

Language of Innovation: Abbreviations In Jakarta Smart City Annual Report

Enggar Mulyajati^{1✉}, Nurkhalila Fajrini ², Irla Yulia ³, Pratiwi Anindita Adji ⁴

¹English Literature Study Program, Universitas Terbuka, Tangerang Selatan, Indonesia,

²Communication Sciences Study Program, Universitas Terbuka, Tangerang Selatan, Indonesia,

³Communication Sciences Study Program, Universitas Terbuka, Tangerang Selatan, Indonesia,

⁴Library and System of Information Study Program, Universitas Terbuka, Tangerang Selatan, Indonesia

✉ email: enggar@ecampus.ut.ac.id

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ABSTRACT

Abbreviations are widely used in both informal and formal texts as a strategy for linguistic economy, including in government documents. This study examines the use of abbreviations in the Jakarta Smart City Annual Report, an official publication that communicates digital governance and urban innovation initiatives. Using a qualitative document analysis approach, the study applies Mattiello's analytical framework to classify abbreviations into clippings, acronyms, and initialisms and to analyze their structural formation. The findings reveal that initialisms are the most frequently used type, particularly in references to public administration, transportation, and technology, such as *JSC*, *LRT*, and *SPBE*, followed by acronyms and a limited number of clippings. These patterns indicate a strong preference for compact linguistic forms to convey complex institutional and technical concepts efficiently. At the same time, the extensive use of abbreviations highlights potential challenges for clarity and public comprehension. By identifying the types and formation patterns of abbreviations in an official smart city document, this study contributes to understanding how linguistic efficiency operates in formal government communication and underscores the importance of balancing conciseness with accessibility in digital governance discourse.

Keywords: *abbreviation; acronym; clipping; initialism; Jakarta Smart City.*

INTRODUCTION

Abbreviation is viewed as a popular way of forming new word Plag, (2003). Abbreviation has been widely used by people to develop their writing in limited space, for example in scientific papers published in journals. They are the element of languages that cannot be separated from any of the modern languages nowadays Pujiyanti et al., (2019). Not only used in formal writing like research articles and newspaper articles, abbreviation and acronym are also used in informal writing, such as Instagram daily post, WhatsApp messages, and so on. This means, nowadays people are exposed with abbreviation and acronyms more often in their daily communication. Hidayati, Suwarti, & Susanto (2021) state that people learn something new through abbreviation since they help people shorten words that is difficult to understand in daily communication. As an example, DKI is a form of abbreviation which stands for *Daerah Khusus Ibukota*.

Indonesian people, especially, are used to using it for many years and this shows that abbreviation eases people to use in communication.

Abbreviation has been used for both formal and informal communication through written text and oral conversation. Studies related to abbreviation has been conducted, such as analysis of abbreviation in technology in Kompas.com which shows there are six types of abbreviation in technology section, involving acronym, contraction, shortening word, clipping word, initialism, and blend Yusuf & Marlina, (2020). Still with similar research in written communication, Hidayati et al. (2021) analyzed acronym and abbreviation in Instagram daily post. The analysis of the research explains there are two types of acronyms (acronym with combining the initial letters and acronym with combining parts of different words) and three types of abbreviations (initialism, contraction abbreviation, and shortening). In addition, abbreviation also occurs in oral communication according to research done by Iriyansah, Syahyuri, & Harared (2023) which focuses on the analysis of abbreviation on the university students' speech which results four classifications of abbreviation, namely shorthand (42,4%), acronym (35,3%) fragments (14%), and contraction (8,5%). In conclusion, based on the mentioned studies, abbreviation and acronym are interesting to study since they are used globally in written and oral communication. In addition, abbreviation is needed to help people understand new terms or words as communication is steadily developing in this modern era. Ladzekpo et al., (2023) explain that abbreviations and acronyms become ubiquitous in communication as to form linguistic efficiency. In Indonesia, the use of abbreviations has been interestingly increasing where the source phrase of English. Research conducted by Moehkardi (2019) with title "English Acronyms in Indonesian School Events", shows the use of acronyms has been used widely though the inversion strategy is not available in the Indonesian acronym rules. This is very interesting fact that the use of abbreviations has been evolving and has become familiar in written communication.

Abbreviations have been widely used in written communication which are included as word formation since they form words into new words. Kridalaksana (2008) explains that abbreviation is the process of cropping a word, parts of a word, and group of words into a new form of word. In addition, it is commonly composed by taking initial letters of word sequences to make a new word Plag, (2003). Thus, abbreviation is form of words or phrase which that are combined into a new word. Abbreviations, such as initialisms, acronyms, and clippings, formed through diverses patterns, including mixed letter casing, selective word omission or inclusion, used of symbols, cross-linguistic word combinations, lexicalized acronyms asking eponyms and toponyms, internationalized forms, and pluralization akin to ordinary words (Méndez, 2015). Abbreviation, according to Mattiello (2013), is regarded as the umbrella of three phenomena, involving clippings, acronyms, and initialisms as explained in the following.

