FOREIGN LANGUAGES AND VIETNAMESE

AN ANALYSIS OF MEDICAL DISCOURSE IN VIETNAMESE AND ENGLISH: A MULTIMODAL APPROACH BASED ON SYSTEMIC FUNCTIONAL LINGUISTICS AND VISUAL GRAMMAR

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ABSTRACT: This research examines medical graphics from some trusted sources of Vietnamese and English languages, drawing from the Systemic Functional Linguistics (SFL) developed by Halliday and Visual Grammar proposed by Kress & van Leeuwen. Three aspects of research should be addressed as follows: (1) the supplementary roles of visuals in aiding comprehension of complex medical knowledge; (2) the possibility of identifying any cultural specificity and contextual dependency in the designs of these graphics; (3) the opportunity for increased popularity of multimodal medical discourse in health materials for the purpose of educating the public. Six medical graphics of Vietnamese and English were selected randomly for thorough investigations. The research reveals some interesting findings, including (i) the prominence of narrative and conceptual structures in medical visuals; (ii) the prioritization of Mood over Modality system to express medical emergency; and (iii) the presence of cultural cues in health designs of English and Vietnamese.

KEY WORDS: Medical discourse; graphics; multimodality; SFL; visual grammar.

RECEIVED: September, 02nd, 2026. EDITED: November, 17th, 2026

1. Introduction

Medical discourse can be regarded as language used in written or spoken health communication to convey specific messages towards target groups of patients, healthcare professionals, or even laymen. Unfortunately, it has been mostly preferred as unimodal elements rather multimodal ones as can be seen in a number of Vietnamese and international studies (Nguyễn Thanh Nga, 2017; Nguyễn Thị Kim Luyến, 2018; Manalastas G. *et al*., 2020; De la Croix, 2013; Pun, 2021). The reluctance to such shift may be due to a wrong assumption that texts can help explain and clarify complex health-related concepts better than visual counterparts, and medical materials are only intended for those with knowledge and experiences.

With the frequency of campaigns of public health in the increasingly digitalized world, some health professionals and language experts started to pay attention to how inter-semiotic elements revolutionized communication in medical contexts. Grounded in Visual Grammar developed by Kress & van Leeuwen (2006), which was also inspired by Halliday's Systemic Functional Linguistics (Halliday, 1985), Systemic Functional Multimodal Discourse Analysis was constructed by O'Halloran (2008) as an integrated analytical framework for decoding both visual and verbal components of discourses (Mesinioti, 2025). However, the question of whether multimodal health discourses should be investigated through the use of such integrated system or they can be decoded simultaneously via the two separated frameworks is open to discussion. Regardless of the selected methodology, a number of studies were conducted to shed light on inter-semiotic health-related interactions such as Gill & Lennon (2022) on the construction of emotional appeal via Multimodal Critical Discourse Analysis (MCDA) to force behavioral compliance in times of the epidemic. Similarly, the preventive actions were fostered as a response to the Covid-19 pandemic via the adoption of material processes (SFL) in combination with visual structures (Visual Grammar) of

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narration and symbolization (Khusna & Hardjatno, 2022). It should be noted that medical discourses were also scrutinized at the institutional level such as the healthcare infographics and posters from WHO and national newspapers (Ope-Davies & Shodipe, 2023; Al-Subhi, 2025). Meanwhile, in Vietnam just a few researchers focused intensively on the analysis of medical discourses targeting local communities for public health education as opposed to the prevalence of those found in textbooks (Tôn Nữ Mỹ Nhật, 2017; Phạm Bích Ngọc & Lâm Quang Đông, 2024).

As stated above, there is a pedagogical gap in this field when multimodal discourse of medicine is taken into consideration (Gill and Lennon, 2022). Specifically, there are no existing conceptual frameworks which can exhibit a high level of reliability and validity in terms of decoding both visual and verbal components simultaneously. What is more, any potential cultural factors may be involved in its designs if the medical knowledge is constructed using different languages (e.g. in cases reported by World Health Organization or Ministry of Health of Vietnam).

