journals was governed by the need for finding journals that widely cover

different topics related to medical law and IT law whose abstracts are informative. Two journals met the aforementioned characteristics: "*Health and Justice*" for medical law and " *International Journal of Cyber Criminology*" for IT law. The probabilistic random sampling was utilised, applying the lottery method of sampling. The corpora comprised 150 RA abstracts whose length ranged from 100 to 300 words. The chosen journals were required to meet Scopus' indexing standards, which are renowned for their stringent criteria for journal selection and topic coverage. *Health and Justice* and the *International Journal of Cyber Criminology* are highly ranked journals with a frequent publication rate in the hybrid disciplines (medical law and IT law). Moreover, their 2023 impact factors, in light of Scopus Journal Rank (Scopus CiteScore Rank), were 2.75 and 1.8, respectively (http://www.resurchify.com/). Based on the affordances of searchability, portability, and accessibility, the corpora in the present study were electronically retrieved and downloaded from the archives of the selected journals.

3.1.2 Interview.

The participants in the interviews in the present study were 7 well-known scholars in applied linguistics who are interested in genre analysis. Selecting the sample was done by navigating Google Scholar to find PhD holders who have actively published research articles in the domain of genre analysis and applied linguistics. Then, a list of 70 alphabetically ordered names of experts in the previously mentioned fields was built. Every second name in the list was selected using systematic analysis. Out of 35 scholars, only seven of them responded, indicating low engagement from the other scholars, which might be considered a limitation. However, the wide background and knowledge of the seven prominent scholars yielded valuable data, compensating for the limited number of responses. The choice to select experts over non-experts was not arbitrary. With their experience, these experts could provide valuable insights due to having deep understanding of the theoretical and practical aspects of genre analysis, which cannot be found in non-experts.

The interview was designed by the researchers and validated by a professor of applied linguistics. The interview consisted of nine questions. "A structured interview in a qualitative study probably emphasises open-ended questions." (Goodwin & Goodwin, 1996, p.135) The questions in the present study were structured in the sense that the same nine questions were sent to the participants via email and they were open-ended in the sense that each scholar was provided the freedom to answer each question as they pleased. By doing so, it was possible to extract themes from the responses to each question to reach common perspectives on the topic targeted. The questions revolved around the perspectives of the scholars on the similarities and differences between hybrid

disciplines, and which interactive metadiscourse discourse markers would dominate in hybrid disciplines those of a hard discipline or soft discipline. The researchers assured the participants that their personal information would be confidential. An email interview was chosen to obviate the need for overcoming the problem of reaching participants in other countries. Moreover, "one of the main benefits of email interviews is the potential for rapid response. " (Nehls, 2013, p.304).

3.2 Data Analysis.

***3.2.1 Genre Analysis*.**

For the sake of investigating the generic features of RA abstracts in the two hybrid disciplines (medical law and IT law), the focus was on microstructure of RA abstracts. The microstructure analysis dealt with the interactive MMs of RA abstracts. As Xiao and McEnery (2005) have indicated, a range of linguistic and textual techniques are used in empirical studies on genre analysis of RA abstracts to delve into the communicative functions and patterns of abstracts in various academic fields and research genres; in most research studies, the textual analysis approach was predominant. MM analysis was adopted in the current study. Li et al. (2017) state that it invariably employs a top-down method, with analysts initiating their investigation from predefined metadiscourse elements and moving downwards to the texts being scrutinised. As for the present study, Hyland's (2005) model of interpersonal MMs was the framework used for the analysis.

Table (1): Hyland's (2005) Interpersonal Model of Metadiscourse

Category	Function	Examples
Interactive	**Help to guide reader through the text**	**Resources**
Transitions	Express relations between main clauses	and, but, in addition, however, thus
Frame markers	Refer to discourse acts, sequences or stages	My purpose is …, first, second, the findings are …, In conclusion
Endophoric markers	Refer to the information in other parts of the text	mentioned above, as follows
Evidentials	Refer to information from other texts	according to …, X states that …
Code glosses	Elaborate propositional meanings	In other words, it means that …, such as …, e.g., for example

Source: Hyland (2005, p.49).

The identification of interactive MMs was performed on two stages. First, a concordance tool for automated analysis which generates a list of terms arranged according to their frequency (AntConc 2019 software) was used to find the frequencies of interactive MMs' occurrence. Then, manual analysis was applied to ensure that what the software listed as interactive MMs was accurate. AntConc software would simply provide statistical statistics regarding words and phrases; it would not provide pragmatic or semantic information. Therefore, human judgement is required to provide this information based on the illocutionary meaning of each word and phrase. It is worth to mention that the percentage of frequency of interactive MMs' subcategories were calculated using percentage formula. However, to compare the two corpora, there was a need to adopt other techniques due to their sizes.

In the present study, there were two corpora with different corpora sizes (medical law with 18297 words and IT law 13647 words). Consequently, in an attempt to make the comparison between them more accurate, the number of interactive MM per 1,000 words was considered (e.g., Hu & Cao, 2015; Li & Whatron, 2012). The normalised number of signals can help a researcher make more meaningful comparison. Therefore, an average number per 1,000 words was used to be able to notice the differences among disciplines. In addition, the standardised Z-score residual was calculated for each variable using SPSS Version 26. Then the Z-scores of each variable in the two corpora were directly compared. Considering statistical significance, if the Z-scores are significantly different, it suggests that the variable's distribution in one corpus differs significantly from its distribution in the other corpus. When it comes to investigating whether the differences between the interactive MMs in medical law and IT law RA abstracts were significant Chi-square test was used.

