

Beyond Language Classes: Semiotic Practices in PowerPoint Slideshows in Pharmaceutical English-Mediated Presentations

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Abstract

Computer Assisted Language Learning (CALL) has attracted considerable attention lately due to our increasing reliance on technology in education. This article contributes to educational research on CALL by considering the semiotic practices that surround PowerPoint slideshows. The article examines how a year-five female undergraduate in pharmacy designs her PowerPoint slideshow to represent and communicate knowledge in an English-mediated literacy event, i.e. pharmaceutical seminar presentations. While language plays an essential role in engagement in this event, the article seeks to highlight the role that visuals and writing plays in PowerPoint slideshows to help the presenter represent and communicate different aspects of meaning which reflect what she considers to be important for a successful engagement in a professional presentation. The investigation is carried out through a qualitative case study, using a social account of literacy and a social semiotic multimodal approach to meaning making. Though this investigation is not carried within a traditional language class, it is used to highlight some of the issues that can help inform language education by drawing attention to the potential benefits that lie in exploring situated practices of meaning making in different professional and academic settings.

Keywords: CALL, social semiotics, multimodality, literacy, qualitative research

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Introduction

Researching CALL-related issues is generally directed towards examining the use of different types of computer programs which can be used to support language learning and teaching. Whether research is about CALL-specific software, generic software, web-based programs or computer-mediated communication programs, focus is usually directed towards the pedagogical practices in which teachers engage to facilitate the teaching of linguistic features in language classes more than investigating how people engage with computers in academic and professional settings beyond language classes. Among available studies, no adequate attention is offered to examine how people engage with technology to use language with other available semiotic resources as part of their meaning-making repertoire to represent and communicate knowledge.

This article uses a qualitative case study approach to investigate how a year-five university undergraduate in pharmacy relies on a commonly used generic software, i.e. PowerPoint to assist her while representing and communicating knowledge in an English-mediated literacy event, i.e. seminar presentations. The article specifically looks at PowerPoint as a semiotic technology which should be considered in light of the semiotic practices that shape its use in different contexts. While PowerPoint is a commonly employed software that language teachers and learners frequently employ in different settings, the investigation in this article highlights two specific points. First, the context in which the presenter uses this software is not a traditional language-learning context. It is an academic setting in which learners are expected to use English competently while embracing professional practices in different aspects of their education, including disciplinary meaning making. Second, the article adopts a multimodal perspective to meaning making to examine how the presenter coordinates the semiotic resources made available by PowerPoint to make her presentation.

Significance of the Study

Considering CALL as “any process in which a learner uses a computer and, as a result, improves his or her language” (Beatty, 2003, p. 7), it is not surprising that many CALL studies tend to prioritize investigations of the effect of technology on developing mastery of linguistic features and communication skills among language learners (Underwood, 1984). Yet, such tendency overlooks the complex relation that language holds with a wide array of semiotic modes and resources in which people engage with “a full range of communication forms people use - image, gesture, gaze, posture and so on” to communicate with each other (Jewitt, 2009, p. 14). Although this investigation is not carried out in a language classroom, it draws on the growing awareness among specialists in language teaching and learning of “the need for students (and instructors) to become aware of disciplinary and genre practices outside of the language classroom” (Hardy & Friginal, 2016, p. 120). It can help to shed light on the contextualized practices through which language is used with other semiotic resources for meaning making. Knowledge of these practices is needed because it can inform pedagogical decisions in language classrooms and shed light on how language users engage with language for meaning making while using generic computer programs. Such knowledge can help enhance stakeholders’ awareness of different genres’ features and boundaries in which language is an essential meaning-making tool, but is not the only one (Morton, 2016). While these boundaries are without doubt connected to specific linguistic features, they are not limited to them because “[g]ood control of genre involves

an understanding of how different modes – visual, written and oral- interact” (Parkinson, 2013, p. 167).