2. Theoretical Framework

2.1. Medical discourse and current issues

Much research has been carried out to examine verbal encounters in professional education of medicine like sessions of roleplay between physicians and patients during the conduct of OSCE exams (Manalastas G. *et al*., 2020; De la Croix, 2013; Pun, 2021) or the delivery of bad news in simulated consultations as part of communication training for medical students in China (Pun, 2021). However, not many linguists are committed to investigating the roles of visuals in transforming how medical discourse is reconstructed via powers of pictorial features as supplements for textual means in such settings. This gap in the analysis of a new genre of discourse has been evidenced in some studies in Vietnam when patient information leaflets (Nguyễn Thị Kim Luyến, 2018) and doctor-patient conversations (Nguyễn Thanh Nga, 2017) from online resources were closely examined for educational purposes (that is, the discourse was analyzed to enable medical students in Vietnam to gain a better understanding of how linguistic exchanges affect talk-in interactions and communication in healthcare contexts).

It is likely that multimodal discourse with combined powers of texts and visuals may play a certain role in enhancing overall effectiveness of dissemination of medical knowledge, which in turn raises public awareness of the importance of disease control and prevention. And indeed, this assumption was strongly tested during the outbreak of Covid-19 pandemic as governments and local authorities were struggling with containing the virus and minimizing global casualties due to the lack of a basic understanding of RNA viruses. And as a result, there were millions of lives being lost owing to ignorance. In response to the catastrophic effects of the highly communicable disease, many propaganda posters, illustrations and in-school drawings were designed to inform the public about it and calm the worldwide populations. Specifically, as reported in the studies of Bích Hạnh and Thanh Mai (2024) and Gill and Lennon (2022), visual discourse in such materials provided a vivid reconstruction of medical events with embedded meanings (including conceptual metaphors) which are capable of transforming individuals' thoughts and thus facilitate their comprehension.

2.2. Systemic Functional Linguistics (or SFL)

Halliday's Systemic Functional Linguistics (known as SFL, Halliday, 1985) was famously known as an effective analytical tool for verbal components from words, phrases to lengthy texts in a wide range of discourse genres, including healthcare. His approach differs from that of traditional linguists as he places a great emphasis on the functionality of the language including key constituents such as mood, themes, rhemes, agents and processes instead of conventional features like subjects and predicates. More specifically, Halliday argued that there is a system of languages concerning three primary components, namely Interpersonal meta-function, Ideational meta-function and Textual meta-function. While the former is linked to the systems of Mood (Declarative, Interrogative and Imperative structures), Modality (degrees of probability, obligation, certainty and inclination) and Appraisal, the middle one highlights a series of processes denoting different roles of participants in

relation to associated factors known as goals, circumstances, phenomena and attributes which are revealed upon a close examination of the relationship between sentence constituents and their functions. The latter investigates the communicative features of the texts through the use of pronouns, repetition of ideas in zigzag patterns, expression of the writer's attitudes, reiteration of main themes and an emphasis on temporal and spatial information. Indeed, all these meta-functions are strongly linked to social semiotics in which signs (can be realized as choices made in a sentence) are products of meaning-making (Rose and Martin, 2012). Among these primary components, in order to measure the level of engagement with the target audience, textual cues presented in medical graphics are often analyzed drawing on Interpersonal meta-function of Haliday (Haliday, 1985). In this regard, some interesting insights should be revealed, including: (1) whether the embedded message implies any degrees of certainty and obligation towards the target audience regarding adherence to any medical conventions and protocols; and (2) whether the viewers are required to follow the instruction through the use of Imperatives, or acquire medical knowledge via the Declarative structures or be directed to some noticeable details by way of Interrogatives. These inquires play a crucial role in shedding light on how texts help the writer express his views and intentions which are likely to force actions upon the audience accordingly.

