

Sciencetometric Forensic Linguistics Investigation

J. Anhar Rabi Hamsah Tis'ah^{1*}, Romdani², Zainal Rafli³

^{1,2,3}Universitas Negeri Jakarta, Indonesia; E-mail:
JumatAnharRabiHamsahTisah_9906919016@mhs.unj.ac.id

Abstracts: This research used a qualitative approach in literature review, using inclusion criteria and flowcharts to compile data into a synthesis based on scientific sources related to linguistic forensics that were obtained from various sources both journals and books using inclusion criteria. The researchers found 2436 journals that fit these keywords. A total of 439 journals found according to the search keywords were then screened, 163 journals were excluded because full text articles were not available. Eligibility assessment of 279 full text journals was carried out, journals that were duplicated and did not meet the inclusion criteria were excluded as many as 273, so that 6 full text journals were reviewed. Based on the results of the analysis and discussion above from this study, it can be concluded that with the development of forensic linguistics as a scientific discipline, linguistic studies are certainly needed both for oral variety data and written variety data related to language in legal processes, language in legal products and language in legal evidence.

Keywords: Forensic, Linguistics, Review Literature.

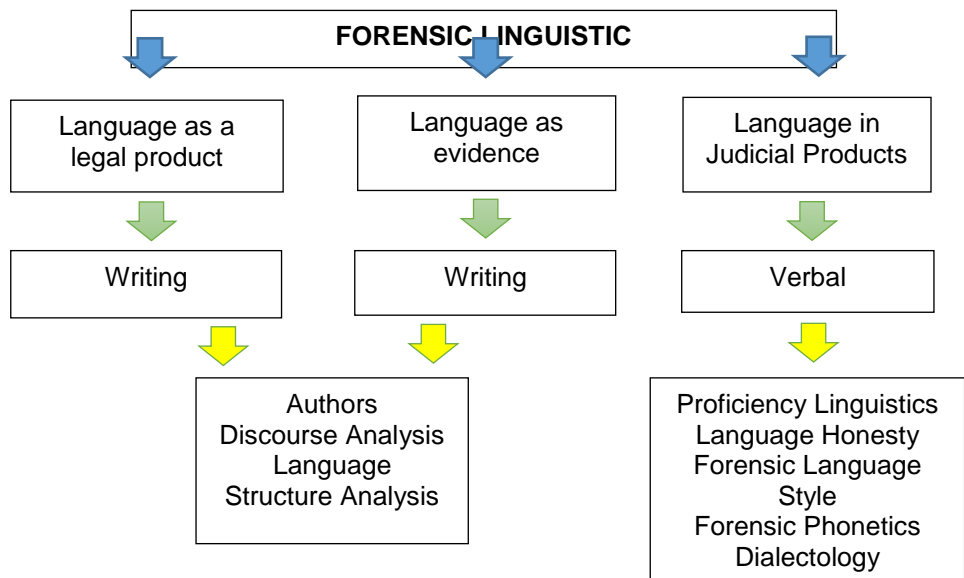
1. INTRODUCTION

Language is a major aspect of communication in human life and a deep understanding of linguistics is required as it is applied to several disciplines, not only for linguists but also for various specialists, including lawyers [1]. In the integrative development of modern scientific studies linguistics signifies the interconnection of linguistics and other disciplines, including law [2]. It is characterized by the emergence of forensic linguistics, commonly known as legal linguistics or legal language [3]. The field has evolved from research-based language understanding [4]. Forensic linguistics involves the application of scientific knowledge to language in the context of criminal and civil law [5]. Forensic linguists are knowledgeable in understanding written legal language, its complexity and origin, as well as forensic language use procedures [6]. The analysis of forensic linguists begins with the process of arrest, interview, prosecution, trial, and sentencing [7] [8].

The scope of forensic linguistics consists of seven main points, namely, language of legal documents, language of police and law enforcement, interviews with children and witnesses ranging in the legal system, courtroom interactions, linguistic evidence and expert testimony in trials, authorship, and plagiarism, and coincidental phonetics and identification [9]. Linguistic forensics also examines the language used in correctional institutions, development in the context of legal events, provision of linguistic forensic evidence based on expertise and provision of linguistic expertise in the preparation of illegal documents and efforts to simplify legal language [10].