3.2.2 Thematic Analysis.

Examining the interview transcripts in detail can help find recurrent themes or topics. This may entail coding the data. By following Braun and Clarke's (2006) six steps and NVivo 10 software, the scholars' responses were categorised into codes. To perform the thematic analysis for the structured open-ended interviews two phases were followed. First, an online software NVivo 10 was used to generate the themes. NVivo can expedite the process of coding as it can help categorise the codes. It becomes easier with the node creation materials provided by NVivo's tools to organise and identify larger patterns, allowing a researcher to link codes across different responses or categories. Second, manual analysis took place for the interpretations.

3.3 Inter-rater Reliability.

In the present study, an experienced linguist with interest in genre analysis was chosen to serve as the second inter-rater. The degree to which the two raters

agree that is known as inter-rater reliability was measured. A statistical method called Cohen's kappa (for two raters) was used to measure the inter-rater reliability or precision. By comparing the 150 RA abstracts that were separately coded by both raters, it was demonstrated that the coding process was dependable with kappa value .92 (.91 for medical law and .94 for IT law) which indicated a strong agreement between the two inter raters. See Table 2.

Table (2): Kappa Value of Inter-rater Reliability for Interactive MMs

Measure of Agreement Kappa	Medical Law	IT Law
Value	0.913	0.946
Asymptotic Standard Error[a]	0.037	0.026
Approximate T[b]	17.557	20.354
Approximate Significance	0.000	0.000

4. Results and Discussion:

The results of genre analysis were presented followed by the results of thematic analysis.

4.1 Results of Genre Analysis.

According to Hyland (2005), the interactive MMs serve to organise the text's content. They imply that a writer is aware of the existence of readers. They help readers understand the writer's intention more easily.

***4.1.1 Interactive Metadiscourse Markers in Medical Law RA Abstracts*.**

Before delving into the results of the analysis of interactive MMs in the medical law corpus in the present study, an overview of their frequencies of occurrence and percentages was provided. See Table 3.

Table (3): Frequencies and Percentages of Interactive Metadiscourse Markers in Medical Law RA Abstracts

Interactive metadiscourse markers	Frequency	%
Code glosses	245	60.80%
Transition markers	120	29.77%
Frame markers	38	9.43%
Endophoric markers	0	0%
Evidentials	0	0%
Total	**403**	**100**

As it can be seen in Table 3, code glosses were found to be the most common of interactive metadiscourse markers in medical law abstracts, accounting for 60.80% (245 instances). Transition markers followed with 29.77% (120 occurrences). Moreover, frame markers were noteworthy, appearing in 9.43% (38 occurrences). On the other hand, endophoric markers

and evidentials were not used by the writers of the medical law RA abstracts in the present study. In an attempt to provide a precise explanation for code glosses, it was necessary to categories them based on the functions they performed.

Table (4): Frequencies and Percentages of Code Glosses Subcategories' Functions in Medical Law RA Abstracts

Functions of all code glosses subcategories	Frequency	%
1. Presenting statistical values	99	40.4%
2. Introducing acronyms or abbreviation for terms	73	29.8%
3. Providing clarification for terms	31	12.7%
4. Offering explanation and elaboration	24	9.8%
5. Providing examples	15	6.1%
6. Reformulating	3	1.2%
Total	**245**	**100**

As illustrated in Table 4, with 40% (frequency 99) of all code glosses, "presenting statistical values" was the most frequently observed function. Following this, the "introducing acronyms or abbreviations for terms" is quite prevalent, accounting for 29.8% (frequency 73) of all instances. "Reformulating" and "providing examples" were less commonly used functions; "providing examples" was used 6.1% (frequency 15) of all code glosses, and "reformulating" was used in just 1.2% (frequency 3) of code glosses. Acronyms and abbreviations simplified language and improve readability and conciseness of medical law RA abstracts.

In medical law RA abstracts, all statistical values were provided within parentheses. There are several reasons for the inclination of medical law writers to do so. Firstly, abstracts are designed to offer brief summaries of RA. By enclosing statistical values in parentheses, key numerical results can be presented with precision and clarity, keeping the main text clear. Secondly, statistical data like p-values, effect size and confidence intervals are usually essential for comprehending the importance of the results. Placing them in parentheses highlights these significant results. Thirdly, there are standards for how statistical results should be reported in abstracts in various academic domains. It is conventional to use parentheses to indicate that these numbers present particular statistical results connected to the study's conclusions. Last but not least, parentheses assist readers in rapidly recognising and understanding statistical values among other information in the abstract. This facilitates comprehension for researchers and academics who are searching through several abstracts (see Excerpt 1).

Excerpt 1

Substance use marginally predicted increased odds of rearrest at one wave, and rearrest significantly **(p < .05)** predicted increased odds of substance use at another. **(ML4)**

Excerpt 1 shows how the parentheses can present the statistical values, indicating the significance of the results of a study. These values add accessibility and credibility to the results.

In technical or jargon-heavy writing, parentheses are employed to clarify terms or phrases so that readers understand specialised terminology correctly.

Excerpt 2

Medications for opioid use disorder **(MOUD)** significantly decrease mortality but courts rarely refer participants with opioid use disorder to MOUD providers. **(ML59)**

Medical law writers also used the parentheses to introduce acronyms such as (MOUD) in Excerpt 2. This can be an essential tool in academic writing especially in specialised fields like medical law. By doing so, medical law writers tried to enhance the readability of abstracts without sacrificing clarity. This enabled them to maintain the specialised nature of abstracts and increase the readability through simplicity. On the other hand, the frequent use of parentheses to offer explanation and elaboration emphasises their function to improve understanding by providing additional information.

Excerpt 3

We used an age-adjusted analysis, accounting for the difference in age distributions between the two groups, to compare sociodemographics, chronic conditions, and geriatric conditions **(functional, sensory, and mobility impairment)**. **(ML8)**

Excerpt 3 is a good example of another function of parentheses as code glosses that is "providing clarification for terms. Some readers might not be familiar with specific terms used in medical law such as "sociodemographics, chronic conditions, and geriatric conditions"; therefore, (functional, sensory, and mobility impairment) could ensure that the readers do not miss the intended meaning in the abstract. Moreover, theoretical concepts seem difficult for some readers, so medical law writers elaborated them. Excerpt 4 illustrates this.