***Table 1**. Halliday's Interpersonal meta-function in SFL (edited for medical contexts)*

Modality				**Mood**	
Type	***Degree of possibility and certainty***			***Type***	***Function***
	Low	***Medium***	***High***		
Verb	*may, might* e.g. Patients exposed to cold weather <u>may</u> develop the flu.	*can, could, should* e.g. Patients with a high BP <u>should</u> consult the doctor.	*will, must, have to* e.g. The Covid-19 patients <u>must</u> be hospitalized immediately	**Declarative**	Give information about medical events and details which are considered as 'facts'
Adverb	*maybe, perhaps* e.g. <u>Maybe</u> a CT scan is needed for diagnosis of this ailment.	*usually, unlikely* e.g. Medication is <u>unlikely</u> to kill the bacteria.	*always, never* e.g. <u>Always</u> wear facial masks when in contact with the flu patients.	**Interrogative**	Raise awareness of medical events through inquiries for confirmation, clarification and gathering of medical details
Noun	*possibility* e.g. There is a possibility of developing vaccines for cancer.	*probability* e.g. The probability of getting infected with the virus is expected.	*certainty* e.g. The patients face the certainty of transitioning into the Stage-2 cancer.	**Imperative**	Issue orders, instructions and recommendations as a way to force adherence to certain medical conventions

Although the Appraisal system was integrated into this meta-function later and it serves as an essential tool to verify personal opinions and stances through texts (Martin and White, 2005), it should be disregarded to avoid any redundancies as discourse-related features will be analyzed in tandem with language organization through which interactions are constructed. Table 1 above

summaries Halliday's Interpersonal meta-function in SFL in the absence of the Appraisal system (with modifications for medical contextualization).

2.3. Visual Grammar (or VG)

On the other hand, it would be ideal to analyze visual cues drawing from a system of conventions which bear a striking resemblance to those developed by Halliday for increased validity and reliability of the research tools. Fortunately, Kress and van Leeuwen (2006) designed a conceptual framework for a close examination of visuals with three layers of meanings based on three meta-functions of SFL, including Representational meanings, Interactive meanings and Compositional meanings, all of which are situated within the so-called 'Visual Grammar'. They argued that both graphics and texts are types of social semiotics with distinct communicative functions and 'powers' which may be combined or separated depending on the designer's intentions. More specifically, the way visuals are arranged and constructed with colors, shooting angles, sizes and other pictorial effects constitutes 'regularities' that become visible to the trained eye. In other words, medical graphics are not only aesthetically pleasing but also carry hidden meanings recognized by their patterns or 'grammar', with the purpose of narrating events vividly.

Diagram 1 below provides a brief summary of Kress and van Leeuwen's Representational meanings being further divided into Narrative and Conceptual structures. First, it is important to understand that this type of meaning is concerned with how events are represented or co-constructed through the designer's perception and experience of the world, with a possible consideration for socio-cultural aspects. That is, what is presented in a graphic reflects personal mindsets and intentions in specific culture-driven scenarios which then channel into messages conveyed to the target audience. Regarding the narrative structure, Kress and van Leeuwen (2006) posited that pieces of information or 'events' are narrated through a series of interconnected factors such as the participant, his or her body movement and the intended action characterized by a real or implied 'vector'. For example, in a photo which shows a nurse holding a needle ready for the patient's vaccination, it is understood that the nurse is the participant and the needle directed to the patient's arm for injection represents an implied 'vector' indicating a line of action - all of these features are 'grammatical patterns' that can be detected using the framework so that the visual meaning can be decoded. In terms of the conceptual structure, it is advised by the researchers that meanings can be classificatory, analytical and symbolical with unique implications. A diagram illustrating the human respiratory system which consists of the airways, the lungs and the diaphragm would be a typical example of the classificatory type, whereas a photo giving information about how the lungs (parts) support the respiratory system (the whole) through their gas exchange mechanism exemplifies the analytical type.

Meanwhile, the symbolic structure highlights the use of universal symbols in healthcare settings such as a 'heart icon' representing the field of medicine and a 'bed in hospital' indicating the presence of an inpatient being treated. However, it should also be noted that these symbols may be culturally contextualized to familiarize locals with the events being depicted.

