Input in study abroad and views from acquisition: Focus on constructs, operationalization and measurement issues: Introduction to the special issue

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Abstract
This article briefly discusses the notion of input in a study abroad perspective, situating it against how input is treated in second language acquisition (SLA) more broadly, with a focus on methodological issues, operationalizations, and measurements. It further introduces three studies that examine input as studied in ‘the real wild’, and two studies that instead focus on ‘the digital wild’.

Keywords
input, measurement, method, study abroad, tasks

I Input in second language acquisition (SLA) and in study abroad
A common assumption about language learning in the study abroad (SA) context is that sojourners receive large amounts of high quality input and that they are presented with numerous opportunities to interact in the target language during their stay abroad. However, this assumption has rarely been studied empirically and may in fact be too strong. More than a decade ago Collentine (2009: 277) called for the collection of more

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primary data on language exposure during SA, but observed that ‘no concerted research agenda exists either in theory or practice to control the amounts and types of input and interaction learners receive in the SA context.’ Tullock and Ortega (2017) painted a very similar picture in their scoping review of 136 studies in the field of SA.

In second language acquisition (SLA) research, input and its role for language learning has been documented, discussed and researched for many decades (e.g. Krashen, 1985), and all current theories of SLA assume that languages are learned on the basis of input (for a discussion of input in SLA, see Carroll, 1999, 2001). This is true of both cognitively oriented theories such as the usage-based approach (Wulff and Ellis, 2018) or approaches based on Universal Grammar (Rothman and Slabakova, 2018), and of socially oriented theories such as socio-cultural theory emphasizing the situated nature of language learning and the role of the context (van Lier, 2004). However, depending on the specific theory, the definition and the relative importance of input will obviously vary, especially with regard to the linguistic domain where it is assumed to matter most (e.g. lexis vs. syntax). In this perspective, the SA setting is potentially interesting since it offers the possibility of studying both the social and the cognitive dimensions of input. In fact, prior to a moment where sojourners actually find themselves in a situation where they are negotiating for meaning in a face-to-face conversation with native speakers – a potentially favorable situation for language learning (VanPatten, 2004) – a number of social events mitigated by interpersonal factors (Collentine, 2009) will have had to occur. The sojourner will have to have been accepted as a member of a social group (Goodwin and Goodwin, 2004) in order to participate (Firth and Wagner, 1997) in an activity (van Lier, 2004) where interaction is a key element resulting in rich and repeated exposure (Bybee, 2008) to the target language and ultimately leading to input and possible intake (Carroll, 2001). In theory at least, the SA setting thus allows researchers to study the long and winding road from membership to input.

The SA setting also provides researchers with rich opportunities to study the multimodal aspects of input that have received increasing attention in SLA research in recent years (see, for example, Gullberg, 2022; Peters and Muñoz, 2020). In real life settings, whether it is in the real world or in the digital world, input will always be multimodal. Gestures, moving images, pictures captions, etc. will accompany spoken and written language in complex combinations. The SA setting allows researchers to empirically study the potential of multimodal input for language learning.

In practice, the study of each of these different facets of input will require different methodologies. An obvious prerequisite for valid and reliable observations, documentation or measurements of qualitative and quantitative multimodal input in SA contexts is the existence and availability of research methods and instruments of high precision designed for the task. Input and its measurements are currently prominent on the research agenda in SA research, but also in language acquisition research more generally (Ellis, 2009). In a time when research agendas are emerging in SA research (Duff, 2019; Taguchi and Collentine, 2018), SA researchers could look to existing work in both first and second language acquisition studies where attempts have been made to address the problem of capturing input empirically.

For a long time, research on first language (L1) acquisition has been concerned with the detailed measurements of the ambient language of the infant child (Lieven, 2010,
Granfeldt et al. 2019; Van de Weijer, 1998) or of child-directed speech using methods of dense corpora (for an overview, see Lieven, 2019; see also Behrens, 2006; Rowe, 2012). With the introduction of wearable recording devices (see the LENA system; Soderstrom and Wittebolle, 2013) day-long recordings of children in their own home environment were made possible, resulting in rich and shareable data sets (e.g. HomeBank; VanDam et al., 2016). Research on early bilingualism has devoted considerable efforts to both construct definitions of input at different levels (Paradis et al., 2014), and to its measurement through repeated and detailed parental questionnaires (e.g. De Houwer, 2009; Unsworth, 2013).

