1. Journalism competence and the COVID-19 crisis in Southeast Asia

Toward journalism as a transformative and interdisciplinary enterprise

Abstract: The COVID-19 crisis across the world has posed a daunting challenge to journalism as a discipline. Indeed, how the journalism profession performs at this time could have game-changing implications on its already beleaguered role as a source of information in society. This article deals with the subject of journalistic competencies necessary in such crisis times, when interpreting and disseminating technical or scientific information becomes crucial in news work in a region that is vastly different from the West or the 'Global North'—Southeast Asia. The issues and relevant concepts of journalistic competence and science journalism, especially in the time of digital and economic disruptions are discussed in relation to: 1) literature on journalistic roles and the character of media systems in Southeast Asia, and 2) data from in-depth interviews with selected experts from 31 countries. This article argues that, based on literature and a growing consensus among experts, journalism can best strengthen its role in society by shifting its standards and norms under a transformative and interdisciplinary perspective, which for a long time has been hindered by the inertia of the industry and industry-centered journalism education.

Keywords: COVID-19, digital media, Global South, journalism, journalism education, pandemic, science journalism, Southeast Asia

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THE global coronavirus crisis came at a time when journalism is also facing crises of different sorts. Drok (2019) explained that these crises are 'financial' and 'functional' in nature and occurred as part of the transition from the 'mass media model' of journalism in the 20th century to the 'network model' of the 21st (p. 8). The financial, he wrote, refers to the added pressure

of generating revenues stemming from declining ad profits, tighter competition, and 'decreasing willingness to pay' for professionally produced news (p. 8). The functional, meanwhile, refers to the 'declining relevance and meaning of journalism for various groups and communities in society' (p. 8). However, as the pandemic crisis created a strong need for reliable and accessible (scientific) information, the journalism profession found the daunting challenge by which it could establish its new role(s) in societies.

The convergence of technologies, enabled by the internet coming of age, granted audiences instant access to a multitude of sources online, and with it also came hostile audiences with populist attitudes or audiences distrustful of mainstream news (see Fletcher, 2019; Newman et al., 2019; Newman et al., 2020). Right-wing populist movements have taken advantage of surging inter-net penetration rates, so much so that digital media has become 'a precondition for success', wrote Schroeder (2017), who compared four cases from the US, Sweden, India, and China. In a more recent work, Schroeder (2019) explained how the 'issue of media manipulation' has become a dominant theme in digital populist campaigns, hence the 'antagonistic relations between populists and traditional media' (p. 8).

It is in this kind of terrain that journalists are trying to perform their per-ceived roles in the middle of a pandemic. It becomes important to ask: what should journalists possess, in terms of competencies, to navigate this terrain and deliver relevant pandemic-related information to their publics? Through which or whose perspectives can this question be answered (i.e. in the perspective of the employer, what competencies constitute competence? What about in the perspective of a private citizen? A scholar?). How can a journalist be described as 'competent' and who (or what) defines 'competence'? These questions are crucial if journalism is striving to perform its role of being the 'beacon of reli-ability' (Drok, 2013, p. 156; see also Opgenhaffen et al., 2013; Weaver et al., 2007) in the online sphere with seemingly endless options for content. In other words, these questions beg to be addressed as journalism is distinguishing itself from all other sources that now challenge its gate-keeping function, considered a thing of the bygone pre-internet era.

This work aims to address these questions within the context of Southeast Asia (SEA), an environment characterised by rich diversity in political, cul-tural, and economic conditions (Estella & Paz, 2019) and a rapidly expanding internet market (Google, Temasek, and Bain and Company, 2019, p. 9). SEA has 'emerging democracies' (Chua, 2013) as well as countries in 'democratic decline' (Powers, 2018, p. 307), high-income economies and low-to-middle-income economies, and partly free to tightly controlled media systems (Estella & Paz, 2019, p. 196). The conditions of SEA that are alien to the conditions of the 'West' or the 'Global North' create an interesting case study under the

spirit of 'de-centering', to borrow Muhlmann's (2008) term, the discourses in journalism and communication studies. Loo's (2013) statement best describes the Southeast Asian condition:

> …the media in parts of Asia had travelled on a different path dotted by traditions and customs, centuries of struggling for independence from colonial rule, followed by struggles for press freedom from authoritarian post-colonial states, and where press freedom was legislated—such as in the case of Indonesia, the Philippines and Thailand, and where private media ownership has led to excessive commercialism and corruption to this day. (Loo, 2013, p. 46)