From the explanation above, it can be concluded that there are three main areas that are the focus of forensic linguistics studies. These main areas are language as a legal product, language in judicial processes, and language as evidence. More specifically, forensic linguistics deals with identifying speakers based on their dialect, speaking style or accent, even analyzing the suspect's handwriting to obtain a profile, matching the voice recordings of the accused with a number of suspects, analyzing the characteristics of a person's voice prints, ensuring that the voice recordings are genuine and not fabricated, and filtering and sorting various other possibilities that were recorded to determine the setting of the place and time where The recording was made and may be subject to consideration in court [11][12][13]

TABLE 1. forensic linguistic framework



The current era presents a new perspective on innovation processes that can be applied in different areas of the company. Considering innovation in talent management and computer resources implementation as a strategic part of organizations represents a significant increase in their economic value [7], [8]. Recent studies have shown that the profitability of small industries is based on strategic talent management and the process that enables an organization to establish itself in the market through the efficient work of its staff and the use of ICT in managerial processes.

Countries like Colombia, Argentina, Brazil, Chile, and Peru have implemented strategic talent management practices in the textile sector. These internships include staff support, innovating with compensation indicators and retention policies, and fostering motivation to achieve goals through strategic organizational components, attributes, and contemporary approaches. In Ecuador, regular adjustments are being made based on the specificities of each textile company [3]. Some companies are achieving expectations by incorporating a strategic approach into their talent management processes and digitizing procedures. Those responsible for strategic management are actively involved in this process [10].

In the small and medium textile industries of the Sierra Region, made up of both natural and legal persons, difficulties have been observed in management processes, leading to weaknesses that impact strategic management and undermine the operational effectiveness of human resources. The strategic talent of management is an administrative and operational tool that increases the likelihood of success. Variables related to human resources and using information and communication technologies (ICT) as a form of innovation in management procedures positively impact organizations through innovation. The selection, recruitment, integration, orientation, productivity, self-development, rewards, evaluation, and audit of personnel form links within the socio-competitive and strategic company value chain [9]. It influences the strategic management of companies, which, supported by a systematic methodology aimed at achieving high employee performance, results in high productivity levels [10].

This paper diagnoses the capabilities and levels of technological innovation in the Ecuadorian textile industry. These elements interact with each other so that any change in one of them affects the others, generating new motivations and producing changes and expansions in the entire innovation system. In this case, the principal variable is human talent. Table 1 details the aspects of provision, organization, maintenance, development, and audit of the strategic management of human talent (Table 3). These aspects are closely related and interdependent,

so any change in one of them influences the others, requiring adjustments and adaptations in the whole system from a systemic perspective that considers the subsystems within it.

2. MATERIEL AND METHODS

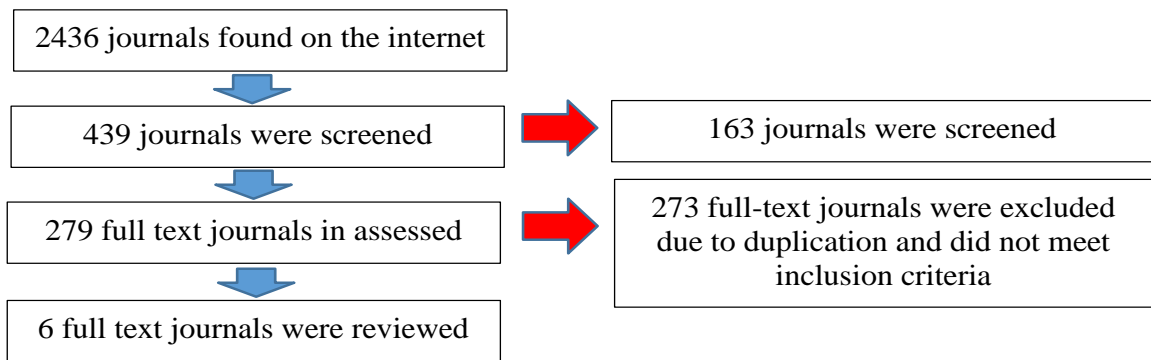
This research used qualitative approaches in literature review to compile data into a synthesis based on scientific sources related to linguistic forensics obtained from various sources both journals and books using inclusion criteria.

Table 2. Inclusion Criteria.