Excerpt 4

The present study focuses on the first seven phases **(Assessment through Training)** of the ADAPT-ITT framework in the adaptation of the Department of Corrections (DOC) protocol in preparation for a pilot trial for induction in a rural jail and during the transition to a rural community. **(ML41)**

In Excerpt 4, the code gloss "Assessment through Training" helped simplify the framework used in the study. In comparison to the previously mentioned communicative functions performed by parentheses, "providing examples" and "reformulating" received the lowest frequencies of occurrence. One explanation for this could be the nature of abstracts, where writers try to avoid over-elaboration.

Overall, parentheses in medical law RA abstracts improved readability, offered more details, and efficiently directed the reader through sophisticated or specialised content. The abstracts have become easier for readers in the medical law research community to access and understand thanks to the organised usage of parentheses. In general, the results of the analysis revealed that the writers of medical law RA abstracts tend to use many code glosses. It can be inferred that they do so to make the complex features of research in this hybrid field accessible, coherent and engaging to readers. To clarify, the target readers of medical law could have different disciplinary background. Code glosses can make a highly-specialised research comprehensible to non-specialist readers to create a structurally and communicatively well-organised and coherent abstract which is very significant in academic writing. It is a step towards raising the interest of the readers to read the whole RA.

In RA abstracts, transition markers play a number of essential roles. They: 1) aid in improving readability and comprehension; 2) ensure the coherence of the abstract; and 3) indicate a methodical and systematic approach to showing findings, which is critical for showing credibility and professionalism. Table 5 displays the frequencies and percentages of transition markers employed in medical law RA abstracts.

Table (5): Frequencies and Percentages of Transition Markers' Subcategories Functions in Medical Law RA Abstracts

Functions of transition markers subcategories	Frequency	%
1. Showing contrast	61	50.8%
2. Indicating addition	42	35%
3. Identifying consequence	13	10.8%
4. Expressing reason	3	2.6%
5. Indicating comparison	1	0.8%
Total	**120**	**100**

The use of transition markers in medical law RA abstracts was investigated, and their application was classified into a few major functions. "Showing contrast" was the most common function, accounting for half of all transition markers. Markers that indicate addition had the second highest percentage 35 %

of all transitions used. Transition markers for "Indicating comparison" accounted for at least 0.8% of the total, with "likewise" being the only marker seen once.

There are various interpretations that can be drawn about how writers organise and present information in medical law RA abstracts. First, the predominance of contrast implies that there is focus on presenting contradictory views or contradicting information, which is necessary for gaining a complete understanding of what is known in the field of medical law. It helped medical law researchers to set their work in relation to the pre-existing one. Consider Excerpt 5.

Excerpt 5

The evidence for specialty mental health probation is promising; **however,** little is known about the implementation challenges and facilitators associated with SMHP. **(ML23)**

In Excerpt 5, the writer used the contrast to highlight the credibility and thoroughness of the research that in spite of the promising evidence, there is still an area that requires exploration. Second, the emphasis on addition suggests that additional information should be briefly added, possibly identifying important ideas or elaborating on findings. On the other hand, medical law writers frequently used addition transitions to highlight subsequent findings (Excerpt6).

Excerpt 6

Officers' knowledge of mental illnesses increased **and** officers demonstrated lower levels of stigma towards persons with mental illnesses as evidenced by scores on a standardised scale. **(ML2)**

Excerpt 6 illustrates how medical law writers ensured that the abstract reads cohesiveness. By using "and", they facilitated the smooth flow of information, indicating professionalism in writing by connecting ideas logically. This can contribute to making abstracts in medical law easier to follow and more persuasive.

The moderate use of markers for "identifying consequence" in medical law RA abstracts suggests that these markers play a minor role in connecting research findings to implications or outcomes. In the abstracts of highly technical disciplines, there may not be many transitions for consequence. The focus in these disciplines is on presenting facts or experimental results rather than addressing wider consequences. The writers usually place a higher priority on providing the main results, methodologies and conclusion in the abstract and this is the case for medical law writers.

Transition markers for "expressing reason" were used sparingly by medical law RA abstracts. For various important reasons pertaining to the genre and disciplinary conventions, writers of RA abstracts frequently employ fewer transition markers when expressing cause. To start with, abstracts are usually brief, so it is necessary to remove lengthy transitional sentences that provide explanations and merely showcase findings. Abstracts frequently give conclusions without going into the specific reasoning behind each claim. In addition, the goal of scientific writing is to convey facts objectively; excessively speculative or interpretive language is avoided. This frequently implies that abstracts present results as facts. Researchers and experts in the field who read scientific studies usually skim the abstracts in order to swiftly understand the key conclusions and applicability of the research. Rather than in-depth justifications for each discovery, they anticipate succinct, straightforward descriptions of the findings. Abstracts are, therefore, designed to meet these expectations by emphasising results above causes

In a similar vein, medical law writers focused primarily on presenting their own research findings and contributions, which is why they employed fewer comparison transitions. There are various cases in which using fewer comparison markers is common. First, the writers could place more emphasis on presenting innovative findings rather than providing a comparison with the body of current literature. Medical law is a hybrid discipline and the goal of many hybrid disciplines is to address difficult issues that extend beyond several conventional fields. Effectively tackling these multidisciplinary problems and offering thorough answers and insights that were previously lacking might lead to innovativeness. In addition, abstracts may focus less on comparative analysis when the focus is on describing the study's methods to validate its results.

In medical law RA abstracts, different functions exhibited different frequencies of frame markers usages.