This article argues that in this kind of environment and with the challenges posed by the pandemic crisis, journalistic competence should be developed based on an interdisciplinary and transformative paradigm, one that deviates from the well-entrenched industry-centered perspective (see also Folkerts, Hamilton & Lemann, 2013; Harcup, 2011; Mensing 2010). This perspective privileges technical training and industry-set norms and standards with the principal aim of producing graduates for the mainstream industry. This article began with a discussion on the character of the political and media systems in SEA, as well as pertinent journalistic roles, because any discussion on journalistic competence is a futile exercise if not properly contextualised. This work also includes a brief review of the state of research on journalistic competence particularly in SEA. The last section deals with the interdisciplinary and transformative paradigm, and how such an approach to journalist training or journalism education is necessary in today's circumstances.

The Southeast Asian condition: The need for a critical-reflexive approach

SEA as a geographical realm is comprised of 11 territories: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, and Vietnam. As a political bloc, SEA countries, apart from Timor-Leste (with observer status), constitute the Association of Southeast Asian Nations (ASEAN), a regional intergovernmental group established supposedly to promote 'economic growth', 'peace and stability', and 'active collaboration' among its member states (ASEAN Secretariat, 2017, p. 3). Although ASEAN has been in the process of regional integration as early as 1997, its leaders launched the 'ASEAN Community' only in 2015, with the goal of arriving at a 'rules-based' and 'cohesive' regional group with narrowed development gap and 'free movement of goods, services, and investments…capital and skills' (ASEAN Secretariat, 2013). ASEAN leaders aim to meet the 'critical targets' of the integration by 2025, but several scholars have already expressed scepticism toward

the 'progress reports' of ASEAN (Menon & Melendez, 2016) and toward the possibility of integration and its relevance to the greater population of over 600 million citizens (Dosch, 2015; Desker, 2015; Heydarian, 2015).

Perhaps one of the challenges to the integration is the highly diverse array of political, economic, and cultural systems of SEA (Löffelholz & Arao, 2011, p. 17; see also Estella & Paz, 2019). The region has presidential republics (Indonesia and Philippines) and parliamentary democracies (e.g. Singapore) to military government (Myanmar) and communist/socialist republics (Laos and Vietnam). It is also 'one of the most religiously diverse regions in the world', as it includes Indonesia, the country with the largest Muslim population in the world, Thailand, which has the largest percentage of Buddhists globally, and Philippines, which has the biggest number of Roman Catholics outside Latin America (Pew Research Center, 2012, cited by Jereza, 2016, p. 90). It is home to a great number of migrants from India and China as well as many indigenous peoples and other minority groups (Meijknecht & de Vries, 2010, p. 77).

In terms of national wealth, the region has high-income economies (Singapore and Brunei) to middle and low-income economies (e.g. Philippines, Laos, and Cambodia). Cuyvers (2019) wrote that there is a 'development gap' between the 'newest and least developed members'—the 'CLM' or Cambodia, Laos, and Myanmar—and the rest of the ASEAN countries, particularly those with national income that rivals that of many developed countries in the Global North (e.g. Singapore and Brunei) (p. 4). Cuyvers also compared the ASEAN countries in terms of different indicators such as GDP, Human Development Index, and poverty incidence, showing that SEA indeed has a strong mix of developing and highly developed countries, with varying conditions of educational, technological, and innovative infrastructure (p. 4).

What is of particular importance to this article is the character of media system, journalistic roles, and 'journalism paradigms' in the region because these directly circumscribe the discourse on journalistic competence. It should be noted that in the majority of SEA countries, big data on journalistic roles or journalism cultures is absent (except for Indonesia, Malaysia, Brunei, Singapore, and Philippines), although there is a wealth of qualitative studies about journalism in the region. The same goes for news consumption behaviour: It was only recently that the attitudes of audiences toward news and their gateways to news have been profiled through large-sample research (see for example Newman et al., 2019; Newman et al., 2020). This could be seen in two ways: First, journalism studies is still in its infancy in many SEA countries because of underdeveloped research and development (R&D) infrastructure as well as poor appreciation for journalism research (see for example Hanitzsch, 2005; Estella & Löffelholz, 2019), and second, because journalism as a field is still struggling to gain a footing especially in societies that are in transition (Lehmann-Jacobsen, 2017).