Criteria	Inclusion
Period	The date and year of publication are not limited to grounded theories contained in it until the latest research
Language	Bahasa English
Subject	Forensic Linguistics
Scientific sources	Books of grounded theories and original articles in the form of publications
Theme of the content of the article	Language as a legal product, Language as evidence, Language in Judicial Products

Based on search results on Google Scholar, Pub Med, EBSCO and ProQuest with the keywords forensic linguistics, language as a product of science, language as evidence, language in judicial products, researchers found 2436 journals that fit these keywords. A total of 439 journals found according to the search keywords were screened, 163 journals were excluded because full text articles were not available. Feasibility assessment of 279 full text journals was conducted. Journals that were duplicated and did not meet the inclusion criteria were excluded as many as 273 so that 6 full-text journals were reviewed.

Table 3. Systematic Review Flowchart



2.1. Dialectology

Dialectology is a branch of linguistics that studies isoelect differences by treating them as a whole [14]. This field examines language variation based on geographic distribution displayed through language maps and covers topics such as branching two local dialects of the same parent language and synchronic variation [15]. In other words, dialectology specifically studies the variations of language in all its aspects, studying the elements of grammar, lexicon, and phonology in a particular region [16]. This field not only concerns people who have lived in an area for generations, but also immigrant groups who bring their language to a new area [17].

2.2. Forensic Phonetics

Forensic Linguistics is a field that uses knowledge of language and linguistics to help solve legal or criminal problems [18]. This involves the collection and analysis of language data, such as audio recordings, texts, and interviews, with the aim of identifying or confirming the veracity of statements or obtaining other information that

may assist in investigations [19]. Some forms of forensic phonetics [20][21][22].

Phonetic analysis:

Determine the identity or origin of the recorded sound or compare the sound to other recordings to identify similarities or differences.

Handwriting analysis:

Determine an author's identity by comparing signatures, handwriting, or other documents written by the same person.

Discourse analysis:

Analyze the structure and meaning of written or spoken texts to identify specific language characteristics or patterns that might reveal additional or suspicious information.

Identification of forgery or manipulation:

Analyze documents or records to determine if there are signs of manipulation or forgery.

Conversation analytics:

Analyze recorded conversations to determine characteristics such as lies or anxiety, or to identify unknown speakers.

2.3. Forensic Language Style

This discipline directs written or oral material (or both), to scientific analysis for the determination and measurement of content, meaning, speaker identification, or authorship determination in the legal and criminal realms [23]. In criminal analysis, it is important to study the written or spoken language of the offender, as it can provide insight into the perpetrator's age, race, gender, education level, religious or spiritual beliefs, geographic and socioeconomic background, culture, and ethnicity [24]. Although perpetrators sometimes attempt to disguise their gender, longer communication usually allows the individual to make mistakes so as to reveal gender overtones [25]. Women typically use more self-deprecating, more emotional, more polite, and less confident language than men [26]. Women are more likely to apologize publicly for their actions, use emotional words, and use intensifier than men [27]. Vocabulary, sentence complexity, abstract logic, and sophisticated word use tend to indicate a higher level of education. The use of technical or specialized language can suggest work; Biblical references may relate to religious or philosophical persuasion.

2.4. Language Honesty

Honesty is a human behavior that makes him trustworthy in his words, work, and actions [28]. Language itself is one of the communication tools used by humans, language is also an important link between human relationships [29]. Honesty in language is a word, work and action related to communication between humans or liaison between human beings that conveys messages in writing or orally in accordance with existing facts without reducing or exaggerating [30]. Honesty in language is very important in establishing good relationships between human beings, this is done to avoid unwanted things such as defamation, slander, murder and hatred and so on [31]. Forensic linguistics also allows the investigation process to reveal the honesty of the parties examined in the investigation process such as suspects and witnesses, considering the possibility of witnesses also telling dishonesty during the investigation process [32]. Through linguistic analysis, it can be identified whether the suspect is telling the truth, making it up, or covering up the actual incident through sentence structure research or word selection from the suspect's description [33]. In addition, in order to detect the lies of suspects/witnesses, the use of investigative

questioning strategies combined with the help of lie detectors is an effective way to support the success of investigations [34].