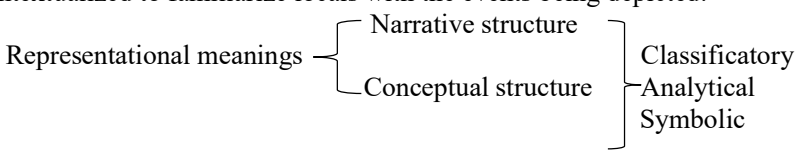


Diagram 1. *Visual Grammar by Kress and van Leeuwen (2006)*

2.4. Systemic Functional Multimodal Discourse Analysis (or SF MDA)

Drawing from Systemic Functional Linguistics of Michael Halliday (1985) as an extension of the well-established analytical tool for textual resources from the perspective of social semiotics, Systemic Functional Multimodal Discourse Analysis (SF-MDA) was developed by O'Halloran

(2008) for complementarity of inter-semiotic resources with consideration for transitions into digital semiotics and symbolization. Indeed, it can be said with certainty that the integrated model is a product of mapping the three meanings of Visual Grammar of Kress & van Leeuwen onto the three meta-functions of Systemic Functional Linguistics of Halliday as a result of acknowledging the need for synchronization of the existing systems for linguistic and non-linguistic modes.

However, such exhaustive taxonomies for cross-linguistic investigations may face some technical problems, especially when identifying inter-semiotic resources depicted in distinct languages of either inflectional or isolating features like English and Vietnamese. What is more, SF-MDA may fail to achieve visual-verbal synergy in its analysis of public health infographics and posters, as opposed to the use of SFL and VG as the dynamic tools to capture verbally or visually salient components both separately and collectively when needed (Khusna & Hardjatno, 2022; Gill & Lennon, 2022).

Bateman (2008) conducted a systemic review of the analysis of multimodal documents drawing from some notable existing models with an attempt to identify issues and developments related to this emerging trend. He pinpointed the absence of empirical replicability due to the subjective labelling of syntactical features onto visual elements in many research cases where inter-semiotic elements were examined based on systems like SF-MDA or MCDA. Recently, Mesinioti (2025) recently made an attempt to sketch out the burgeoning field of multimodal studies, with an emphasis on how a number of developed frameworks in this genre like SF-MDA originated from previous theories about semantic interplay of gazes, pictures, gestures as well as spoken and written means (Halliday, 1978; Halliday & Hasan, 1985; O'Toole, 1994; Kress, 2009; Bezemer & Jewitt, 2010). Several advantages and disadvantages of SF-MDA as an integrated system of multimodal discourse analysis were presented, with its limited applications to written modes, occasional failure to consider social features, time-consuming technical decoding process as well as the inability to interpret embedded contexts being mostly highlighted (Iedema, 2001; Ledin & Machin, 2018; O'Halloran, Tan & Wignell, 2019).

3. Methodology

3.1. Research design

The research is purely analytical of several available data sets of both English and Vietnamese to examine current uses and functions of texts and visuals in disseminating information about disease control and prevention. For this reason, the findings may not be generalized to draw a decisive conclusion due to the lack of quantitative elements. However, it still plays a role in helping researchers observe the dynamic interactions between multimodal features in meaning-making process, and suggesting potential applications where necessary.

3.2. Data analytical instruments

Systemic Functional Linguistics (SFL) and Visual Grammar (VG):

This study employs Interpersonal meta-function of Systemic Functional Linguistic of Halliday and the Representational meanings of Visual Grammar of Kress and van Leeuwen (Halliday, 1985; Kress and van Leeuwen, 2006) to analyze both visual and textual elements presented in medical graphics. During the conduct, two systems are either decoded collectively or individually depending on the characteristics of graphics themselves, with conclusions drawn for improved medical practices. Furthermore, although most linguists agree that texts should only exist in a form of lengthy paragraphs in hundreds of pages presenting medical information, I would argue that any language chunks capable of communicating intended messages to target audiences can be regarded as meaningful texts.

Data analysis:

To ensure the reliability of the data collected and its validity across different linguistic domains, 06 healthcare-related graphics were randomly selected in medical handbooks of both English and Vietnamese. With the purpose of analyzing both textual and visual elements of multimodal discourse, only medical graphics containing large number of words were chosen while those with only pictures

were excluded. This would create ideal research conditions as both modes are available for close examination. The graphics were extracted from reliable resources, and a deep analysis of textual and pictorial elements is carried out to examine their roles in the enhancement of communication in healthcare settings.