Clipping, according to Kreidler (2000), is the process of making new words which acquired from a simple lexeme and consists from one to three syllables of that word, for example *photo* from *photograph*. Clipping, in addition, is the process of deriving one or more syllables of a word Booij, (2007). Furthermore, Katamba (1994) explains that clipping refers to the creation of a new word form retaining the meaning of the original

term by cutting of part of the word and reducing it to a nomosyllable or disyllable. Clippings are classified by Mattiello (2013) according to the deleted part of the base involving **back-clipping**, **fore-clipping**, **edge-clipping**, **mid-clipping**, **random clipping**, and **suffixed clipping**. Back-clipping preserves the initial part and deletes the final part of the word. It represents the highest percentage in English, especially in monosyllabic or disyllabic nouns. For examples: *bi(sexual)*, *cap(tain)*, *specs* (\leftarrow *spectacles*), *admin* (\leftarrow *administration*), *memo* (\leftarrow *memorandum*), and *exam* (\leftarrow *academic*) *examination*). Back-clipped adjectives and verbs are also found yet less frequent, for examples: *comfy* (\leftarrow *comfortable*), *fab* (\leftarrow *fabulous*), and *hyper* (\leftarrow *hyperactive*). Back-clippings are also found in shortened slang rather than standar words, for instance *fag* (\leftarrow *faggot* ‘a male homosexual) and *nig* (\leftarrow *nigger* ‘a dark-skinned person). Some fore-clipping input is ambiguous due to homophony, for example *ad* can stand for *advertisement* or *administration* and *doc* for *doctor* or *document*. Second type of clippings is fore-clipping that keeps the final part and deletes the initial portion of the word, for examples (*hi)story*, (*o)possum*, (*peri)wig*, (*rac)coon*. Most fore-clipping are formed from nouns, yet there are also from adjectives like *e(strange)*, verbs (*niff* \leftarrow *sniff*), conjunctions (*‘cause* \leftarrow *because*), adverbs (*deed* \leftarrow *indeed*), and preposition (*‘neath* \leftarrow *beneath* or *underneath*). The slang words of fore-clipping are also provided, for examples: *gator* (\leftarrow *alligator*) and *nana* (\leftarrow *banana* ‘a foolish person). The third type of clippings is edge-clipping that deletes the initial parts and preserve the medial one of the word. This type is considered as rare and the transparency is very endangered. The example of edge clipping can be seen in *script* for *prescription* then later also used to imply ‘a prescription for narcotic drugs’. Another example is the edge-clipped word *gypsy* which is from ‘Egyptian’ which is extremely ambiguous. Then, the fourth is mid-clipping which delete the middle part yet preserve both extremities. Mid-clipping is regarded as the rarest and the least transparent type because of the discontinuity of the base, for examples *proctor* for *procurator* and *cortisone* for *corticosterone*. In addition, other examples include hyphens or apostrophes such as *B’ham* (\leftarrow *Birmingham*) and *B-way* (\leftarrow *Broadway*). Next, the fifth example is random clippings that contain scrambled letters, specifically, consonants, from the base word. The examples are *dlr* (\leftarrow *dollar*), *Jpn* (\leftarrow *Japan*), *Ltd* (\leftarrow *Limited*). Such clippings are also commonly used in text message, such as *msg* for *message*, *pls* for *please*, *ppl* for *people*, and *sry* for *sorry*. Clipped compounds reduce a compound word to one of its parts, for examples: *graph* (\leftarrow *graphic formula*), *pre-nup* (\leftarrow *pre-nuptial agreement*), and *stereo* (\leftarrow *stereophonic system*). The last type was suffixed clipping which some parts of the word is deleted, and a suffix is added, for examples *aggro* (\leftarrow *aggravation*), *garbo* (\leftarrow *garbage collector*), *Mandy* (\leftarrow *Amanda*), and *Sydders* (\leftarrow *Sydney*). However, as the communication is steadily developing, Dienhart (1999) as cited in Mattiello, (2013) proposes another classification called reduplicative compounds, such as *hi-fi* and *sci-fi* because the components exhibit rhyme with different consonant onset.

Acronym is the second phenomenon under the umbrella of abbreviation. It is composed from the initial letters of a compound lexeme Kreidler, (2000). Acronym as

well as initialism are formed by taking the first letters of words in a phrase, title, compound or list, such as Aids, FAQ, and VAT. This statement is supported by Booij (2007) who states that acronym is the combination of initial letters of a word sequence. Katamba (1994) explains that acronym is formed by shortening complex expressions into initial letters which create pronounceable syllables representing words, like name of company, an organization, or a scientific concept. The form of acronyms are pronounced as full words whereas initialisms are pronounced letter by letter. For examples, the acronym of *Aids* (\leftarrow *Acquired Immune Deficiency Syndrom*) is pronounced /eɪdz/ yet the initial *B.B.C.* (\leftarrow *British Broadcasting Corporation*) is pronounced as /bi:bi:'si:/. These two types are classified as “letter-sounding” and “letter-recitation by Kreidler (1979) which later are renamed as “orthoepic” and “alphabetic” in Kreidler, (2000). However, this distinction is admitted as not always definite and accepting both pronunciations, such as *aka/AKA, a.s.a.p/A.S.A.P, ufo/U.F.O.* There are some words that behave like initialism but look like acronyms, for instance, *WHO* (\leftarrow *World Health Organization*) is read letter by letter to avoid ambiguity with relative pronoun. Another distinction of acronym and initialism is proposed by Plag (2003) who states that both acronym and initialism can be implied either capital or lower-case letters (like *SMS* vs. *sms*) but only initialism can have dots (like *U.S.A.*) Acronym and initialism deal with capital letters. Yet nowadays some words that originally acronyms are no longer spelt with capital letters like *laser* and *radar*. Acronym according to Mattiello (2013) are devided into two main types: **elliptic** and **non-elliptic acronym**. Eliptic acronyms do not contain all the initial of the words in the source phrase, such as *ARCA* (\leftarrow *Automobile Racing Car of America*), *BAFTA* (\leftarrow *British Academy of Film and Television Arts*), *UNESCO* (\leftarrow *United Nations Educational, Scientific and Cultural Organization*). Non-elliptical acronyms are words which contain the initial letters of all the words in the source phrase. The examples of non-elliptical acronyms are *COLA* (\leftarrow *Cost of Living Adjustments*), *FAQ* (\leftarrow *Frequently Asked Questions*), *RAM* (\leftarrow *Random Access Memory*), *Unicef* (\leftarrow *United Nations International Children's Emergency Fund*), and slang word as in *Wysiwyg* (\leftarrow *What You See Is What You Get*). The most common word classes omitted in this type are prepositions, conjunctions, and articles. Mattiello (2013) mentions another types of acronyms also involve acronyms with vowel addition, extended acronyms, recursive acronyms, and inverted letter acronyms. Acronyms with vowel addition refers to acronyms that undergo a process known as vowel insertion, such as *Humvee* (\leftarrow *High-mobility Multi-purpose wheeled Vehicle*) that adds vowel in order to sound pleasant when uttered (euphony). Vowels, in pronunciation, are frequently inserted, as in *NWAVE* (\leftarrow *New Ways of Analyzing Variation in English*) which is pronounced /enweɪv/. Vowels also can be inserted to create words that imply a different meaning. The example is *Footsie* (\leftarrow *Financial Times-Stock Exchange*) which is derived from the slang word meaning “romantic activity using feet”. Another type of acronyms is extended acronyms that are created by using some initial letters from each word of the expression. For instance, *AMESLAN* (\leftarrow *AMERICAN Sign LANguage*, also *ASL*) and *OFFER* (\leftarrow *OFFice of Electricity Regulation*). In this type, the letters kept do not always align with full syllable. Next, recursive acronyms are construction in which one word