Table (6): Frequencies and Percentages of Frame Markers Subcategories' Functions in Medical Law Corpus

Functions of frame markers subcategories	Frequency	%
1. Sequencing	18	47.4%
2. Announcing goals	14	36.8%
3. Labelling stages	6	15.8%
4. Shifting topic	0	0%
Total	**38**	**100**

As Table 6 shows sequencing markers accounted for 47.4% of all frame markers, making them the most common frame markers. 36.8% of all frame markers were for "announcing goals". The labeling stage markers formed 15.8%

of all frame markers, It is noteworthy that none of the RA abstracts in medical law employed the frame markers for shifting topic.

The analysis of frame markers in medical law RA abstracts indicates that they were effectively ustilised to improve coherence and structure. Sequencing markers created a clear chronological or procedural flow that led readers through the steps followed and results obtained. Hard disciplines usually place considerable importance on presenting research findings in an organised and understandable way. To ensure the information flows logically and to preserve objectivity, these disciplines often employ frame markers for sequencing. This is because in hard disciplines, precision and reliability are essential to facilitate comprehension and to replicate experiments or investigations. See Excerpt 7.

Excerpt 7

Most of the participants were male and racial and ethnic minorities. There were five dominant themes that emerged during our analysis: **1)** variations in their quantity of antiretroviral medication received during transition; **2)** linkages to community-based physical health care providers was not well-coordinated; **3)** insufficient housing and social resources; **4**) structural and social challenges to post-release well-being; and **5)** family as a source of resilience. **(ML27)**

Excerpt 7 illustrates the sequencing function of frame markers. By using this frame marker, the writer guided the readers through the presentation of the key findings. This organises the content and prepares the readers for a detailed breakdown of the study's results. On the other hand, writers announce the goals of their study to ensure that the readers understand the central aim of the research. By doing so, readers can interpret the subsequent content within the context of the study's objectives. See Excerpt 8.

Excerpt 8

The **purpose** of this study was to describe whether and how HIV stigma influences continuity of care for people living with HIV while they transition from prison to community settings. **(ML5)**

Mentioning the purpose of the study in Excerpt 8 can indicate the intention of the writer to raise the readers' expectations of what will be explored.

It is noteworthy that the lack of markers to indicate shifting topic reveals a conscious attempt to preserve focus and thematic coherence throughout the analysed RA abstracts. These results demonstrate how frame markers serve as essential instruments in medical law RA abstract facilitating efficient communication and understanding of scientific data.

Two interactive MMs were not employed in medical law corpus. The first one was endophoric markers. This result is in consistent with the results of Ruonan and Al-Shaibani's (2022) study. In their study, the writers of the RA

abstracts in three disciplines (English language and communication, mass communication and psychology) did not use the endophoric markers in their study. It is possible to draw a conclusion that medical law writers attempted to enhance clarity and readability of an abstract by focusing on summarising the key components of the research, such as objectives, methods, results, and conclusions, without presuming the reader is familiar with internal references.

Evidentials were not also employed in medical law corpus. This can indicate the resemblance of medical law to hard disciplines. The emphasis of these studies is on replicable results and objective findings. Therefore, when hard discipline researchers make claims, they typically reference specific studies, experiments, or data sets that provide empirical support for their assertions. That is to say, hard disciplines tend to prioritise empirical validation of other researchers' interpretations or theories.

***4.1.2 Interactive Metadiscourse Markers in IT Law RA Abstracts*:**

Table 7 shows the frequencies and percentages of all interactive MMs in IT law corpus.

Table (7): Frequencies and Percentages of Interactive Metadiscourse Markers in IT Law RA Abstracts

Interactive Metadiscourse Markers	Frequency	%
Transition markers	122	44.68%
Code glosses	110	40.29%
Frame markers	30	10.98%
Evidentials	10	3.66%
Endophoric markers	1	0.39%
Total	**273**	**100**

Table 7 displays that with 122 occurrences, transition markers are the most common, accounting for 44.68% of all interactive metadiscourse markers. Closely behind were code glosses, which represented 40.29% (110 occurrences). Frame markers constituted 10.98% (30 instances). At 3.66% (10 occurrences) were less prevalent. The least common interactive MMs were endophoric markers, which were in only 0.39 (2 instances) of abstracts.

Through the appropriate use of transition markers, writers craft an integrated narrative that leads the readers through the abstract while making sure the important details are conveyed. This technique shows the professionalism and rigour expected in scholarly publications, as well as improving the abstract's quality. Table 8 demonstrates the different functions of transition markers subcategories in the IT Law corpus.

Table (8): ***Frequencies and Percentages of Transition Markers' Subcategories Functions in IT Law RA Abstracts***

Functions of transition markers subcategories	Frequency	%
1. Indicating addition	59	48.4%
2. Showing contrast	46	37.7%
3. Identifying consequence	11	9%
4. Expressing reason	6	4.9%
Total	**122**	**100**

The most commonly used function was "indicating addition", accounting for 48.4% of all transition markers used. "Showing contrast" was the second most frequently employed function, accounting for 37.7% of all transition markers. At 9%, "identifying consequence" was the third most frequent function. "Expressing reason" accounted for 4.9% of all the transition markers used. It is noteworthy that no comparison markers were applied in IT law RA abstracts.

The frequency of transition markers' occurrence in IT law RA abstracts was 122, which was the highest among the other interactive markers. Similarly, these markers were the most frequently used in the RA abstract in the three disciplines (English language and communication, mass communication, and psychology) in Ruonan and Al-Shaibani's (2022) study and in the RA abstract in the prestigious and less prestigious journals in El-Dakhs' (2018) study.

In IT law RA abstracts, transition markers serve different functions. They helped produce a structured and evidence-based approach to abstracts, which is typical of hard disciplines. To start with, the prevalent function of addition transitions indicates how IT law writers rely on them to present information. A good example is Excerpt 9.

