The effect of affect? Task variability in L2 French

Deborah Moniuk
University of British Columbia
moniuk@interchange.ubc.ca

Researchers have considered negative affective factors as problematic to both acquisition and processing (Arnold, 1999; Krashen, 1982; Stevick, 1976). Fewer authors have examined the possible relationship between positive affect and learner output (Guiora, 1980; Stevick, 1999), and previous studies have mostly considered negative affective states (e.g. anxiety and agitation) and their inhibiting effects (MacIntyre & Gardner, 1994; Steinberg & Horowitz, 1986). Recently, researchers have focused on learners' willingness to communicate in a second language (Doucette & MacIntyre, 2010; Pyke, McCullough & Kissau, 2010; Storch & Léger, 2009). In this paper we will present a methodological framework for researchers to address a possible correlation between positive affect and learner output. We will then apply the framework to our upcoming study. The participants will be forty male and female advanced learners (age range 18-25) of French as a second language at a post-secondary institution in Canada. We will present the participants with two randomized trials of stimuli: three one-minute videos and three photographs. The experimenter will ask participants a series of leading questions in order to elicit production; participants will describe one trial orally, and one trial in written form. Following each description, participants will rate their emotional response to each stimulus on a scale, then respond to a personality questionnaire designed to flag for extroversion. Initially, we will code adjective types, then run descriptive and inferential statistics. We acknowledge the limited subject pool and individual variability in responses, but this methodology can be replicated for research in other languages. We predict that variation in types and Mean Length of Utterance will increase with reported positive affective responses. If learner output varies with reported feelings, French language teachers should consider the effect of affect in selection of teaching materials.
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1 Introduction

1.1 An introduction to the domain of affect in education

Affective factors as related to progress in education gained importance during the growth of humanistic psychology during the 1960s. Since the 1970s, researchers in the field of Second Language Acquisition (SLA) have considered the implications of affect as problematic to both acquisition and processing (Arnold, 1999; Krashen, 1982; Stevick, 1976).

In this study, we understand affect as the combination of emotional, psychological, and/or environmental factors that have a cognitive impact on language, be it on processing, acquisition or output. We will focus on learner output in French as a Second Language (L2) and the possibility of affect in a facilitative or hindering role in oral and written production. As fewer studies have addressed the positive side of affective factors, we hope to spark discussion in the field of SLA on this matter. Although we will use L2 French as an example for our future study, we hope that researchers will be able to apply this method as a starting point for investigating the effect of affect in other languages.

1.2 What do we know about anxiety and L2 production?

Further to the above-mentioned studies on processing, many researchers conducted studies with a focus on negative affective states (e.g., anxiety and agitation) and their inhibiting effects (MacIntyre & Gardner, 1994; Steinberg & Horowitz, 1986). While the majority of these studies focused on the debilitating effect of anxiety, some studies (see e.g., Scovel, 1978) did supply evidence suggesting that anxiety can have a positive effect on language learning.

One limiting element commonly acknowledged by researchers of affective factors is that affective factors, whether positive or negative, are numerous, vary within individuals and situations, and are difficult to isolate; even if one could isolate an affective variable in a laboratory setting, this would be difficult to replicate in a language classroom. Thus, the present study will acknowledge the inevitable presence of the following in language learners, most of which, in a typical learning environment, would be difficult for an educator to control: a) emotional factors such as personal crises; b) psychological factors such as state or trait anxiety; c) environmental factors such as room temperature. For this study, we will focus on an element French language teachers can control: the visual stimuli presented in the learning environment.

1.3 What do we know less about anxiety and L2 production?

In response to the swell of evidence suggesting that negative affect inhibits willingness to communicate, and therefore L2 use, the intuitive deduction is that a reduction of anxiety will have a facilitative effect. Despite this, we know much less about the effects of reduced anxiety. Fewer authors have examined the possible relationship between positive affect and learner output (see Guiora, 1980; Stevick, 1999).

In recent years, researchers have focused increasingly on learners' willingness to communicate in a second language (Doucette & MacIntyre, 2010; Pyke, McCullough & Kissau, 2010; Storch & Léger, 2009;). This rise in studies about willingness to communicate suggests that researchers in SLA are becoming more interested in a less investigated aspect of affect; that is, they are considering situational models where anxiety is reduced rather than induced. These studies investigated the reasonably intuitive assumption that if raising anxiety induces reticence, then lowering anxiety ought to increase willingness to communicate (i.e., overall production). With this as a focus, we build our future study.

2 A sample future study

A review of previous studies as described above reveals that we know a great deal about negative affective factors as related to processing and acquisition. Researchers have identified anxiety in particular as a problem for language learners. From the abundance of anxiety research, there is much evidence suggesting that a negative affective factor such as high anxiety may hinder processing or production (even though some studies suggest that a small amount of induced nervousness could facilitate these processes). Thus, one might reasonably infer that if French language teachers strive to reduce anxiety in the classroom, learners will participate more, hence practicing language use more. In this way, French language teachers would be able to assess student progress in language more easily.

