

# Genre-knowledge Transfer in English for Medical Purposes: A Genre Activity-based Research Study

*Anna Franca Plastina*

doi: 10.7359/791-2016-plas

*Keywords:* applied genre analysis, EMP, genre-activity based approach, genre-knowledge transfer, learners' genre participation.

## 1. INTRODUCTION

Since the late 1980s, genre studies have informed practitioners of LSP teaching that genres are “[...] keys to understanding how to participate in the actions of a community” (Miller 1984, 165), and that the specialist informant should “be a competent and trained specialist member of the disciplinary culture in which the genre under study is routinely used” (Bhatia 1993, 35). LSP genre studies have been profoundly influenced by Swales’ pivotal concept of *discourse community*, which “[...] utilizes and hence possesses one or more genres in the communicative furtherance of its aims” (Swales 1990, 26). Drawing on Swales’ interrelated concepts of discourse community, communicative purpose and genre, LSP genre studies have fine-tuned their foci on analysing the social and contextual features of genres, thus moving beyond the sole linguistic analysis of texts.

In the LSP classroom, genre-based pedagogy has traditionally concentrated on developing *genre acquisition* by teaching learners to reproduce text types as “a staged, goal-orientated, and purposeful social activity” (Martin 1984, 25). Johns (2008, 238) argues, however, that genre acquisition activities are designed “[...] often from a template, that is organised, or ‘staged’ in a predictable way [...]”. In other words, the rehearsed reproduction of text types in the classroom context has often missed “the purposeful social activity”, suggesting that staged learning alone cannot fully enhance genre acquisition to cope with new contexts of use. Teaching *genre awareness* has

also been underestimated in the LSP classroom, as shown by the case made for its importance. For example, Johns (2008, 238) points out that genre awareness is “[...] necessary for adapting [learners’] socio-cognitive genre knowledge to ever-evolving contexts”. Devitt (2009, 337) further emphasises that “teaching critical genre awareness will help students [...] make deliberate generic choices”. Hence, raising learners’ genre awareness only in the classroom environment constrains their exploitation of “socio-cognitive genre knowledge”. Developing genre awareness does not only require cognitive learning in the classroom, but essentially presumes that learners ought to be given the opportunity to develop their socialisation within their discipline so they “[...] can act, can participate in those genres” (ibid., 338).

This chapter argues for a genre-activity based approach to English for Medical Purposes (EMP) which enables learners to actively participate in the creative exploitation and communicative use of the medical interview as a key genre in their discourse community. It further advocates that adopting a genre-activity based approach can grant teachers the opportunity of conducting genre analysis on learner products which are generated following genre-activity processes. The first part of the chapter covers the pedagogical experiment in which the genre-activity based approach was adopted with a group of EMP learners. The approach is theoretically framed by two main assumptions. First, it is grounded in the principle that “[...] acquiring a genre means acquiring an activity, learning to do the activity in its context” (Russell and Fisher 2009, 164); second, its application implies that “[...] genre knowledge is reconstituted and reinvented within the context of genre production” (Devitt and Reiff 2014, 274). In this respect, the experiment aimed at engaging EMP learners in populating the activity space of social action (cf. Bazerman et al. 2003) of the medical interview, and in creating their own digital artefacts as one form of genre production. In the second part, the focus is on the research study which was conducted to investigate how EMP learners transfer their genre knowledge to process and produce their artefacts. Genre-knowledge transfer skills can be seen as a crucial way of appropriating genres as they refer to the “ability to adapt previously-learned skills to apparently new future tasks and contexts” (Johns and Pric 2014, 477). They thus build on learners’ generic competence, which Bhatia (2004, 144) defines as:

[...] the ability to respond to recurrent and novel rhetorical situations by constructing, interpreting, using and often exploiting generic conventions embedded in specific disciplinary cultures and practices to achieve professional ends.

The research study further draws on Devitt's (2004, 31) recommendation:

[...] that genre be seen not as a response to recurring situations but as a nexus between an individual's actions and a socially defined context. [...] genre exists through people's individual rhetorical actions at the nexus of the contexts of situation, culture and genres.

In this sense, applied genre analysis was carried out on learners' products to shed light on their individual communicative usage and appropriation of the genre of the medical interview.

## 2. THE GENRE-ACTIVITY BASED APPROACH: GENRE-KNOWLEDGE TRANSFER

According to the activity-based view, "genres are forms of life, ways of being. They are frames for social action. They are environments for learning. They are locations within which meaning is constructed" (Bazerman 1997, 19). Genres as mediating socially organised activities are understood to operationalise *activity systems* (cf. Russell 1997). Informed by activity theory, these systems are considered as basic units of analysis of social processes, which include a subject (person), an object (goal or common task) and tools that mediate interaction (cf. Engeström 1987). Within these systems, which are not permanently fixed, each genre has its own activity space of social action "[...] that prompts the production of particular kinds of information to populate that space", where "texts [...] are seen as language in use" (Bazerman et al. 2003, 455-456). As a result of repeated rhetorical goal-directed actions performed by subjects, genres become typified and their activity systems stabilised. Thus, a genre-activity based approach enables LSP learners to create activity systems operationalised by professional genres of interest, and to populate genred activity spaces for use and not just for study purposes (cf. Russell and Fisher 2009). In this perspective, Dressen-Hammouda (2003, 80) suggests that:

[...] we can engage students in 'hands on' activities, whereby professional ways of thinking and using language can be cultivated using genre. Such purposeful language learning engages students in meaningful activities where genres are integral to the task at hand, as 'tools-in-use' rather than as mere ends.

