Millennial Students' Metalinguistic Knowledge on Headlines Using Grammaticality Judgment Test

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Abstract
Amid the proliferation of online news portals, there is a felt need for a re-investigation of the millennial students' metalinguistic knowledge (MK) on the technicality of the headlines. Couched within Relevance Theory, including the interlarding theories of Communicative Competence and Monitor Hypothesis, this study investigated 80 students' technical knowledge on selected 35 headlines vis-à-vis the students' academic disciplines and exposure to the headlines/news articles. The study employed a Grammaticality Judgment Test (GJT) by Schütze (1996) following Noam Chomsky's competence/performance distinction. The results showed the dearth of the students' knowledge on the technical rules of the headlines, which only fared around 70.66% accuracy. Likewise, the results showed that those who were never exposed to the headlines had a significantly lower mean score as compared to those with exposure to the headlines. Poor cognizance of the semantics-syntax of the headlines statistically cuts across eight academic disciplines and exposure to news articles. Overall, the students' understanding of the headlines seems to be shaped by their explicit knowledge and grammaticality judgment about the technicalities of the headlines. By and large, such results may be an indication of the students' experiences of semantic ambiguities of the headlines. We put forth the dire need for the re-introduction of 'Journalism' course across educational levels in a language classroom

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given today's rapid pervasiveness and breadth of digitalism. Students' lack of MK on the technicality of the headlines can impinge on their understanding of the semantics and the actual story-level depictions of the news.

Keywords: Grammaticality judgment, headlines, journalism, metalinguistic knowledge, relevance theory.

1. INTRODUCTION

The news headlines are a micro written register (Bucaria, 2004) because of their synoptic nature. They are a "summary and advertisement for a broader flow of the news contents" (Andrew, 2013, p. 455). They may have morphed into the newest journalistic styles. For instance, Blom and Hansen (2015, p. 87) investigated a variant of stylistic and narrative technique in headlines on a web, which is called forward-reference, with two forms such as discourse deixis and cataphora. Discourse deixis is a "reference to forthcoming (parts of the) discourse relative to the current location in the discourse" as in 'This is the best news story you will ever read.' On the one hand, "cataphors point forward to a word or a phrase later in the sentence or text" (p. 87) as in the sentence 'When he arrived at the crime scene, the journalist interviewed the victims' wife.' Recently, Munalim (2019) notes on the 'Minute News' headlines of American and Philippine Englishes based on the reading time appended in the headlines. He argued that the reading time, which signposts the readers to the approximate time to finish reading, provides a new journalistic style in the headlines. Conboy (2010) also took notice that the headlines have more cases of punning and have become less informational.

However, amid these stylistic and journalistic variations and changes (cf. Jaki, 2014), there remain considerable technical rules of the headlines, which have remained in-tact in the test of time. Over the years, many scholars have noted that the headlines have maintained in terms of their stylistic, lexical, syntactic, narrative devices (Bucaria, 2004; Ifantidou, 2009) and sensationalist nature (Molek-Kozakowska, 2013) in order to attract readers. In this present study, selected rules in headlines writing are subject to ESL students' metalinguistic knowledge. To our knowledge, understanding millennials' metalinguistic knowledge on the headlines have not been well understood with the recent pervasiveness of social media. Likewise, we found that there is only one study on the headlines by Khodabandeh (2007), who worked on students' errors in the translation of the headlines. There are only two studies on the headlines published, but these papers are contrastive and discursive in nature (cf. Samar & Mahdavy, 2009).

Over 13 years since the last work by Khodabandeh (2007), the students' conscious knowledge on the technicality of the headlines may have been taken for granted. The need for a re-investigation may be providential, given today's pervasiveness and proliferation of social media (Christakis & Fowler, 2011; Clark et al., 2015). Likewise, to some, teaching the technicality of the headlines may be an easy job for ESL/ESP teachers. We argue that the easy nature of the teaching of the explicit technicalities of the headlines should never be treated as a disrepute in a second language classroom because these technicalities all have a direct effect on students'

consumption of the news articles fed on social media. Most importantly, understanding the students' conscious metalinguistic knowledge on the technicality of the headlines offers pedagogical implications for the teaching of ESP, as the language skills are induced by real-life specific communicative activities and goals (cf. Benesch, 2001; Brown, 2016; Dudley-Evans & St. John, 1998; Munalim, 2021; Paltridge & Starfield, 2012).

With these backdrops in mind, this study is an attempt to answer the following questions:
1. What is the level of students' knowledge on the technicality of the news headlines?
2. Does knowledge on headlines technicality differ according to students' academic disciplines?
3. Does knowledge on headlines technicality differ according to students' exposure to the news?

