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5

MOTIVATIONAL PROCESSING IN INTERACTIONAL TASKS

Zoltán Dörnyei and Wen-Ta Tseng

There is a substantial body of research focusing on the linguistic analysis of language learner output in interactional tasks (as attested to by many contributions in this volume), but relatively less attention has been paid in the past to examining the psychological processes underlying student performance in interactive activities. This paper intends to add to this latter body of research by providing an analysis of one of the key learner aspects of interactional task performance, the under-researched issue of learners' motivation to engage in the task. We will first review three motivational studies that have specifically focused on analyzing dyadic interactions, and then present the results of an empirical investigation examining motivational task appraisal. Although this study does not specifically focus on dyadic interaction but rather on the more general question on how performance, appraisal, and control are linked in language learners' perceptions, we believe that some of the results can be meaningfully generalized to interactional tasks.

Our findings point to the conclusion that motivation in interactional tasks is closely related to the participants' appraisal and noticing capacity, which in turn form a relevant link to the interaction hypothesis (Gass & Mackey, 2006, 2007), as indicated by Gass's (2003, p. 224) definition: "[t]he input and interaction approach takes as its starting point the assumption that language learning is stimulated by communicative pressure, and examines the relationship between communication and acquisition and the mechanisms (e.g., noticing, attention) that mediate between them." Our study aims at furthering our understanding about the mediating role of appraisal in the learners' interactional competence, thus creating a direct link with the work of Susan Gass. Interestingly, task motivation is related to Sue's work in yet another way: In 1993, she was one of the first scholars in the L2 field to highlight the significance of interlocutor familiarity in understanding the course of interaction (Plough & Gass, 1993) and, as we will see in the following review of the relevant motivation

literature, interlocutor familiarity has turned out to be an important component of the motivational construct underlying interactional tasks.

Task Motivation

As described by Dörnyei (2002, 2005) in more detail, the construct of task motivation has traditionally been seen as a combination of generalized and situation-specific motives (Julkunen, 1989), corresponding to the traditional distinction between *trait* and *state* motivation. According to Tremblay, Goldberg, and Gardner (1995), the former involves stable and enduring dispositions, the latter transitory and temporary responses or conditions. At first sight, this dichotomy makes good sense: It is highly likely that, when confronted with a particular task, a learner will be motivated both by generalized, task-independent factors (e.g., overall interest in the subject matter) and situation-specific, task-dependent factors (e.g., the challenging nature of the task or the influence of the interlocutors). Task motivation would then be a composite of these two motivational sources (cf. Julkunen, 2001).

While the trait/state motivation dichotomy appears to be a logical and parsimonious construct, in a paper specifically devoted to the analysis of the motivational characteristics of language learning tasks, Dornyei (2002) proposed that task motivation may be more complex than a mere composite of generalized and situation-specific motives, because on-task behavior is embedded in a series of what can be called actional *contexts* (e.g., taking up the study of a particular L2, going to a specific school, attending a particular class), each of which exerts a certain amount of unique motivational influence. That is, engaging in a specific task will activate a number of different levels of related motivational mindsets, or *contingencies,* associated with the various actional contexts, resulting in complex interferences between these parallel contingencies. As a result, we can expect to find various dynamic motivational processes underlying task completion. This is the point when the understanding of task motivation becomes relevant to the understanding of dyadic interaction, because interaction, by definition, is a dynamic interplay between two participants, and the language product of this dynamic interplay, the verbal output, will be influenced not only by linguistic factors but also by the dynamics of motivational task processing.

As a starting point in exploring the motivational basis of language learning tasks (e.g., various communicative activities such as role-plays or oral argumentative tasks in which students have to argue about something and come to an agreement), let us consider a relatively simple construct of the motivational processing model suggested by Dornyei (2002, 2005) (see Figure 5.1). He proposed that the complex of motivational mindsets and contingencies activated during task performance feed into a dynamic
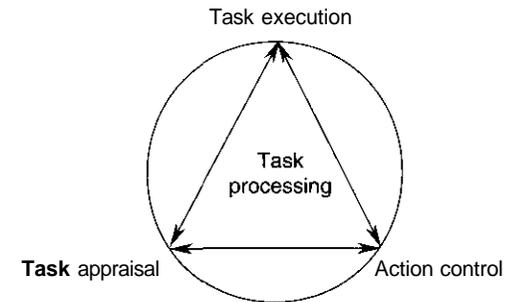
Figure 5.1 Schematic Representation of the Three Mechanisms Making Up the Motivational Task-processing System

task processing system which consists of three interrelated mechanisms: *task* execution, *task appraisal,* and *action control.* In practical terms, these involve the students' continuous monitoring and evaluating how well they are doing in a task, and making possible amendments if something seems to be going amiss. More specifically:

- Task *execution* refers to the learners' engagement in task-supportive learning behaviors in accordance with the action plan that was either provided by the teacher (through the task instructions) or drawn up by the student or the task team. In other words, this is the level of actual "learning."
- *Task appraisal* refers to the learner's continuous processing of the multitude of stimuli coming from the environment regarding the progress made toward the action outcome, comparing the actual performance with the predicted or hoped-for one or with the likely performance that alternative action sequences would offer.
- Action *control* processes denote self-regulatory mechanisms that are called into force in order to enhance, scaffold, or protect learning-specific action; active use of such mechanisms may "save" the action when ongoing monitoring reveals that progress is slowing, halting, or backsliding.