Hence, allowing learners to engage in 'hands on' activities may facilitate their active participation in disciplinary genres. When activities are, how-

ever, carried out only in the classroom environment, it may be difficult to involve learners in the active practice of genre participation and use. This is mainly because learners are usually immersed only in *the activity system* of education, and are given few opportunities to operate also in their professional activity systems. As Russell and Fisher (2009, 165) point out, if “the activity system remains that of the classroom, [...] the genre is abstracted from its context of use in professional work and is recognized as operating in the activity system of education”.

EMP learners should, then, be given the chance to move between the activity system of the classroom and that of the medical profession so as to experience the genre of the medical interview as a mediational means for *learning*, as well as for *doing*. This move between the two activity systems facilitates learners’ development of *genre-knowledge transfer* through their engagement in “[...] patterns of participatory processes as part of the social and material contexts” (Russell and Fisher 2009, 166). This process cannot be seen, however, simplistically as a matter of transferring genre knowledge from one context to another: “transfer is not only mere application; it is also an act of reconstruction” (Nowacek 2011, 25). However, the act of reconstructing activity systems outside the classroom presents its own problems. As EMP learners are not yet fully fledged members of their disciplinary community, they cannot transfer genre knowledge to authentic professional activity systems. To overcome this problem, Russell and Fisher (2009, 166) suggest using computer software programmes, which “dynamically simulate the systems of activities that the genre systems mediate”.

As the use of information technology is not new to LSP teaching and research (cf. Arnó et al. 2006; Bárcena et al. 2014), this study is specifically aided by the use of web authoring tools. Pedagogically, these tools effectively support genre-based activities, allowing EMP learners to design the simulated activity system in which the medical interview operates. Moreover, web authoring prompts learners to engage in decision-making processes on the genre knowledge they are striving to transfer and adapt to the simulated activity system. Learners may also find the multimodal affordances offered by web authoring tools more motivating as they can creatively populate activity spaces and customise their genre production. In practical terms, the tools are simple to use, as well as cost-effective. Ultimately, web authoring tools allow learners to store and submit their digital artefacts for research.

### 3. THE PEDAGOGICAL EXPERIMENT

#### 3.1. *Aim*

The broad aim of the experimental study presented in this chapter was to engage EMP learners in active participation in genre-based activities with the objective of developing their genre-knowledge transfer skills. In particular, the pedagogical objectives of the study were set to:

- Engage learners in genre use as the mediational means for *doing* and *learning*, based on the principles of socio-constructivism.
- Develop learners' skill in reconstructing the specific activity system of the *problem-oriented* medical interview, which reflects the patient's request for help with specific health problems. The choice of this professional genre was made for two particular reasons. First, as learners need to be well-versed in their future profession, it was crucial to develop their *genre depth* (cf. Russell 2002) in one of the most salient genres in the field. Second, both EMP and genre-based pedagogies have traditionally assigned priority to reading and writing skills, underestimating the importance of oral interaction. In this respect, Roter and Hall (2006, 4) point out that "talk is certainly the fundamental instrument by which the doctor-patient relationship is crafted and by which therapeutic goals are achieved".
- Allow learners to populate the genred activity space of problem-oriented medical interviews by personalising information in computer-mediated simulations.
- Enable learners to transfer their genre-knowledge between formal educational and professional contexts.
- Encourage learners to showcase their genre-knowledge transfer processes through the production of digital artefacts.

#### 3.2. *Participants*

Sixteen Italian postgraduate students (4 males; 12 females) at the University of Calabria agreed to participate in the experimental study. All participants were enrolled in their first year at the School of Specialisation in Clinical Pathology on the 5-year curriculum course offered by the same university. A preliminary questionnaire was administered to gather information on participants' language proficiency and digital literacy levels. All

participants' English language proficiency was found to be at the CEF B2 level, while their digital literacy fell within Martin and Grudziecki's (2006, 257) range of Level II - Digital Usage, whereby "users draw upon relevant digital competences and elements specific to the profession, domain or other life-context".

### 3.3. *Procedure*

Participants were first instructed on the genre-based activity they were expected to engage in, and were told they could personalise their reconstruction of the activity system, freely populate the multimodal activity space of the problem-oriented medical interview and exploit generic conventions appropriately. This procedure was grounded in the belief that genres "[...] are ways of seeing what acts are available that are appropriate to the moment as you see it – what you can do, what you might want to do" (Bazerman 2006, 221).

In the second step, participants were instructed on the use of the web authoring tool and on its multimedia affordances. GoAnimate.com was chosen as it is an easy, cost-effective tool with simple drag and drop, point and click, lip synchronisation functionalities which allow users to design animated characters, backgrounds and props in dialogue-based scenes.

The core part of the experiment consisted in allowing participants to draft and redraft multimodal texts in order "[...] to sense from the inside the nature of the social action entailed by [the professional genre]" as "none of this know-how will have been made available through [classroom] simulations [...]" (Freedman et al. 1994, 221). After two weeks of autonomous practice, participants were asked to produce their personal genre-based digital artefacts, which were then subjected to genre research.