However, the fact that there are more studies employing qualitative approaches (e.g. descriptive and discursive works and case studies) suggests that in areas like SEA, the common research tradition focuses on describing or to some extent theorizing the unique circumstances of the region, which are best examined through methods like participant observation or ethnographic approaches. These circumstances—colonial past and post-colonial consciousness, authoritarian regimes, poverty and huge inequalities, strong traditions and customs, among others – make this environment vastly different from the Global North or West, from which most of the perspectives and methodologies in the field of journalism studies and journalism education originated. Therefore, as Robie (2019) has argued, there is a need for research to be 'nuanced', 'culturally appropriate', and 'reflexive' enough to appreciate the 'complex media cultures' of the Pacific region. From this decolonising project stemmed new research frameworks and methods particularly in the Pacific region, such as the '*talanoa*' approach (Robie, 2019). The research philosophy of 'talanoa', a Fijian term for 'frank face-to-face discussion with no hidden agenda', focuses on 'public interest, civil society and community empowerment' (Robie, 2019, p. 12). Clery (2014, cited by Robie, 2019, p. 6) described this approach as 'purposeful talk', with an emphasis on exploratory dialogue in addressing the needs of the community. In such an approach, the scholar (or the journalist, as this approach is also applicable to journalism practice) is not a detached observer, as opposed to the default stance of the researcher in many Western-Global North studies.

Furthermore, the reality of the media in SEA presents a case against the 'liberal hegemonic model of journalism' (Nerone, 2012; see also Hanitzsch & Vos, 2016), which has its roots in Western democracies. This hegemonic model, imported by developing countries by the beginning of the 20th century, privileges public sphere journalism (political affairs journalism) over private sphere journalism (lifestyle or home and consumption affairs) (Hanitzsch & Vos, 2016, p. 4). As a result, democracy has long been considered as a requirement for the 'perfect' form of journalism to exist even though this 'has not been supported on the ground' (Zelizer, 2013, p. 465) as only a minority of the world's population live in democratic systems (Hanitzsch & Vos, 2016). This hegemonic model also created an 'undemocratic form of journalism scholarship' (Hanitzsch & Vos, 2016, p. 5) that is Western-centric in terms of perspectives and methodologies.

The media systems in SEA countries are far from those in the Western or Global North democracies—most are tightly controlled under authoritarian or semi-authoritarian governments. In fact, in the World Press Freedom Index (WPFI) 2020 (Reporters Without Borders, 2020), all SEA countries, except Timor-Leste and Malaysia, are in the bottom third of the rankings. The WPFI measures the 'degree of freedom' of journalism in 180 countries through a set of indicators such as legislative framework governing the media, pluralism, and

abuses. Below is a table indicating the current ranking of the Southeast Asian countries, as well as some notes on the state of media freedom taken from the Index and related literature (Table 1).

It is clear from the table that while no two countries in SEA (or in the world) have exactly the same political environment, and while each country has its own unique circumstance, there are trends that run across almost all countries in the region. The journalists in SEA, perhaps with the exception of Timor-Leste, have long been operating within an environment characterised by decades of political suppression, self-censorship, harassment of journalists, and other methods of control that continue to this day, most of which are shifting into digital forms and spaces (e.g. the need to work amid cyberattacks and 'troll' armies that sabotage online political discourse). However, while Timor-Leste is ranked higher in the Index than most SEA countries, it has to be emphasised that its environment is far from a rosy picture, as its journalists also struggle with poor wages and poor working conditions, a chronic dilemma that is common in many SEA environments.

It is not surprising, therefore, that the development journalism paradigm is firmly established in the region (Estella & Paz, 2019). The main premise of development journalism is that the profession should 'play a central role in disseminating governmental or national policies to inform and educate the masses as well as mobilise them for the concerted effort at bringing about economic development' (Wong, 2004, p. 26). Development journalism puts emphasis on 'the promotion of unity and state agenda' (Estella & Paz, 2019, p. 198), in stark contrast with the goals of the watchdog-adversarial paradigm that is popular in many Western democracies particularly in the 20th century. Interestingly, although the role 'reporting things as they are' is popular among journalists in Indonesia (Muchdar & Masduki, 2016), Philippines (Tandoc, 2016), Singapore (Duffy & Kim, 2016), and Malaysia (Hasim et al., 2016), studies dealing with published content revealed a continuing adherence to the tenets of development journalism (Cenite et al., 2008; Estella & Paz, 2019; Massey & Chang, 2006).