from the original source is the same as the acronym, as in *CAVE* (\leftarrow *Cave Automatic Virtual Environment*) and slang *mung* (\leftarrow *Mung Until No Good*). The last type is inverted letter acronyms which show that the order of some letters has changed, as in *MISHAP* (\leftarrow *Missiles High-Speed Assembly Program*) that H and S are inverted to be easily pronounced. Acronyms not only shorten words but also make long names, such as organization, scientific terms, or ideas easier to understand Kadhim et al., (2022).

Various types of acronyms have been explained, yet there are many examples that blur the line between typical blends and typical alphabetisms, making them hard to classify. For example, *Satcoma* (\leftarrow *SATellite COMmunications Agency*) is a mixed form, involving partial reduction like blends, yet with minimal merging like alphabetism. Similarly, formations like *SMART* (*Swatch Mercedes ART*) are hybrids, sitting between acronyms and blends.

Initialism is the third phenomenon under the umbrella of abbreviations and it can be categorized into elliptic initialisms and non-elliptic initialisms. Pop & Sim, (2009) point out that initialism is created by combining the first letters of words but pronounced as separate letters. Elliptical initialism is like acronyms which some initial letters are not initialised and tend to omit grammatical words, such in *ESL* (\leftarrow *English as a Second Language*), *MAE* (\leftarrow *Master of Arts in Education*), and *TGIF* (\leftarrow *Thank God It's Friday*). Non-elliptic initialisms involve the initial letters of all the words in the source phrase eventhough they are pronounced as single letters. The examples are *aka* (\leftarrow *Also Known As*), *CIA* (\leftarrow *Central Intelligence Agency*), *SUV* (\leftarrow *Sport Utility Vehicle*), and *URL* (\leftarrow *Uniform Resource Locator*). Initialisms can also show symbols (– and /), coordinators (&, and, 'n'), prepositions (as in *C. in C* \leftarrow *Commander in Chief*), and numerals (*4WD* \leftarrow *Four-wheel drive*).

Nowadays, government communication through various media, including speeches, helps share information and also leads to the creation of new words, known as neologisms (Mulyajati & Baroroh, 2025). Šetka Čilić & Ilić Plauc (2021) mention neologisms such as clippings, acronyms, blends, compounds, and abbreviations, are useful for naming new inventions, emerging phenomena, or existing concepts that gain new cultural meanings. As mentioned before, abbreviations have also been used in Indonesia government programs, one of which is Jakarta Smart City (JSC). JSC which is implemented in 2015 is a concept which emphasizes on two fundamental aspects: innovation and technology in Jakarta which are continuously being developed to improve its public service and quality of life. JSC has six indicators to support the manifestation of smart city 4.0 ecosystem, involving smart governance, smart environment, smart economy, smart mobility, smart living, and smart people. Jakarta population is more than 11 million in 2024 with 46% is dominated by young and productive people: millennials and gen Z. JSC is indeed designed to accommodate Jakarta people to live better in some sectors and mostly the services are mostly accessed and used by young citizens. The Jakarta Regional Administration develop smart city concept to improve resource management and tackle urban challenges through challenges through innovative, integrated, and sustainable approaches (Syalianda &

Kusumastuti, 2021). JSC has published annual reports in 2022 and 2023 that can be accessed on the website <https://smartcity.jakarta.go.id>. In the annual reports, there are new terms in form of abbreviation and acronym related to JSC's programs, such as JAKI, JIExpo, BLUD, Diskominfo, and others. The annual reports must be comprehensible when being read by public since they are considered as parts of government communication. Aji et al. (2018) mention that government communication helps public trust and long-term relationships with citizens, making it a key mechanism for achieving good governance.

Méndez (2015) mentions that abbreviations may cause difficulties of understanding or misinterpretation due to their ambiguity, specificity, and overlapping. Moreover, abbreviations have become interesting topics for few scholars since abbreviations is regarded to be irregular and sporadic compared with affixation and compounding (Kreidler, 2000). That is why it is beneficial to identify the abbreviation in the JSC annual report so it can provide comprehensive explanation about them. In addition, there is still limited studies focusing on abbreviation in formal written communication, especially in government context. Hence, this research can help readers get better understanding and insight about the abbreviated terms related to Jakarta Smart City and how they are formed. This research proposes the following questions: (1) what types of abbreviations in JSC 2023 annual reports?; and (2) how are the abbreviations composed? Furthermore, this research aims to identify the types of abbreviations in the reports and explain how the abbreviations composed. This research also aims at providing input for government public communicators to deliver information using creative abbreviations.