## 4. THE RESEARCH STUDY

### 4.1. *Aim*

Research was conducted on participants' digital artefacts with the aim of analysing how genre knowledge was transferred and represented. To this end, two research questions were addressed: (1) Which generic compe-

tence do EMP learners transfer for the purpose of populating the activity space of problem-oriented medical interviews? (2) What liberties do EMP learners take with specialist discourse in computer-mediated simulations?

#### 4.2. *Corpus*

Sixteen dynamic multimodal texts were the materials used for analysis. The corpus was made up of 4,395 words with dynamic dialogue-based scenes for a total duration of 102 minutes ( $M = 6.38$  mins.) While the corpus may seem somewhat small-scaled, the complexity of the different aspects of genre-knowledge transfer and representation in multimodal texts required in-depth analysis.

#### 4.3. *Method*

Drawing on Bhatia (1997), the research method was based on applied genre analysis. This was performed by relying on the four categories included in the Bhatian analytical framework in order to analyse the essential variables involved in genre-knowledge transfer. In detail, the four categories include:

1. *Knowledge of the code*: “[...] the pre-requisite for developing communicative expertise in specialist [...] discourse” (ibid., 136). In the present study, knowledge of the code was analysed in terms of the type of terminology used and its frequency of occurrence.
2. *Genre knowledge*: the use of “[...] appropriate rhetorical procedures and conventions typically associated with the specialist discourse community [learners] aspire to join” (ibid., 137). Three factors were analysed within this category, namely rhetorical phases and moves (linear vs. flexible), dialogic roles (constrained vs. unconstrained), and agency (acknowledged vs. unacknowledged). The first two factors were taken into account, as rhetorical phases and moves “[...] are interactionally produced and thus not necessarily linear nor constrained by role” (Jones and Beach 2005, 104). As for the third factor, “a rhetoric of agency must be legitimated and practiced by all the interlocutors in a rhetorical situation, which in health care means the patient and his or her providers” (Young and Flower 2001, 72).
3. *Sensitivity to cognitive structures*: the ways in which learners decided to “[...] exploit conventions in response to changing socio-cognitive demands in specific professional contexts [...]” (ibid., 137). In this

regard, two current demands were considered: patient vs. doctor-centredness, and narrative-based vs. evidence-based medicine.

4. *Exploitation of generic knowledge*: “[...] exploiting and taking liberties with conventions to achieve pragmatic success in specified professional contexts” (ibid., 138).

These categories were introduced as dependent variables in terms of learners’ convergence towards and divergence from the generic conventions of the medical interview. Devitt (2004, 156) emphasises the importance of both convergence and divergence in genre learning: “students need to learn how to make their texts fit within the patternings of converging situations and texts; they also need to learn how to diverge from those patternings in order to say what they want to say”. Thus, the first three variables were used to discover how EMP learners conformed to the conventions of the genre, whereas the fourth for the purpose of highlighting the creative choices they made.

## 5. FINDINGS

### 5.1. *Knowledge of the code*

The learner corpus consisted of 4,395 tokens (*types* = 950; *TTR* = 21.61%) with 1,042 domain-specific terms (23.71%; *types* = 352; *TTR* = 33.78%). Domain-specific terminology was classified into two categories: (1) *general domain terms* (*tokens* = 648; *types* = 114; *TTR* = 17.59%) referring to the genre of the medical interview and to health problems; (2) *specialist domain terms* (*tokens* = 394; *types* = 89; *TTR* = 22.58%) related to diagnoses and drug treatments. Results for these categories show that general domain terms (62.19%) outweighed specialist domain terms (37.81%), suggesting participants’ awareness of the importance of avoiding an excessive use of specialist terms when communicating with the lay patient. General domain terms were further analysed for their frequency of occurrence in order to shed light on possible medical models underlying the lexical choices made. Frequency ranking of the top ten general domain terms are presented in *Table 1*.



Table 1. – Frequency ranking (%) of the general domain terminology used by participants.

RANKING	FREQUENCY OF OCCURRENCE
1. doctor	31.1%
2. prescription	14.3%
3. pain	11.6%
4. symptoms	10.4%
5. pill(s)	10.3%
6. medicine	9.1%
7. test	7.4%
8. antibiotic	4.3%
9. fever	0.9%
10. side effects	0.6 %

Results indicate that the dialogues analysed were lexically reconstructed with a traditional approach to the medical interview. In other words, dialogic interactions were embedded in a doctor-led frame, rather than in a patient-centred one, and were thus found to be grounded in the so-called *disease-oriented* model. This suggests that participants mainly reconstructed the pathophysiologic process, rather than privileging each patient's unique experience of illness. In this respect, all dialogues were found to source lexical repertoires of anatomical and diagnostic terms to convey symptoms and drug treatments as shown in *Table 2*.

The findings first reveal the wide variety of lexical choices made by participants, clearly highlighting their good knowledge of the code. As in *Table 2*, most participants chose to use plain terms in the reconstruction of health symptoms. Only two occurrences of scientific terms were, in fact, found: *phlegm* (participant # 4) and *gastro-intestinal* (participant # 8). Conversely, the lexical items mostly selected to express diagnoses were found to belong to the repertoire of specialised terms. This showed that participants had “[...] acquired some specific lexis [...] using highly technical terminology as in medical communities” (Swales 1990, 26). On the other hand, the preference for the lay term *food poisoning*, rather than its equivalent medical term, *campylobacteriosis*, suggests that participant # 2 was aware that the use of the latter would have most probably led to communication breakdown with the patient.