Excerpt 9

Additionally, the study identifies other articles in the KUHP (Criminal Code) that address the mitigation of cybercrime issues in Indonesia. **(ITL71)**

The use of the additional transition in Excerpt 9 helped expand on the study's findings by providing supplementary details about the scope of analysis. There is emphasis on the breadth of the study while the flow of thought was maintained. In addition, transitions for contrast played a crucial role in IT law abstracts. Their use reflects that IT law writers tend to address opposing viewpoints, contradicting information, and highlighting deficiencies. See Excerpt 10.

Excerpt 10

Although much has been written on topic of hacker motivations, little empirical research has been conducted and even less research has attempted to quantify hackers' motivations. **(ITL6)**

Excerpt 10 is a good example of how IT law writers introduced an idea that contradicts the previous statement. The use of "although" showed a gap in the literature. The writer seems to effectively use this marker to create a nuanced understanding by juxtaposing the two statements. This can make the reader realise the significance of the study. Even though "identifying consequences" and "expressing reasons" were less prominent, they were still present in IT law abstracts. This demonstrates that IT law writers are in favour of a structured argument.

Excerpt 11

Not much is done about it in developing countries like Nigeria. This study **therefore** investigated the predicative roles of depression and demographic factors in Internet addiction among Nigerian university students. **(ITL5)**

"Therefore" in Excerpt 11 indicates that the investigation in the study was logical, being a logical response to a need. This ensures that the readers understand the cause-and-effect relationship in the research framework.

In general, writers of RA abstracts in hard disciplines tend to use fewer transition markers to express reason. What can stand behind this inclination is the limitations of brevity, the emphasis on summarising findings rather than explanations, adherence to genre conventions of scientific writing, and meeting reader expectations for clear and direct communication of results. For further clarification, see Excerpt 12.

Excerpt 12

A multiple linear regression of the standardised variables indicated that digital capacity for identity protection, affinity for modeling, and positive affect for digital deviance significantly predicted moral disengagement from the harms associated with digital music piracy ($F = 94.011$, $p < .05$, adj. $R2 = .319$). **(ITL19)**

The previous excerpt can provide an insight into how most IT law abstract did not employ transition markers for expressing reason.

Table 9 shows the frequencies of code glosses' subcategories in IT Law RA abstracts.

Table (9): Frequencies and Percentages of Code Glosses Subcategories' Functions in IT Law RA Abstracts

Functions of all code glosses subcategories	Frequency	%
1. Providing clarification for terms	32	29%
2. Presenting statistical values	24	21.8%
3. Offering explanation and elaboration	23	20.9%
4. Providing examples	17	15.5%
5. Introducing acronyms and abbreviation for terms	13	11.8%
6. Reformulating	1	1%
Total	**110**	**100**

Table 9 illustrates how code glosses were used in IT law RA abstracts. "Providing clarification for terms" appeared to be the most common function, with 32 occurrences, or 29% of all the instances. "Presenting statistical values" followed closely behind, occurring 24 times, or 21.8% of all instances. Acronyms and abbreviations for terms were often used by IT Law writers; there were 13 occurrences, or 11.8%, of this function. "Reformulating" was the least used function – it was only used once, or 1% of all instances.

In IT law abstracts, various rhetorical functions were applied through the use of code glosses. Consider Excerpt 13.

Excerpt 13

The study also found that currently there is no statute in the country which explicitly permits the arbitration for disputes regarding cybercrimes **or** online crimes committed in IPR domains like copyrights and trademark disputes. **(ITL60)**

"Or" in Excerpt 13 provided clarification of the term "cybersecurity". This marker ensures the clarity of the abstract and enhances the readers' understanding.

As was previously stated, there are many rewards for the use of code glosses, namely statistical values in RA abstracts: clarity, emphasising the importance of results and facilitating readers' comprehension. It is noteworthy that statistical values can be an indication of a disciplinary impact. Hard sciences place more importance on using statistical values to simplify the results of complex experiments and highlight the validation of a study's findings. Soft sciences, on the other hand, focus on the interpretation of results rather than detailed numerical results. Therefore, there might be fewer statistical values in their abstracts. They aim to address theoretical implications or real-world applications.

Excerpt 14

A total of 440 students from the University of Mostar took part in this research, aged from 18 to 25 years **(M=21.32, SD=1.84). (ITL 25)**

Excerpt 14 illustrates how statistical value helps support the empirical nature of the research through providing numerical details about the samples age distribution. In addition, the inclusion of the mean and standard deviation also reflects the robustness of the data which positions the research within a methodological framework. The parentheses were also used to offer explanation (see Excerpt 22) and to provide examples (see Excerpt 15).

Excerpt 15

The regression analysis reveals significant correlations between digital literacy **(specifically copyright, citizenship, curation, and connectedness)**, online privacy concerns, and cybersecurity behaviour. **(ITL 70)**

The elaboration in Excerpt 15 helped narrow down undefined concepts to its specific facets, ensuring the readers' understanding. When it comes to Excerpt 16, the examples presented within parentheses are illustrative in applying the information to real-world contexts.

Excerpt 16

This framework suggests that electronic resources **(e.g. social media; message boards; digital texts; etc.)** may act as proxy for conventional social interaction in learning deviant ideologies and developing neutralizing strategies. **(ITL 19)**

Regarding the other rhetorical functions of code glosses, a few acronyms and abbreviations were used in the IT law corpus. When it comes to the code glosses: "providing examples" and "reformulating" presented within parentheses, they were limited in number.

