Setting the stage(s) for English for Research and Publication Purposes: Authors, audiences, and learning the craft

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Abstract

The *stage* is an apt metaphor for how the ERPP community has come to understand research-based writing: research writing is of course a textual practice, but it is also inherently social, with both cognitive and affective dimensions. The aim of our paper (based on a plenary given at NFEAP in 2021) is to bring new insights to our understanding of these stages by presenting a few data examples derived from a task completed by a group of doctoral students in the sciences. The task was designed to foreground primarily social facets of writing: writing as genre performance on a specific stage, for a specific audience and as a form of situated, purposeful communication against the backdrop of the current knowledge within a field. Further, the task foregrounded writing as a form of development towards a self-directed, agentive and possibly creative adaptation of one's authorial choices. We present three main arguments: first, we show that a straightforward disciplinary framing of research-based writing may not be reflective of the hybridised, fluid and multidisciplinary audiences that our students write for; second, we argue that students need support in recognising this complexity and in developing rhetorical adroitness in order to write effectively; and third, we call for deeper engagement with well-established theories of learning such as self-regulation and metacognition to design tasks that investigate and promote student learning, and that encompass the social, cognitive and affective dimensions of genre performance.

Keywords: academic writing, writing for research, writing in STEM, genre pedagogy, interdisciplinarity, learning processes and metacognition.

Resumen

Preparando los escenarios para el inglés para fines de investigación: autores, públicos y aprendizaje

La metáfora del *escenario* es una metáfora adecuada para explicar cómo desde el ámbito del inglés para fines de investigación se ha llegado a entender la escritura basada en investigación: si bien la redacción de resultados de investigación es una práctica textual, también es inherentemente social, con dimensiones tanto cognitivas como afectivas. El objetivo de este artículo, basado en una conferencia plenaria presentada en el *Norwegian Forum for English for Academic Purposes* (NFEAP) de 2021, es ofrecer nuevas perspectivas acerca de nuestro conocimiento de esos escenarios a través de varios ejemplos procedentes de una tarea llevada a cabo por un grupo de doctorandos del área de ciencias. Esta tarea se diseñó de tal forma que fuera capaz de poner de relieve los aspectos sociales del proceso de escritura, entendido como actuación genérica que tiene lugar en un determinado escenario, para un público específico y como forma de comunicación que se produce en una situación concreta y con un fin determinado respecto al conocimiento disponible dentro de un campo. Además, la tarea hizo hincapié en la interpretación de la escritura como una forma de desarrollo hacia una adaptación autodirigida, agentiva y, en cierta manera, creativa de las propias decisiones del autor. En este artículo se presentan tres argumentos principales: en primer lugar, mostramos que enmarcar claramente la escritura basada en investigación dentro de los límites de una disciplina concreta puede implicar que no queden bien representados aquellos lectores multidisciplinares para los que nuestros estudiantes habrán de escribir y que evidencian una mayor hibridación disciplinar; en segundo lugar, consideramos que los estudiantes necesitan ayuda a la hora de reconocer esta complejidad y de desarrollar una habilidad retórica suficiente para escribir con eficacia; por último, abogamos por un mayor compromiso con teorías establecidas del aprendizaje como la autorregulación y la metacognición para diseñar tareas que investiguen y promuevan el aprendizaje de los alumnos y que abarquen las dimensiones sociales, cognitivas y afectivas de la actuación genérica.

Palabras clave: escritura académica, escritura para fines de investigación, escritura en CTIM, pedagogía de géneros, interdisciplinariedad, procesos de aprendizaje y metacognición.

1. Introduction

Our point of departure for this paper is the metaphor of a *stage*[1] as a way of thinking about how the English for Research and Publication Purposes

(ERPP) community has come to understand research-based writing, a textual practice that is also inherently social (Curry & Lillis, 2008; Hyland, 2015; Tardy et al., 2020), with both cognitive and affective dimensions (Casanave, 2019; Castelló et al., 2013; Devitt, 2015; Roderick & Moreau, 2020; Sala-Bubaré et al., 2021). Publishing is the stage, and academics are actors performing genres to audiences who have expectations based on a familiarity with those genres and the rhetorical contexts in which they operate. Stage can also pertain to the series of stages of writer development, the processes through which the academic writer acquires the ability to perform and have agency when writing for different audiences and in different contexts.