We hypothesize that the metalinguistic knowledge, which is coursed through Grammaticality Judgment Test (GJT) on the technicality of the headlines will differ significantly in terms of the students' academic disciplines and their exposure to the different news items. It remains axiomatic to claim that the students have different levels of language exposure based on the demands of their academic requirements even with the required language courses. We are assured of this when Dor (2003) argues that reading the relevance of the headlines is basically addressee-oriented. In like manner, exposure to the news both on social media and in traditional print newspapers has a direct effect on the students' ability to judge the grammaticality of the headlines as a text type (Jaki, 2014).

2.   LITERATURE REVIEW

2.1   Theoretical Framework

This present study is couched in Sperber and Wilson's (1986) Relevance Theory. Sperber and Wilson (1995, p. 46) maintain that "human beings are efficient information-processing devices" in any communicative events. They also highlight the concept of what-is-a-meaning in verbal communication demonstrated by an individual, first by inferring what is communicated and how communication is achieved, for example, in cases of distortions and misperceptions such as in metaphors and other figures of speech. For this present study, the headlines are also a type of a distorted syntactic and paradigmatic linguistic arrangement, which demands readers' conscious processing of the communicative purpose. Following Sperber and Wilson's (1986) Relevance Theory, Dor (2003, p. 699) supports that "human cognitive processes are geared to achieving the greatest possible cognitive effect for the smallest processing effort". Put simply, reading and comprehending the headlines completely intertwines with the tenets of the Relevance Theory assembled above. He describes (newspaper) headlines as relevance optimizers. Hence, even at its microscopic engagement, the readers are required with a specific amount of mental effort to deconstruct the fairly anomalous and ambiguous syntactic and paradigmatic resources of the headlines. Dor (2003) crisply asserts:

Headlines are designed to *optimize the relevance* [original emphasis] of their stories for their readers: Headlines provide the readers with the optimal ration between contextual effect and processing effort, and direct readers to construct the optimal context for interpretation. Newspaper headlines are relevance optimizers: They are designed to optimize the relevance of their stories for their readers. (pp. 695-696).

In psychology, comprehending the semantics and syntax of the headlines may be associated with the constructs of the "pay attention" signal, which is delineated by Schmeichel and Baumeister (2010), as an "attention [which] must be controlled when the stimulus the person is attending to is a stimulus the person is not otherwise inclined to attend to" (p. 30). Within the same psychological remit, McGuire and Botvinick (2010, p. 103) rejoin that "information-processing tasks vary in their associated levels of cognitive demand. Highly demanding tasks require strong input from cognitive or executive control, input typically associated with a subjective sense of mental effort". Given the technical nature of the headlines, it is likely that the consumers of the headlines experience cognitive operations in their attempts to make sense of the headlines, which will affect their decision to read the whole news or not.

We also argue that Relevance Theory shares with the interlarding concepts of language learning theories such as Communicative Competence (Hymes, 1972) and Monitor Hypothesis (Krashen, 1981). Hymes (1972) introduced the term communicative competence—the concept of knowing a language. One of the competencies that he mentioned includes grammatical competence that involves knowing the language code: vocabulary, word formation and meaning, sentence formation, pronunciation and spelling. On the one hand, Krashen (1981) clarifies that the monitor is an error-detecting mechanism, which scans utterances and the individual's monitor edits the language inputs. The melding of these language theories leads to the use of GJT, which was employed in this present study.

Couched on a number of theories assembled above, the students' technical knowledge on the headlines is coursed through a GJT. Schütze (1996, 2016) traced back that GJT is attributed to Noam Chomsky's distinction between competence and performance. Schütze (2016) also uses the terms *grammaticality judgment* and *acceptability judgment* synonymously. This type of test, we argue, falls within the tenets of the conscious metalinguistic knowledge (MK) or knowledge about language (Alderson & Horák, 2010; Borg, 2001), which involves explicit and conscious understanding and monitor of the nature, meaning, and function of letters, words, vocabulary, syntax, and sentence (cf. Arndt et al., 2000; Arnó-Macià, 2009). Carter and Nunan (2011, p. 224) define metalinguistic knowledge as an "explicit, formal knowledge about language that can be verbalized, usually including metalinguistic terminology, such as present tense, indefinite article, etc." To Smith (2020), MK is all about conscious accessibility and conscious knowledge about a particular language, whose knowledge is used to think, analyze, and manipulate linguistic features in certain purposes. That is why Çandarlı (2018) reports that the L2 writers' metalinguistic understanding of lexical phrases may be a product of their prior learning experiences and conceptualizations of the lexical constructions.

It is important to note that the operationalization of MK has varied somewhat across studies, ranging from the learners' ability to correct, describe, explain L2 errors, explain grammatical rules, label parts of speech, and identify morphological

knowledge, idioms, sentence structures, sentence parsing, and verb conjugations (Ellis, 2006; Munalim & Raymundo, 2014; Tsang, 2011; White & Ranta, 2002).