*Table 2. – The lexical reconstruction of the medical interview.*

PARTICIPANT #	SYMPTOMS	DIAGNOSES	DRUG TREATMENTS
1.	stomach ache, spastic pain diarrhea, vomiting	helicobacter infection indigestion	Plasil injection, Lactical (Enterogermina), Imotil, Spasmex
2.	stomach ache, nausea vomiting, cramps	food poisoning	antibiotic, antiemetic
3.	swollen knee	contusion bone fracture	anti-inflammatory therapy, topical cream (Voltaren Gel)
4.	cough, headache, diarrhea, phlegm	flu	antiviral
5.	stomach ache, acidity	dyspepsia gastric acid production	proton-pump inhibitor (Protonix), Maalox, Pantoprazole, benzimidazole medications
6.	sore throat, cough	tracheitis bacterial infection	antibiotic cough syrup
7.	swollen ankle leg pain, bruise	ankle sprain hematoma	pain-killer anti-inflammatory
8.	the runs gastro-intestinal problems	gastro-enteritis	antimotility medicine
9.	backache, leg pain	inflammation of sciatic nerve	pain-killer, anti- inflammatory
10.	urinating problems	cystitis bladder infection	antibiotic (Ciprofloxacin)
11.	sore throat, difficulty in swallowing	tonsillitis	antibiotics, inflammatory pills
12.	sore chest, headache, chills, sneezing, cough, muscle aches	flu	pain-killer, anti- inflammatory
13.	red neck and shoulders sneezing, runny nose	allergy	anti-histamine (Zotac)
14.	itchy eyes	allergic rhinitis	antihistamine, eye drops
15.	difficulty in swallowing	tracheitis	antibiotic, cough syrup
16.	stomach ache, nausea, vomiting	gastro-enteritis	antibiotic

In this sense, two participants decided to overcome this issue by proposing both plain and specialist terms: *dyspepsia* / *gastric acid production* (participant # 5); *cystitis* / *bladder infection* (participant # 10).

Specialist terms were also mainly used to express drug treatments, although some participants decided to use more common terms, such as *cough syrup* instead of *antitussive* (participants # 6, 15), *pain-killer* for *analgesic* (participants # 7, 9, 12). Five participants (# 1, 3, 5, 10, 13) further decided to specify brand names (e.g. *Enterogermina*, *Imotil*, *Spas-mex*), as well as drug ingredients when dealing with pain management. Both these cases suggest that these learners wanted to provide evidence of their sound scientific knowledge of the code and of their communicative expertise.

On the whole, findings regarding this specific aspect suggest that they transferred adequate domain-specific knowledge in order to make appropriate lexical choices which characterised the register of their medical-based dialogues.

## 5.2. Genre knowledge

The artefacts were mainly found to follow the structure of linear rhetorical phases and moves typical of the genre of medical interviews: opening, data-gathering or question-answer, physical examination, diagnosis and treatment, and closing. While this shows that all participants had basic knowledge of the specific genre format, only 5 learners showed major flexibility in developing rhetorical phases as in examples (1)-(3):

- (1) DOCTOR: I think the best thing is to have an MRI scan done so that I can evaluate the possible damage better. Let's go Mrs. Humphrey...  
(Later on)  
Now judging from the results, I need to bandage your ankle.  
[Participant # 7]

In example (1), the basic linear sequence of the medical interview is interrupted by the flexible introduction of another rhetorical phase in which a new dialogue-based scene related to the initial one is represented to contextualise the performance of the MRI scan.

- (2) PATIENT: Oh nooo!! I just can't do that... please... I'm afraid of needles...  
[Participant # 1]

In example (2), the patient manifests an emotional reaction in the rhetorical phase of diagnosis and treatment when prescribed intravenous medication. The patient thus enacts a dialogic role which is unconstrained by the formal setting. The emotional move created by the participant further reflects her skill in flexibly transferring genre knowledge for authentic purposes.

- (3) DOCTOR: Good morning. Please do come in. I only have to wear my coat and I'll be ready in a minute. [Participant # 10]

Similarly, example (3) suggests a degree of flexibility in the opening rhetorical phase, where the doctor decides to allow the patient into his office before completely enacting his professional role constrained by wearing a white coat.

Compared to the low level of flexibility transferred by participants in the rhetorical phases and moves of their dialogues, all artefacts presented instances of genre knowledge of the rhetorical conventions of agency as shown in examples (4)-(7):

- (4) PATIENT: Good morning, I have an appointment with Doctor Hubert.  
RECEPTIONIST: Have a seat, please. [Participant # 5]

Example (4) is a typical instance of the most recurring rhetorical convention of agency found in the corpus. Specifically, it refers to the opening rhetorical phase in which the receptionist legitimates the patient's agency by inviting her to take a seat.