2.5. Proficiency Linguistics

Linguistic proficiency or language proficiency reflects an individual's level of language acquisition; The extent to which a person is able to grasp the meaning of language and convey his meaning with that language [35]. In the process of investigation, there are often found suspects or victims or witnesses who are just silent and do not want to give answers to the investigator's questions [36]. Forensic linguists can help identify whether a suspect is deliberately silent or because he lacks language skills and is unable to grasp the intent of the investigator's questions or is unable to speak well to express his intentions [37]. The investigation process can then be assisted by translators, sign language experts (if the suspect/victim/witness is deaf or speech-impaired), or linguists with certain competencies to assist suspects who do not have language skills to express their intentions properly so that the investigation can take place smoothly [40]. In addition, forensic linguists can also assist investigators in examining using certain linguistic strategies so that they can dig up information without using violence during the investigation process so that the information collected is more valid and of higher quality [41].

2.6. Language Structure Analysis (Semantics, Morphology, Syntax)

Structure is the arrangement or merging of language elements into a patterned language. Language has several structures such as discourse, paragraphs, sentences, words, phenomes, and morphemes [42]. Language structure analysis is concerned with studying linguistic structures which include linguistic structural units such as morphological, syntactic, and semantic analysis in a text, in this case texts in forensic linguistic analysis [43]. Regarding language in legal products, this language structure analysis examines the language structure in legal products to dissect the use of language in legal products, whether it is in accordance with linguistic rules so as not to cause meaninglessness that has an impact on the abuse of legal language in court proceedings [44]. In addition, language structure analysis in the study of legal products can also arrive at recommendations for simplifying complex sentences in legal products so that they are easier to understand [45].

2.7. Discourse Analysis (Pragmatic, Socio-Pragmatic)

Discourse analysis is the right way to explore the form of language series or their supporters [46]. Discourse analysis is a rational description of the relationship of speech sequences that are in an ordered unity (rule governed manner), so as to clarify the relationship of elements within the unity and the form of coherent circuits, as well as their relation to elements outside the unity [47]. Discourse analysis as a scientific discipline that examines the relationship between form and function in verbal communication [48]. Discourse analysis means analyzing the language used [49]. Discourse analysis is the process of analyzing language and language use with the aim of obtaining a more explicit and systematic description of what is conveyed [50].

Some of the characteristics and nature of discourse in terms of analysis, as follows [51]:

- Discourse analysis discusses the rules of using language in society (according to Widdiwson)
- Discourse analysis is an attempt to understand the meaning of speech in contexts, texts, and situations (Firth)
- Discourse analysis is the understanding of speech sequences through semantic interpretation (Beller)
- Discourse analysis is concerned with language comprehension in language acts (What is said from what is done - according to Labov)
- Discourse analysis is directed at the problem of using language functionally (according to Coulthard).

2.8. Authorship

This method is generally used in cases of plagiarism, or the investigation of a text that the author does not know the real author [52]. The identification of the author in plagiarism cases is applied using the science of stylistics or the science of language style [53]. Through this stylistic science, it can be known the distinctive style of language that is usually used by someone in his works so that it can be revealed by the real author and the author who plagiarized the work [54]. Through the use of a particular style, it can be identified the origin or stylistic characteristics of a person, which can then be a clue to uncover the real culprit in the investigation of a case [55]

3. DISCUSSIONS

Science is becoming increasingly important in relation to law, and forensic linguistics is one of its areas of research leading to advances that are increasingly used to solve crimes [56]. This research explores the discipline of forensic linguistics and the use of linguistic evidence in legal proceedings [57]. Linguistic forensic experts make descriptives that are linked to related fields of science through legal language interaction [58]. Forensic experts provide advice and recommendations to lawyers for judicial purposes [59].

CONCLUSIONS

Based on the results of the above analysis and discussion of this study, it can be concluded that with the development of forensic linguistics as a scientific discipline, linguistic studies are certainly needed both for oral variety data and written variety data related to language in legal processes, language in legal products and language in legal evidence. Discussion of aspects of the dimensions of language analysis that are typical in forensic linguistics, namely the dimensions of comparison, distinction and gauge is expected to contribute insight to the development of forensic linguistics research, and it is also expected that the results of the discussion can be an enrichment of linguist testimony material in legal cases.