Grammaticality Judgment Test (GJT) sits well in testing students' technical knowledge of the headlines. GJT as the lexical item "judge," allows the readers of the headlines to make use of their explicit knowledge of the syntactic structures and rules of the headlines. Following the tenets of GJT, reading the headlines reflect what the learners know or do not know about the rules of the headline constructions. In the actual test of this current study, the students were given binary choices and had to decide the correct syntax that corresponded to the actual headlines. For this present study, the students' ability to judge the grammaticality of the headlines based on the given correct linguistic options is arguably akin to the operationalization of MK because this task requires the students' skills in looking at language as an object (White & Ranta, 2002). In Relevance Theory, the human mind always makes relevant judgments about new assumptions (Dor, 2003) and about worldviews. At heart, one's ability to look at the technical language of the headlines inevitably demands conscious declarative knowledge on the grammaticality and semantics of the headlines. What are headlines? What are their characteristics and pragmatic use? What are the common rules in headline writing?

2.2   Headlines: Characteristics and Pragmatic Use

This ensuing section enumerates the selected rules in headlines writing, which are seen to cause confusion among the readers. This confusion bears the thrust of this paper, as it attempts to re-investigate the millennial students' explicit knowledge on the micro register of the headlines. As a micro written register, the headlines are a "textual negotiator between the story and its readers, which are characterized as short, telegram-like summaries of the news items" (Dor, 2003, pp. 696-607). Iarovici and Amel (1989) argues that the headline is a special text and cannot be considered as autonomous because it is always contingent on another text. Likewise, a headline is either extracted out of the actual stories or purely written without reference to the news item itself (Dor, 2003) to entice the readers into the text of the news story (Evans, 2000).

However, the term 'headlines' is defined richly in literature, not in its direct definition, but rather heavily based upon its characteristics and nature. These characteristics are rather linguistic in nature, which have remained their special linguistic peculiarities (Bucaria, 2004). Likewise, the headlines as a written register have not totally morphed even with the advent of newer technology (cf. Hall, 2001). Their linguistic and technical rules are still observed both in traditional and online journalism. Hence, given the technicality of the headlines, readers and students alike need some metalinguistic knowledge in order to understand the semantics of the headlines. These technical rules, which are obviously observed in local and international journalistic spheres (cf. Cruz, 2010; Perfetti et al., 1987; Quinn & Lamble, 2008) include, but are not limited to:

- A comma is used in lieu of the conjunction 'and'
- Active verbs are better than the passive verbs
- All forms of verb be (both helping and copular) are omitted
- An infinitive 'to + verb' is used for future stories
- Articles such as *a, an,* and *the* omitted

- Positive heads, not the negatives ones, are preferable
- Present tense is used even for past stories

   With all these characteristics assembled above, it is clear that the headlines serve a number of pragmatic purposes. For instance, Andrew (2013) maintains that because they are sensational headlines, they are enough to induce political engagement such as interests, discussion and debate. The more cases of engagement, the more economic costs, advantages and incentives (cf. Andrew, 2013; Iyengar et al., 2010; Richardson, 2007) these headlines exact on different media organizations. This assertion is not unlikely given that the different journalistic styles and strategies are observed in the name of "competition culture and journalistic culture" (Popescu & Toka, 2009, p. 4) for readership. Trimble and Sampert (2004) also hold that the crafting of the headlines is a long-standing journalistic practice, which according to Iarovici and Amel (1989) function as a plurality of speech acts such as urging, warning, and informing, even with the possibility of lexical and syntactic ambiguity (Bucaria, 2004). Overall, the headlines lack formal and normal linguistic paradigmatic resources, which can precipitate confusion in terms of their semantics and functions of grammatical classes, hence the crux of this present study.

3.   METHODS

3.1   Research Design

   This present study was an attempt to ascertain the students' level on the technicality of the news headlines. It also attempted to check if the students' technical knowledge on the headlines differs according to their academic disciplines and the degree of exposure to news articles. Hence, this study is quantitative in nature. It describes the trends including a systematic, actual, accurate and objective situation, problem, or phenomenon and at the same time it explores and understands a central phenomenon under investigation (Creswell, 2002; Garcia, 2003) using both descriptive and inferential statistics.

3.2   Respondents

   As shown in Table 1, the respondents in this study were the 80 first year university students taking up eight different academic programs in a local university. They are students officially enrolled in the course of 'Purposive Communication' for the academic year 2019-2020 under one of these authors. These freshmen students had taken Journalism courses during their K-12 years in the Philippines. Thus, we presupposed that these students are cognizant of the technicality of the headlines. From a total of 90 plus students officially enrolled in three sections, only 80 students successfully responded to the survey on Google Forms due to the issues with connectivity during the COVID-19 pandemic. Nonetheless, a total of 80 students may be enough for this present re-investigation of the students' technical knowledge on the headlines.

Table 1. Distribution of respondents' academic disciplines.