For some scholars, development journalism is a 'compliant' (Loo, 2013, p. 14) form of journalism primarily because of its preference for government sources and news frames set or favored by the state. What makes this problematic, according to them, is that it can allow authorities to 'hijack' it (Ali, 1996, p.148) and make it 'government say-so journalism' (Lent, 1978, p. 1), all under the notion that a free and critical press is a luxury for developing nations. Such a paradigm sits well in authoritarian and semi-authoritarian states, where authorities more often than not have the power to interpret whether or not a text is a 'threat to national interest' or security (Estella & Paz, 2019, p. 199), and where journalists support the promotion of state agenda, whether as an outcome of political pressure or internalisation of state-determined roles.

However, for other scholars, development journalism is not simply the

Table 1: The state of media freedom in Southeast Asia, 2020		
Country	**World Press Freedom ranking**	**Notes on the state of media freedom**
Brunei	152	1. State censorship and low level of autonomy, resulting in self-censorship (RSF, 2020). 2. Curtailed freedom of information. A 'malicious' comment is punishable by five years in prison, while any statement deemed blasphemous or promoting apostasy is punishable by death (RSF, 2020). 3. Government closure of publications (IFJ, 2019).
Cambodia	144	1. A climate of fear and self-censorship (CCIM, 2017; RSF, 2017). 'Defamation and 'lèse-majesté laws are widely used to circumvent [media freedom] provisions envisaged in article 41 of the constitution' (RSF, 2020). 2. Journalist killing and harassment (Wake, 2018; CCIM, 2017). 3. Struggling to cope with the rise of new media (Lehmann-Jacobsen, 2017). 4. Factions owning news media use to malign their opponents, (the result being 'unbridled reporting with no clear ethical guidelines that often sees public decency being violated'(Loo, 2006). 5. Political patronage as an obstacle to professional practice (CCIM, 2017; Loo, 2006) 6. Poor journalism ethics as a consequence of low salaries (Loo, 2006).
Indonesia	119	1. Human rights violations against news media workers particularly in West Papua, (Robie, 2017, pp. 40-47). These violations appeared to have increased in frequency in the time of current president Joko Widodo's term, especially in West Papua, 'where violence against local journalists continues to grow' (RSF, 2020). 2. Self-censorship, a 'legacy of the Suharto era' (Wahid, 2006, cited by Tapsell, 2012), continues and has attained the status of an "industry-endorsed practice" (Tapsell, 2012, p. 228; see also RSF, 2020). 3. Commercialisation of the press, media corruption and malpractices (Loeqman, 2003, cited by Hanitzsch, 2005; Loo, 2013) 4. 'Cartelisation' of media ownership that threatens editorial independence (Harymurti, 2010, cited by Tapsell, 2012; Dhyatmika, 2014). 5. Problematic framing of religious and cultural conflicts (Sharp, 2013; Steele, 2012) and 'scandalisation' or 'soap-operafication' of government corruption (Kramer, 2013, p. 61).

Laos	172	1. Continuing state censorship and self-censorship (RSF, 2020) 2. Heavy restrictions on access to information and political expression (Downie, 2000; RSF, 2017). 3. Laotians are turning to the internet and social media, but 2014 decree penalises internet users who criticise the government (RSF, 2020).
Malaysia	101	1. Government restrictions act as obstacles in the 'media liberalisation' and modernisation process (Tapsell, 2013, p. 613). The Malaysian government has long been 'imposing prior restraint' and 'encouraging self-censorship' as 'routine forms of media control' (George, 2003, p. 247). 2. With the defeat of the ruling coalition in the 2018 elections, the media freedom atmosphere has become 'more relaxed', with previously blacklisted publications being allowed to resume operations without fear of harassment (RSF, 2020). According to RSF (2020), the 'Orwellian' provisions of the anti-fake news law enacted by the previous government were repealed, but 'archaic laws' threatening media freedom are still in place, such as 1948 Sedition Act and the 1972 Official Secrets Act (see also Wake, 2018). 3. Authorities 'tailor their political interventions narrowly', which means giving the media ample legroom for economic activities but at the same time putting their foot down on any expression deemed critical of the government, hence the term 'narrow tailoring' (George, 2003, p. 247). 4. Self-censorship is a product of centralisation in media ownership (George, 2003). 5. 'Poor wages and working conditions' (IFJ, 2019, p. 26)
Myanmar/ Burma	139	1. Censorship, harassment, and imprisonment of journalists have given rise to citizen journalism in new media, albeit still restricted. Despite the rise of Myanmar in the Index in the past years, it is now in decline. Levels of self-censorship are rising, especially after two journalists received a seven-year prison sentence for trying to report on the massacre of Rohingya civilians (RSF, 2020). It appears that despite coming from a long history of military rule, the new government headed by Aung San Suu Kyi also does not put much premium on media freedom (RSF, 2020). 2. Curtailed freedom of information and expression (RSF, 2017), Neumann (2002) described the country as the 'most information-starved' (p. 20) in Asia.
Philippines	136	1. Journalist killings and human rights violations against alternative and community journalists (Conde, 2017; RSF, 2017, 2020).