In this paper, we look closely at this stage and these stages, the actors and their audiences, and make three key points derived from an amalgamation of our previous research (Kaufhold & McGrath, 2019; McGrath, 2015; Negretti, 2017, 2021; Negretti & McGrath, 2018, 2020) and illustrated by new data. First, we show that a disciplinary framing of research-based writing is not necessarily reflective of the hybridised, fluid and multidisciplinary groups that our students write within. Second, we argue that students of writing for publication need support in recognising the complexity of their writing contexts and in developing a rhetorical dexterity to enable them to write effectively. Thirdly, we show how engagement with well-established theories of learning such as metacognition and self-regulation (SR) can help ERPP teachers and researchers to design tasks that investigate and promote students' development as effective and adaptive research writers. In sum, we explore how the metaphor of stages can illuminate aspects of learning and teaching writing for publication, at least in the way we interpret it in our work. In this paper, we present the theoretical foundations of our work, provide an example of a practical task that we have created (see Appendix) based on these theoretical pegs, and provide illuminating extracts from the data we have collected.

2. The social nature of writing: Stage, actors and audience

As indicated in our introduction, there is now substantial agreement that writing is a socially-situated practice (Curry & Lillis, 2008; Hyland, 2015); academics write research articles for a specific audience who share certain expectations and standards for knowledge construction and verification, and

what constitutes a contribution to the field (Swales, 1990). These shared epistemological expectations naturally invoke the concept of discipline. Indeed, discipline continues to dominate framings of genre investigations of writing for publication, as evidenced by multiple and recent papers in English for specific purposes journals such as *Ibérica* (e.g. Cheung & Lau, 2020; Kathpalia & Khoo, 2021; Le & Pham, 2020). In writing studies, we talk often about disciplinary communities, designated by Swales (1998) as "near cousins" of discourse communities, to characterise the audiences of research genres. Hyland's work has led the charge –for him, "discipline is the key factor influencing publishing behaviour" (2015, p. 68). 'Discipline' then, as a conceptual category, could be said to have almost hegemonic status in ERPP research.

Nonetheless, discipline is a slippery notion (Trowler et al., 2012). In fact, some have argued that conceptualisations of disciplines as "intellectual arenas" are outdated (Wallerstein, 2003, p. 454), and that a focus on discipline is at odds with "the dynamic disciplinary and interdisciplinary areas of the contemporary university" (Manathunga & Brew, 2014, p. 45). Disciplines are important organisational structures for university management, and they do of course exist within departments, associations, and publication outlets (Krishnan, 2009). But while in the 19th and 20th centuries, researchers tended to work within bounded disciplinary spaces (Manathunga & Brew, 2012) it has been shown that many academics do not in fact affiliate strongly with a specific discipline when it comes to scholarly publication, but rather identify their work as part of an interdisciplinary field. Affiliations are like Russian dolls –scholars work within a field within a field within a field or, alternatively, academics position themselves at the confluence of disciplines. Kaufhold and McGrath (2019) in their work on academics in the humanities found that disciplinary affiliation was idiosyncratic, multiple, interdisciplinary and shifted over time. Instead of focusing on discipline, participants in that study identified group memberships in terms of research interests, and their audiences were interdisciplinary and transdisciplinary networks. To further muddy the waters, amalgamate disciplines such as Chinese Studies have also emerged (see Kuteeva & Negretti, 2016).

Another important aspect of understanding the stage, actors and audiences involved in writing for publication is the relationship between the academy and industry. One of the pillars of the so-called 'knowledge economy'— defined as "the production and services based on knowledge-intensive

activities that contribute to an accelerated pace of technical and scientific advance" (Powell and Snellman, 2004, p. 199)—is strong collaboration between public and private research organisations. These collaborations can be said to deal in "Mode 2 knowledge" (Gibbons et al., 1994). It needs to be noted that theorisations of disciplinarity do not always align –for an alternative conceptualisation, we refer the reader to Bernstein's distinction between 'singulars' and 'regions' (2000, p. 52).