Academic clusters	Frequency	Percentage
Medical Technology	25	31.25
Information Technology	15	18.75
Social Work	11	13.75
Fine Arts	9	11.25
HRM	7	8.75
Music Education	5	6.25
Administration	4	5.00
Fine Arts	4	5.00
Total	80	100.00

3.3   Materials and Instrument

This present study made use of the headlines as the "primary unit of analysis" (Andrew, 2013, p. 457), given their peculiarities (Bucaria, 2004). The use of the online news headlines (cf. Ward, 2002), not in traditional print media in this study, can be considered a fitting choice due to the fact that many news organizations in the Philippines have also doubled-copied their news items onto their Facebook pages. Nonetheless, with the perceived enduring technical constructions of the headlines, either sample headlines taken from both print and the online news portal, may not affect the purpose of this present study.

For a re-investigation of the students' technical knowledge on the headlines, 35 headlines in 2019 and 2020 were taken from ABS-CBN News, the biggest and most trusted news organization in the Philippines. As of 2020 May 25, its Facebook page had 18 million plus likers and 19 million plus followers. We agreed on the total number of 35 Philippine President Duterte-related articles for this study to lessen the students' higher cognitive, emotional and affective filter when answering the test during the COVID-19 pandemic. The choice of Duterte-related articles was also to make sure of the consistency of their engagement with the grammaticality judgment test.

As presented in Table 2, the headlines are only categorized based on the level of difficulty such as the use of 'to+ verb' for future time; the use of comma in lieu of 'and;' the absence of 'verb be'; and the absence of 'verb be' in a passive voice construction. The rest of the rules of the headlines writing such as the use of present action verbs as in 'Duterte accepts ABS-CBN apology' and other straightforward syntactic arrangements were intentionally excluded. Headlines of these sorts do not bear any semantic and syntactic ambiguities, as compared to the categories analyzed in this present study. In the questionnaire, the headlines types were distributed to different items, and options were varied to prevent the respondents from detecting the patterns of correct options. One student averred, "I started to doubt my answers because there were items that looked exactly the same as the other items but they had at least one different choice."

Table 2. Distribution of the types of headlines under study.

Headline type	Sample	Actual semantics/syntax (in bold)	No. of sentences
Future Time	Duterte to pursue fraud charges vs water distributors	Duterte **will** pursue fraud charges vs water distributors	10

Table 2 continued…

Use of comma in lieu of 'and'	Duterte, top gov't officials approval ratings improve in last quarter of 2019	Duterte **and** top gov't officials approval ratings improve in last quarter of 2019	10
Deletion of 'verb be' after a predicate adjective	Duterte 'not feeling well'	Duterte **is** 'not feeling well'	10
Deletion of 'verb be' in passive constructions	Duterte family tested for COVID-19	Duterte family was tested for COVID-19	5
		Total	35

As stated elsewhere in this paper, the students were given binary choices and had to judge and choose the correct syntax that corresponded to the actual presented headlines. As simply illustrated in Figure 1, the test takers were provided with the actual headline taken from a national news organization in the Philippines. The two binary options are syntactically correct but their semantics have to judge against the indicated actual headline. The intention is to test millennial students' metalinguistic knowledge on the headlines via Grammatically Judgment Test (cf. Schütze, 2016). In the sample item below, the correct answer is "Duterte is satisfied with Philvocs." As the pedantic journalistic rule dictates, all linking verbs like *is* and *are* have to be deleted when writing a headline. This act of deletion obviously can confuse the readers the actual semantics of the headlines; thus, Grammaticality Judgment Test sits well with the metalinguistic knowledge (cf. Munalim & Raymundo, 2014).
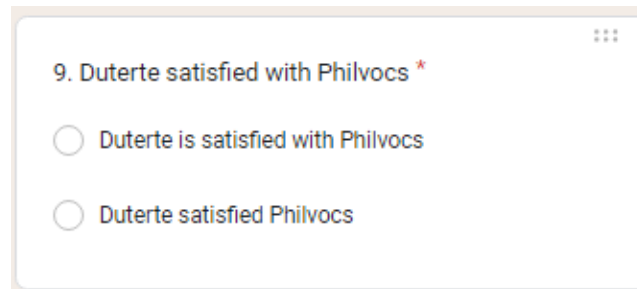

Figure 1. Sample test item.

While the headline types are rather limited to four types; the number of items of 35 is limited; and the respondents only reached 80 individuals, we argue that they would suffice for this present study. In fact, the headlines are read individually, and any cases of mis-comprehension can impinge on the students' interaction with the actual news. Khodabandeh (2007) in the study of students' errors in the headlines also had 30 test items. In short, the issue of the number of items used in this present study, and the number of the headline types under scrutiny may be secondary to the idea of the technical knowledge on the headlines being investigated. The number of respondents may not be a real methodological issue because reading the headlines is a solitary and personal engagement. We also maintain that the reading of the headlines is real-time and is not solely affected by the number of the headlines being consumed. Nonetheless, we encourage future researchers for a larger number of headlines, even beyond 35 items, without considering the presupposed mental and cognitive stress any

test can do to any test takers; and including the need for a larger population of millennial readers of the headlines.