Example (5), instead, indicates how the doctor's agency is legitimated in the rhetorical phase of physical examination by the patient the moment the requested act is performed:

- (5) DOCTOR: Now Mr. Taylor, could you please open your mouth and say "Ah"?  
PATIENT: Aaahhh. [Participant # 8]

Similarly, in the closing rhetorical phase the doctor's agency is legitimated by the patient in example (6) by deciding to book an appointment:

- (6) DOCTOR: You'll have to come back again next week, I'm afraid.  
PATIENT: Ok, I'll book an appointment then. [Participant # 11]

A rhetoric of agency was additionally acknowledged by "using a first-person grammatical subject, active voice, active (as opposed to stative) verbs, and 'I' statements" (Young and Flower 2001, 73) as shown in example (7):

- (7) PATIENT: Can I go to work tomorrow? [Participant # 1]

Besides the use of the first-person subject and the active verb *go*, example (7) also shows how a rhetoric of agency was created by “identifying short-term goals in the context of [the patient’s] current medical problem [...]” (Young and Flower 2001, 73).

On the whole, participants’ genre knowledge reflected the fact that “in certain [...] medical, and scientific contexts, constraints are so tight that there is no room for personal expression, variation, experimentation, or dissent [...]”, and that participants viewed “[...] agency not as freedom from regulation, but as the ability to act effectively and collaboratively within the structures of a community” (Paré 2014, A90).

### 5.3. Sensitivity to cognitive structures

Genre conventions were found to be exploited in response to two main socio-cognitive changes which should occur in medical interviews as the result of current debates in the field. The first social demand refers to the advocated need to shift from minimal communication to open communication which fosters increased patient-centredness. This change was reflected in 50% of the artefacts analysed as shown in example (8):

- (8) PATIENT: Sorry Doctor, I’m not really sure I understand. What do you mean by gastro-enteritis?  
DOCTOR: It’s a viral disease that affects the intestine.  
PATIENT: Is it an infectious disease?  
DOCTOR: Yes, but don’t worry... we’ll get rid of it with an antibiotic to fight lactic acid bacteria. [Participant # 16]

The example first suggests that the learner is sensitive towards the socio-cognitive need to establish better communicative relationships between doctors and patients. It also indicates in detail how patient empowerment, which requires patients to be well-informed active partners (Funnell and Anderson 2004), can be facilitated. In this specific instance, in fact, patient empowerment is mediated through the agency of the ‘I’ statement (*I’m not really sure I understand*) and through active participation, denoted by two direct questions (*what do you mean by...?*, *is it...?*). In turn, the doctor negotiates more open communication through the use of a plain-language definition (*It’s a viral disease that affects the intestine*) (cf. Plastina 2016). Moreover, textual forms are used to convey the doctor’s empathy towards the patient, both through back-channelling (*yes*) (cf. Fairclough 1995) and active co-participation (*don’t worry, we’ll get rid of it...*).

Thus, the eight participants who showed genre sensitivity to cognitive structures in the creation of their dialogues first indirectly acknowledged that “a communicative turn in medical care and healthcare is a recognition of the limitations of a biomedical model of disease and health” (Sarangi 2004, 3). The frequent use of direct questions (e.g. *what is...?*, *what do you mean by...?*, *is it...?*) formulated by patient characters further revealed participants’ sensitivity to the increasing demand for patient empowerment, considered a prerequisite for health by the World Health Organisation.

The second socio-cognitive demand identified in the artefacts refers to the need to move beyond the concept of Evidence-based Medicine (EbM) towards Narrative-based Medicine (NbM). On the issue, Kalitzkus and Matthiessen (2009, 56) point out that “with the rise of ‘modern medicine’, narratives were increasingly neglected in favour of ‘facts and findings’ regarded as more objective and scientific”, although “[...] by no means is [narrative] meant to devalue medical knowledge” (ibid., 61). Based on Kalitzkus and Matthiessen’s (2009) classification of the different genres of narratives in the medical context, only six mini-narratives were identified in the 16 multimodal texts. All narratives belonged to the category of *patient stories*. Instances are provided in examples (9) and (10):

- (9) I was out last night with some friends and I had a large portion of fish and chips at a new restaurant. [Participant # 2 on food poisoning]
- (10) Yesterday I did some fixing at home. The kitchen sink was leaking and I was bent down under it for a couple of hours at least. [Participant # 9 on inflammation of the sciatic nerve]

Both examples suggest that a personal social context of the illness experience (NbM) is offered to support the application of EbM knowledge to single cases. As learners also blended patient stories with medical knowledge, they indirectly showed sensitivity towards the recent attempts made in the field to integrate NbM and EbM into what has been defined as Narrative Evidence-based Medicine (NEbM), which “recognises the narrative features of *all* data and the evidentiary status of *all* clinical text” (Chadron and Wyer 2008, 297; original emphasis). The mini-narratives introduced by the six participants further highlight the skill of supplementing medical expertise with patients’ socio-cognitive experience.

Overall, EMP learners transferred their generic competence in a range of different ways in order to populate the activity space of problem-oriented medical interviews. Their production suggests that all learners *converged* towards the conventions of the genre as reported in *Table 3*.

Table 3. – Analytical findings on EMP students' genre-knowledge transfer.