Putting in mind that using PowerPoint slideshows has become an essential part of tertiary education around the globe (Zhao and van Leeuwen, 2014), examining these issues requires a move from a traditional literacy agenda through looking at learners as passive recipients of technical skills of reading and writing (Graff, 1995) to considering their situated engagement with reading and writing as social practices (Barton, 1994; Barton & Hamilton, 1998; Street, 1993). In relation to slideshow design, learners should be looked at as authors whose slideshow design present a form of ‘new writing’ (Van Leeuwen, 2008). Thus, a slideshow represents a resource form meaning making that should be examined and analysed in order to understand how learners use language in combination with other available semiotic tools in order to inform pedagogical practices in language teaching and learning with relevant and situated materials.

Theoretical Background

To examine the semiotic practices associated with PowerPoint use, this study employs a social view of literacy and a social semiotic theory of multimodal meaning making. These theoretical views complement each other in examining the presenter’s slideshow design by shedding light on specific semiotic decisions in relation to the meaning maker’s interests and the contextual demands and constraints which shape and affect the meaning-making process. A social account of literacy views people’s engagement with reading and writing as social practices that can only be understood in relation to specific social and cultural contexts (Barton, 1994; Barton & Hamilton, 1998; Street, 1993). Two important concepts are relevant to this investigation. The first concept is related to communities of practice which are defined as “the basic building blocks of a social learning system” (Wenger, 2000, p. 229). These communities are characterized by their members’ mutual engagement with other members in specific activities. They engage with a wide range of “routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts” that form the repertoire of the community and distinguish it from other communities (Wenger, 1998, p. 83). Despite their shared nature, these elements are still open for new uses and interpretations and community members may choose to embrace or ignore them for a variety of purposes.

The second is related to identity construction. Within a community of practice, the identity that members foreground or background is crucial to their membership in the community (Wenger, 2000). Identity can be defined as “the way a person understands his or her relationship to the world, how that relationship is constructed across time and spaces, and how the person understands possibilities for the future” (Norton, 2013, p. 4). Within educational settings, identity issues are important because they shape how learners engage with others (Preece, 2018). An important theoretical concept in identity is related to learners’ engagement with imagined communities and their associated imagined identities. Imagined communities refer to “groups of people, not immediately tangible and accessible, with whom we connect through the power of the imagination” (Norton, 2013, p. 8). As these communities reflect the communities that learners aspire to join, “[a]n imagined community assumes an imagined identity” (Norton and Toohey, 2011, p. 415). This is because it may encourage learners to take specific decisions that would allow them claim membership in these communities. For learners, these imagined communities are as

real and as powerful as the real communities in which they engage and may even have a stronger impact on learners and their attitudes towards language use and learning (Norton, 2013).

To examine meaning making decisions in PowerPoint use in this study, a social semiotic approach is employed to pay attention to modes, semiotic resources and context as three important elements which shape how meaning is made in any multimodal ensemble (Kress, 2010). According to this approach, meaning making extends beyond the use of language alone to include a wide range of modes. A mode is “a socially and culturally shaped resource for making meaning” (Bezemer & Kress, 2008, p. 171). As modes are usually grouped in specific ensembles, they entail specific features and patterns of use which have been formed through culturally specific and regular uses in specific contexts (Kress, 2003). Semiotic resources represent the materials used to make meaning. They have “a meaning potential, based on their past uses, and a set of affordances based on their possible uses” (van Leeuwen, 2005, p. 285). Meaning makers, thus, may choose to highlight specific resources over others. For example, within the mode of ‘colour’, a meaning maker may choose to highlight specific resources in this mode over others, such as differentiation, intensity or purity. Finally, context is an important concept in this theory because it “may either have rules or best practices that regulate how specific semiotic resources can be used, or leave the users relatively free in their use of the resource” (van Leeuwen, 2005, p. 4). Meaning making is, therefore, closely connected to the specific contextual norms, expectations and demands of representation and communication and this appears in how meaning makers may choose to embrace, manipulate or resist specific choices according to their needs as active agents.