3.4   Data Collection

The university millennial students were asked to answer the metalinguistic GJT using the Google Forms tool. The students only had to choose one of two options, which best describes semantically the given headlines. We intentionally crafted the choices in different linguistic options to avoid the students from seeing the patterns of the right answers. Given the problems of connectivity during the COVID-19 pandemic, the students were given at least 1 week to answer the GJT. From 80 students, 60 students answered the test within 30 minutes. What this means is that they immediately attempted to answer the test, perhaps heavily relying on their prior knowledge. It should be noted that whether or not the students consulted some references before taking the test is far from settled in this present study.

3.5   Analytical Procedures

Results generated by the Google Forms tool were further analyzed in tandem with our manual analysis using an Excel file. Students' answers were clustered based on (a) the headline types such as future time; use of comma in lieu of 'and'; deletion of 'verb be' after a predicate adjective and main verb; and the deletion of 'verb be' in passive constructions; (b) the students' academic disciplines; and (c) the exposure to news on social media like Facebook. All of these domains were analyzed using descriptive and inferential statistics. The significant difference between the four types of the headlines was determined using repeated measures ANOVA, post Hoc test using Bonferroni. The significant differences of the technical knowledge on the headlines based on academic disciplines and exposure were performed using one-way ANOVA and Tukey's test for post hoc test, all with the help of SPSS. The commissioned statistician noted that "since passive voice is less than 10 items, to be comparable with the other three headline types, the data to use is the average, instead of total scores. Since the possible answer is only 1 and 0, the expected results of the average are also from 0 to 1. For the academic disciplines and exposure, total score instead of average was used."

4.   RESULTS

4.1   The Level of Students' Knowledge on the Technicality of the Headlines

The students' average score is only 24.73 out of 35, or equivalent to 70.66% accuracy. Using this percentage, it means that the students have only achieved a low level in terms of their technical knowledge on the headlines with regard to the four types of linguistic constructions of the headlines such as (a) future time, (b) deletion of 'verb be' after a predicate adjective or the main verb; (c) use of comma in lieu of 'and'; and (d) the deletion of 'verb be' in passive constructions.

Table 3. Performance of the different headline technicalities.

Headline type	Sample headlines	Correct scores	Percentage
Future Time	Duterte to pursue fraud charges vs water distributors	560	28.31
Deletion of 'verb be' after a predicate adjective or main verb	Duterte 'not feeling well'	551	27.86
Use of comma in lieu of 'and'	Duterte, top gov't officials approval ratings improve in last quarter of 2019	540	27.30
Deletion of 'verb be' in passive constructions	Duterte family tested for COVID-19	327	16.53
	Total	1,978	100.00

When the headlines were clustered based on the four types, results divulge that 'future' time tops the well mastered headline technicality type, followed by the deletion of 'verb be'; the use of comma in lieu of the conjunction 'and'; and the deletion of 'verb be' in passive constructions. However, even if the technicality of the headlines based on future time seems to be well mastered by the students, the accuracy of 28.31% is disconcerting given that these university students had taken Journalism courses during the K-12 years in the Philippines. The accuracy plummets below even perhaps with the acceptable accuracy of 50%. The following are samples of students' inability to understand the headlines:

Table 4. Actual headlines and incorrect grammaticality judgement.

Actual headlines	Incorrect judgement
Duterte for VFA termination, says spokesman	Duterte sides for VFA termination, says spokesman
Duterte 'open' to any complaint, Palace says on Rio exit	Duterte makes himself 'open' to any complaint, Palace says on Rio exit
Duterte, family unharmed in Mindanao quake	Duterte alongside his family unharmed in Mindanao quake
Bong Go says criticism, 'fake news' over donations meant to distract Duterte admin	Bong Go says criticism, as well as 'fake news' over donations meant to distract Duterte admin
Duterte 'under the weather', cancels interview with spox anew	Duterte gets 'under the weather', cancels interview with spox anew

Table 4 shows that the second column contains syntactic structures that are not the exact syntactic features of the original headlines. While the judgement may be correct, the other correct options in the judgement test were not chosen by the students. Their choices violated the technical rules and intention meaning of the headlines.

Table 5. Significant difference between the four types of headlines.

Types of headlines	Mean	Standard deviation	p-value	Conclusion
Future Time	0.70	0.18	0.001	At least one has significantly diff mean
Conjunction 'and'	0.68	0.21		
Verb Be	0.69	0.16		
Passive Voice	0.82	0.19		

Table 5 continued ...

Pairwise Comparison		Difference	p-value	Conclusion
Future Time	Conjunction 'and''	0.02	1.000	Not Significant
	Verb Be	0.01	1.000	Not Significant
	Passive Voice	-0.12	0.001	Significant
Conjunction 'and''	Verb Be	-0.01	1.000	Not Significant
	Passive Voice	-0.14	0.001	Significant
Verb Be	Passive Voice	-0.13	0.001	Significant

When the four types of the headlines technicalities were compared statistically, the results shown in Table 5 reflect that the resulting overall p-value of 0.001 denotes that at least one headline type has a significantly different mean score. Post hoc test reveals that the resulting mean score of passive voice is significantly higher by 0.12 as compared to 'future time,' by 0.14 as compared to conjunction 'and' and by 0.13 as compared to 'verb be.'