In research on adult SLA, attempts to study the effects of input on acquisition outcomes is found in many sub-domains, such as in the study of implicit and incidental learning, which includes studies of statistical learning (e.g. papers in Rebuschat and Williams, 2012), and first exposure studies in controlled settings, both experimental and classroom based (e.g. Dimroth et al., 2013; Gullberg et al., 2010; Rast, 2008), but also in a range of domains of L2/bilingual processing where psycholinguistic and neurocognitive techniques are used to probe which aspects of input are processed by learners using tasks ranging from priming to neurocognitive methods (e.g. papers in Godfroid and Hopp, 2022; Schwieter, 2019). In these studies ‘objective’ and quantifiable input properties (e.g. token and type frequency, form saliency, reliability of form–meaning mappings, distribution and spatial contingency) are carefully controlled in order to make correlations feasible between such features and any measurable learning. The qualitative aspects of input are less well addressed in this line of work. Interest in the effect of input, including in more qualitative aspects, is also found in more naturalistic studies of language learning ‘in the wild’ with a greater emphasis on interaction than input per se, and specifically on the role of learning in interaction (e.g. Eskildsen, 2018; Wagner, 2010), online (Sockett, 2014), or via media (e.g. Pujadas and Muñoz, 2019).

II The contents of the special issue

This special issue brings together scholars working on input in different domains of language acquisition and SA in order to broaden the current understanding of the input construct(s), and to take stock of documentation, operationalizations, and measurements of input with a specific focus on SA contexts. Three of the articles deal with what we call ‘the real wild’, that is, with contexts in which sojourners travel to another country, region, or setting in order to use a new language in face-to-face interaction with users of that language. The other two articles examine language exposure in the ‘digital wild’, that is, in settings where learners continue to reside at home but are exposed to input in the new language via media or the internet.

I Part I: Input in the real wild

The first article in this section, by Rosamond Mitchell (University of Southampton), is a very rich review of a large body of different approaches to the documentation of input in the SA context. Mitchell makes a distinction between self-reported and indirect observations of input exposure on the one hand (e.g. the Language Contact Profile; Freed et al., 2004), and direct observations on the other, typically through recordings at different moments during
the day. Mitchell critically discusses these two approaches to the study of input exposure in the SA context and proposes suggestions for improvement.

The second article, by Henriette Arndt, Jonas Granfeldt and Marianne Gullberg (Lund University), discusses Mitchell’s first approach, indirect observations, and more specifically the challenges of using one-off self-report questionnaires in SA studies in which participants estimate their typical level of exposure over extended periods of time. As an alternative, the authors present a methodological option used in other disciplines, the Experience Sampling Method (ESM), in which participants are prompted to complete brief surveys several times per day. This method has the potential to reduce biases associated with summative recall and to increase the validity of the resulting data. Another strength of the ESM is that data are collected repeatedly, in various everyday situations, which facilitates the study of dynamic change across time and contexts. The authors address some practical considerations and conclude by advocating for the implementation of ESM using smartphone technology.

The third article in this section highlights the richness and fruitfulness of using the second of Mitchell’s approaches: direct observation. Tim Greer (Kobe University) and Johannes Wagner (University of Southern Denmark) discuss the socialization into a new environment through a second language. They examine Japanese students during homestays in the US and in Australia, who video-recorded parts of their daily life. The analysis focuses on extracts where ‘troubled talk’ is resolved by the participants. Greer and Wagner demonstrate that the embodied and situated learning that takes place in these types of situations goes well beyond the learning of lexical items. This leads to the introduction of a rich and sociologically based understanding of meaning, which in turn leads to a challenge of the notion of input as the term is traditionally used in SA studies.

These three contributions all address different aspects of the input construct and propose novel approaches to studying it. All highlight the need for combining quantitative approaches to input in SA with qualitatively richer detail. This includes coming to grips with learners’ agency with regard to the type of input they seek and why (Mitchell), capturing the dynamic shifts of learners’ engagement with input as it happens over both shorter (a day) and longer (weeks and months) time scales (Arndt et al.), and potentially expanding the notion of input to include not only speech but the embodied, material setting itself in which speech and interaction occurs as well as social participation and membership (Greer and Wagner). The methods associated with these suggestions – triangulation of, for example, survey data and corpus linguistics, rich sampling through ESM, or the collection and analysis of rich video data – all require some method and tool development before any real headway can be made in identifying propitious conditions for acquisition.

2 Part II: Input in the digital wild

Input for language learning in the 21st century is not only input in real life but also very much digital input stemming from media and the internet. The second part of the special issue contains two articles addressing these issues. In the first article Carmen Muñoz, Geòrgia Pujadas and Anastasia Pattemore (University of Barcelona) argue that studies on input in the SA context need to include studies of the effects on language development of ‘original version’ audio-visual input. The authors present the results from two
studies in a classroom setting involving extensive viewing of an English TV series. They discuss the role of frequency, imagery, captions, and subtitles in relation to linguistic development. They also address implications for sojourners that are about to embark on a SA period and for their during-SA period.