Philippines	136	2. Commercialisation and conflict of interest emerging from media ownership structure (Teodoro, 2014; Tuazon, 2007). 3. Lack of job security and poor salaries (Tandoc, 2016). 4. Accusations against media integrity spread by paid 'disinformation networks' in the internet (Ong & Cabañes, 2016, p. 1), which clearly took advantage of the fact that the country is labeled 'social media capital of the world' due to very high levels of social media use and a rapidly increasing rate of internet penetration (Estella & Löffelholz, 2020). 5. The 'populist' president Rodrigo Duterte and his supporters have been making tirades against journalists since he assumed office in 2016, even going as far as labeling them as 'lowlifes' and fake news peddlers (Chua, 2020), contributing to the atmosphere of hostility toward the media.
Singapore	158	1. Severe government restrictions on media freedom (George, 2003; Lehmann-Jacobsen, 2017); Karppinen (2015) noted that the city-state earned its status as a global 'anomaly' because it has combined a highly successful capitalist economy with tight control over its media system (p. 333) 2. Self-censorship among journalists (George, 2003), an outcome of the Singaporean authorities' repertoire of actions in suppressing media freedom, which include suing 'critical journalists, or applying pressure to make them unemployable, or even force them to leave the country' (RSF, 2020). 3. For journalists, there are 'OB markers', which refers to topics, issues, or public figures that are considered 'out of bounds' in reportage (RSF, 2020).
Thailand	140	1. A long history of state censorship and human rights violations against media practitioners (Harfenist, 2017), which continues to this day with the 'total control wielded by the elite surrounding General Prayuth Chan-o-cha, who is now prime minister, defence minister and chief of the Royal Thai Police' (RSF, 2020). 'Draconian legislation', such as the newly adopted cybersecurity law, and a justice system that is not autonomous created an atmosphere of fear (RSF, 2020). 2. Lack of job security for journalists (IFJ, 2019). 3. Cyberattacks are becoming a bigger threat to the profession (IFJ, 2019, p. 47).
Timor-Leste/ East Timor		1. The state of media freedom in Timor-Leste is far better than that in its neighbouring countries in the region. For instance, no journalist has ever been jailed since the country won its independence in 2002 and its constitution continues to guarantee media freedom and free speech (RSF, 2020).

Timor-Leste/ East Timor	78	2. However, there are laws that journalists fear can put political pressures on the practice. Defamation laws were allegedly used as means to crack down on journalists investigating corruption (Guterres, 2020). 3. The 2014 Amendment to the Media Code law established a 'press council' in charge of regulating journalism, exercising 'disciplinary authority' on practitioners, and revoking professional credentials. The amended law, supposedly guaranteeing press freedom, was criticised by the Human Rights Watch, which pointed out that such an agency could be used to censure content and harass journalists (HRW, 2014). The creation of the Press Council is a 'step to the right direction', but the 2014 law 'poses a permanent threat to journalists and encourages self-censorship' (RSF, 2020) 4. 'Poor wages and poor working conditions' (IFJ, 2019, p. 54).
Vietnam	175	1. Media system remains tightly controlled by the state but dependent on external market for revenues (Lehmann-Jacobsen, 2017; RSF, 2017). 2. 'Struggles for professionalism' among journalists (Lehmann-Jacobsen, 2017, p.18) 3. Poor exercise of freedom of information and expression (Nguyen, 2008; RSF, 2017). The 'level of terror has risen sharply' in the past three years, as many bloggers were jailed in connection to their posts and the authorities established a military cyberwarfare department targeting dissident content-makers and defending the Communist Party online.