Table 6. Top 5 well mastered headlines (N=80).

Item number	Type	Headline	Frequency	Percentage
3	Be verb	Duterte not feeling well	71	20.64
5	A comma in lieu of 'and'	De Lima thanks US, Canada for support in sanctioning Duterte govt	69	20.06
9	Be verb	Duterte satisfied with Philvocs	69	20.06
12	Be verb	Duterte hesitant to expand South Korea travel ban	68	19.77
34	Passive	Duterte family tested for COVID-19	67	19.48

Table 6 reveals the top 5 most mastered types of the headlines. Among the four types of the headlines under investigation, the headlines with 'be verb' construction are well mastered compared to the use of a comma in lieu of the conjunction 'and.' However, if the overall percentage is considered, the accuracy is only mastered by at least 20.64% of the total 80 respondents.

Table 7. Top 5 least mastered headlines (N=80)

Item number	Headline type	Headline	Frequency	Percentage
24	Verb be	Duterte for VFA termination, says spokesman	25	17.01
21	Verb be	Duterte 'open' to any complaint, Palace says on Rio exit	25	17.01
7	'and'	Duterte, family unharmed in Mindanao quake	27	18.37
17	'and'	Bong Go says criticism, 'fake news' over donations meant to distract Duterte admin	33	22.45
18	Verb be	Duterte 'under the weather', cancels interview with spox anew	37	25.17

For the top 5 least mastered headlines, only the passive constructions are not part of the cohort. Table 7 shows that the 'verb be' constructions still dominate in the least mastered headlines. From these most misunderstood headlines, selected students (coded as S1, S2, S3 and so forth) were asked why such a struggle, and asked how they processed the grammatically judgment test. They averred:

"I was reading the headlines by adding to them some verbs and phrases to have a complete sentence and then decide what my answer will be." – S1

"I used my stock knowledge. I talked to myself if it [the headline] sounds right, and also I think some of the basis sentence patterns as well." – S2

4.2 Knowledge on the Headline Technicality in Terms of Students' Academic Disciplines

Table 8 shows the significant differences of the students' technical knowledge on the headlines based on their academic disciplines.

Table 8. The difference in knowledge of headlines in terms of academic disciplines.

Disciplines	N	Mean	Standard deviation	p-value	Conclusion
Administration	4	21.75	7.81	0.367	Not Significant
BSIT	15	24.67	4.30		
Fine Arts	13	25.85	4.14		
HRM	7	25.57	2.64		
Music	5	28.20	4.55		
MedTech	25	24.36	4.42		
Social Work	11	23.27	5.82		

Pairwise Comparison			Difference	p-value	Conclusion
Administration		BSIT	-2.92	0.917	Not Significant
		Fine Arts	-4.10	0.707	Not Significant
		HRM	-3.82	0.836	Not Significant
		Music	-6.45	0.369	Not Significant
		MedTech	-2.61	0.938	Not Significant
		Social Work	-1.52	0.997	Not Significant
BSIT		Fine Arts	-1.18	0.993	Not Significant
		HRM	-0.91	0.999	Not Significant
		Music	-3.53	0.749	Not Significant
		MedTech	0.31	1.000	Not Significant
		Social Work	1.39	0.987	Not Significant
Fine Arts		HRM	0.28	1.000	Not Significant
		Music	-2.35	0.958	Not Significant
		MedTech	1.49	0.963	Not Significant
		Social Work	2.57	0.816	Not Significant
HRM		Music	-2.63	0.957	Not Significant
		MedTech	1.21	0.996	Not Significant
		Social Work	2.30	0.944	Not Significant
Music		MedTech	3.84	0.614	Not Significant
		Social Work	4.93	0.431	Not Significant
MedTech		Social Work	1.09	0.995	Not Significant

Results in Table 8 show that different academic disciplines turn out to have no significantly different mean score in terms of total (p=.367), future time (p=.309), conjunction 'and' (p=.395), 'verb be' (p=.552) and the passive voice (p=.100). From the results, it is clear that none of the students from any academic disciplines such as Administration, Information Technology, Fine Arts, Hotel and Restaurant Management, Music, and Medical Technology were able to process and judge the grammaticality of the anomalous headlines even at the microscopic linguistic nature of the headlines.

4.3 Knowledge on the Headlines Technicality in Terms of Students' Exposure to News

Table 9 shows that the cohort of students who responded to the grammaticality test only 'sometimes' (56.25%) exposes themselves to the news articles on social media. At least, more than half of these students take notice of the technicalities of the headlines, as a pre-orienting device (Jaki, 2014), which can either invite them to click and peruse the actual story-level depictions of the headlines.

Table 9. The exposure to news on social media.