METHOD

The study uses a descriptive qualitative method which is document studies to gain a better understanding of the classification and the functions of abbreviations. Document studies mainly analyze the language of a document as a medium for conveying thought and expression (Silverman, 2004). This method emphasizes openness and flexibility in categorizing information. It reveals that no numerical or quantitative data will be generated during the process (Bell, 2010; Manokaran & Ong Shyi Nian, 2020; Sarantakos, 2005; Silverman, 2004). The research population is all abbreviations found in the Jakarta Smart City Annual Report that can be accessed in the official website of Jakarta Smart City (<https://smartcity.jakarta.go.id>). This research used purposive sampling which is mentioned by Creswell & Creswell (2018) as purposeful sampling that is a technique used where the researcher selects sample intentionally to analyze the central phenomenon being studied. On the website, there are two annual reports published which are the 2022 and 2023 annual reports. After reading both reports, the abbreviation phenomena mostly appear in the 2023 report in form of written text. So, the sample of the research is the 2023 Annual Report. In addition, its content is improved since it provides a lot of information.

To collect the data, we read and listed carefully the abbreviations found in the annual report. We also read and studied the abbreviations theories, the we took note of the concepts and definitions of abbreviation theories from relevant linguists. The data

are classified and analyzed following Matiello's framework of abbreviations, involving clippings, acronyms, and initialisms. Three tables for each framework are made. The first table is clipping involving its seven types (back-clipping, fore-clipping, edge-clipping, mid-clipping, random clipping, suffixed clipping, and clipped compound). Second is table of acronym including five types of acronyms (elliptical, non-elliptical, extended, recursive, and inverted letter). The third table is initialisms which include two types: elliptical and non-elliptical initialisms. The report is read and all abbreviations found are listed and categorized whether they are clippings, acronyms, or initialisms. After that, all categorized abbreviations are categorized based on the types of each framework. Then, they are analyzed based on the word forms. Lastly, the analysis and how the words are composed are explained and supported by relevant sources.

FINDINGS AND DISCUSSION

The data analysis shows that there are 127 abbreviations involving 2 clippings, 13 acronyms, and 112 initialisms. In clippings, the types of clippings found are clipped compound and back-clipping. Meanwhile, in acronyms analysis, the types of acronyms involve elliptical acronyms, non-elliptical acronyms, and extended acronyms. Lastly, the types of initialisms in the data are both elliptical and non-elliptical initialisms. The tables of three frameworks contain lists of the abbreviations, descriptions, and their types, each framework analysis is explained comprehensively as well.

Based on the analysis, there are two abbreviations identified, including clipped compound and back-clipping. The table and analysis of clippings are in the following.

Table 1. Clipping

No	Abbreviations	Descriptions	Type of Clippings
1	Wi-fi	Wireless Fidelity	Clipped Compound
2	D.Phil.	Doctor of Philosophy	Back-Clipping

The abbreviation *wi-fi* is considered as clipped compound because this clipping is derived from compounds or phrase *wireless fidelity*. *Wi-fi* is clipped compound because it has combined meaning. This word (*wi-fi*) is not included in *blend* because its bases (*wireless* and *fidelity*) are syntagmatically related. This sentence is in line with Mattiello (2013) who states that blend words have paradigmatic bases meanwhile clipping words syntagmatic related. The other type of clippings found is back clipping involving *D. Phil* (\leftarrow *Doctor of Philosophy*). The abbreviation *D.* (\leftarrow *Doctor*) is not clipping as Mattiello, (2013) states that letter sequences, called graphic abbreviations, are pronounced like the source words they abbreviate. On the other hand, *Phil* (\leftarrow *Philosophy*) is back-clipping since the original word *Philosophy* is truncated at the final part of it, thus preserving the initial portion. This clipping type is in line with Minkova (2018) who mentions that clipping refers to word formation through the loss of one or more syllables, including initial, medial, and final sound reduction.

The second phenomenon of abbreviation is acronym. Based on the data, there are 13 acronyms found and categorized into three types: elliptic (3 words), non-elliptic (7 words), and extended (3 words) acronyms. The following is the list and the analysis of acronym.

Table 2. Acronym

No	Abbreviations	Descriptions	Type of Acronyms
1	IRTI	Ikatan Restoran <u>dan</u> Taman Indonesia	Elliptic Acronym
2	QRIS	Quick Response <u>Code</u> Indonesian Standard	Elliptic Acronym
3	TOEFL	Test of English <u>as a</u> Foreign Language	Elliptic Acronym
4	NIK	Nomor Induk Kependudukan	Non-elliptic Acronym
5	KUE	Kartu Uang Elektronik	Non-elliptic Acronym
6	PIK	Pantai Indah Kapuk	Non-elliptic Acronym
7	AQI	Air Quality Index	Non-elliptic Acronym
8	ENSO	El Niño–Southern Oscillation	Non-elliptic Acronym
9	PAUD	Pendidikan Anak Usia Dini	Non-elliptic Acronym
10	IPA	Ilmu Pengetahuan Alam	Non-elliptic Acronym
11	INKA	<u>Industri</u> Kereta Api	Extended Acronym
12	SARS-COV-2	Severe Acute Respiratory Syndrome <u>Coronavirus</u> 2	Extended Acronym
13	Covid-19	<u>Corona</u> Virus <u>Desease</u> 2019	Extended Acronym

Based on the data, there are three elliptic acronyms identified, involving *IRTI*, *QRIS*, and *TOEFL*. In this type, all the initials of the words are not retained, and prepositions are commonly omitted. As in *IRTI* which stands for *Ikatan Restoran and Taman Indonesia*, preposition *and* is not part of the initial of the word. The same thing goes for *QRIS* and *TOEFL*. Acronym *QRIS* is elliptic since *Code* (n) is not put as part of the initial of it. Lastly, in *TOEFL*, the preposition *as* and determiner *a* are not part of the initial of the word. Based on this finding, not only prepositions are omitted in this acronym type, but noun and determiner also.