REFERENCES

- [1] Udina, N. (2017). Forensic linguistics implications for legal education: Creating the e-textbook on language and law. *Procedia - Social & Behavioral Sciences*, 237, 1337–1340. <https://doi.org/10.1016/j.sbspro.2017.02.219>.
- [2] Tiersma, P. (2008). The nature of legal language. 7–25. <https://doi.org/10.1075/aals.5.03tie>
- [3] McMenemy, G. R. (2002). *Forensic Linguistics Advances in Forensic Stylistics*. Routledge
- [4] Perkins, R. C. (2021). The application of forensic linguistics in cybercrime investigations. *Policing: A Journal of Policy and Practice*, 15(1), 68–78. <https://doi.org/10.1093/police/pay097>
- [5] MacLeod, N., & Wright, D. (2020). Forensic linguistics. In S. Adolphs & D. Knight (Eds.), *The Routledge handbook of English language and digital humanities* (1st ed. p. 18). Routledge.
- [6] McMenemy, G. R. (2002). *Forensic Linguistics Advances in Forensic Stylistics*. Routledge.
- [7] Mollema, N. (2019). New frontiers in forensic linguistics: themes and perspectives in language and law in Africa and Beyond. *Language Matters*, 50(3), 90–92. <https://doi.org/10.1080/10228195.2019.1690556>
- [8] Art & Humanities Research Council. (2009). Forensic linguistics. Retrieved from <http://www.ahrc.ac.uk/What-We-Do/Build-the.../Forensic-linguistics.pdf>
- [9] Coulthard, M and Johnson, A. *An Introduction to Forensic Linguistics: Language in Evidence*. London: Routledge. 2007.
- [10] Buunk, A. P., & Gibbons, F. X. *Social comparison: The end of a theory and the emergence of a field*. *Organizational Behavior and Human Decision Processes*. 2007.
- [11] Tiersma, P. M., & Solan, L. (2002). The linguist on the witness stand: forensic linguistics in American courts. *Language*, 78(2), 221–239. <https://doi.org/10.1353/lan.2002.0135>
- [12] Tiersma, P. M. (2002). The language and law of product warnings. In *Language in the legal process* (pp. 54–71). Palgrave Macmillan UK. https://doi.org/10.1057/9780230522770_4
- [13] The International Association for Forensic and legal Linguistics (IAFL). (n.d.). The International Association for Forensic and legal Linguistics. <https://iafl.org/>
- [14] Olsson, John. (2008). *Forensic Linguistics*. New York: Continuum.
- [15] Umiyati, M. (2020). A literature review of forensic linguistics. *IJFL (International Journal of Forensic Linguistics)*, 1(1), 23–29.
- [16] Udina, N. (2017). Forensic linguistics implications for legal education: Creating the e-textbook on language and law. *Procedia - Social & Behavioral Sciences*, 237, 1337–1340. <https://doi.org/10.1016/j.sbspro.2017.02.219>