Methodology

This study draws on a doctoral study that is concerned with a specific literacy event in the College of Pharmacy within a major Saudi university. It relies on a number of ethnographically oriented qualitative data collection tools, such as observation, semi-structured interview, informal conversations, research journal and artifact collection. Because they facilitate access “to see how language practices are connected to the very real conditions of people’s lives” (Heller, 2008, p. 250), these tools are used to provide deep understanding of how the presenter under investigation uses PowerPoint as a semiotic technology to make an oral presentation and how specific choices help the presenter to strategically align with and deviate from common norms and practices in this context. For the larger study, ethical forms, detailed information sheets and consent forms have been given to different members of this community, including the presenter whose work is under analysis in this article. One interview has been conducted after presenting with this presenter who is called Layla (pseudonym) throughout this article and a copy of her slideshow has been obtained through email and has been discussed with her to examine her authoring decisions.

Analysis

This analysis starts by shedding light on the context, i.e the literacy event in which the presenter worked. After that, a brief overview of the presenter and her interests and priorities are discussed. Then, the analysis moves into looking at instances of textual practices in the presenter’s slideshow to examine scientific and underlying meanings in Layla’s presentation. These meanings will be discussed in relation to two specific modes in her slideshow: visuals and writing.

The literacy event

The literacy event under investigation belonged to a mandatory course, called Pharmacy Seminars 2 (PS2) in the College of Pharmacy at a major Saudi University. The course was offered to year-five pharmacy students. PS2 aimed at examining students' abilities to give longer and more specialized academic presentations. It also aimed at examining students' knowledge and professional practices at this stage of their development before graduating. Each PS2 presentation was carried out in English and was expected to last from seven to nine minutes. Presenters were expected to adopt formal semiotic choices that directly reflected the medically-oriented and academic nature of their course.

The presenter: Layla

The presenter whose work is investigated in this article, Layla, is a year-five undergraduate in the College of Pharmacy at the time of data collection. Layla chose to discuss substance abuse while specifically focussing on opioids dependence. Following the general guidelines in this course, Layla wanted to choose a topic that mattered to her audience. In addition to the teacher's directions, she believed that it was their ultimate responsibility as pharmacists to serve the communities in which they lived and worked by choosing topics that mattered to people. She used her presentation to balance her current position as an undergraduate under assessment with her view of herself as a professional in the field of pharmacy. She used her discussion of opioids dependence not just as a way to demonstrate her developing professional knowledge as a pharmacist by discussing available treatment, but also as a platform through which she could fulfil her responsibility as a medical professional who recognizes and addresses urgent health issues in her society.

Layla's topic represented an urgent issue in the society which, albeit its significance, did not seem to be well-understood. She believed that rather than being seen as patients who needed and deserved professional help, substance abusers were often stigmatized in the society as many families considered them as sources of shame that needed to be hid away, rather than acknowledged and properly treated. Layla felt that her colleagues in the College shared a similar attitude. Many considered this topic a depressing topic and they did not seem to appreciate its significance.

لما كنت أناقش البنات ((تقوم بتقليد زميلاتها)) "يا الله ما أحب دي المواضيع" كل واحدة تقول "لا ما نبغى نسمع زي كذا، ما نبغى نعرف".

When I discussed it with the girls, ((she imitates her friends)) "Oh, God I don't like these topics". Everyone says "We don't want to hear something like this. We don't want to know".

Although other presenters in this event often prioritized their colleagues' opinions and avoided topics which their colleagues found disturbing or unacceptable or simply did not like, Layla insisted on her topic. Rather than choosing a more favourable topic, she used her presentation as a way to provide an informative and medically-oriented discussion of opioids dependence while working, at the same time, to address common negative attitudes about substance abuse and raise awareness among her audience regarding substance abusers.