4. Findings and Discussion

Due to the limited scope of this study, 6 medical graphics were used for a thorough analysis in terms of similarities and differences between English and Vietnamese versions. Translation was provided to graphics in Vietnamese medical materials to avoid any ambiguity in meanings; however, most original texts remained intact in case factors like length, word choices and sentence structures might present some subtle cultural nuances.

4.1. Instruction for Insulin injection by Duke Health

Figure 1 gives information about the insulin injection procedures using simple illustrations instead of realistic photos. This graphic was partly taken (some of its parts including steps 3 to 5 were removed as they take up too much space) from the handbook titled 'Diabetes Care" published by Duke Health organization in America, so the comments are in English to facilitate the comprehension of both local and international readers. In terms of language, drawing from Interpersonal meta-function of Halliday (Halliday, 1985) it is obvious that the mood here is expressed by the fact that most textual elements present imperatives, which are exemplified by the absence of subjects at the beginning of each sentence, giving these positions to verbs like "wash", "check", "roll", "wipe", "shake", "look for", "clean" and "let" - "dry" (in "let the alcohol dry") with the purpose of issuing orders to viewers in compliance with intended medical procedures. The only exception is the third sentence (in a separate line) in Step 6 containing normal declarative structures including subordinating conjunction "when" followed by the pronoun "you" as the sentence subject. Although it is difficult to read the minds of the designer in this circumstance, it is assumed that the pronoun "you" lends itself to creating an intimacy between the viewer and the author so that the procedures can be personalized for easy digestion. It should also be noted that there is no presence of verbs, adverbs and nouns listed in the system of Modality in this graphic, thus signaling the designer's emphasis on urgency, forced compliance and authorization rather than giving audience the choice to determine their responsibilities. This is indeed a prevailing mindset of many Western countries when it comes to strict adherence to uniformed medical standards, without which negative outcomes may occur (for example, injection of too much insulin into the patient's body may result in Hypoglycemia).

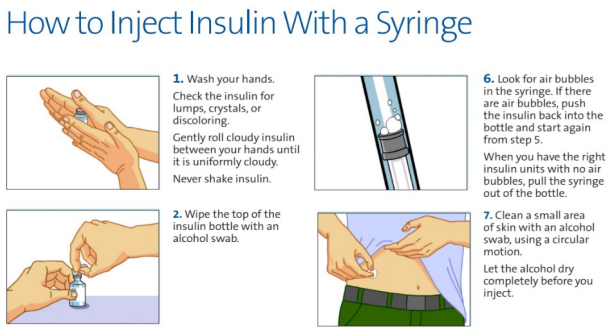


Figure 1. *Instruction for Insulin injection*

Regarding visual features, it is evident that these computer-based drawings represent narrative structures in Visual Grammar (Kress and van Leeuwen, 2006). More specifically, they denote various lines of actions such as handwash, bottle wiping, air bubble inspection and skin cleansing, while movements of the body, syringes and hands act like vectors to help direct and orientate these actions. The ultimate goal presented in this medical graphic is undoubtedly both the insulin itself and the act

of injecting it into the body, with the actor being implied as the patient who should follow these important steps.

4.2. Instruction for Insulin injection

Figure 2 was extracted from the slides giving instructions on insulin injection by the Center for Advanced Training in Clinical Simulation in Vietnam. Again, the drawings by computer were selected for illustrating the procedure, thus signaling the same choices made by the designers of different language backgrounds. This may be better explained by the fact that drawings or similar animations help to reduce abstraction and emotional discomfort, while increasing the flows of narration by removing distractors such as pictorial features related to skin colors, age and gender which are often clearly depicted in realistic photos.