Non-elliptic acronyms are dominantly found in the data. In this type, all the initial letters of all words are kept, such as *NIK* (← *Nomor Induk Kepergawaiian*), *iOS* (← *iPhone Operating System*), and so on. Furthermore, in non-elliptic, there is an acronym that behave like initialism: *KUE* (← *Kartu Uang Elektronik*). It is ambiguous because *KUE* can be either read as acronym /ku:e/, which means “cake” or “cookies” in Indonesian, or either read as Indonesian initialism. Ahn et al. (2025) mention that acronyms can aid communication, but poorly designed or undefined ones may mislead readers or cause confusion.

The last type is extended acronym as in *INKA* (← *Industri Kereta Api*) because it is composed by more than one initial letter of each word. As it can be seen *INKA* stands for *IN(dustri) K(ereta) A(pi)*, the initial letters *IN* is taken from *Industri* followed by *K* from *Kereta* and *A* from *Api* to build acronym *INKA*. The same thing goes to *SARS-COV-2* which stands for *S(evere) A(cute) R(espiratory) S(yndrome) CO(rona)V(irus) 2*. Unlike the other words which contribute one initial letter each, the initial *CO* taken from *Corona* has

contribution to the acronym SARS-COV-2. Lastly, Covid-19 (\leftarrow *Corona Virus Disease 2019*) is the extended acronym that involves numerals to show year and can also be part of initialism's characteristics. Yet, *Covid* itself is considered as acronym since the abbreviation is pronounceable and is read /'kəʊvɪd/ instead of being read each letter, though, it is composed with more than one initial letter. This statement is supported by Kreidler (2000) who argues that to create a pronounceable and meaningful acronym, letters are sometimes freely chosen, with vowel added. The acronym *Covid* is composed by the initial *Co* from *Corona*, initial *vi* from *virus*, and initial *d* from *disease*. Dhika JR & Ermanto (2023) state that acronyms can be formed from the combination of letters and words. The phenomenon of acronym with number is no longer new. Mattiello (2013) explains the alphanumeric combinations emerge in text messaging. In addition, Zaim (2015) mentions the use of number in acronym shows the number of occurrences of the letter. Meanwhile, in this data, the number in the acronym shows year of the corona virus emerged in 2019.

The last phenomenon is initialism which appeared most in the data. As it can be seen in the following table, there are 112 words included in the initialisms. Based on the data, there are two types of initialism, involving elliptic (10 words) and non-elliptic initialism (102 words).

Table 3. Initialism

No	Abbreviations	Descriptions	Type of Initialisms
1	UNECE	United Nations Economic Comission <u>for</u> Europe	Elliptic Initialism
2	TIK	Teknologi Informasi <u>dan</u> Komunikasi	Elliptic Initialism
3	PBB	Pajak Bumi <u>dan</u> Bangunan	Elliptic Initialism
4	ICT	Information <u>and</u> Communication Technologies	Elliptic Initialism
5	FDA	United State's Food <u>and</u> Drug Administration	Elliptic Initialism
6	CDC	Centers <u>for</u> Disease Control <u>and</u> Prevention	Elliptic Initialism
7	JGTS	JSC Goes to School	Elliptic Initialism
8	IEEE	Institute of Electrical <u>and</u> Electronic Engineers	Elliptic Initialism
9	BMKG	Badan Meteorologi, Klimatologi, <u>dan</u> Geofisika	Elliptic Initialism
10	GSMA	Global System <u>for</u> Mobile Communications Association	Elliptic Initialism
11	SKYBS	Surat Keterangan yang Berpenghargaan Sama	Non-elliptic Initialism
12	DKI	Daerah Khusus Ibukota	Non-elliptic Initialism
13	JSC	Jakarta Smart City	Non-elliptic Initialism
14	LRT	Light Rail Transit / Lintas Raya Terpadu	Non-elliptic Initialism
15	MRT	Mass Rapid Transit	Non-elliptic Initialism
16	SMK	Sekolah Menengah Kejuruan	Non-elliptic Initialism
17	SAS	Statistical Analysis System	Non-elliptic Initialism
18	CRM	Customer Relationship Management / Cepat Respon Masyarakat	Non-elliptic Initialism