In broad terms, Mode 1 knowledge refers to knowledge that is generated within a particular discipline of the academy, arising from a research agenda that is set by the discipline, and validated according to the standards of that discipline. The data generated is said to be 'context free' in that the research problem or design are not necessarily conceived of in relation to a real-world context or problem. Mode 2 knowledge on the other hand is said to be rooted in a context of particular application (for example, in a specific industry, one might ask: what could make this product more effective or this process more efficient?). In this sense, the knowledge is directly and immediately relevant to practitioners and other applied stakeholders. Therefore, unlike Mode 1 knowledge that is deeply rooted in the discipline, Mode 2 knowledge is often interdisciplinary, multidisciplinary, or transdisciplinary, and, as pointed out by Trowler (2014), often context-dependent and "local" rather than disciplinary. Teams work together on a temporary basis, resulting in knowledge production that is characterized by heterogeneity and organisational diversity. Whereas Mode 1 knowledge verification is the job of the discipline, Mode 2 knowledge is judged in terms of its application and from the perspective of the different stakeholders involved (Nowotny et al., 2003).

This scenario brings us to our second point. Clearly, as teachers of writing for publication, we need to foreground the social nature of that writing if we are to support students in recognising the complexity of their writing contexts and in developing a rhetorical dexterity to enable them to write effectively within those contexts. Departing from a disciplinary and primarily textual perspective (i.e. engineers write research articles in this way; these are the conventional features of research articles in engineering) will not work if our students do not have fixed disciplinary identities (Kaufhold, 2017; Kaufhold & McGrath, 2019) and are working in temporary, interdisciplinary applied teams, writing for an inter- or trans-disciplinary audience. In engineering, for example, students may need training in producing complex genres that address readers beyond academia and that blend academic and

professional/digital discourse (Sancho Guinda, 2020). Attention to the social context is perhaps especially crucial when we work with multilingual scholars and students, whose access to international publication practices in English is often constrained by a variety of limitations in terms of research networks and literacy brokerage (Curry & Lillis, 2008). As Curry and Lillis argued more than 10 years ago: "Our research highlights *the need to go beyond a focus purely on texts in designing materials* to support the English-medium professional academic text production of scholars and postgraduates, *towards an approach that foregrounds social practices*" (2008, p. 324, emphasis added).

Hence, there is broad agreement that it is a good idea to foreground social practices. However, knowledge of these social practices is often tacit, inherently implicit in expert knowledge. The key question is then, what kind of tasks can we develop to help ERPP students and lecturers (and indeed supervisors and subject lecturers) *become aware* of the social practices that surround writing for publication? We argue that this can be achieved without relinquishing a focus on text or subject-matter knowledge, and by fostering important drivers of learning such as self-regulation and metacognition.

3. Learning the craft: Examples from students' assignments, in trans- or interdisciplinary contexts

We focus here on a *Writing Context* task (Appendix) that was designed to foreground the social dimensions of writing for research: writing as performing a genre on a stage, for a specific audience, writing as a form of situated, purposeful communication against the backdrop of the state-of-the art knowledge within a field or sub-field. This task is the initial capstone assignment in a writing for publication course, attended by doctoral students in Science, Technology, Engineering and Mathematics (STEM). The aim is to start the course by foregrounding the social aspects of research writing, and in a sense to 'set the stage' for each student by scaffolding them to think about: who are they writing for? What characterises their audience? How do they perceive/define their own positionality in the field? What do they see as a successful genre performance in their specific context – what strategies are they using to appeal to that audience?

In this section, we connect the Writing Context task to our discussion about social practices in research writing and their connection to discipline (for further studies on social and disciplinary practices surrounding doctoral