TRANSFER	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16
<i>Knowledge of code</i> Domain-specific lexis	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
<i>Genre knowledge</i> - Flexible rhetorical phases/moves	√			√			√			√		√				
- Rhetorical conventions of agency	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
<i>Sensitivity to cognitive structures</i> - Patient-centredness		√		√		√	√			√			√	√		√
- Patient narratives	√	√		√			√		√	√						

However, data show that only 3 students (# 4, 7, 10) fully transferred all the different aspects of genre-knowledge; the other 13 participants presented individual weaknesses indicated by the blank spaces in *Table 3*. Thus, the applied genre analysis shed light on otherwise hidden pedagogical understandings of learners' different needs when only LSP genre typification is practised in the traditional classroom.

#### 5.4. *Exploitation of generic knowledge*

Participants' exploitation of generic knowledge was also analysed to seek the ways in which learners took liberties with specialist discourse. All participants personalised the medical activity space, suggesting they had learned "how to diverge from [...] patternings in order to say what they want to say" (Devitt 2004, 156), as shown in the three sample snapshots in *Figure 1*.

The character panel afforded by the web authoring tool enabled participants to create their characters, animate their actions and give voice to their dialogues. Moreover, the prop panel allowed them to personally choose which objects to include in the medical space and to decide on their various arrangements. This kind of exploitation was found to develop participants' awareness of the different ways in which the activity space could be authentically populated. According to Fairclough (2001, 49-50):

[...] the [...] ‘medical space’ [...] implies the presence of a whole range of medical paraphernalia which help to legitimize the encounter [...] there is a restricted set of legitimate subject positions, those of the doctor, the nurse and the patient [...] There are requirements for modes of dress which reinforce properties of the setting in defining the encounter as medical [...].

Besides customising the main activity space, all participants further took liberties in reconstructing and representing meaning semiotically as shown in the sample snapshots in *Figure 2*.

In the first image on the left, the doctor’s act of making a diagnosis is visually represented by the hand gesture of racking his brain, while the patient’s heartburn pain is pictured as a flame on her body. In the second image, a group of patients are represented in the waiting room as they gaze at the nurse expecting to be called next. In the last image, the doctor’s folded arms suggest he is listening attentively to his patient, whose pain is visualised in his knitted eyebrows and through his posture in the wheelchair. This kind of freedom taken by learners appears to be in line with the claim that “speech, gesture, posture, and other acts jointly produce meaning in medical interaction” (Wilce 2009, 200).

The third and final type of exploitation concerned the reconstruction of the bio-social context of the illness experience. This particularly reflected participants’ social constructionist stance to health issues: “from a social constructionist perspective the meaning of health is created (constructed) through the way that we, as social beings, interact and the language that we use” (Warwick-Booth et al. 2012, 17). In detail, 4 students engaged in the activity of interrelating the medical activity system with other systems. This further indicates that they were, at least implicitly, aware that a genre does not function in isolation. As highlighted by Cohen (1986, 207):

[...] a genre, therefore, is to be understood in relation to other genres, so that its aims and purposes at a particular time are defined by its interrelation with and differentiation from others genres.

The sample snapshots in *Figure 3* show three different types of genre interrelation with the medical activity system.

The domestic activity system in the first image on the left is interrelated with the medical system through the illness experience of a backache; in the second image through a stomach ache and nausea after a flight, and in the third image through a sprained ankle in the activity system of everyday street routines. Although these interrelations vary in terms of illness, place and time, they share the common meaning that illness originated within the bio-social contexts.

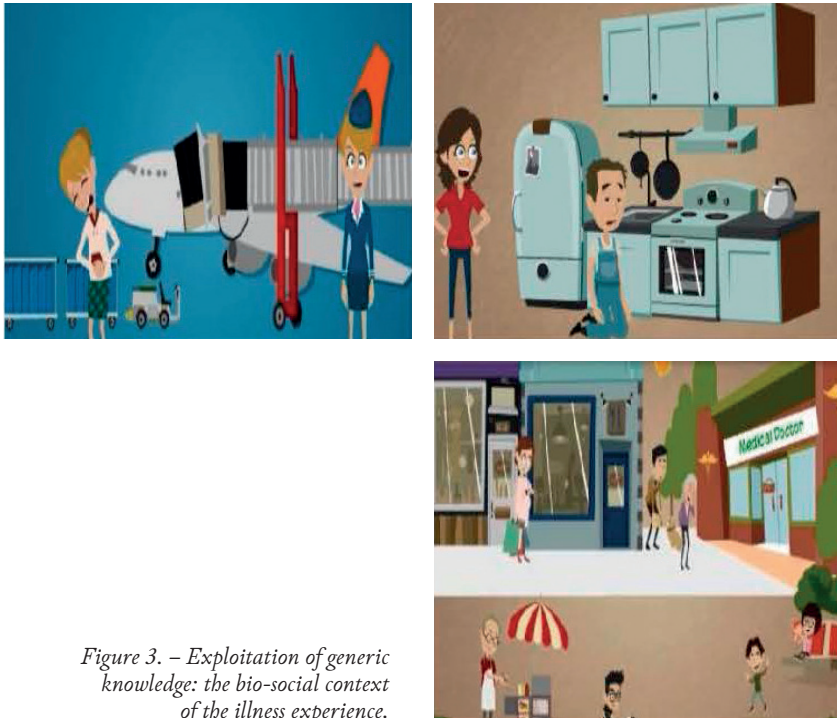




*Figure 1. – Exploitation of generic knowledge: personalisation of the medical space.*



*Figure 2. – Exploitation of Generic knowledge: semiotic representation of meaning.*



*Figure 3. – Exploitation of generic knowledge: the bio-social context of the illness experience.*

As an additional value of exploiting generic knowledge, all participants moved up to Level III of digital literacy, namely, to the level of digital transformation, which “[...] is achieved when the digital usages which have been developed enable innovation and creativity, and stimulate significant change within the professional or knowledge domain” (Martin and Grudziecki 2006, 260).