To achieve that, Layla used her presentation to represent and communicate different meanings. First, there were the expected, scientific meanings which appeared in her scientific framing of the discussion in terms of offering the definition of her topic, symptoms, diagnosis and treatment plan. Second, there were other less common meanings that related to Layla's reading of her audience view of the topic. Though these meanings were not usually discussed by other presenters in a direct way, they were important for Layla because they reflected issues that affected how the topic was to be seen and understood. Two particular meanings surface in this analysis: establishing the significance of opioids dependence as a socially significant issue and highlighting patients' suffering and plight. Among the potentially unlimited semiotic resources to make meaning, Layla used PowerPoint to author her slideshow in a way that supported her discussion of these meanings while aligning herself with the textual expectations and practices in her community. Her decisions were well-received by the teacher who positively assessed her topic choice and the organization of her presentation.

Layla's slideshow design

Layla's PowerPoint slideshow consisted of twenty-seven slides that generally followed the basic common design in this event (Table 1). However, unlike the other observed presentations in this event, Layla displayed three extra slides after finishing her presentation. These slides, described as 'coda' in this analysis, were shown after the thank-you slide during her discussion with the teacher. When asked to explain how she approached her slideshow design, she talked about her preference to rely on visuals more than writing or speech because she believed that visuals provided better opportunities for representation and communication of various meanings. This view was sustained by the course guidelines which encouraged presenters to wisely choose discipline-specific visuals that supported their discussions while requiring them, at the same time, to avoid extensive writing on slides. Overloading slides with writing jeopardized presenters' attempts to appear as professional speakers. This was also extended to the appearance of slideshow layout which was expected to align with the scientific nature of professional presentations in this academic context and avoid catchy images and clip arts.

Table 1. *Distribution of Elements in Layla's Slideshow*

Stages	Constituent Elements	Number of Slides
Setting up the Presentation	Introductory Display	2
	Title	1
	Outline / Logos	1
Introducing the Topic	Definition	1
	Opioids Dependence Description	1
	Brain Reward Pathway	2
	Physical Dependence	1
	Withdrawal Symptoms	1
Discussing Treatment	Introductory Display	3
	Diagnosis	1
	Available Treatment	7

Concluding the Presentation	Concluding Statement	1
	References	1
	Thank you	1
Coda		3

In Layla’s slideshow, semiotic choices related to visuals and writing generally aligned with common textual choices among other presenters in this event. Most of these choices were directly concerned with explaining the constituent elements of her slideshow. These choices were expected in this event in which representation of knowledge was directly assessed by the extent of its ability to explain discipline-specific information, such as definition, symptoms and medication’s dosages (Table 2).

These choices aligned with common textual practices in this event and sustained the discipline-specific nature of Layla’s presentation. For example, in stage 1, it was common among presenters to show the logos of the organizations and websites consulted while preparing their presentations, such as the World Health Organization and the Food and Drug Authority. Another example appears in stage 2 in which visuals helped to explain the definitions and symptoms of medical issues and show images of medications. In addition to offering a naturalistic display of information, visuals often offered an abstract sense of reality which is consistent with regular display of information in science (Kress and Van Leeuwen, 1996). They served to explain the scientific content in association with the presenter’s talk and the writing on each slide. These visual representations of reality were part of this professional community repertoire and that made them easy to read and understand by its members.

Table 2. *Examples of Discipline-Specific Use of Visuals and Writing in Layla’s Slideshow*

Stage	
1	
2	



Layla’s use of writing to support her discussion was also consistent with her colleagues’ use of this mode. As presenters were expected to minimize their use of writing on slides, writing served to offer a visual documentation of essential information. This documentation relied on condensed structures and key words to avoid overcrowding slideshows (Morell, 2015). Quantity was not the only important issue in writing. Consistency in colour, size and font was also important to support the scientific and academic nature of these presentations.