writing, see also González-Ocampo & Castelló, 2018; Moore & Schleppegrell, 2020; Negretti & McGrath, 2020; Negretti, 2021; Paltridge & Starfield, 2020; Park & Schallert, 2019). The data extracts we present are drawn from the assignments written by students in various iterations of the course, over a period of 2 years. We will show excerpts from four students (out of 33 participants), to illustrate how the task may have prompted them to reflect on audiences and themselves as actors on the research stage. These students were chosen as focal participants as their responses to tasks flagged a very strong transdisciplinary or interdisciplinary dimension in their writing contexts, and provided compelling insights pertaining to our study focus. P1, an Applied Physics student half-way to the PhD, was working in a very specialized field that dealt with the manipulation of light and its ability to interact with matter, with potential applications in quantum computing, among others. By their own admission, this research transcends a specific discipline, having "gained a lot of interest in several research communities, everything from fundamental physics to applied physics and chemistry as well as pure theoretical research groups" (P1, Writing context assignment). P2 was a doctoral student mid-way towards a PhD in Energy Technology, in the already rather interdisciplinary department of "Space, Earth and Environment". The focus of their research—C02 capture—brings together researchers from a variety of disciplinary backgrounds (from Geology to Policy-making), and often occurs in a collaborative nature with industry partners. Working in Applied Mechanics, P3's research exemplifies the close interaction between academia and industry that is typical of much engineering research (what we associate with Mode 2 knowledge). This hybrid identity was immediately foregrounded in the first line of their Writing Context assignment: "As an engineer working within the automotive industry, I do research on new technologies for improving the efficiency of automobiles" (P3, Writing Context). P4, from the department of Microtechnology and Nanoscience (in itself a rather diversified "discipline") also exemplified this connection with industry, but in addition to that, clearly staked out the relevance of their research for different fields, associated with different goals and methodological approaches.

It is very clear from the focal participants' data that these students do not write to a discipline, but typically have interdisciplinary, hybrid academic/professional, experimental/theoretical audiences. This task elicited considerable variety in the type of readers that students typically

address, and for the most part students seemed aware of the multifaceted nature of their audiences.

For instance, for P1, the audience follows what we have called 'The Russian doll' model, referring to smaller and more specialized audiences of fields within fields. Notice how P1 explicitly *positions* their work, and identifies an element of *interdisciplinarity* within it:

> Within Photonics, a distinction is made between devices that manipulate light at microscopic or macroscopic length scales. At macroscopic length scales, e.g., the manipulation of light with lenses and optical fibers, the averaged material properties of the device, such as its refractive index, are important. This subfield of Photonics is often referred to as **Optics**. At microscopic length scales, e.g., integrated optical chips and small optical antennas, the specific geometry of the material and its microscopic material properties are important. Due to the small length scales involved, this subfield of photonics is also known as **Nanophotonics**. My research provides a bridge between Optics and Nanophotonics. (P1, bold in the original)

The same student then explicitly connects the field with audiences (researchers and journals). The following paragraph is quoted in its entirety because it concludes with an "aha" moment (a metacognitive experience, cf. Metcalfe & Schwartz, 2015), triggered by writing the task:

> Our research targets an audience with a **diverse scientific background**. Physicists may be interested in the theories and concepts underlying a particular metamaterial design while engineers may be interested in the fabrication process and the specifications of the device. This diversity is reflected in the journals that metamaterial research appears in. Metamaterial research is often published in **high-end journals** when new concepts or fabrication techniques are discussed, such as Science, Nature (Photonics, Physics and Nature Materials), PNAS and Physical Review Letters. Other contributions either appear in **physics journals** which tend to focus on the conceptual and technical progress in the field, e.g., European Physical Journal (QT), New Journal of Physics, and Journal of optics, or they appear in **applied physics and engineering journals** such as Physics Applied, IEEE (Microwave and Antenna propagation, Quantum electronics), European Physical Journal (QT) and Physical Review Applied. Finally, because of field is evolving very rapidly and involves many engineering disciplines, progress if regularly **highlighted** in Reviews in Modern Physics, Optics and Photonics, etc. Good mapping of the field! (P1, bold in the original)

Similarly, P2 highlights how the field in which they work comprises a broad spectrum of specializations, describing both the "broad and the "specialized" research field:

> My broader research field is about carbon capture and storage (CCS). This academic topic is rather 'densely populated' since it deals with mitigating global warming –a major challenge in the 21st century. Amongst others, it comprises research in capture technologies (the means of how to separate/collect CO_2 from its sources), mapping and simulation of geological storage locations or other long-term storage media, cost calculations, policy making, and application of CCS in various fields of industry (e.g. heat and power generation, oil and gas, other producing or process industries).