In pedagogical terms, individual exploitation of digital activity systems may further help shed light on LSP students’ motivational drive and personal learning styles, which is, however, beyond the scope of the present study.

On the whole, the liberties taken by EMP learners with specialist discourse in the computer-mediated simulations were of three main types: (1) personalisation of the medical space; (2) choice and range of medical paraphernalia; (3) genre interrelation. In all cases, learners transferred genre knowledge using different sources of creativity, choice and individual action, achieving a pragmatic nexus between their own actions and the socially defined context of the medical interview (cf. Devitt 2004).

## 6. CONCLUDING REMARKS

Over the last few decades, genre-based pedagogy has moved beyond the traditional practice of focussing on surface linguistic forms to develop LSP learners' genre acquisition and awareness. However, pedagogical activities have often been mostly geared to the rehearsed acquisition of genres (cf. Johns 2008) within the activity system of the classroom alone (cf. Russell and Fisher 2009). This chapter has argued for a genre-activity based approach to EMP as "[...] a form of acculturation, an attempt to help learners understand the social and cultural context in which the genres operate [...]" (Basturkmen and Elder 2004, 678). The pedagogical experiment encouraged EMP learners to transfer their knowledge of the medical interview and use the genre as the mediational means for doing and learning through creative computer-mediated simulations. Genre analysis of learner artefacts provided valuable insights into EMP students' transfer of their knowledge of the code, genre knowledge and sensitivity to cognitive structures. Flexibility of rhetorical phases/moves in medical interviews and sensitivity to cognitive structures were found to be the areas in which EMP learners presented major weaknesses. On the other hand, learners showed active engagement in exploiting generic knowledge by personalising the medical space, making consistent choices of paraphernalia, constructing semiotic representations of meaning, and by interrelating the genre of medical interviews to other genres pertaining to bio-social contexts. The research results, although small-scaled, highlight the benefits of genre-activity based LSP which moves beyond the activity system of education, given that "[learners] typically go through a fairly slow process of organizational acculturation before they acquire and can successfully use workplace genres" (Artemeva 2008, 9). Further research on the effects of the genre-activity based approach is necessary to gain deeper insights into its potential for a more professional application of LSP pedagogy. This also entails evaluating the effectiveness of new technological environments in facilitating tertiary learners' training as specialist members of their disciplinary culture, and in supporting the transition from classroom genre-based pedagogy to professional contexts of use.

## REFERENCES

- Arnó Macià, Elisabet, Antonia Soler Cervera, and Carmen Rueda Ramos, eds. 2006. *Information Technology in Languages for Specific Purposes: Issues and Prospects*. New York: Springer.
- Artemeva, Natasha. 2008. "Approaches to Learning Genres: A Bibliographical Essay". In *Rhetorical Genre Studies and Beyond*, edited by Natasha Artemeva and Aviva Freedman, 9-99. Manitoba: Inkshed Publications.
- Bárcena, Elena, Timothy Read, and Jorge Arus, eds. 2014. *Languages for Specific Purposes in the Digital Era*. Berlin: Springer.
- Basturkmen, Helen, and Catherine Elder. 2004. "The Practice of LSP". In *The Handbook of Applied Linguistics*, edited by Alan Davies and Catherine Elder, 672-694. Malden (MA): Blackwell.
- Bazerman, Charles. 1997. "The Life of Genre, the Life in the Classroom". In *Genre and Writing: Issues, Arguments, Alternatives*, edited by Wendy Bishop and Hans Ostrom, 19-26. Portsmouth (NH): Boynton - Cook-Heinemann.
- Bazerman, Charles. 2006. "The Writing of Social Organization and the Literate Situating of Cognition: Extending Goody's Social Implications of Writing". In *Technology, Literacy and the Evolution of Society: Implications of the Work of Jack Goody*, edited by David R. Olson and Michael Cole, 215-240. Mahwah (NJ): Lawrence Erlbaum.
- Bazerman, Charles, Joseph Little, and Teri Chavin. 2003. "The Production of Information for Genred Activity Spaces". *Written Communication* 20 (4): 455-477.
- Bhatia, Vijay K. 1993. *Analysing Genre: Language Use in Professional Settings*. London: Longman.
- Bhatia, Vijay K. 1997. "Applied Genre Analysis and ESP". In *Functional Approaches to Written Text: Classroom Applications*, edited by Tom Miller, 134-149. Washington (DC): US Information Agency.
- Bhatia, Vijay K. 2004. *Worlds of Written Discourse: A Genre-based View*. London: Continuum.
- Chadron, Rita, and Peter Wyer. 2008. "The Art of Medicine. Narrative Evidence Based Medicine". *The Lancet* 371: 296-297.
- Cohen, Ralph. 1986. "History and Genre". *New Literary History* 17 (2): 203-218.
- Devitt, Amy. 2004. *Writing Genres*. Carbondale (IL): Southern Illinois University Press.
- Devitt, Amy. 2009. "Teaching Critical Genre Awareness". In *Genre in a Changing World*, edited by Charles Bazerman, Adair Bonini, and Débora Figueiredo, 337-351. Boulder (CO): Parlor Press.
- Devitt, Amy, and Jo Reiff. 2014. "Reproducing Genres: Pattern-related Writing". In *Handbook of Writing and Text Production*, edited by Eva-Maria Jakobs and Daniel Perrin, 263-284. Berlin - Boston: Walter De Gruyter.
- Dressen-Hammouda, Dacia. 2003. "Contributions of an Integrated Genre Theory of Text and Context to Teaching LSP". *ASP* 39-40: 73-90.