One useful way to determine whether a discipline is hard or soft is to examine its use of code glosses. Nevertheless, before making a firm determination about whether a discipline is "hard" or "soft" based solely on its use of code glosses, it is important to consider disciplinary norms, audience expectations, and the specific context of the research. The presence of code glosses in a RA abstract can suggest higher technical complexity typically associated with hard disciplines. The use of code glosses may also demonstrate the need for explicit and accurate abstract communication. Disciplines differ in what constitutes appropriate usage of technical terms and when code glosses are required. It should be mentioned that although there may be technical jargon, code glosses may not be as frequently needed as in other disciplines. Code glosses in a RA abstract may indicate who the research's main audience is.

It can be inferred that the high frequency of code glosses in IT law RA abstracts is an attempt by the writers of this hybrid discipline to establish writer-

reader interactions. The abundance of these interactive markers would guide readers to organise, interpret, and evaluate the information given. Therefore, code glosses were employed to eliminate any source of ambiguity in IT law RA abstracts to engage the readers.When it comes to the frame markers, Table 10 shows their subcategories.

Table (10): Frequencies and Percentages of Frame Markers Subcategories' Functions in IT Law Corpus

Functions of frame markers subcategories	Frequency	%
1. Announcing goals	18	60%
2. Sequencing	9	30%
3. Labelling stages	3	10%
4. Shifting topic	0	0%
Total	**30**	**100**

Table 10 demonstrates that in IT law RA abstracts, frame markers for announcing goals were the most prevalent, constituting 60% of all frame markers with a frequency of 18 occurrences. Next, there were nine sequencing frame markers (30%). Frame markers for labelling stages were less prevalent, accounting for 10% of the total with 3 instances Notably, no frame marker for shifting topic was employed. The results suggest the preference of IT law writers to articulate research objectives and intentions clearly. Consider Excerpt17.

Excerpt 17

The **objective** is to examine the relationship between these elements and individuals' cybersecurity behaviours, offering valuable insights to guide training programmes and interventions. **(ITL 70)**

On the other hand, the moderate use of sequencing markers underscores the importance of information order. This reflects IT law writers' intention of logically and sequentially guiding readers through the abstract. The structured approach they adopted to write is consistent with the conventions of hard disciplines. See Excerpt 18.

Excerpt 18

This paper **first** examined the relationship between religiosity and cyberbullying, **then** ascertained how justice system could prevent cyberbullying behavior, through social and educational initiatives. **(ITL54)**

Moreover, the absence of shifting topic markers shows the resemblance of IT RA abstracts to these disciplines. No explicit markers of shifting topics are required in hard disciplines as topic shifts are implicitly understood by the

readers. On the other hand, the low frequency of stage-labelling markers denotes the tendency of IT law writers to avoid segmenting in favour of integrating the information into a continuous narrative. Interestingly, this a common feature in legal abstracts. Overall, based on frame markers' usage, the writing style in this hybrid discipline, IT law, is cohesive and focused and mostly resembles hard disciplines.

In the IT Law corpus, only 10 evidentials were applied. The results revealed that the majority of evidentials were employed to offer theoretical support for the frameworks used in interpreting the data. See Excerpt 19.

Excerpt 19

This study adopted Owen's (2014a) Genetic-Social and meta-theoretical framework to conceptualize cybercrimes and build a model of cyber violence that could help in predicting aggressive online behavior and the role of the state legislatures to prevent these types of cybercrimes. (ITL44)

Even though the frequency of evidentials occurrence was not high in IT law RA abstracts, their presence can be interpreted as the resemblance of IT Law to soft disciplines. These disciplines often deal with more interpretative or subjective phenomena such as behavior. Knowledge is often constructed through interpretation and critique. Yang and Tian (2015) have demonstrated that more evidence is typically used by writers in soft fields to demonstrate their adherence to the facts and their sources.

Appertaining to several reasons discussed earlier in the present study, writers of RA abstracts avoid referring to some parts of their articles in the abstracts. With regard to IT law writers, only one endophoric marker was applied in the IT law corpus. Similarly, in El-Dakhs' (2018) study, the endophoric markers were rarely used in the RA abstracts from prestigious journals and less prestigious journals.

Overall, the results of the analysis of interactive MMs can provide valuable insights into how the writers of IT law RA abstracts engaged with their readers as they promote comprehension, build trust and preserve coherence. To clarify, there is a strong emphasis on directing the readers through the flow of information, as evidenced by the frequent use of transition markers. Code glosses are effective instrument for improving understanding since they prove clarification on technical phrases and concepts found in IT law RA abstracts. By assuring a clear arrangement of concepts, frame markers support the abstract's structural coherence. The evidentials helped in verifying the accuracy and origins of IT Law writers' assertions by using established models for analysis. Conversely, the appearance of endophoric markers only twice in IT law corpus indicated the abstracts relied less on internal references.

***4.1.3 Similarities and Differences between Medical Law and IT Law RA Abstract in Respect to Interactive Metadiscourse Markers*.**

A comparison was drawn between RA abstracts in medical law and IT law in terms of interactive MMs to answer the third question of the study that states: "What are the similarities and differences between legal RA abstracts in medical law and IT law in terms of interactive metadiscourse markers?" Table 11 shows the values of both frequencies per 1000 words and Z-scores for interactive metadiscourse markers in these disciplines,

Table (11): Similarities and Differences between Interactive MMs

Interactive metadiscourse markers	Medical law RA abstracts		IT law RA abstracts	
	Frequency per 1000 words	Z-score	Frequency per 1000 words	Z-score
Code glosses	13.39	1.57852	8.06	0.96883
Endophoric markers	0	-0.77390	0.07	-0.93736
Evidentials	0	-0.77390	0.73	-0.77996
Frame markers	2.07	-0.40903	2.19	-0.43020
Transition markers	6.55	0.37831	8.93	1.17869

As Table 11 displays, both medical law and IT law writers showed a great concern for enhancing the readability of their research article abstracts. The use of code glosses was the approach they adopted to clarify the meanings of terms that might be ambiguous for some readers. However, medical law abstracts used code glosses more frequently (13.39) than IT law (8.06), even though both disciplines showed positive Z-scores for these markers. For more details about what functions of code glosses that were used differently in the two disciplines see Table 12.