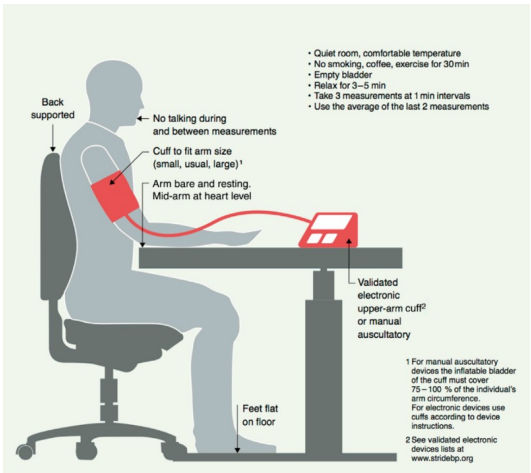
Figure 2*. Instruction for Insulin injection by Center for Advanced Training in Clinical Simulation*

Moreover, this visual approach can also negate any factors that could potentially alienate some viewers, especially those with a phobia of needles or any diagnosed diabetes patients feeling stigmatized by their medical conditions. One interesting point to consider in this graphic is that Step 3 shows a male face, a human illustration that is totally absent from the English version. This visual choice was probably made to (1) show careful attention to the correct insulin dosage with the patient's eyes being aligned with the measurement levels, and (2) reduce fear of needle or injection phobia by ways of action normalization and viewer reassurance through the confidence expressed by the face itself. This clearly presents a subtle cultural difference in which Vietnamese people consider learning as a step-by-step process compared with Western counterparts embracing self-control of emotions and autonomy.

Similar to the English version, these visuals favor the narrative structures to effectively communicate the medical process as actions are directed by various vectors like the syringe, hands, the needle and the gaze. The language itself also resembles that of English with the use of verbs like "display", "insert", "invert", "check" and "remove" in initial sentence positions to form imperatives for issuing of medical orders. The Mood system was again prioritized over the Modality system to express authoritative voices and foster a sense of adherence to rigorous medical standards in avoidance of side effects and complications for diabetes patients.

4.3. Instruction on blood pressure measurement and symptoms and diagnosis of Noma (Cancrum Oris)

Figure 3 and figure 4 are the first examples in this study showing language that is not comprised entirely of imperatives. For example, in the medical guideline for instruction of blood pressure check, while most primary comments still highlight the roles of verbs to issue orders like "no smoking", "empty", "relax", "take", "use", "cuff" and "see", we can see some examples of ellipses when any syntactical redundancies were omitted to keep medical language concise and straightforward. Moreover, in the bottom right-hand corner of the graphic, there is a footnote explaining the use of the cuff around the patient's arm, with inclusion of a declarative containing *must* as the modal verb. It should be noted that this linguistic approach entails a sense of explicit obligation on neither the patient nor the *cuff* itself but rather on the individual performing this line of action despite the modal verb *must* being positioned immediately after the *cuff*. The combination of the declarative and imperative



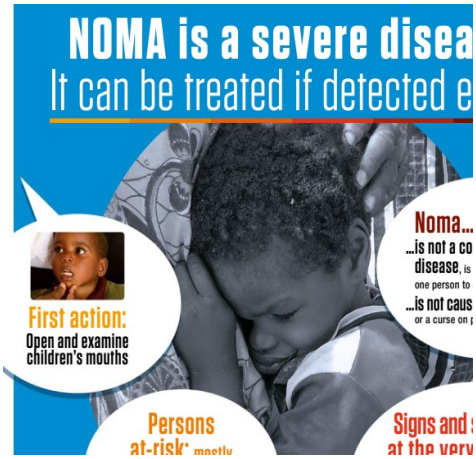


Figure 3*. (Left) Instruction on blood pressure measurement;*
Figure 4*. (Right) Symptoms and diagnosis of Noma (Cancrum Oris) by WHO*

structures in this diagram conveys a strong message to the target audience whereby both authorization and obligation were equally emphasized as a two-way communication. Similarly, Figure 4 is also a typical example of the use of ellipses with omission of syntactical and semantic redundancies while only key information was retained. Imperatives were occasionally used only ("open" and "examine" in "open and examine children's mouth") as the conveyed message may be purely instructional and reassuring. Since Noma disease can be life-threatening and inflicts much physical and psychological suffering on the patient, it is easily understood that authoritative voices were not favored by the graphic designer. As a result, any expressions denoting modality were also removed to avoid personal judgement and accountability.