No	Abbreviations	Descriptions	Type of Initialisms
19	ITU	International Telecommunication Union	Non-elliptic Initialism
20	UMKM	Usaha Mikro, Kecil, Menengah	Non-elliptic Initialism
21	BLUD	Badan Layanan Umum Daerah	Non-elliptic Initialism
22	OPD	Organisasi Perangkat Daerah	Non-elliptic Initialism
23	PKB	Pajak Kendaraan Bermotor	Non-elliptic Initialism
24	BPBD	Badan Penanggulangan Bencana Daerah	Non-elliptic Initialism
25	KK	Kartu Keluarga	Non-elliptic Initialism
26	DSDA	Dinas Sumber Daya Air	Non-elliptic Initialism
27	IoT	Internet of Things	Non-elliptic Initialism
28	ISC2	International Smart Cities Conference	Non-elliptic Initialism
29	SPBE	Sistem Pemerintahan Berbasis Elektronik	Non-elliptic Initialism
30	SKPD	Satuan Kerja Perangkat Daerah	Non-elliptic Initialism
31	AI	Artificial Intelligence	Non-elliptic Initialism
32	DTKS	Data Terpadu Kesejahteraan Sosial	Non-elliptic Initialism
33	ASN	Aparatur Sipil Negara	Non-elliptic Initialism
34	UI/UX	User Interface/User Experience	Non-elliptic Initialism
35	APL	Assistant Project Leader	Non-elliptic Initialism
36	KJMU	Kartu Jakarta Mahasiswa Unggul	Non-elliptic Initialism
37	KJP	Kartu Jakarta Pintar	Non-elliptic Initialism
38	KTP	Kartu Tanda Penduduk	Non-elliptic Initialism
39	CCTV	Closed-Circuit Television	Non-elliptic Initialism
40	BPJS	Badan Penyelenggara Jaminan Sosial	Non-elliptic Initialism
41	JPO	Jembatan Penyeberangan Orang	Non-elliptic Initialism
42	TOD	Transit Oriented Development	Non-elliptic Initialism
43	RST	Rumah Susun Terjangkau	Non-elliptic Initialism
44	CBTC	Communication-Based Train Control	Non-elliptic Initialism
45	GoA	Grade of Automation	Non-elliptic Initialism
46	OCC	Operation Control Center	Non-elliptic Initialism
47	KAI	Kereta Api Indonesia	Non-elliptic Initialism
48	TVM	Ticket Vending Machine	Non-elliptic Initialism
49	UNJ	Universitas Negeri Jakarta	Non-elliptic Initialism
50	PGC	Pusat Grosir Cililitan	Non-elliptic Initialism
51	BKN	Badan Kepegawaian Negara	Non-elliptic Initialism
52	CBD	Central Business District	Non-elliptic Initialism
53	BNN	Badan Narkotika Nasional	Non-elliptic Initialism
54	RS	Rumah Sakit	Non-elliptic Initialism
55	KRL	Kereta Api Listrik	Non-elliptic Initialism
56	JPM	Jembatan Penyeberangan Multiguna	Non-elliptic Initialism
57	GBK	Gelora Bung Karno	Non-elliptic Initialism
58	PM	Particulate Matter	Non-elliptic Initialism
59	CO	Carbon Monoxide	Non-elliptic Initialism
60	SO2	Sulphur Dioxide	Non-elliptic Initialism
61	O3	Ozone	Non-elliptic Initialism
62	NO2	Nitrogen Dioxide	Non-elliptic Initialism
63	LEZ	Low Emission Zone	Non-elliptic Initialism
64	SPF	Sun Protection Factor	Non-elliptic Initialism
65	UV	Ultraviolet	Non-elliptic Initialism
66	HC	Hydrocarbon	Non-elliptic Initialism
67	GHG	Greenhouse Gas	Non-elliptic Initialism

No	Abbreviations	Descriptions	Type of Initialisms
68	RTH	Ruang Terbuka Hijau	Non-elliptic Initialism
69	RDF	Refuse-Derived Fuel	Non-elliptic Initialism
70	TPST	Tempat Pengolahan Sampah Terpadu	Non-elliptic Initialism
71	PT SBI	PT Solusi Bangun Indonesia	Non-elliptic Initialism
72	JRC	Jakarta Recycle Center	Non-elliptic Initialism
73	TP PKK	Tim Penggerak Pemberdayaan Kesejahteraan Keluarga	Non-elliptic Initialism
74	BUMD	Badan Usaha Milik Daerah	Non-elliptic Initialism
75	IMS	Infeksi Menular Seksual	Non-elliptic Initialism
76	HIV	Human Immunodeficiency Virus	Non-elliptic Initialism
77	PTM	Penyakit Tidak Menular	Non-elliptic Initialism
78	DBD	Demam Berdarah Dengue	Non-elliptic Initialism
79	PMI	Palang Merah Indonesia	Non-elliptic Initialism
80	WNA	Warga Negara Asing	Non-elliptic Initialism
81	K.H.	Kyai Haji	Non-elliptic Initialism
82	DKM	Dewan Kemakmuran Masjid	Non-elliptic Initialism
83	MPRS	Majelis Permusyawaratan Rakyat Sementara	Non-elliptic Initialism
84	BCA	Bank Central Asia	Non-elliptic Initialism
85	THR	Tunjangan Hari Raya	Non-elliptic Initialism
86	ETA	Estimated Time Arrival	Non-elliptic Initialism
87	PPOB	Payment Point Online Bank	Non-elliptic Initialism
88	GPS	Global Positioning System	Non-elliptic Initialism
89	PPDB	Penerimaan Peserta Didik Baru	Non-elliptic Initialism
90	CPDB	Calon Peserta Didik Baru	Non-elliptic Initialism
91	SPTJM	Surat Pernyataan Tanggung Jawab Mutlak	Non-elliptic Initialism
92	SMP	Sekolah Menengah Pertama	Non-elliptic Initialism
93	SMA	Sekolah Menengah Atas	Non-elliptic Initialism
94	SDLB	Sekolah Dasar Luar Biasa	Non-elliptic Initialism
95	MI	Madrasah Ibtidaiyah	Non-elliptic Initialism
96	PKn	Pendidikan Kewarganegaraan	Non-elliptic Initialism
97	IPS	Ilmu Pengetahuan Sosial	Non-elliptic Initialism
98	OSIS	Organisasi Siswa Intra Sekolah	Non-elliptic Initialism
99	MPK	Majelis Permusyawaratan Kelas	Non-elliptic Initialism
100	SMPLB	Sekolah Menengah Pertama Luar Biasa	Non-elliptic Initialism
101	PIP	Program Indonesia Pintar	Non-elliptic Initialism
102	PKBM	Pusat Kegiatan Belajar Masyarakat	Non-elliptic Initialism
103	TPA	Taman Penitipan Anak	Non-elliptic Initialism
104	TKLB	Taman Kanak-Kanak luar Biasa	Non-elliptic Initialism
105	SMALB	Sekolah Menengah Atas Luar Biasa	Non-elliptic Initialism
106	SEO	Search Engine Optimization	Non-elliptic Initialism
107	SE	Surat Edaran	Non-elliptic Initialism
108	CV	Curriculum Vitae	Non-elliptic Initialism
109	USP	Unique Selling Point	Non-elliptic Initialism
110	BNI	Bank Negara Indonesia	Non-elliptic Initialism
111	HP	Handphone	Non-elliptic Initialism
112	iOS	iPhone Operating System	Non-elliptic Acronym