Yet, there were other semiotic choices that made Layla’s slideshow stand out among other slideshows because of their apparent deviation from common textual expectations and practices in this community (Table 3). Deviation in Layla’s slideshow did not result from lack of understanding of common norms and expectations in her community or a superficial desire to create a visually attractive slideshow. It was, in fact, an execution of specific, deliberate meaning-making decisions in her presentation that aimed to support her topic discussion. Concerned with the negative attitude that she observed among her colleagues in specific and the larger society in general, Layla adopted a series of semiotic choices that allowed her to address that negative attitude. She worked to prove the existence of the problem in the society, point out the drastic ramifications of not properly treating this issue and alleviate societal view towards substance abusers by presenting opioids dependence as a treatable medical issue while creating a more humane view of drug abusers.

Table 3. *Deviating Use of Visuals and Writing in Layla’s Slideshow*

Stage	Slide	Slide
1	2	

3 11 / 12



4 22

The Road Of
Recovery Will Not
Be Easy,
But It Will Worth
It

While it was common among presenters to choose scientific visuals to introduce their topics in stage 1, Layla used a slide in which the mix of visuals and writing was not directly connected to their profession. The second slide in the table above shows a centrally positioned extract from a local, Arabic newspaper in which the arrest of a drug smuggler by the local police is reported. The extract contained two visuals: the first shows the smuggler wearing the traditional Saudi outfit for men, with his eyes covered, and the second shows an x-ray of heroin-filled intestines which he used to smuggle the drugs. The extract in the slide is surrounded by photographs which relate to the shape, use and distribution of drugs. Unlike many of her colleagues, the photographs in this slide did not draw on opioids dependence as a pharmaceutical issue. The newspaper extract and the surrounding photographs represented reality through complex modality configurations by combining the naturalistic photographs with the abstractness of the scientific x-ray to highlight the legal and societal nature of her topic. This representation is best understood in light of the meaning maker's own reading of the societal attitude towards drug abuse which generally tended to dismiss the seriousness of the issue and question its gravity. As it was common among presenters in this event to prioritize their colleagues' views of their presentations, Layla's choices represented strategic decisions to ensure her ability to attract her audience and encourage them to consider the significance of this topic. For Layla,

أهم شي هنا جذب الانتباه اللي في البداية. بس أنا كنت أبغى أشير للجرائم اللي بتصير بسببهم و المشاكل القانونية و في أنواع. أهم شي إنهم ينتبهو معايبا في الشي اللي حاقوله.

the most important thing here is to attract attention at the beginning. I just wanted to point out the crimes that happen because of them and the legal problems and types. The most important thing is that they pay attention to what I am going to say.

While the meaning maker was against the negative attitude that substance abusers face in the society, she drew upon this negative attitude to introduce her discipline-specific discussion.

Another different, semiotic choice in the table above appears in Layla's slideshow in stage 3 in which she used two introductory slides to introduce her discussion of treatment. This stage

follows Layla's thorough scientific discussion of the definition and symptoms of opioids dependence in stage 2. While other presenters usually introduced this section by offering a list of available treatments, Layla created a multimodal ensemble that offered a sense of hope. In slide 11, a shining sun is shown in combination with a written title (How to overcome Opioid Dependence) in which the more commonly used 'treat' is replaced with 'overcome'. While 'treat' reflects the pharmacists' responsibilities in diagnosing and planning treatment, 'overcome' seems to place more focus on the challenges associated with this illness. This is further enhanced through the specific choices of font, type and size of writing which differ from other slides. While in earlier slides, the title was usually written in a smaller and more formal-looking font in orange, the title in slide 11 is written in blue with a larger size and various fonts. For Layla, these were necessary semiotic choices.

ليه سويت كدا؟ شفتي الصورة حققة الرجال المدمن؟ بعد كدا صورة الأعراض، الألم حققة الـ **physical dependence**، بعد كدا الـ **withdrawal symptoms**، الصور السيئة، هادي كل الأشياء محزنة و كئيبة، ففي النهاية ما في شي ما يمدينا نتخطاه (. في شمس، ندور على حل. عشان كدا، لكن لو سويته بكتابة كان طنشوه الناس.