- [17] Totty, R. N., Hardcastle, R. A., & Pearson, J. (1987). Forensic linguistics: The determination of authorship from habits of style. *Journal of the Forensic Science Society*, 27(1), 13–28. [https://doi.org/10.1016/S0015-7368\(87\)72702-9](https://doi.org/10.1016/S0015-7368(87)72702-9)
- [18] Ziauddin, I., Khan, M., Jam, F., & Hijazi, S. (2010). The impacts of employees' job stress on organizational commitment. *European Journal of Social Sciences*, 13(4), 617-622.
- [19] Shuy, R. W. (2005). *Creating language crimes: How law enforcement uses (and misuses) language*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195181661.001.0001>
- [20] Svarvik's, J. (1968). *The Evans statements: A Case for forensic linguistics*. University of Gothenburg Press.
- [21] Abberton, E. (1972). Some laryngographic data for Korean stops. *Journal of the International Phonetic Association*, 2, 67–78. <https://doi.org/10.1017/S0025100300000517>.
- [22] Andruski, J. E., & Ratliff, M. (2000). Phonation types in production of phonological tone: the case of Green Mong. *Journal of the International Phonetic Association*, 30, 37–61. <https://doi.org/10.1017/S0025100300006654>.
- [23] Ariza-García, A. (2018). Phonation types and tones in Zapotec languages: a synchronic comparison. *Acta Linguistica Petropolitana*, 14, 485–517. <https://doi.org/10.30842/alp2306573714220>
- [24] Davidson, L. (2021). The versatility of creaky phonation: Segmental, prosodic, and sociolinguistic uses in the world's languages. *Wiley Interdisciplinary Reviews: Cognitive Science*, 12, e1547. <https://doi.org/10.1002/wcs.1547>
- [25] Campbell, N. & Beckman, M. (1997). Stress, prominence, and spectral tilt. In: *Intonation: Theory, Models, and Applications*, International Speech Communication Association, Athens, Greece, 67–70, 1997.
- [26] Bishop, J., & Keating, P. (2012). Perception of pitch location within a speaker's range: Fundamental frequency, voice quality and speaker sex. *Journal of the Acoustical Society of America*, 132, 1100–1112. <https://doi.org/10.1121/1.4714351>
- [27] Esling, J. H. (1999). The IPA categories "pharyngeal" and "epiglottal": laryngoscopic observations of pharyngeal articulations and larynx height. *Language and Speech*, 42, 349–372. <https://doi.org/10.11772/F00238309990420040101>
- [28] Gobl, C., & Ni Chasaide, A. (2010). Voice source variation and its communicative functions. In W. J. Hardcastle, J. Laver, & F. E. Gibbon (Eds.), *The Handbook of Phonetic Sciences* (2nd, pp. 378–423). Oxford: Wiley-Blackwell.
- [29] Harris, C. L., AycđicSegi, A., & Gleason, J. B. (2003). Taboo words and reprimands elicit greater autonomic reactivity in a first language than in a second language. *Applied Psycholinguistics*, 24(04), 561–579. <https://doi.org/10.1017/S0142716403000286>
- [30] Corey, J. D., Hayakawa, S., Foucart, A., Aparici, M., Botella, J., Costa, A., & Keysar, B. (2017). Our moral choices are foreign to us. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 43(7), 1109–1128. <https://doi.org/10.1037/xlm0000356>
- [31] Cipolletti, H., McFarlane, S., & Weissglass, C. (2016). The moral foreign-language effect. *Philosophical Psychology*, 29(1), 23–40. <https://doi.org/10.1080/09515089.2014.993063>
- [32] Kahneman, D., & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. In D. Gilovich, T. Griffin, & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 49–81). New York: Cambridge University Press. <https://doi.org/10.1017/cbo9780511808098.004>
- [33] Keysar, B., Hayakawa, S. L., & An, S. G. (2012). The foreign-language effect: Thinking in a foreign tongue reduces decision bias. *Psychological Science*, 23(6), 661–668. <https://doi.org/10.1177/0956797611432178>
- [34] Lu, J. G., Quoidbach, J., Gino, F., Chakroff, A., Maddux, W. W., & Galinsky, A. D. (2017). The dark side of going abroad: How broad foreign experiences increase immoral behavior. *Journal of Personality and Social Psychology*, 112, 1–16. <https://doi.org/10.1037/pspa0000068>
- [35] Shalvi, S., Eldar, O., & Bereby-Meyer, Y. (2012). Honesty requires time (and lack of justifications). *Psychological Science*, 23(10), 1264–1270. <https://doi.org/10.1177/0956797612443835>
- [36] Brinton, D., Snow, M.A., & Wesche, M.B. (2003). *Content-based second language instruction*. Ann Arbor, MI: University of Michigan Press.
- [37] Costello, A.B., & Osborne, J.W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10, 1–9
- [38] Coulthard, M. & Johnson, A. 2010. *The Routledge Handbook of Forensic Linguistics*. Routledge, New York.
- [39] Simons, G.F., & C.D. Fennig. 2018. *Ethnologue: Languages of the World*. Twenty-first edition. SIL International, Dallas, Texas. Online. <http://www.ethnologue.com> (Accessed June 26, 2018)
- [40] Sornig, K. 1981. *Lexical Innovation: A Study of Slang, Colloquialism and Casual Speech*. John Benjamins, Amsterdam
- [41] Mous, M., & A. Breedveld. 1986. A dialectometrical study of some Bantu. In (G. Guarisma & W. Möhlig, eds.) *La méthode dialectométrique appliquée aux langues africaines*, pp. 177–241. Dietrich Reimer Verlag, Berlin
- [42] Emmanouilidou, E., & Kokkinos, N. C. (2023). Membrane Performance on Biodiesel Production and Purification: A Review. *International Journal of Membrane Science and Technology*, 9, 1-13. <https://doi.org/10.15379/ijmst.v9i.1036>
- [43] Lovstrand, J. 2011. Request for New Language Code Element in ISO 639-3. SIL, Yaoundé.
- [44] Manning, C. D. 2003, "Probabilistic syntax," in R. Bod, J. Hay, and S. Jannedy (eds.), *Probabilistic linguistics*, Cambridge, MA: MIT Press, pp. 289–341.
- [45] Mani, I., Pustejovsky, J. and Gaizauskas, R. (eds.) 2005, *The language of time: a reader*, New York: Oxford University Press.
- [46] Lieberman, P. 2002, "On the nature and evolution of the neural bases of human language," *American Journal of Physical Anthropology* 35: 36–62.
- [47] Ladefoged, Peter 2001 *A course in phonetics*, 4th edition, Oxford and Malden, MA: Blackwell.