Essentially, elliptic **initialism** has the concept as elliptic acronym that does not include some initial letters, in this case the grammatical words is omitted. As it is found in *TIK (<Teknologi Informasi dan Komunikasi)* which omit conjunction *dan* and the

preposition is not initialised. The same thing goes to *UNECE* (\leftarrow *United Nations Economic Comission for Europe*) which does not initialized the preposition *for*. In this type, it is found the initialism *FDA* that stands for *United State's Food and Drug Administration*, and it is obvious that not only preposition *and* is not initialised, but the phrase *United State's* is omitted as well. Meanwhile, *JGTS* (\leftarrow *JSC Goes to School*) shows that initialism omit other part of *JSC* and take the initial part only. Such initialisms (*FDA* and *JGTS*) may appear since Mattiello (2013) states that grammatical and function words are omitted to be pronounceable and easy to memorize. Borys, (2022) argues that speakers often shorten expressions into acronyms to communicate more efficiently.

Non-elliptic initialism appears dominantly in the data as 102 words are in this type. Non-elliptic consists of the initial letters of every word in the source phrase, though they are pronounced individually as letters. As it can be seen in the data, the initialism *JSC* which stand for *Jakarta Smart City* is pronounced each single letter. Meanwhile *GoA* (\leftarrow *Grade of Automation*), *IoT* (\leftarrow *Internet of Thing*), and *iOS* (\leftarrow *iPhone Operating System*) shows that initialisms can be written in combination of capital and lower-case letters. This is in line with Mattiello (2013) who states that capital letters are considered as device link to the the acronym and initialism, yet nowadays they are no longer spelt with capital letters. Initialisms in the data also exhibit numerals, as in *SO2* (\leftarrow *Sulphur Dioxide*), *O3* (\leftarrow *Ozone*), and *NO2* (\leftarrow *Nitrogen Dioxide*). The use of numerals here is related to chemical symbol. Not only that, the use of numerals is also identified in *ISC2* (\leftarrow *International Smart Cities Conference*), and number 2 here is put after *C* which indicates the number of occurrences of that letter in the initialism. In this initialism, there are two words that begin the letter *C* so that the two words that should be abbreviated as *CC* can be written as *C2*. In the data, the use of dots in appears in form of initialism as in *K.H.* (\leftarrow *Kyai Haji*) and it is supported by Plag (2003) who states that only intialisms can have dots. The last, the initialism *PKn* (\leftarrow *Pendidikan Kewarganegaraan*) shows that not only the initial letters of each word is used, but also the last letter of the word as in *P(endidikan) K(ewarganegaraa)n*. In this form of initialism, the initial letters are written in capital meanwhile the last letter is written in lower-case. This is in line with Zaim (2025) who states that there is a phenomenon that abbreviation may appear in the form of mixing capital letters with lowercase letters. The other finding shows that one initialism may have two descriptions, as in *LRT* and *CRM*. In *LRT*, this initialism stands for both *Light Rail Transit* and *Lintas Raya Terpadu*, while the initialism *CRM* stands for both *Customer Relationship Management* and *Cepat Respon Masyarakat*. These patterns indicate that JSC engaes morphological adaptation by constructing Indonesian expansions that align with pre-existing English-based abbreviations. It has been mentioned before, the initialism *LRT*, originally derived from *Light Rapid Transit*, is morphologically restructured in Indonesian as *Lintas Raya Terpadu*. A similar pattern is observed in *CRM*, where the abbreviation is retained, but the expanded form is adapted to fit the Indonesian lexicon and syntactic structure. This reflects a deliberate linguistic strategy to localize English abbreviations by generating morpho-syntactically appropriate equivalents in Indonesian.

CONCLUSION

Abbreviations, in the context of Jakarta Smart City, play a bigger role in shaping how innovation is communicated. This study found that the JSC Annual Report uses a wide range of abbreviations, involving initialisms, acronyms, and clippings which reflect the city's push toward efficient, modern, and accessible communication. These abbreviations help simplify complex terms across sectors like public services, health, technology, and mobility, making them easier to understand, especially for the younger generation who make up a large portion of Jakarta's population. At the same time, the rapid rise and variety of abbreviated forms pose challenges in clarity and inclusiveness. That's why understanding how these abbreviations are formed and used is essential. It's not just for linguistic insight, but also to support Jakarta's vision as a connected, innovative and citizen-focused smart city.

Future studies could explore how different groups of citizens understand abbreviations in government documents and whether these forms help or hinder comprehension. Comparative research involving smart city reports from other regions or countries may also provide broader insights into abbreviation use in formal contexts.

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REFERENCES

Ahn, H., Shin, H. W., Oh, H.-K., Jung, Y. J., Singhi, A. N., Jo, M. H., Choi, M. J., Lee, T.-G., Shin, H. R., Kim, D.-W., & Kang, S.-B. (2025). Quantitative and Qualitative Analysis of Clinical Trial Acronyms From Surgical Journals. *Journal of Surgical Research*, 307, 62–69. <https://doi.org/10.1016/j.jss.2025.01.009>

Aji, G. G., Tsuroyya, & Dewi, P. A. R. (2018). Bridging communication between public and government: a case study on kim surabaya. *Journal of Physics: Conference Series*, 953, 012194. <https://doi.org/10.1088/1742-6596/953/1/012194>

Bell, J. (2010). *Doing Your Research Project: A Guide for First-Time Researchers in Education and Social Science* (Fifth). McGraw-Hill.