Why did I do this? You saw the photograph of the addicted man? After that, the image of all the symptoms, the pain of **the physical dependence**, and then **the withdrawal symptoms**, the bad visuals, all of these things were sad and depressing. At the end, there isn't anything that we cannot overcome (. There is sun, we look for a solution. That's why, if I did that in writing, they would have ignored it.

These choices were necessary because of the messages that she needed to convey as a meaning maker to her audience. She felt that her earlier discussion of opioid dependence in stage 2 created a dim picture of the gravity of this issue, but that was a picture that she hoped to combat by creating visual connotations of hope.

In slide 12, Layla further builds on this idea by directly stating that 'THERE IS HOPE' 'Hope' was used instead of the more commonly used 'prognosis' in this event to complement her earlier choices. It is further enhanced by the two photographs shown in this slide. The photograph on the left shows a medium-shot, frontal angle of a faceless physician while the one on the right shows one of the local hospitals for treating substance abuse in Saudi Arabia. This photograph situates the discussion of 'hope' within the local context in which these presentations took place. This is further intensified by the writing of the Arabic name of the hospital 'الأمل', 'Al-Amal' which literally means 'hope' in English.

The photograph of the hospital with the Arabic script allows Layla to indirectly address her colleagues' doubts about the existence of this issue in their community.

أنا في البداية قلت لهم على إحصائية في أمريكا..... بس نحنا المشكلة عندنا في البلد، لكن كمان صح إنها موجودة بس في لها حل.

I told them at the beginning about statistics in America..... but we have this problem in the country. But although it exists here, there is a solution for it.

Rather than verbally stating this fact to her colleagues, Layla relied on these semiotic choices in her slideshow to draw their attention to what she viewed was essential in carrying out an informative presentation in this event.

Another uncommon semiotic choice appeared in Layla's conclusion in slide 22. While almost all of the other observed presenters in this event concluded their presentations through summary of main points, list of references and a thank-you slide, Layla used an effective sentence instead of the summary while keeping the references and thank-you slide. In slide 22, she wrote (The Road of Recovery Will Not Be Easy, But It Will Worth It). The sentence echoes her earlier choice in slide 11 in terms of font, size and colour and it seems to complement the meanings of hope to combat feelings of despair.

Closely connected to Layla's attempts to alleviate awareness among her audience regarding her topic are the three slides, i.e. coda that she displayed while discussing her work with the teacher (Table 4). These slides show scans of the treatment plan offered by one of the Saudi local hospitals to treat substance abuse.

Table 4. *Coda*

Slide 25	Slide 26	Slide 27
		

In addition to their irregular display after the end of her presentation, the Arabic script in which this plan was written further enhanced Layla's earlier choices. They supported her efforts to situate the discussion within the local community and drew her audience attention to the complexity involved and needed in treating substance abuse which extends beyond the knowledge or work of a single practitioner in pharmacy. When asked why she did not include these slides within the main body of her slideshow, Layla explained that she did that to avoid exceeding the seven-to-nine timeframe that governed presentations in this event.

Finally, examination of the semiotic choices in Layla's slideshow cannot be concluded without considering a recurrent visual that appeared as part of the basic outline of most of her slides. Layla included a small drawing at the right, bottom corner of twenty slides in her slideshow (Figure 1). The drawing shows a patient kneeling down on the floor with an oversized drug bottle lying on his/her back. According to Layla,

هادي الصورة إنو الإدمان عبء عليكي

this picture shows that addiction is a burden on you

Many other presenters included specific visuals in their slideshow outline to create slideshows whose outline was visually consistent with their topics. These visuals represented a variety of issues, such as medications, laboratory equipment and body organs. In Layla's case, however, the visual included in most of her slides helped her to further highlight patients' plight and suffering.