Exposure to news on social media	Frequency	Percentage
Sometimes	45	56.25
Always	16	20.00
Rare	13	16.25
Never	6	7.50
Total	80	100.00

Table 10 shows that the mean score in terms of total (p=.175), the different headline types such as future time (p=.175), conjunction 'and' (p=.193), 'verb be' (p=.095) and the passive voice (p=.147) turn out to be the same regardless of the students' exposure. However, combining all the scores, the results show that those who are never exposed have a significantly lower mean score by 6.73 as compared to 'rare' and by 5.48 as compared to 'sometimes'. In short, the cluster of students from eight different academic disciplines regardless of their exposure performed with a low technical knowledge on the headlines. This is noted when one student even shared that "I managed to understand some technicalities of the headlines because I have a background in being a news writer and an editorial writer in our campus newspaper during my high school days."

Table 10. The differences between technical knowledge on the headlines based on exposure.

Exposure	N	Mean	Standard deviation	p-value	Conclusion
Always	16	24.75	5.63	0.026	At least one has a significantly different mean
Never	6	19.50	4.72		
Rare	13	26.23	4.25		
Sometimes	45	24.98	4.06		
Pairwise Comparison			**Difference**	**p-value**	**Conclusion**
Always		Never	5.25	0.073	Not Significant
		Rare	-1.48	0.806	Not Significant
		Sometimes	-0.23	0.998	Not Significant
Never		Rare	-6.73	0.016	Significant
		Sometimes	-5.48	0.029	Significant
Rare		Sometimes	1.25	0.804	Not Significant

5. DISCUSSION

The results of the study show the dearth of the students' knowledge on the technical rules of the headlines, which only fared around 70.66% accuracy. Overall, the pattern is an indication that the students experienced a real challenge in applying

their metalinguistic knowledge and grammaticality judgment between the correct choices of each of the four headlines types. Given that the mastery plummeted below 50% of the total respondents, it is still erudite to assert that the top one well mastered headline such as 'Duterte not feeling well' is considered disconcerting for the university students not to identify that the actual syntax of the headline is actually 'Duterte is not feeling well.' Yet at least, it is consolatory that the well mastered headlines are spread across four types under investigation in this present study.

The university students' dearth on the technical knowledge of the headlines may be an indication of their semantic confusions brought about by the syntactic ambiguities of the headlines. Because of these anomalies, it was expected that the students exhibited some trepidation and challenge in identifying the normal sentence structures of the English language. In fact, Celce-Murcia and Larsen-Freeman (2008, p. 13) mention that "identifying standard parts of speech are an enterprise fraught with difficulty".

For sure, the peculiarities of the headlines further precipitated this difficulty, especially when one grammatical form tends to act differently in an already dual category of the English language (cf. Colman, 2005; Endley, 2010; O'Dwyer, 2006). Likewise, in the students' attempt to make sense of the headlines, they had to choose between the two options using their explicit and conscious judgment on the grammaticality of the original headlines. They had to parse for syntactic and semantic cues (cf. Zyzik, 2009) before choosing the better choice. This decision is seen to be identical when reading the actual news headlines even outside the formal ESL instructions and even outside this grammaticality judgment test that the students took. Overall, the non-normative behaviour of the headlines like in "Duterte tested for COVID-19", including cases of ellipsis (Bucaria, 2004), and other syntactic truncations can result in a number of interpretations. For example, many students misinterpreted (answered letter B for item number 9):

9. Duterte satisfied with Philvocs
   a. Duterte is satisfied with Philvocs
   b. Duterte satisfied Philvocs

Put simply, the very low knowledge on the technicalities of the headlines cuts across six academic disciplines. In Relevance Theory, Sperber and Wilson (1995, p. 49) argue that in the communication process, "all human beings automatically aim at the most efficient information processing possible. An individual's particular cognitive goal at a given moment is always an instance of a more general goal: maximizing the relevance of the information processed". As demonstrated in the average score of 24.73 out of 35, or equivalent to 70.66% accuracy, results illuminate that all students from different academic disciplines had been challenged to "...consider the semantic shifts created by confusion between grammatical categories" (Bucaria, 2004, p. 281) of the headlines. Meanwhile, since those who have never been exposed to the headlines performed significantly lower than those with exposure, it means that exposure has significant effect on their technical knowledge. This remains an axiomatic claim.

Explicit in the results is the idea that the students of different disciplines have demonstrated a disconcerting level on the technical knowledge of the headlines. Yet, the results may be predictable in nature. Historically, Perfetti et al. (1987, p. 692) argue that the "headlines present interesting comprehension problems because they are

syntactically impoverished and, consequently, often syntactically ambiguous". What the results convey is that the students' meagre knowledge on the technicality of the headlines may be forgivable. Munalim and Raymundo (2014) mention that even English teachers themselves demonstrated a low level of declarative metalinguistic knowledge even after many years of teaching the language courses. Because the students' poor technical knowledge on the headlines is recorded in this present study, this should not be used to downplay the perceived need for our students to be more cognizant of the technicality of the headlines. People as part of the free and democratic country naturally engage and consume news, even outside the four corners of the brick-and-mortar classrooms.