Note: Compiled by the author from the Cambodian Centre for Independent Media (CCIM), Reporters Without Borders (RSF), World Press Freedom Index 2020 and other sources as detailed.

propaganda arm of the state, arguing that many have missed the core concepts underpinning the practice. Kalyango et al. (2016), for instance, wrote that development journalism is 'interventionist, developmental, and educational' (p. 3) as journalists act as 'agents of change' that help the grassroots sectors participate in development initiatives (Estella & Paz, 2019, p.199; see also Anand, 2014). Robie (2014, 2019), meanwhile, has proposed a kind of development journalism that has watchdog elements: the 'critical deliberative paradigm' of journalism which aims to empower the disenfranchised by enabling 'the participation of all community stakeholders' (p. 84).

Science journalism, COVID-19, and the subversion of professional norms

The COVID-19 crisis has underscored the role and potential of science journalism, especially at a time when the availability—and quality—of pandemic-related information could be a life-or-death matter. In fact, in US and Europe,

Casero-Ripolles (2020) found that news consumption and audience engagement increased significantly in the time of the pandemic, as citizens who usually are not interested in current or public affairs found themselves 'reconnecting' with news (p. 9). Surprisingly, legacy media, especially the television, appear to have 'reclaimed' part of its 'journalistic authority' in this health crisis as seen in audience preferences and trust levels (Casero-Ripolles, 2020, p. 9), despite data pointing toward its declining relevance as news sources (Newman et al., 2020). Casero-Ripolles concluded from the data that in exceptional situations such as 'risk to human life', citizens tend to follow news as a key activity, validating Schudson's (1998) idea that audiences are 'monitorial' citizens who appear inactive but 'poised for action if action is required' (p.311, cited by Boczkowski & Mitchelstein, 2012, p. 5).

However, whether or not the case is similar in the SEA context or the Asian context has yet to be determined through empirical research. It is obviously important to profile audiences' attitudes toward sources of information at a time like this, especially because COVID-19 cases continue to increase in SEA and countries like Indonesia and the Philippines struggle with exponential increase of cases, crippled healthcare systems, and 'democratic distress' (Warburton, 2020). In Indonesia and Philippines, like in other countries outside SEA, political administrations seem to be using the pandemic crisis as leverage for consolidating power through measures criticised as draconian or as a breach of human rights (Basuki, 2020; Deinla, 2020). In environments where the health crisis is complicated by civil unrest, power struggles, or political manoeuvres, the journalism profession can perform game-changing roles. It has to be reiterated that while SEA has countries like Singapore and Brunei, where educational and technological infrastructure are globally competitive, it also has countries in which educational deprivation levels are high and R&D infrastructure remains mediocre, two factors that can act as obstacles to flattening the COVID-19 curve. Mass media, therefore, assumes a greater burden in educating audiences about the health crisis (at least in a normative sense). As Nguyen and Tran (2019) observed, news in 'Global South' settings 'plays an almost exclusive role in informing and engaging laypeople with science' and its various implications (p.1).

Indeed, the crisis brings a 'test of capacity', to borrow Kunelius' (2018) phrase, to journalism similar to how climate change 'offers an unavoidable testing ground and laboratory' for the practice—a 'forced opportunity' (pp. 219-220). He explained that a 'systemic problem' such as the threat of climate change forces journalism to rethink its default positions and professional virtues. For instance, he wrote that climate reportage subverts the time and rhythm logics of mainstream journalism: 'Journalism is in the business of storms, floods, summits and elections, whereas climate change is about trend, trajectories, predictions and probabilities of models' (p.220). Reporting on the pandemic crisis likewise

challenges textbook norms and ways of doing journalism, more so at the time when actors sowing disinformation online are actively trying to delegitimise journalism as a source of information (see for example Ong & Cabañes, 2018), or when information is distorted by digital populist movements to shift public opinion (Schroeder, 2019).