Table (12): Similarities and Differences between Code Glosses

Code glosses	Medical law abstracts		IT law RA abstracts	
	Frequency per 1000 words	Z-score	Frequency per 1000 words	Z-score
1. Introducing acronyms or abbreviation for terms	3.98	0.86610	0.95	-0.49893
2. Providing clarification for terms	1.69	-0.26477	2.34	1.27851
3. Presenting statistical values	5.41	1.56615	1.75	0.53011
4. Providing examples	0.81	-0.69557	1.24	-0.12473
5. Reformulating	0.16	-1.01867	0.07	-1.62152
6. Offering explanation and elaboration	1.31	-0.45324	1.68	0.43656

As Table 12 illustrates, medical law and IT law presented statistical values with positive Z-scores 1.56615 and .53011 respectively. However, their use in medical law (5.41) was notably higher compared to IT law (1.75). Also, "Introducing acronyms or abbreviation for terms" was more prevalent in medical law at 3.98 frequency per 1000 words compared to 0.95 in IT law. While Z-score for medical law was positive (.86610), that of IT law was negative (-.49893). These results suggest that medical law is a discipline that relies heavily on specialised terminology and quantitative data, reflecting its scientific and empirical nature.

IT law, on the other hand, preferred "providing clarification for terms" constituting 2.34 frequency per 1000 words while medical Law accounted 1.69. In comparison to medical law which had a negative Z-score (-.26477), the Z-score of IT law was positive (1.27851). Similarly, in "offering explanation and elaboration", IT law had a positive Z-score (.43656) whereas medical law had a negative Z-score (-.45324). IT law showed preference to explanation at 1.68 frequency per 1000 words which was higher than that of medical law (1.31). It seems that IT law prioritised clarification and elaboration indicating a need for clearer communication in a rapidly evolving field. IT law appears to profoundly emphasise on context and detail compared to medical law.

These results suggest that writers seem to be fully aware of the nature of these two hybrid disciplines and the possible complexities that readers might face while reading their RA abstracts, especially when the target readers are considered. These readers would belong to different discourse communities with varied backgrounds. Therefore, eliminating any source of unclarity can be these writers' opportunity to increase the readability of their abstracts and to communicate the results of their studies effectively with a large audience. However, the emphasis on different types of code glosses would demonstrate varying disciplinary impacts. RA abstracts in medical law may provide more precise and data-driven insights, while those in IT law may focus on practical applications and understanding of concepts. Probably, medical law leans to hard disciplines more than IT law.

When it comes to transitions, their use can indicate how much the writers in medical law and IT law tried to ensure directing readers through their abstracts. See Table 13.

Table (13): Similarities and Differences between Transitions

Transition markers	Medical law RA abstracts		IT law RA abstracts	
	Frequency per 1000 words	Z-score	Frequency per 1000 words	Z-score
1. Indicating addition	2.29	0.68229	4.32	1.31311
2. Showing contrast	3.33	1.40248	3.10	0.81975
3. Indicating comparison	0.05	-0.87181	0	-0.92601
4. Identifying consequence	0.71	-0.41695	0.80	-0.50855
5. Expressing reason	0.16	-0.79600	0.43	-0.69830

Notably, the transitions used to show contrast and indicate addition were largely employed in both disciplines. The Z-scores of "showing contrast" were positive in medical law (1.40248) and IT law (.81975). Also, their Z-scores of "indicating addition" were positive medical law (.68229) and IT law (1.31311). However, while "showing contrast" was more prevalent in medical law at 3.33 frequency per 1000 words, it was 3.10 in IT law. "Indicating addition", on the other hand, was more predominant in IT law constituting 4.32 frequency per 1000 words whereas in medical law it accounted 2.29 frequency per 1000 words. The other functions had negative Z-scores in both disciplines with no remarkable difference between them. These results may indicate that in medical law the emphasis was more on contrast to set the writers' work to the pre-existing one and to highlight the deficiencies or criticise current beliefs or practices while in IT law the focus was more on adding to what existed in the field.

Another interactive metadiscourse marker to discuss is frame markers. Remarkably, the hybridity of medical law and IT law can be clearly observed in frame markers. See Table 14.

Table (14): Similarities and Differences between Frame Markers

Frame markers	Medical Law RA abstracts		IT Law RA abstracts	
	Frequency per 1000 words	Z-score	Frequency per 1000 words	Z-score
1. Sequencing	0.98	.87287	0.65	-.13245
2. Labelling stages	0.32	-1.09109	0.21	-.92717
3.Announcing goals	0.76	.21822	1.31	1.05963
4. Shifting topic	0	0	0	0

Both disciplines met the expectations of hard disciplines readers of RA abstracts by not using one of the subcategories of frame markers. It is "shifting topic," which is unlikely to be employed by hard discipline writers who value

maintain the focus on the research with no digression. At the same time, these disciplines prioritised the other subcategories differently, demonstrating the resemblance to distinct disciplines. To clarify, while the subcategory "sequencing" was the most prevalent in medical law accounting 0.98 frequency per 1000 words with positive Z-score (.87287), it constituted 0.65 with negative Z-score (-.13245) in IT law. Moreover, "announcing goals" was the most common in IT Law at 1.31 frequency per 1000 and at 0.76 in medical law with positive Z-scores 1.05963 and .21822 respectively. Regarding "labeling stages", no remarkable difference was found between the two disciplines as they had negative Z-scores in both disciplines. These results regarding frame markers can suggest that medical law, like hard disciplines, exploits sequencing markers to create a clear chronological or procedural flow to lead the readers. Conversely, IT law showed the preference for articulating research objectives in an attempt to communicate with their readers in the same way usually followed by soft discipline writers. That is to say IT law seem to demonstrate its hybridity nature in employing frame markers.