The last study, by Geoff Sockett (Paris Descartes University), deals with input in the digital wild. It reviews research on formal, non-formal, and informal on-line learning. In particular, it discusses the Erasmus+ Online Learning Support (OLS), a platform specifically designed to prepare and support Erasmus students before and during their stay abroad. The author argues that on-line personal learning environments constitute a part of the SA experience. Even though language exposure using such resources in isolation might not be sufficient to advance language learning, their combined use offers support for many language learners.

These two contributions share a novel focus on learners’ experiences of input in the ‘digital wild’. They alert us to the fact that in our digitized society, the SA immersion experience has changed in significant ways. For one thing, the SA immersion will not be the first significant immersion in the target language for many learners any longer. Many sojourners will have experienced intensive contact with input in the target language before the SA period, especially when the target language is English, having engaged in non-formal and informal activities with different degrees of intention to learn the language and with different learning outcomes (Sockett). During the SA period, sojourners will participate in the real wild and most likely in the digital wild as well, with language learning emerging from more numerous and more complex interactions with input than ever before. To understand differences in learning outcomes in the SA context at this time, these articles advocate addressing learners’ individual differences from an emic perspective (e.g. engagement, feeling of learning) (Sockett) as well as the multimodal characteristics of the input (e.g. use of subtitles or captions in audio-visual input) that may also result in variable outcomes (Muñoz, Pujadas and Pattemore).

### III Outlook and concluding remarks

In their proposal for a research agenda in SA research, Taguchi and Collentine (2018) start by pointing to the future need for studying whether sojourners’ participation in particular domains leads to the use of linguistic forms and interactional patterns specific to the domain in question (for similar ideas couched in the transdisciplinary framework of the Douglas Fir Group, 2016, see also Duff, 2019). In such a research endeavor, an important first step would be to identify the social domains in which sojourners are engaging. Since these domains will be highly diverse, Taguchi and Collentine (2018: 555) note that this will be a challenging task and propose that researchers should interview sojourners about where and how they use the L2. While conducting interviews certainly has advantages, especially in qualitative research, the use of more quantitative methods will also be needed in the future in order to include more participants and thereby gain a fuller understanding of the SA experience. The article by Arndt et al. (this issue) suggests that the ESM in combination with a smartphone application is a promising way of dealing with this challenge in the ‘real wild’ that should be further explored in future research. However, the same challenge exists for research in the ‘digital wild’.
As illustrated by the articles by Sockett and by Muñoz et al. (this issue), the digitized society is an arena for language learning with an ever-increasing importance and complexity that ultimately will affect the language learning affordances. Just like the real wild, sojourners’ engagement in the digital wild will need to be accounted for in more detail in future research.

Further insights from the articles in this issue may be relevant for pre-departure training of sojourners. For example, Mitchell (this issue) reminds us that there has been no sustained effort to create SA-specific input corpora or a systematic collection of the actual input to which sojourners are exposed. To this we may add the value of a syllabus built on a SA-specific task-based needs analysis (see, for example, Lizuka, 2019).

Another take-away message from the articles in this special issue is the need to go beyond traditional definitions of input in SLA as something that exists independently of learners (for an early critique of the idea that input is somehow ‘neutral’, see Carroll, 2001), and consider how best to capture the role learners themselves play in forging their own input dependent on individual differences, such as engagement with the language and its users, motivation, willingness to communicate (e.g. Khajavy et al., 2021), and the role of affect in SLA more generally (papers in Mavrou et al., 2022). In addition, with the broadening of SA to include the digital wild come new opportunities to use other techniques such as eye-tracking and experimental paradigms. Eye-tracking data may be used for triangulation with qualitative data about learner perceptions of and engagement with input in the search for explanations of variation in outcomes. Other useful tasks include priming techniques that allow researchers to implicitly probe to what extent learners are picking up on and processing (and potentially re-using) specific lexical and structural aspects of the input (e.g. Shea, 2021).

A further important issue that has begun to take hold, but that requires more development, is the insight that SA is a deeply multilingual venture for most learners (see Martínez-Arbelaitz et al., 2017; Tullock and Ortega, 2017). One particular case mentioned by Sockett in this issue concerns Erasmus students in European universities where English may be the language of instruction and the lingua franca amongst peers, but not the local or national language. The ways in which learners navigate and draw on multilingual input need to be explored. The ESM approach, which enables the collection of rich, nested data on language use, could help shed light on the details of multilingual practices. However, any link to shifts or development in the various languages used may require the combination of more test tools than before, and also of the development of sophisticated statistical approaches (see Arndt et al.). Direct recordings of situated language use will also provide valuable information on this aspect of language use in SA.

Much work remains to be done to help improve our understanding of the role of input in SA: its multidimensional nature, the various operationalizations, and the multiplicity of measurements in SA contexts. Hopefully the articles in this special issue will inspire further methodological work on securing valid and reliable documentation, and qualitative and quantitative measurements of multimodal input in SA.

Author note

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