> The specialized area I see myself involved in deals with partial capture, where only the most cost effective part of the total CO_2 emissions of an industrial source is separated for storage (usually significantly less than 90 % of the CO_2). The industrial CO_2 sources I focus on are Nordic industries (e.g. pulp & paper, cement production) and predominantly iron & steelmaking. (P2)

On the other hand P3 indicates working at the intersection of two different fields, and notices differences in form as tied to the different parts of the research:

> To start with my first field in high temperature thermoelectric modules it comprises of several parts, where I'm doing some kind of research at least. The research has two distinct parts to it, the synthesis of materials and the fabrication of modules. The synthesis is not my main field but my previous publication did have a synthesis part with completely different type of language, writing I was not familiar with before. (P3)

The same student's description of their research field potentially foregrounds what we interpret as Mode 2 knowledge, where the focus is the problem and the scientific contribution to the solution comes from a variety of fields (including industry):

> Not sure right now who will be my target audience but I'm sure that at least the aerospace industry will be interested. As an engineer working within the automotive industry, I do research on new technologies for improving the efficiency of automobiles. Due to environmental concerns and government legislations, there are many researchers from different backgrounds that are working on HEVs. (P3)

In terms of their own position in the field, these quotes also illustrate that while most students depart from their scientific contribution (the subject-matter) in describing their writing context, their links to other researchers are often foregrounded. In other words, writing this assignment prompts students to reflect on their role on the stage of their research context. In addition, students' reflections on audience, readers, and the contribution of their own work within the field facilitate a metacognitive awareness of what this means for their own research writing: set goals and plan their submission, monitor their expressions of novelty and contribution, and foreshadow the potential strategies that research writing for specific journals/audiences may entail. For example, P1 reflects on what it would mean to address readers outside their own specialized area (theorists vs. experimentalists):

> For me, the difficulty will consist in providing a sufficiently broad introduction and accessible description of this technical work. Also, being slightly outside of the field, the introduction and state-of-the art will be the hardest part. (P1)

This reflection brings about metacognitive awareness of the rhetorical strategies required to appeal to the audience, tying anticipated audience expectations to the way they structure their writing and drawing on genre knowledge (see Tardy (2009) and Tardy et al. (2020) for a conceptualisation of genre knowledge, genre awareness and metacognition) where conventions have been established.

> First, a broad introduction should cover the use of optical forces in science (optical force community), optical forces in artificial materials (nanophotonics community) and tunable metamaterial designs based on optical forces (metamaterial community, nonlinear physics). In the conclusion of metamaterial papers, it is also common practice to comment on the challenges related to the fabrication of the structure and the appearance of losses. Overall, the conclusion should appeal to the metamaterial community in general, from theoretical physicists to material scientists and experimenters. (P1)

In the same manner, other students reflected on the challenges posed by the varied background of their audiences, and what that means in terms of performing the genre. For example, P2 shows metacognitive awareness of rhetorical strategies tied to the multidisciplinary background of their audience.

The participants of this conference are likely to be the main audience for the article and will have a diverse background in CCS (see topics mentioned above). Other likely readers are partners in the project I am involved in, on cost-cutting for process industries. The broad and quite multi-disciplinary background of the readers requires a distinct and clear definition of the paper's scope. This point is likely the most important to be made, since the paper's nature will be 'work in progress' and may not deliver a great leap in novelty or constructed knowledge. In the conclusion part, it will be crucial to motivate future work with help of the results and establish a border between other fields of research (e.g. general design of absorption processes from an industrial source). (P2)

The student 'on two stages', P4, also recognizes the need to play a different role and plan the contribution according to the target journal saying:

I also do some work with completely different fields, mainly in high frequency antennas. Because my work so far has been purely practical I have not yet seen any similar research articles in 3D printing, and only a few about antennas. I can however guess that this "field" as well is two widely different fields with two different groups. My plan is to write these articles as 3D-printer articles if the breakthrough is 3D-printing and as antenna articles if the breakthrough is antennas. (P4)

Similarly, P3 reflects on their own contribution to the field and how to make that contribution salient vis-à-vis current practices in research publication in their context:

I have noticed that most of the research papers usually focus on one thing, for example testing a certain part, algorithm or configuration in a few operating conditions or comparing different technologies under one driving cycle… I plan to test different control algorithms and variations in the configuration to see their benefits with respect to other technologies under multiple driving conditions. This will allow my research to look into these technologies from a broader perspective. I will be conducting both simulations and experimental work as well, which can further widen the perspective and accuracy of my findings. (P3)

As we have shown in this section, in response to the *Writing Context* task, the focal participants described the multifaceted nature of their audiences – disciplinary, interdisciplinary and hybrid. The task also fostered their metacognitive awareness of what this characterisation means for their writing– both in terms of the writing challenges they face and the strategies they employ.