The students' technical knowledge on the headlines was investigated in terms of their academic disciplines and exposure to the headlines and news on social media. What seems clear from the results is that the millennial students may no longer all tune with the micro register of the headlines, even with the frequent exposure to the news items on social media. This level of technical knowledge can impinge on their appreciation of the news items, and can precipitate in the perception of branding the news outfits as misleading or biased, among others. Likewise, the students should be more cognizant of the technicality of the headlines with the idea in mind that many of them heavily rely on free data, which only allows them to see the texts without images, and even without reading the story-level depictions of the headlines. The headlines serve as a guide and context, thus can still offer the readers the effect and impression of the actual stories (Evans, 2000; Ward, 2002). However, the students should be advised not to solely rely on the headlines. Caulfield and Bubela (2004) caution that although headlines can provide a glimpse of first impression, they may be inaccurate or "hyped," thus deviating from story-level depictions. Moreover, the headlines sometimes lack informational value to the actual news contents, which others call 'misleading and click-bait' headlines.

With all the findings assembled above, the syntactic violations and anomalies of the headlines have challenged the students in two ways: comprehension and problem solving. This is what is historically underlined by Perfetti et al. (1987, p. 693), who believe that "comprehending newspaper headlines may be more a matter of problem solving than of reading". The results may mean that the students as parsers cannot process the possible contents of the actual stories of the news without enough metalinguistic knowledge of the technicalities of the headlines. This knowledge about language (KAL) demands rule-based operations of the headlines, which should be mastered outright because the "headlines have distinctive syntactic properties, which make them a grammatical oddity" (Fairclough, 1995, p. 21).

6.   CONCLUSION

In capsule, the results of the study show the dearth of the students' knowledge on the technical rules of the headlines, which only fared around 70.66% accuracy. Likewise, results showed that those who are never exposed to the headlines had a significantly lower mean score as compared to those with exposure to the headlines. Poor cognizance of the semantics-syntax of the headlines statistically cuts across academic disciplines and exposure to news articles. Overall, the students'

understanding of the headlines seems to be shaped by their explicit knowledge and grammaticality judgment about the technicalities of the headlines.

Pooling the results together, the dearth of the students' knowledge on the technicality of the headlines has reminded us of the challenging linguistic resources and infrastructures of the headlines. Consuming the headlines remains an activity, where the readers have to utilize their declarative knowledge of the technicalities of this micro written register. The headlines are acknowledged and understood to be an easy challenge, whose understanding is further enhanced with the help of intricate, conscious and declarative metalinguistic knowledge (MK) and judgment of the semantic and syntactic anomalies of the headlines. This assertion sits well with the concepts of MK: it is acknowledged and understood to be a cognitive problem-solving task that involves analytical reasoning and high control of rule-based processing (Roehr, 2000; White & Ranta, 2002); and with one of the tenets of Relevance Theory, which delineates that "humans may be capable of controlling more than one technique for performing inferences" (Sperber & Wilson, 1995, p. 67).

It is not impossible that the students' lower level of metalinguistic knowledge on the headlines was precipitated due to the absence of visual images, and other accompanying linguistic resources of the headlines. Future studies may re-test the students' grammaticality judgment of the headlines by incorporating other semiotic resources surrounding the headlines. Blom and Hansen (2015, p. 92) assure that the headlines "may be more or less dependent semantically on the content of the full article" and even on their other semiotic environments, which will further help them to deconstruct the syntactic and semantic ambiguities of the headlines. Likewise, the number of the students across eight academic disciplines were not uniform because the number was solely based on the number of students officially enrolled during the trimester. Future studies may try to homogenize the number for any comparative undertakings.

At the top of these concerns, there is a dire need for language and journalism teachers to re-introduce the principles and technicalities of the headlines in their classes across academic stages. The semantic meanings of the headlines are indispensable in the students' interaction with the actual news contents and even doing away with possible disconnect between the headlines and the actual news contents. Underlying this research is the understanding of normative expectation from social media users to be cognizant of the different written registers on social media – both macro and micro-linguistic features. In like manner, from the top-down sphere, such results contribute to teachers' and policymakers' decision concerning the revival of Journalism subjects, and or integration of news writing (and reading) in a language classroom across educational levels.

To close, only when we have constantly determined and improved the students' metalinguistic knowledge on the technicality of the headlines are we able to make these millennial students become much more empowered members of society. ESL/ESP/TESOL teachers should continue to aim to arm these students with formidable metalinguistic knowledge and the strong ability to discriminate and judge linguistic grammaticality and accuracy of the headlines in today's modern world, regardless of the academic disciplines that the students belong to, given the valuable communicative (Dor, 2003) and pragmatics functions of the headlines in a democratic society like ours.

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