Apart from the critical reflection that science journalism requires (from professionals), a significant degree of multi-literacy is also becoming a prerequisite. Chan (2015) wrote that "science writing requires scientific literacy and the literary muscle to inject enthusiasm into the bounds of reported information" and practitioners that have both are 'few and far between'. She also observed that in Asia, the standards of science journalism remain wanting, as scientific discovery 'faces an uphill battle in capturing the imagination of the public' and 'significant language and cultural barriers' stand firmly in place. Nguyen and Tran (2019), through a systematic literature review, found several themes on science journalism in the Global South: 1) 'heavy dependence on foreign sources, especially the media of the Global North', 2) 'the low status of domestic science news in newsrooms', 3) 'uncritical science reporting that easily lends itself to influences of non-science vested interests', 4) 'tight grip of politics on science journalism', and 5) 'ineffective relationships between science and journalism'.

Toward interdisciplinary and transformative journalism

As mentioned, the previous two sections provide the contexts on which any discussion on journalistic competence and journalism education should be based. To put it briefly: Journalists in SEA are operating in a highly diverse environment (and even individual countries are far from homogenous) in which more and more citizens are living an 'onlife', to borrow Floridi's (2015) term, which refers to a life lived in a 'hyperconnected reality' where it is 'no longer sensible to ask whether one may be online or offline' (p. 1). They are also working in an environment with journalistic roles and a journalistic paradigm that are quite different from those in the West or much of the Global North, rooting from authoritarian and semi-authoritarian governments and controlled media systems. The journalism profession in these areas is also, in one way or another, affected by systemic problems such as high income inequalities and poor educational and R&D infrastructure.

In this terrain, what then constitutes the so-called journalist's 'toolbox', or a set of competencies for successful practice? To address this question, 'competencies' and 'competence' have to be defined first. 'Competencies' is broader than other seemingly similar terms such as 'ability' or 'skill'; it refers to skills, attitudes, personality traits, dispositions, and knowledge (Himma-Kadakas, 2018; Sturgess, 2012) that are acquired through 'learning processes when an individual interacts with his or her environment' (Klieme et al., 2008, p. 8). Journalistic

competence, meanwhile, is the summation of competencies—a competence construct—necessary for practice.

The question of what competencies constitute the journalist's toolbox in SEA can be framed in different ways. Is it in the perspective of the corporate employer, whose aim of maximising profit has in numerous instances taken precedence over public service? Is it the perspective of the editor, who attempts to balance commercial pressures and the journalistic norms that he or she acquired through socialisation with peers and mentors? Are we talking about competencies that are needed to thrive in the workplace, without necessarily trying to fulfill the normative function of journalism in society? Or are we talking about competencies for quality journalism that may or may not be profitable? In any study on journalistic competence and journalism education, the researcher has to specify which lens he or she will be using to approach the topic.

This article seeks to focus on the character of journalistic competence that will allow the profession to retain its place and relevance in society by, above all else, fulfilling its normative roles and at the same time coming to terms with this disruptive age. The journalist's toolbox of competencies—or journalistic competence as a whole—should be transformative and interdisciplinary, and as such there is a need to veer away from the industry-centered perspective that, as discussed, can be anti-innovation and 'anti-intellectual' (Hanna, 2005, p. 127; see also Harcup, 2011).

The arguments are based on extant literature and in-depth interviews with 46 experts from 31 countries, systematically chosen on the basis of research on related fields, academic tenure and reputation, and experience as practitioner prior to embarking on an academic career (or working as a practitioner and academic at the same time). The data from the interviews were analysed through a qualitative coding method done via the MAXQDA 2020 software. Codes were generated from extant literature, but new codes were added whenever ideas or concepts that do not fit in the original set of codes emerged. The data that was previously coded was then revisited—a circular process.

The interviews have yielded many points of discussion, but the article focuses on reflections that are most relevant to the current context(s) of SEA, hence the discussion on the transformative and interdisciplinary way of doing and learning journalism.

A 'transformative' way journalistic practice and education rests on the capacity for critical reflection (Harcup, 2011; Rodny-Gumede, 2016), which means 'posing questions about how and why things are the way they are, what value systems they represent, what alternatives might be available, and what the limitations are of doing things one way as opposed to another' (Richards & Lockhart, 1996). This critical reflection goes beyond critical thinking as a basic human competency—it is not simply about a journalist reflecting on his or her

quality of work. It is a capacity to critique (or even subvert) as well as a capacity to employ research tools or techniques to understand relevant contexts in a more scientific manner. In other words, critical reflection in the context of this work employs academic tools and theory that are often neglected in industry-centered journalism training or education, which, as Hanna (2005) said, can be 'mercenarily anti-intellectual' (p. 127).