4. Stages of development in genre performance: Self-regulated learning and EAP/ERPP

Having discussed some examples from the data, we now turn to our third point: the metaphor of stages also brings about the idea of development and learning. As we have attempted to show thus far, in relation to learning to write for academic audiences, stages evokes two dimensions:

- *Stages* as a metaphor for context, and the need to help students develop the metacognitive knowledge necessary to recontextualize their writing knowledge across different stages – their shifting writing contexts and heterogeneous audiences.

- *Stages* of development – how students can be taught to become self-regulated, independent academic writers.

These two aspects are somewhat inherent in the concept of *recontextualisation* proposed by Cheng (2007, p. 303), as "learners' abilities not only to use a certain generic feature in a new writing task, but to use it with a keen awareness of the rhetorical context that facilitates its appropriate use". Recontextualisation entails that the development of academic writing expertise, and thus a learning goal of academic writing pedagogy, is to develop the ability to perform– and take agency –across a variety of rhetorically recurrent situations (Miller, 1984). To be clear, as Tardy et al. (2020, p. 15) point out, "rhetorical situations do not themselves recur; rather, it is the *perception* of recurrence or similarity that leads people to respond in similar ways." Thus, in this regard, we can again consider the idea of stages as a plural, the many types of social situations and audiences that the same genre may serve, or that require different genres and, at times, languages.

As theorized further by Tardy et al. (2020) as well as others (Driscoll et al., 2019; Negretti, 2021; Novacek 2011), the process of recontextualization or transfer, especially as learners develop, requires metacognition: the awareness of what you know, including how to adapt your knowledge to different situations, as well as the ability to plan, monitor and control how you learn. Tardy (2020) and her colleagues view both genre awareness and metacognition as referring to a broader, conceptual understandings of how genres can be used (independently from language), and argue that genre awareness can be considered as a specialized, writing-specific type of

metacognition, necessary for recontextualization against the backdrop of varied social contexts.

We have consistently argued in our work (McGrath et al., 2019; Negretti & McGrath, 2018; Negretti & McGrath, 2020; Negretti, 2021) that metacognition –metacognitive awareness of genre-specific knowledge– is crucial in the development of writing expertise, and therefore it should be deliberately included in writing pedagogy. We acknowledge that in this, we are not the first: Beaufort (2007, 2012) raised the metacognitive dimension of writing in her theorization of expertise, and, together with Iñesta (Beaufort & Iñesta, 2014), highlighted the need to make explicit learners' knowledge about how to write –and how to regulate (or self-regulate) their writing process (Castelló et al., 2013).

In brief, metacognition theory can be summarized as follows (from Negretti, 2021, p. 171):

1. *Metacognitive knowledge* (also called metacognitive awareness).

   This comprises:

   a. Declarative knowledge: Being aware of possessing a certain type of knowledge, including the self, types of tasks, domain knowledge. It can be verbalized.

   b. Procedural knowledge: Being aware of processes and actions to tackle a specific task –the "know how." Often acquired implicitly through experience and automatized, and learners may benefit from making it explicit.

   c. Conditional knowledge: Being aware of when and why certain aspects of declarative and procedural knowledge are relevant to a specific task and its conditions and, thus, a prerequisite for an effective use of declarative and procedural knowledge.

2. *Metacognitive regulation*

   Metacognitive regulation refers to metacognitive forms of thinking that power self-regulated learning (Winne & Azevedo, 2014), from monitoring progress and identifying faults, to controlling cognitive activities such as planning and goal setting in light of task conditions, to evaluating one's performance.

As pertinent to our argument, the reader may notice that the definition of conditional metacognitive knowledge – comprising of knowledge about task conditions as socially situated – brings us back to the notion of *stages* and *recontextualization*, and specifically the ability to adapt and perform across different stages (or task conditions in metacognitive terms).