- [48] Brown, G., & Yule, G. (1983). Introduction: Linguistic forms and functions. In *Discourse analysis* (2nd ed). <https://doi.org/10.1017/CBO9780511805226.003>
- [49] Cutting, J. (2002). *Pragmatics and Discourse: A Resource Book for Students*. London: Routledge.
- [50] Dowlatabadi, H., Mehri, E., & Tajabadi, A. (2014). Politeness Strategies in Conversation Exchange: The Case of Council for Dispute Settlement in Iran. *Procedia -Social and Behavioral Sciences*, 98, 411–419. <https://doi.org/10.1016/j.sbspro.2014.03.434>
- [51] Hutaaruk, B. S. (2017). Politeness Strategies On " Harry Potter And The Half-Blood Prince " Movie. *Journal of English Language and Culture*, 7(2), 48–56.
- [52] Hymes, D. (1996). *Ethnography, Linguistics, Narrative Inequality: Toward an Understanding of Voice*. London: Taylor & Francis.
- [53] Karimkhanlooei, G., & Vaezi, N. (2017). Politeness strategies in written communications: the issue of Iranian EFL learners. *Journal of Language and Cultural Education*, 5(3), 108–126. <https://doi.org/10.1515/jolace-2017-0031>
- [54] Anthonissen, L. and Petré, P. (2019) 'Grammaticalization and the linguistic individual: New avenues in lifespan research', *Linguistics Vanguard*, 5(s2), pp. 20180037. Available at: <https://doi.org/10.1515/lingvan-2018-0037>. CrossRefGoogle Scholar
- [55] Argamon, S. (2008) 'Interpreting Burrows's Delta: Geometric and probabilistic foundations', *Literary and Linguistic Computing*, 23(2), pp. 131–47. Available at: <https://doi.org/10.1093/lc/fqn003>
- [56] Carne, M. and Ishihara, S. (2021) 'Feature-based forensic text comparison using a Poisson model for likelihood ratio estimation', in *Proceedings of the 18th Workshop of the Australasian Language Technology Association*. Australasian Language Technology Association, pp. 32–42
- [57] Coulthard, M. (2004) 'Author identification, idiolect, and linguistic uniqueness', *Applied Linguistics*, 25, pp. 431–47
- [58] Umiyati, M. (2020). A literature review of forensic linguistics. *IJFL (International Journal of Forensic Linguistics)*, 1(1), 23–29
- [59] Zeifert, M., & Tobor, Z. (2021). Legal translation versus legal interpretation. a legal-theoretical perspective. *International Journal for the Semiotics of Law - Revue Internationale de Sémiotique Juridique*, 35(5), 1671–1687. <https://doi.org/10.1007/s11196-021-09837-7>
- [60] Wang, B. X., Hughes, V., & Foulkes, P. (2022). The effect of sampling variability on systems and individual speakers in likelihood ratio-based forensic voice comparison. *Speech Communication*, 138, 138. <https://doi.org/10.1016/j.specom.2022.01.009>
- [61] Svarvik's, J. (1968). *The Evans statements: A Case for forensic linguistics*. University of Gothenburg Press.

DOI: <https://doi.org/10.15379/ijmst.v10i3.1716>

This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0/>), which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.