In the case of SEA, journalists would benefit from competencies adopting a critical and scientific approach to knowing the political and media systems of their respective environments, as well as its history, culture, and pertinent laws. For interviewees based in Singapore, it is through this competency that Singaporean journalists are able to critique political and media systems, identify the so-called 'OB markers' in reportage (a set of topics and public figures that cannot be criticised, as previously discussed), and be 'flexible' in approaching these issues. For another interviewee in Singapore, this means an awareness of the fact that the watchdog journalism, the yardstick for liberal Western democracies, cannot be the norm in an environment like Singapore, and for such a paradigm to prevail, it would entail structural or systemic changes in the environment as well as professional cultures, otherwise, it would not be possible at all.

Equally important is the capacity to critique prevalent journalistic roles and journalism paradigms and not simply accept them as unimpeachable. In this way, we see the significant place of academic methods and theory in the journalist's toolbox because only through these can contexts be truly understood. As Rodny-Gumede (2016) wrote, journalism education especially in the Global South should be 'research-based' and 'comparative', allowing journalists to locate their environment in the global state of research. Second, by maintaining a critical-reflexive stance, journalists become more open to change because they are constantly questioning ways of doing and are wary of the inertia of journalism cultures, or, as Harrington (2012) called it, 'journalism orthodoxy', in which methods and norms are standardised as part of the 'intellectual domain' of journalism, something that professionals and even educators are fiercely guarding even if it becomes hostile to the innovation that the current times call for (p. 159). This capacity also has its own important place in the journalist's toolbox especially in societies where, as Lehmann-Jacobsen (2017) noted, journalism is in transition or journalism is still struggling to find its footing or role in society.

The 'interdisciplinary' character of journalism practice and education, meanwhile, necessitates the 'breaking down of disciplinary boundaries' between journalism and media studies (Harrington, 2012, p. 156; see also Hirst, 2010), and even between journalism and other fields outside media and communication. Some of the experts interviewed believed that apart from multiskilling across platforms, a journalist can benefit from a knowledge base from other fields and then learn practical skills in journalism (or a bachelor's degree in other fields,

say computer science, health science, or economics). Several experts share the idea that a journalist can either collaborate with IT experts in weaving interactive narratives online or learn data science methods to analyse audience preferences. Competencies in knowing the digital audience and evaluating and curating on-line information—competencies that in the past decade were not even included in the journalist's toolbox—have gained more currency now than previously imagined. These are crucial especially for professionals who work in Southeast Asian countries where the rapid increase in social media use has also led to digital populist campaigns, echo chambers, fake news peddlers, and troll armies, some of which were reportedly employed by authoritarian governments in the region.

In SEA, the multiskilling of journalists, or the expansion of the competence construct, is nothing less than a requirement by the conditions in which low to middle income countries grapple with the pandemic crisis and all its economic and political ramifications. Competencies in science journalism, as discussed in the last section, become indispensable especially in countries where many social institutions and public services have been neglected for decades, thus leading to high levels of educational deprivation and poor healthcare figures, which in turn contributed to the increasing number of COVID-19 cases. It is clear that communicating COVID-19 rests on competencies in properly understanding the disease, the public health issues that surround it, and in knowing the audience well enough to create journalistic content that, simply put, could inform and save lives. An interdisciplinary journalistic education should also be the key to addressing what the deficiencies in science journalism in Global South settings as identified by Nguyen and Tran (2019), particularly the problem with 'uncriti-cal science reporting that easily lends itself to influences of non-science vested interests' and the 'ineffective relationships between science and journalism'. The latter in particularl could be addressed by developing the competencies in adopting a scientific and critical approach to contexts (as discussed under the transformative way of doing journalism).

In the case of COVID-19 reportage, a significant degree of science literacy, coupled with a critical awareness of political and socio-economic systems, might be the key in helping journalism strengthen its role as curator or verifier of information in the age of online echo chambers and information distortion. In settings like SEA, where political and media systems are begging for change, and where social institutions buckle under the weight of crises like the COVID-19 pandemic, it is imperative for journalists to consider a rethink of the established ways by which journalism is done and taught.

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