5. The implications of metacognition for ERPP writing pedagogy

The key question here is, what are the implications of metacognition for writing, and for writing pedagogy? A recent paper by Negretti (2021) investigated the common aspects of writing that doctoral students in STEM are metacognitive about, and raised three specific theoretical points that are particularly pertinent to writers: First, writers with different backgrounds and experiences may hold different and/or inaccurate declarative metacognitive knowledge about writing (Dunning et al., 2003), and may need help in developing accurate metacognitive knowledge of expert writing. Second, procedural knowledge (the know-how) is often implicit (see Beaufort & Iñesta, 2014): students may not be aware of what they are doing, or whether it is effective, and may benefit from tasks that foster conscious and explicit attention to these processes (Winne & Azevedo, 2014). Finally, research writing is highly sensitive to contextual dimensions: strategies that may work for some students may not work for others, or for all situations (Dunlosky & Rawson, 2019), making it important to develop tasks that can promote conditional metacognitive knowledge (i.e., knowledge of why certain strategies are relevant to the specific situation) of ERPP practices.

Metacognition and the ability to self-regulate one's learning (and writing) are thus empowering, but they require scaffolding. As Zimmerman (2000, pp. 24-25) writes:

> "Even with the seemingly solitary and highly personal craft of writing, there is abundant evidence (Zimmerman & Risemberg, 1997) of the value of social and physical environmental regulation techniques, such as emulating the styles of exemplary models, soliciting assistance from teachers or confidants, and restructuring the writing setting. … The social milieu influences self-reflection processes in a similar fashion to forethought and performance phase processes."

We end our discussion with some provocation. First, this paper has dealt with concepts from Educational Psychology, Education and Higher Education research. Why should the ERPP community borrow from theories or concepts from other fields? It is true that a variety of terminology in writing studies has been used to describe stages of learning and development of genre dexterity but how solid is our research evidence when it to comes to effective learning? In our view, we in the ERPP field may benefit from more theoretical and conceptual clarity when specifically investigating learning. This leads us to our second point, i.e. the implications of these theories for practice. Robinson and Levin (2019) in their chapter titled 'Quackery in Educational Research' state that: "When researchers make recommendations for practice, they are "selling" an intervention." (p. 37). We concur that the promotion of pedagogical approaches necessitates a critical perspective on the evidence base drawn. A question we may ask ourselves is thus whether we sufficiently scrutinize our ERPP-pedagogy research: to what extent can we say that our knowledge of best practices for teaching ERPP is based on "replicable, scientifically 'credible' evidence." (Robinson & Levin, 2019, p. 35)? What evidence do we have about ERPP learners' *generalities* (Bazerman, 2018) when it comes to research writing?

On this point, much can be learnt from a field like Educational Psychology that has accrued evidence about effective learning and teaching for decades now. While we may indeed need field-specific terms, theories of learning can actually bring a degree of simplification to teachers, when planning tasks –such as the 'Writing Context' task described here– and to researchers, when trying to examine what our students are learning –particularly learning beyond the textual dimension, encompassing the cognitive and affective dimensions (Teng & Zhang, 2020, 2021). Concepts such as metacognition or self-regulated learning may also give us an evidence base for what works, for whom, and in what circumstances.

Finally, we return to the discussion at the start of our paper – the theatre of writing can be interdisciplinary and transdisciplinary in the construction of Mode 2 knowledge: learning to write for publication is a real-world, multi-faceted problem, which, as we have shown, can lend itself to interdisciplinary and perhaps even transdisciplinary thinking and working –situating ourselves, as the students in our study do, at the intersection of fields. In the case of ERPP, the confluence of fields such as Applied Linguistics, Educational Psychology, and Higher Education could reap rich rewards.

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NOTES

1   The metaphor of "stages" was the theme of the 2021 Norwegian Forum of English for Academic Purposes conference, where this paper was originally delivered as a plenary.

Appendix

Your academic writing context

Provide a short account in which you describe your writing context, i.e. the research field or subfield in which your writing is situated—your "territory"—and how your work contributes to this scientific community.

First, besides broader aspects of the field, you should also describe the specialized sub-field that you aim to address in your writing, and possibly even the journals or publication outlet(s) that you are considering for your article: who are you writing for? How much do you know about your audience? What are the most relevant topics and areas of research that are currently investigated? What kinds of expectations will your reader have about your text?

Then, describe how *you* as a writer fit into this scientific community: what is your research about, and how, in some way or another, does it contribute to generating more knowledge for your target audience? Why is your work relevant for this scientific community, either in terms of theory/methodology, or in terms of problems and issues with previous findings? This text should be written for a fairly general readership, but try to make the analysis of the audience as specific and concrete as possible (e.g. the readership of a specific journal or specialized area vs. the field as a whole).