Though there is an abundance of anxiety research, much less is known about a possible correlation between positive affect and learner output (written and oral). Although some studies have investigated learner output and willingness to communicate, fewer have examined positive affective factors and their possible link to task variability.

The goal of presenting this framework for study is to address this gap in the literature by examining learner-reported emotional responses to visual stimuli (video clips and photographs) and conducting statistical analysis on utterances (oral and written) elicited by these stimuli. We will ask the following questions to guide our research:

(1) What emotional responses can visual stimuli trigger in L2 French?

(2) How much can learner output in L2 French vary relative to learner-reported feelings?

(3) What role does personality play in L2 French output?

We have designed these questions to address the gap in the literature when it comes to positive affective factors. However, for a point of reference, it is important to acknowledge that negative affective responses can occur, especially when working with individuals from different backgrounds and variable affective states and personality traits. Thus, the first research question is open-ended: we are prepared to gather qualitative and quantitative data reporting participants' emotional responses to the stimuli. This means that while a 1-10 scale from negative (1) to positive (10) may be useful, an array of emotional responses are possible, which would convey the nuances of individual variability. For example, one subject might report that one photo makes him or her feel "guilty", with a rating of "4", and another might report "shocked", also with a rating of "4". Collecting both quantitative and qualitative data will enable us to explore the nature of affective factors and its variability across individuals and tasks.

In order to couch the study in the available literature, we intend to quantify the degree of emotional responses as well as the degree of introversion/extroversion as reported by the learners on a personality questionnaire. Once we have collected these data, we will perform descriptive and inferential statistical analysis to quantify variability across tasks, as well as variability within and between individuals.

Thus, the objective of asking these questions is to gather qualitative and quantitative data to analyse learner output while considering affective factors. The intuitive hypothesis is that the visual stimuli will trigger a wide variety of feelings in learners due to personality and individual experiences. Intuitively, we predict that a more positive emotional response will result in a longer Mean Length of Utterance (MLU), greater variety of adjectives and other lexical types. We also predict that there will be more errors overall due to risk-taking. We expect that a subject who responds more positively to a photograph or video would have more to say. However, it is possible that negative affective responses will facilitate the production process as well, and that we will see the shortest MLUs and the least lexical variety accompanied by the emotional responses reported closest to neutral. Another variable we acknowledge is personality. We predict that extroverts will produce more language than introverts, regardless of the task.

This study has practical implications for French language teachers. If affect can trigger variability in L2 performance, teachers should consider the effect of affect for the selection of tasks and materials. If certain tasks and stimuli elicit more output from learners, evaluation and L2 practice are facilitated.

3 Methodology

3.1 Participants

As soon as we receive Research Ethics Board approval, we will conduct the experiment with forty participants, with a distribution of males and females (age range 18-25 years) self-selected from a multicultural pool of students in third-year French as a Second Language courses at a post-secondary institution in Canada. We anticipate that by the third year of study, the participants will have attained a sufficiently advanced level of proficiency, which is important because participants will need the linguistic competence required to express themselves comfortably in the L2 in order for data to be gathered. That said, we do not intend to pre-screen the participants for proficiency, nor do we intend to exclude any participants based on academic achievement. Our study is designed to reflect the ecology of a classroom and to be as encompassing in our participant selection as possible. This approach will reflect the true nature of learner variability and proficiency and will consider realistic challenges teachers face in the classroom.

3.2 Instruments

At present, we are considering the following instruments and materials for the study: a) photographs; b) video clips; c) leading instructions; d) personality questionnaires; e) an instrument measuring reported task difficulty; f) a background questionnaire; g) a recording device.

In order to gather linguistic data, we will employ photographs and videos of human beings engaged in social interactions. The photographs and video clips will be in full colour; the video clips will be silent films of one minute each.

The personality questionnaire will be no longer than 24 items and will be designed to measure signs of introversion or extroversion. We feel this will be relevant for the study as measures of introversion or extroversion may assist in accounting for variability in MLU across participants. It is also possible that, for example, an introvert will report strong affective responses to certain stimuli, but his or her utterances will remain succinct across all tasks. At present, we are considering an abbreviated version of the Eysenck personality questionnaire (Francis, Brown & Philipchalk, 1992).

In order to account for variability in task difficulty, we are considering an instrument designed to ask participants how well they feel they performed on the

task, how mentally demanding the task was, among other factors. One example of such an instrument is the NASA Task Load Index (NTLX), a 7-item scaled questionnaire (Hart & Staveland, 1988).