The use of endophoric markers in medical law and IT law can be a clear indication of how the writers in these disciplines followed the conventions of abstracts. Both disciplines exhibited low usage of these markers, with medical law at 0 and IT law at 0.07 frequency per 1000 words. Moreover, they displayed negative Z-scores medical law (-.77390) which was slightly more negative than IT law (-.93736). These results suggest a lesser emphasis on referencing other parts of the article. Writers in these disciplines bear in mind that an abstract needs to be clear, remain objective, and stand alone as a coherent presentation of the research that was why they avoided employing endophoric markers.

Evidentials can be significant evidence of the disciplinary identity of medical law and IT law. Both disciplines showed minimal usages of these markers with medical law at 0 and IT law at 0.73 frequency per 1000 words. They both had negative Z-scores, indicating a similar underutilization of these markers. Medical law (-.77390) is comparable to IT law (-.77996). However, evidentials were more employed in IT law. Generally, the main function evidentials is to provide strong support for the results of a study either by referring to the findings of previous studies or by seeking the help of established theories in a field. In this way evidentials are more likely to be found in soft discipline abstracts, which usually attempt to strengthen their results employing evidentials. Hard disciplines, in contrast, often rely on empirical evidence obtained from experiments and quantitative data, which makes them unwilling to depend on evidence to achieve the validation of their results. Consequently, medial law appears to resemble hard disciplines, while IT law might align more with soft disciplines with their humble use of evidentials.

***4.1.4 Results of Significance of the Differences between Medical Law and IT Law RA Abstracts*.**

The chi-square test was applied to assess whether there were statistically significant differences between medical law and IT Law in the use of metadiscourse markers as shown in table 15.

Table (15): Chi-square Test Results of Interactive MMs

Metadiscourse markers	Medical Law and IT Law		
	Chi-square value	df	P. Value
Interactive	21	4	$P < 0.05$

The results showed a statistically significant difference (Chi-square value 21, P-value <0.05) in employing interactive metadiscourse markers. Remarkably, the writers in the two disciplines appeared to adopt distinct approaches to structure information and guide readers through their arguments. As previously indicated, writers in medical law likely employed more explicit markers to facilitate understanding of the complexity associated with legal and medical terminologies, indicating that they were more structured. Consequently, the different preferences of writers in medical law and IT law highlight the disciplinary impact on the construction and organisation of content in the abstracts of the two disciplines.

4.2 Results of Thematic Analysis.

The thematic analysis was conducted on seven structured open-ended e-mail interviews. By following Braun and Clarke's (2006) six steps and NVivo software, the scholars' responses were categorised into eight themes. "The role of genre analysis in enhancing and understanding communications across various contexts, professional and academic," was the first theme that identified the reason for researchers' interest in genre analysis. The second theme was "the complexity faced when analysing hard and soft disciplines." This theme clarified the challenges encountered by writers when conducting genre analysis. The third theme revolved around the characteristics of pure hard disciplines that were "clear, objective, and concise presentation of research content." The fourth theme addressed the features of pure soft disciplines, which stated, "Interpretive analysis with narrative style and engaging language." By mentioning the features of the component disciplines of hybrid disciplines, a clear picture can be drawn on how these disciplines (hard and soft) behave. The definition of hybrid discipline " Integration of approaches, methodologies, and rhetorical and disciplinary conventions" was the fifth theme. Then, the sixth theme highlighted the similarities between two hybrid disciplines. It stated "similar use of interactive metadiscourse markers to enhance research clarity and reader engagement". The seventh theme, "variation in discourse markers based on

disciplinary focus," demonstrated the differences between hybrid disciplines' in the light of their use of interactive MMs. The last theme stated, Dominance of metadiscourse markers based on discipline influence and research focus."'

4.3 Integration of Results from Genre Analysis and Thematic Analysis.

The integration of the results of genre analysis and thematic analysis showed high consistency. As the scholars indicated, medical law and IT law tended to maintain clarity, there was prevalence of code glosses and transitions. By doing so, medical law and IT law followed the footsteps of hard disciplines. This approach also denoted the professionalism of these writers, who aimed at communicating with a wide audience from different discourse communities. Similarly, in Mazidah's (2019) study, native writers used these markers than the non-native writers. In addition, it can be said that the scholar's perspectives clarified the classification of medical law and IT law, as the first appeared as a hard-orientated hybrid discipline while the latter seemed as hard-soft-orientated hybrid discipline. The moderate use of evidentials in IT law was an indication of its resemblance with soft disciplines. Similarly, in Kan's (2021) study, evidentials were used more in social sciences RA abstracts than those of science.

5. Conclusion:

It seems that writers in both medical law and IT law aimed to increase the readability of their abstracts through the use of interactive metadiscourse markers. This use could contribute to enhancing the abstracts' clarity, facilitating reader comprehension, and guiding the reader through complex legal concepts. With the focus on clarity, there was remarkable interest in code glosses and transitions. However, the frequencies of code glosses and transitions' occurrence indicated the disciplinary impact of medical law and IT law's component disciplines. While the predominance of code glosses highlighted the need for simplification in medical law, the prevalence of transitions demonstrated a commitment of IT law to logical structure. Both characteristics indicated the resemblance of these two legal hybrid disciplines to hard disciplines. The absence of evidentials in medical law enhanced being this discipline hard-orientated hybrid discipline. Conversely, evidentials' moderate use in IT law was an indication of the reliance of this discipline on theoretical support. Therefore, IT law exemplified hard-soft orientations.

6. Recommendations:

It is recommended that curriculum designers of academic writing produce texts books that assist in familiarising writers who write in legal hybrid disciplines with how interactive MMs are employed in these disciplines.

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