- Engeström, Yrjö. 1987. *Learning by Expanding: An Activity Theoretical Approach to Developmental Research*. Helsinki: Orienta-Konsultit Oy.
- Fairclough, Norman. 1995. *Critical Discourse Analysis: The Critical Study of Language*. London: Longman.
- Fairclough, Norman. 2001. *Language and Power*. 2nd ed. Harlow: Pearson Education Limited.
- Freedman, Aviva, Christine Adam, and Graham Smart. 1994. "Wearing Suits to Class: Simulating Genres and Simulations as Genre". *Written Communication* 11 (2): 193-226.
- Funnell, Martha, and Robert Anderson. 2004. "Empowerment and Self-management of Diabetes". *Clinical Diabetes* 22 (3): 123-127.
- Johns, Ann M. 2008. "Genre Awareness for the Novice Academic Student: An Ongoing Quest". *Language Teaching* 41 (2): 237-252.
- Johns, Ann M., and Donna Pric. 2014. "English for Specific Purposes: International in Scope, Specific in Purpose". In *Teaching English as a Second or Foreign Language*. 4th ed., edited by Marianne Celce-Murcia, Donna Brinton, and Marguerite Snow, 471-487. Boston: National Geographic Learning.
- Jones, Charlotte, and Wayne Beach. 2005. "I just wanna know why: Patients' Attempts and Physicians' Responses to Premature Solicitation of Diagnostic Information". In *Diagnosis as Cultural Practice*, edited by Judith Duchan Felson and Dana Kovarsky, 103-136. Berlin: Mouton De Gruyter.
- Kalitzkus, Vera, and Peter Matthiessen. 2009. "Narrative-based Medicine: Potential, Pitfalls, and Practice". *The International Journal of Narrative Practice* 1 (1): 56-64.
- Martin, Allan, and Jan Grudziecki. 2006. "DigEuLit: Concepts and Tools for Digital Literacy Development". *Innovation in Teaching and Learning in Information and Computer Sciences* 5 (4): 249-267.
- Martin, James R. 1984. "Language, Register and Genre". In *Deakin University Children Course Reader*, edited by Frances Christie, 21-30. Geelong: Deakin University Press.
- Miller, Carolyn R. 1984. "Genre as Social Action". *Quarterly Journal of Speech* 70: 151-167.
- Nowacek, Rebecca. 2011. *Agents of Integration: Understanding Transfer as a Rhetorical Act*. Carbondale (IL): Southern Illinois University Press.
- Paré, Anthony. 2014. "Rhetorical Genre Theory and Academic Literacy". *Journal of Academic Language & Learning* 8 (1): A83-A94.
- Plastina, Anna Franca. 2016. "Putting the Plain into Pain Language in English for Medical Purposes: Learner Inquiry into Patients' Online Descriptive Accounts". *Language Learning in Higher Education. Journal of the European Confederation of Language Centres (CercleS)* 6 (1): 207-228.
- Roter, Debra, and Judith A. Hall. 2006. *Doctors Talking with Patients, Patients Talking with Doctors*. Westport (CT): Praeger Publishers.

- Russell, David. 1997. "Rethinking Genre in School and Society: An Activity Theory Analysis". *Written Communication* 14: 504-554.
- Russell, David. 2002. "The Kind-ness of Genre: An Activity Theory Analysis of High School Teachers' Perception of Genre in Portfolio Assessment across the Curriculum". In *The Rhetoric and Ideology of Genre: Strategies for Stability and Change*, edited by Richard Coe, Lorelei Lingard, and Tatiana Teslenko, 225-242. Cresskill (NJ): Hampton.
- Russell, David, and David Fisher. 2009. "Online, Multimedia Case Studies for Professional Education: Revisioning Concepts of Genre Recognition". In *Genres in the Internet: Issues in the Theory of Genre*, edited by Janet Giltrow and Dieter Stein, 163-192. Amsterdam: John Benjamins.
- Sarangi, Srikant. 2004. "Towards a Communicative Mentality in Medical and Healthcare Practice". *Communication & Medicine* 1 (1): 1-11.
- Swales, John. 1990. *Genre Analysis: English in Academic and Research Settings*. Cambridge: Cambridge University Press.
- Warwick-Booth, Louise, Ruth Cross, and Diane Lowcock. 2012. *Contemporary Health Studies: An Introduction*. Cambridge: Polity Press.
- Wilce, James M. 2009. "Medical Discourse". *Annual Review of Anthropology* 38: 199-215.
- Young, Amanda, and Linda Flower. 2001. "Patients as Partners, Patients as Problem-solvers". *Health Communication* 14 (1): 69-97.