Meanwhile, the visuals in the left picture are considered to be conceptual with the patient's static posture, implying no specific lines of actions. Specifically, they present analytical models whereby the person is the main carrier (the whole) and other components such as the cuff, the arm, the back, the feet, the table and the monitor are treated as key attributes. On the other hand, the symbolic structure was observed in the right picture as the upset child can be identified as one of many individuals residing in poverty-stricken nations like Africa where poor hygiene practices and malnutrition are leading causes of the Noma disease. Noticeably, although these visuals seem to confine the disease to a specific part of the world, they do somehow imply universality because the

supplementary texts do not specify any regionality. It is indeed interesting to see the situation in which the event is conceptualized both locally and universally.

4.4. Transmission routes for Whitmore's Disease - Benefits of breastfeeding

Figure 5 and Figure 6 are Vietnamese medical graphics about the transmission routes for Whitmore's disease, and the benefits of breastfeeding; nevertheless, due to the limited length of this study and for the facilitation of meaning interpretation, only translated versions are provided with the intentional omission of original texts (Figure 5). The work of translation was done with attention being paid to precision and retention of original features so that the language analysis results are not affected by any extraneous variables. Although the man is holding the water bucket with movement of his head and hands towards the contaminated soil on the ground, which may denote a farming activity, there are no specific goals, effects and actors to which this potential line of action is directed. Therefore, instead of narration, it can be argued that the designer chose to conceptualize it using the human figure as the whole, and presented an analytical relationship with given attributes such as the polluted soil/water and exposed feet.

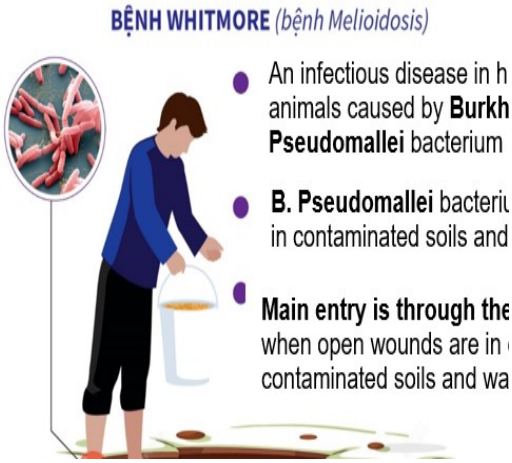




Figure 5*. (Left) Transmission routes for Whitmore's Disease*

Figure 6*. (Right) Warnings for canned food against botulism (Vietnam News Agency)*

By contrast, Figure 6 shows an Asian-looking lady, who is undoubtedly representative of physical features of a Vietnamese woman based primarily on hair color and complexion. The cultural aspect of the graphic lies in how the woman's nipple was not exposed as well, since social norms in most Asian nations like Vietnam forbid the display of male and female genitals. Additionally, Figure 6 also indicates the narrative structure introducing a vector which forms a line stretching from the woman's gaze, her breast, the body postures (her arms) and the baby. This implied vector denotes the act of breastfeeding in which the lady is the actor and the breastfed infant is the goal. It should also be noted that this picture has the first two lines functioning as declaratives ("reduce risks for diseases" can be labelled as 'elliptical declarative'). This approach renders the medical message easily comprehensible as the main purpose of it is listing potential health benefits of breastfeeding.

5. Conclusion

Drawing from Halliday's interpersonal meta-function in Systemic Functional Linguistics and Kress and van Leeuwen's Representational meanings in Visual Grammar, this study provides the following conclusions after the analysis of several medical graphics of both English and Vietnamese:

Question 1. How visuals accompanied by texts aid the dissemination of medical knowledge to the public regardless of expertise and world experiences?: According to the analysis, the narrative structures were mostly used in the graphics, with the primary purpose of giving instructions on how to conduct specific medical procedures like insulin injection, whereas those giving advice and recommendations or issuing warnings against some life-threatening medical conditions such as the Whitmore's disease and Noma disease favor the conceptual-analytical, conceptual-classificatory, or conceptual-symbolic models. These visual approaches provide vivid illustrations of multifaceted connections between complex medical concepts scaffolded by textual elements mostly in the form of imperatives, all of which facilitate the effective dissemination of medical knowledge to the target audience. What is more, the prioritization of the Mood system over the Modality system may be better explained by the fact that the former is more effective in emphasizing the elements of urgency to the public and community.