Looking at this drawing through the lens of visual grammar, the person is portrayed through an oblique angle which suggests power to the viewer over the represented participant in the drawing. Though Kress and van Leeuwen point out that the "difference between the oblique and the frontal angle is the difference between detachment and involvement" (2006, p. 136), it seems that the angle in this case appears to echo the distance that usually separates medical professionals from patients in which professionals observe and diagnose patients without necessarily prioritizing their identity. In line with her earlier-discussed semiotic choices, this consistently-used drawing connected all the other choices to highlight patients' suffering and agony. Thus, the small recurrent drawing in Layla's slides can be seen as combining detachment by backgrounding the identity of the patient and involvement by highlighting his/her suffering and pain to the viewer.



Figure 1. A small drawing consistently used throughout Layla's slideshow.

Discussion

This study hopes to contribute to scholarly research that work to "gain a better understanding of the way PowerPoint facilitates or constrains different knowledge structures and practices" (Zhao and van Leeuwen, 2014, p. 87). The analysis in this study approaches the presenter's use of PowerPoint as a semiotic technology based on the assumption that "what the meaning maker takes as criterial then determines what he or she will represent about that entity, or

how he or she will represent that entity, in making the sign” (Bezemer and Kress, 2015, p. 44). This means that understanding how semiotic technologies are used requires looking at specific instances of practice to examine meaning makers’ decisions and understand the motivation behind these decisions and their significance in order to explore potential possibilities for their use in language classes.

While language was without doubt essential in the presenter’s slideshow design to engage effectively in this literacy event, the analysis highlighted how language was used in combination with other semiotic modes and resources to help the presenter represent and communicate her knowledge through coordinating available PowerPoint-enabled resources to highlight what was considered essential for her discussion. Meanings primarily included the common and expected scientific meanings that presenters were required to discuss in this community to prove their growing knowledge and experience which appeared in discussing the definition, symptoms and treatment of opioid dependence. Yet, there were other less common meanings which the presenter in this event worked to explain and highlight, not through speech but rather through the semiotic affordances made available through PowerPoint.

Using a variety of semiotic resources in relation to visuals and writing enabled the presenter to address the contextual constraints that she identified in discussing her topic. They allowed her, for example, to bring to light the common negative and dismissing attitude towards substance abusers by indicating the gravity of the issue and its existence in the society. Moreover, they allowed her to highlight an aspect of their professional practice that was not commonly discussed by other presenters in this event which appeared in her focus on patients’ suffering and plight. As doctors of pharmacy, presenters were often more concerned with recognition of physical symptoms of diseases and ability to offer appropriate treatment plans. Patients’ suffering and plight were rarely discussed in a direct way. To avoid breaking these common textual practices, the presenter in this analysis generally aligned her slideshow with common norms and expectations to support her speech and discussion of the topic.

Yet, at the same time, she used specific resources in her slideshow to bring to light what appeared to be critical for her discussion. Her decisions in this regard were strategic to avoid jeopardizing the professional and academic nature of her presentation. In relation to language teaching and learning, Layla’s explanation of her meaning-making decisions puts emphasis on the importance of looking at our students as active agents, rather than passive recipients of automatic and fixed sets of rules and linguistic features. Since language learning represents an “interpersonal process situated in a social and cultural context and mediated by it” (Knowles, 2004, p. 2), it is important to look at how learners engage with available tools in different contexts, including the technologies associated with CALL. While it is important to continue experimenting with how CALL programs can be used to support language learning and teaching, it is equally important to seek to provide authentic understanding of how people engage with these programs in real life and to broaden our understanding of meaning making beyond language alone as we saw in this article.