Booij, G. (2007). *The Grammar of Words: An Introduction to Linguistics Morphology* (Second). OxfordUniversityPress.

Borys, D. (2022). INITIALISMS IN THE 21ST CENTURY ENGLISH SLANG. *Humanities Science Current Issues*, 1(53), 159–165. <https://doi.org/10.24919/2308-4863/53-1-23>

Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (Fifth). SAGEPublication, Inc.

Dhika JR, V. T., & Ermanto, E. (2023). Kortara: The Process of Forming Acronyms on Indonesian Military Academy Corpus. *Humanus*, 22(2), 161. <https://doi.org/10.24036/humanus.v22i2.122316>

Dienhart, J. M. (1999). Stress in reduplicative compounds: Mish-mash or hocus-pocus? *American Speech*, 74(1), 3–37.

Hidayati, N. I., Suwarti, T. S., & Susanto, D. A. (2021). Analysis of Acronym and Abbreviation in Daily Post of Instagram. *Proceeding of English Teaching, Literature, and Linguistics (ETERNAL) Conference*, 284–300.

Iriyansah, M. R., Syahyuri, S., & Harared, N. (2023). An Analysis of Abbreviation on the University Students' Speech. *Scope: Journal of English Language Teaching*, 8(1), 127. <https://doi.org/10.30998/scope.v8i1.19589>

Kadhim, W. A. M., Mahdi, G. S., & Maktoof, Z. R. (2022). Acronyms and Abbreviations in the Language of Social Media. *Zien Hournal or Social Sciences and Humanities*, 15, 5757.

Katamba, F. (1994). *English words*. Routledge.

Kreidler, C. W. (1979). Creating New Words By Shortening. *Journal of English Linguistics*, 13(1), 24–36. <https://doi.org/10.1177/007542427901300102>

Kreidler, C. W. (2000). Clipping and Acronymy. In G. E. Booij, C. Lehmann, J. Mugdan, W. Kessel-heim, & S. Skopeteas (Eds.), *Morphologie–Morphology: An International Handbook of Inflection and Word-formation* (Vol. 1, pp. 965–963). WalterdeGruyter.

Kridalaksana, H. (2008). *Kamus Linguistik (edisi keempat)*. PT Gramedia.

Manokaran, K., & Ong Shyi Nian. (2020). An Analysis of Blends in Local English Newspapers. *PLATFORM-A Journal of Management & Humanities*, 3(1), 41–58.

Mattiello, E. (2013). *Extra-grammatical Morphology in English: Abbreviations, Blends, Reduplicatives, and Related Phenomena*. De Gruyter. <https://doi.org/10.1515/9783110295399>

Méndez, D. I. (2015). The Use of Abbreviations in English-Medium Astrophysics Research Paper Titles: A Problematic Issue. *Advances in Language and Literary Studies*, 6(3), 185–196. <https://doi.org/10.7575/aiac.all.v.6n.3p.185>

Minkova, D. (2018). *English word clipping in a diachronic perspective* (pp. 227–252). <https://doi.org/10.1075/cilt.343.10min>

Moehkardi, R. R. D. (2019). English Acronyms in Indonesian School Events. *Lexis*, 17, 1–30. <https://doi.org/10.4000/lexis.5544>

Mulyajati, E., & Baroroh, H. E. (2025). Linguistic Innovation through Blend Words in Jakarta Smart City Annual Report. *JOLLS: Journal of Language and Literature Studies*, 5(4), 957–966.

Plag, I. (2003). *Word-Formation in English*. Cambridge University.

Plag, I. (2003). *Word-formation in English*. Cambridge University Press.
<https://doi.org/10.1017/CBO9780511841323>

Pop, A.-M., & Sim, M. (2009). THE USE OF ACRONYMS AND INITIALISMS IN BUSINESS ENGLISH. *Annals of Faculty of Economics*, 1, 557–562.

Pujiyanti, A., Senowarsito, & Ardini, S. N. (2019). Analysis of Acronym and Abbreviations in IJAL Journal. *Journal of English Language*, 3(2), 9–21.

Sarantakos, S. (2005). *Social Research* (Third). PalgraveMac-Millan.

Šetka Čilić, I., & Ilić Plauc, J. (2021). Today's Usage of Neologisms in Social Media Communication. *Društvene i Humanističke Studije (Online)*, 1(14), 115–140.
<https://doi.org/10.51558/2490-3647.2021.6.1.115>

Silverman, D. (2004). *Qualitative Research Theory, Method, and Practice*. SagePublications.

Syalianda, S. I., & Kusumastuti, R. D. (2021). Implementation of smart city concept: A case of Jakarta Smart City, Indonesia. *IOP Conference Series: Earth and Environmental Science*, 1–10. <https://doi.org/10.1088/1755-1315/716/1/012128>

Yusuf, D., & Marlina, L. (2020). An Analysis of Abbreviations in Technology as Found in Kompas.com. *English Language and Literature*, 9(2), 186.
<https://doi.org/10.24036/ell.v9i2.108187>

Zaim, M. (2015). PERGESERAN SISTEM PEMBENTUKAN KATA BAHASA INDONESIA: KAJIAN AKRONIM, BLENDING, DAN KLIPPING. *Linguistik Indonesia*, 33(2), 173–192. <https://doi.org/10.26499/li.v33i2.36>