The background questionnaire will be designed to gather information about the participants' language learning history, as well as basic demographic information such as language background, age, gender, etc. Finally, for the oral trials, participants will be interviewed one-on-one in a standard classroom setting with a tape recorder.

3.3 Procedure

After obtaining consent from the participants, the experimenter will ask participants to describe two randomly ordered trials, each with three stimuli: three one-minute videos and three photographs. We will use a series of leading instructions in order to elicit production, e.g.: (a) *Décrivez ce que vous voyez dans cette photo* 'Describe what you see in this picture.'; (b) *Dites-moi, à votre avis, qui sont ces personnes-ci?* 'Tell me, in your opinion, who are these people here?'

Participants will intersperse between the oral and written production modes. For example, if a participant describes a picture orally in one trial, the same individual will describe a video clip in written form next. To control for presentation order (a possible bias), participants will be randomly assigned to begin the study in a production mode. In the end, half of the participants will first describe the stimuli orally and in writing second. The other half will first complete the tasks in writing and orally second. Because this will be a free production task, participants will be invited to speak or write for as long as they like.

Following each description, participants will rate their emotional response to each stimulus on a scale and have the option of providing additional qualitative data by selecting from a series of emotions that might best reflect their relationship with the content in the photograph or video. Participants will have the option of resting between trials. At the end of all six trials, participants will then respond to a personality questionnaire designed to flag for signs of introversion or extroversion, and provide some basic demographic information. The experimenter will offer the participants a debriefing and a token of appreciation for their participation.

4 Results

4.1 Data Analysis

We will consider the full handwritten text of the written mode, and the first two minutes of transcriptions for the oral mode. For the oral tasks, we will consider MLU, all lexical types and tokens, false starts and false cognates (L1 interference). For the written mode, we will consider all lexical types and tokens, false cognates (L1 interference), and gender and number agreements.

For our analyses, we will calculate descriptive statistics, run inferential tests, measure the MLUs, count and classify any errors, and count and classify all lexical items. The statistical analysis will take into account the imbalance of content across and within participants.

4.2 Anticipated Results

We predict that variation in all types will increase as participants report stronger positive affective responses to stimuli (i.e., increase from shocking to pleasant). We also expect that extroverts will produce more language overall. The sample Figure 1 shows possible data sample profiles based on these predictions. Y-axis values are meant to provide an example of possible relative outcomes rather than absolute values.

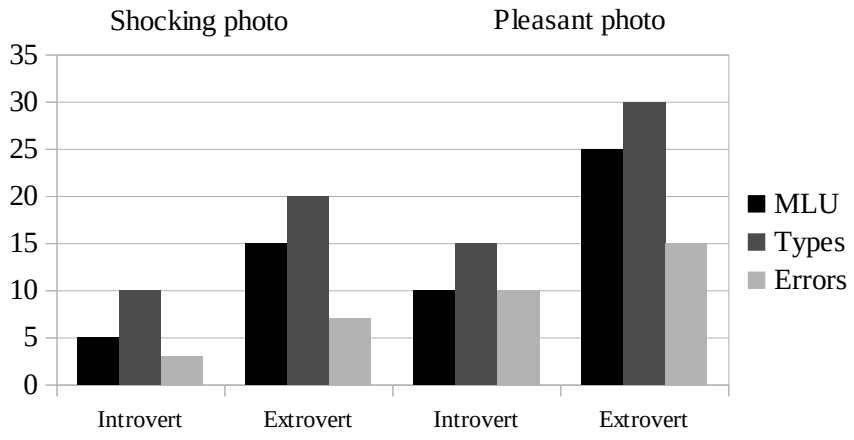

Figure 1. MLUs, Lexical Types and Agreement Errors in Introverts and Extroverts

As shown in the possible profiles on the left, we expect both groups to take fewer risks to meet their communicative needs when reporting negative affective

responses. The two sets of data of the right represent what we might expect to see when participants report a positive response to a stimulus: a increase in variety of lexical types (represented by dark gray bars) and longer MLUs (black bars) overall. Regardless of task type, introverts may provide more succinct responses, taking fewer risks and therefore producing fewer errors (represented by light gray bars) than extroverts as a group.

5 Limitations

We acknowledge that there is a limited subject pool of participants who will be enrolled in third-year French as a second language courses. As such, we stress the importance of adapting this framework for work on other languages. Working in the domain of affective factors also means that individual variability in responses may complicate statistical analysis.

6 Implications

The purpose of this study is to measure variability in L2 output across tasks, as well as within and between participants. If affect can indeed trigger variability in L2 performance, then teachers should consider the effect of affect while selecting tasks and materials for the classroom. If certain tasks and stimuli can elicit more output from learners who appear to feel more relaxed, practice and evaluation are facilitated. We are particularly interested to see whether our data can be replicated across groups of participants learning different L2s.

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