One question here stands out in relation to language pedagogy: how can we benefit from such issues to inform pedagogical practices? There are many ways through which we can move engagement with CALL in language classes to providing a more integrated and meaningful use of

technology as a meaningful tool, not a fashionable toy (Bax, 2003). For example, we can work to develop awareness among different stakeholders that

‘language’ is just one among the resources for making meaning; and that all such resources available in one social group and its cultures at a particular moment ought to be considered as constituting one coherent domain, an integral field of nevertheless distinct resources for making meaning; all equal, potentially, in their capacity to contribute meaning to a complex semiotic entity, a text or text-like entity (Kress, 2011, p. 242).

Such understanding is important to provide authentic experiences to support learners’ language development by raising their awareness of how language is used with other semiotic resources.

We can also encourage critical thinking skills among learners to examine their meaning-making decisions. By giving them enough time to explore technological tools to come up with their own textual products and encouraging them to explain their decisions, learners can develop deep understanding of their contexts and their preferences in a way that allows them to analyse the required tasks and design their response to these tasks. This will eventually allow them to look at technology not as an end in itself, but rather as potentially invaluable tools while learning and using language.

Assessment practices in language teaching and learning should also be considered in using technology. While “the meaning of individual slides and relationships between adjacent slides cannot be interpreted in isolation from their interaction with the speech and gestures of the presenters” (Zhao, Djonov and van Leeuwen, 2014, p. 354), this analysis shows also that they cannot be adequately interpreted without considering their situated nature in specific communities and specific literacy events. As some of the presenter’s semiotic choices were not common in this event, these choices were understandable considering her interests and the situational needs she recognized. Most of the employed semiotic choices aligned with common expectations and practices and they were not negatively affected by the less common ones which did not seem to threaten the academic and scientific nature of Layla’s presentation.

In addition, these practices seemed to echo the many campaigns that students in medical colleges in this event participate in to alleviate awareness among the public regarding a variety of health issues and to improve the quality of health care in the society. In this case, while the presenter generally authored her slideshow as an undergraduate under assessment, the less common semiotic choices in her PowerPoint slideshow should not be seen as deviating from what she was expected to do. These choices should be seen through the meaning maker’s own explanation, i.e. strategic decisions taken to represent and communicate specific aspects of meaning which the meaning maker considered important and significant. These aspects can be seen as an indication of the identity stands that the meaning maker adopted while participating in this event which extended beyond direct engagement in her current community of under-assessment undergraduates to a more active engagement with her broader responsibility towards the society as a health professional and future responsibilities as a doctor of pharmacy.

In relation to technology use, pedagogical practices should be aimed at providing language learners with authentic and real engagement with meaning making. Learners should be encouraged to reflect upon and analyse their use of technology and reconsider the “the taken-for-granted idea that speech and writing have the capacity to make knowledge of all kinds ‘explicit’” (Bezemer and Kress, 2015, p. 65). Although it is not surprising that development of linguistic skills in relation to speech and writing are prioritized in language teaching and learning, this study suggests that they should be considered in relation to other available semiotic choices which meaning makers adopt to communicate with others. Rather than considering technology-enhanced semiotic choices as a way to create visually attractive texts or looking at them as a way to compensate for lack of mastery of the language as Morell (2015) points out, these choices should be examined as integral to the meaning making process that moves beyond language.

Conclusion

This article relied on a qualitative case study to examine how a female undergraduate used PowerPoint-enabled semiotic tools to represent and communicate knowledge in pharmacy. These tools were analysed to highlight the role that visuals and writing played in meaning making in a specific context in which language was not the only important meaning-making tool available to the presenter. While discussing how the presenter used PowerPoint-enabled resources to represent and communicate different meanings in this specific context, the article brought to light the benefit of examining how technological tools are used in different contexts and offered some suggestions to inform pedagogical practices in relation to language learning.

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Appendix

Transcription Conventions

Bold	Bold font is used to indicate a word that was spoken in English in the original talk.
(())	Transcriber's descriptions are shown within double round brackets.
(.)	A full stop between single round brackets is used to indicate a short pause.