Question 2. Are these multimodal elements (diagrams, flowcharts, infographics, photos, drawings and illustrations) governed by sets of culture-driven, context-dependent conventions or globally standardized?: The graphics introduced in this study are mainly infographics and computer-based illustrations. Even though they were designed in different contexts and languages (English and translated Vietnamese texts), they seem to conform to universal standards (perhaps WHO conventions) through the use of popular medical icons and symbols as well as the universality of healthcare-related messages. However, some notable exceptions occur like those in the cases of the benefits of breastfeeding and the Whitmore's disease where Vietnamese cultural values were subtly represented. This evidence highlights the designer's intentions of rendering medical information more culturally appropriate and easily comprehensible for Vietnamese populations through localization.

Question 3. Should multimodal medical discourse be further embedded in health materials for increased public awareness and efficiency of medical propaganda?: Indeed, given the enhanced effectiveness of dissemination when combining visual and verbal components in health-related graphics, it is now urgent and requires collective efforts from all the concerned stakeholders as the majority of medical sources still contain large numbers of words and text-based diagrams, thereby restricting the accessibility of medical information to worldwide readers. It is undeniable that the inclusion of 'visual' medical discourse plays a crucial role in raising public awareness of the emergence of many life-threating diseases, especially highly infectious ones facing the world like the Covid-19 in the early 2020s, claiming the lives of millions of innocents.

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ONLINE MEDICAL RESOURCES

1. Figure 1. Diabetes Care Handbook by the Duke Health organization (United States). https://diabetes.my.dukehealth.org/sites/default/files/2022-03/Diabetes%20Care%20Booklet.pdf?utm_source=chatgpt.com.

2. Figure 2. Instruction for Insulin injection by Center for Advanced Training in Clinical Simulation by ACTS (Vietnam).
https://atcs.ump.edu.vn/upload/images/pdfs/Upload/ATCS_HuongDanTuTiemInsulin.pdf.

3. Figure 3. Instruction on blood pressure measurement (Unger, T., *et al*. (2020). International Society of Hypertension global hypertension practice guidelines. *Hypertension*, *75*(6), 1334-1357).

4. Figure 4. Symptoms and diagnosis of Noma (World Health Organization. (2017). Information brochure for early detection and management of Noma).

5. Figure 5. Transmission routes for Whitmore's Disease by Vietnam News Agency (Source: https://infographics.vn/benh-truyen-nhiem-nguy-hiem-whitmore-nhung-dieu-can-biet/168688.vna).

6. Figure 6. Benefits of breastfeeding (https://www.slideshare.net/slideshow/cm-nang-nui-con-bng-sa-m/250463313).

Phân tích diễn ngôn y tế Việt-Anh: tiếp cận đa phương thức từ góc nhìn ngữ pháp hình ảnh và ngôn ngữ học chức năng hệ thống

Tóm tắt: Nghiên cứu đánh giá đồ họa y tế Anh-Việt dựa trên Ngôn ngữ học chức năng hệ thống của Halliday và Ngữ pháp hình ảnh của Kress & van Leeuwen. Theo đó làm rõ: (1) hình ảnh có vai trò bổ trợ giúp hiểu hơn kiến thức y khoa; (2) việc thiết kế đồ họa bị ảnh hưởng bởi một số yếu tố văn hóa; (3) triển vọng mở rộng tính đa phương thức nhằm giáo dục sức khỏe cộng đồng. Sáu đồ họa được chọn ngẫu nhiên, kết quả cho thấy: (i) chức năng tường thuật và khái niệm được sử dụng phổ biến trong đồ họa y tế; (ii) hệ thống Thức được ưu tiên hơn hệ thống Tình Thái nhằm biểu đạt tính cấp thiết y tế; (iii) yếu tố văn hóa trong thiết kế diễn ngôn y tế đa phương thức Anh-Việt.

Từ khóa: Diễn ngôn y khoa; đồ họa; đa phương thức; SFL; ngữ pháp hình ảnh.