This tripartite model, then, suggests that the quality and quantity of any task outcome will be determined by the interplay of the three components. Following Winne and Marx's (1989) reasoning, Dornyei (2002, 2005) proposed that negative signals from the appraisal system concerning task execution trigger the need to activate action control strategies and, if appropriate schemata are available, certain mental or behavioral adjustments are made and the motivational level necessary for sustaining action is restored. Let us look at an example: Ben, an advanced language

learner with well-developed task-processing mechanisms, is taking part in an L2 debate. He is continuously aware of his own progress, and at one point he notices that his concentration is flagging. This recognition of the problem initiates in Ben a search in his repertoire of relevant action control or self-motivating strategies. If he finds a way that would help him to re-focus his attention (e.g., reminding himself of the significance of doing the task well or, more generally, of becoming competent in the L2), then he executes this strategy as part of his troubleshooting, and restores in this way the necessary attention level. Thus, the smooth operation of the motivational task-processing system is expected to maintain constructive control over Ben's actions throughout the duration of the task.

With regard to the dynamics of interactional tasks in particular, a series of studies by Dornyei and Kormos (2000; Dörnyei, 2002; Kormos & Dornyei, 2004) offer some further insights. Dornyei and Kormos (2000) explored various motivational and socio-dynamic variables underlying student performance in argumentative communicative L2 tasks performed in dyads. They found that the three most important motivational variables affecting task performance were the students' *attitudes toward the L2 tasks* they were undertaking, their attitudes *toward the L2 course* in general, and finally their level of *linguistic self-confidence*.Thus, the authors concluded, the study underscored the importance of situation-specific motives (as two of the three factors with the greatest impact were task-related variables). Interestingly, the students' L1 willingness to communicate (WTC), which was also measured, played a significant positive role only with the students with high task motivation; that is, WTC only made a difference among those who were taking the participation in the task sufficiently seriously.

Dornyei and Kormos (2000) also administered an L1 version of the learning task (i.e., a very similar task which students had to perform in Hungarian) to the same student sample. They found that it was those learners who did not particularly like the English classes and did not see much point in learning English in general who appeared to be more active in the L1 task than their motivated peers. It is as if they had sensed that finally there was a chance for them to participate in a class that normally was not their forte. The research paradigm also included three standard sociometric questions examining the interrelationship between the learners (e.g., "If you received three tickets to the cinema, which two of your groupmates would you invite?"), and based on the answers the researchers computed a measure of the relationship between the two members of each dyad performing the task. Surprisingly, in the L2 task this variable did not have any significant impact on the students' performance, but in the L1 task the dyads who produced significantly more speech (i.e., chatted more freely) were those where there was a mutual friendship relationship. These contrasting results raise an important question: Why

did the interpersonal relationship between the communication partners have no detectable influence on the speakers' performance in the L2 task? That is, what was it about the L2 task that overrode the interpersonal relationship effect which was clearly manifested in the L1 task? The authors proposed two related reasons:

- When the medium of the communication is an L2, this poses the challenge of having to express one's thoughts using a limited linguistic code and to decode the interlocutor's meaning from the often imprecise/incorrect verbalizations. This challenge creates an emotional state which is different from the communication mode in one's mother tongue and which may modify one's perceptions of the latent sociolinguistic features/constraints of the interaction (such as friendship, power, or gender relations).
- The communicative task used in the study was a common communicative learning task—a moderately life-like make-believe situation—in which students were assumed to adopt a (earning mode, that is, to pretend to take the pseudo-communication seriously. In language classes we can often observe the existence of such a learning mode, for example when certain traditional, non-authentic L2 activities require the participants to produce often bizarre, highly artificial interactions with little or no real communicative meaning, and yet motivated learners do not seem to have any problem acting out their parts. The Dornyei and Kormos (2000) study showed that, although one of the main purposes of communicative language tasks is to reduce the artificial nature of the communicative situation, these instructional tasks cannot fully eliminate the "learning mode" in order to produce genuinely authentic interaction. In contrast, when the language of the task was changed into the students' mother tongue, the "learning" element naturally disappeared and the students behaved normally.

Dornyei (2002) re-analyzed the Dornyei and Kormos (2000) dataset to examine the motivational impact of the communication partner on the speaker's task performance. That such an influence exists was a logical assumption because two interacting people affect each other in many ways (see Plough & Gass, 1993), and this was also in accordance with Dörnyei's general conception of the dynamic, negotiated nature of task motivation described earlier. The analysis produced strong evidence that the interlocutor's motivational disposition is indeed related to the other speaker's performance, particularly on the number of turns produced. The strongest impact was observed in pairs where Speaker A originally had a low level of task attitudes but Speaker B was more motivated and acted as a "pulling power."

Thus, the results pointed to the conclusion that task motivation is

co-constructed by task participants. To test this, Dörnyei computed correlations between motivation and task performance at the dyad level, that is, by pooling the data for the two members of each dyad (e.g., the sum of the two members' scores on self-confidence was correlated with the total number of words the two members produced together). Multiple correlations indicated that all the motivational variables together explained 72 percent of the variance in the dyad's total speech size (i.e., total number of words produced) and 69 percent of the variance in the number of turns generated. These coefficients were over 30 percent higher than the corresponding figures at the individual level, which provides strong support for the thesis of motivational co-construction. Furthermore, when the variance explained by WTC was added to the variance explained by the motivational measures, it was found that 76 percent of the variance in speech size and 81 percent of the variance in the number of turns were explained by the individual difference variables. These unusually high figures mean that at the dyad level the motivational variables accompanied by the L1 WTC personality trait (i.e., talkativeness) do an excellent job in explaining the bulk of the variance in task engagement.

Kormos and Dornyei (2004) performed yet another analysis of the original Dornyei and Kormos (2000) dataset. This time their objective was to go beyond merely examining task performance in terms of quantitative measures of task engagement (i.e., number of words and turns produced) and to also analyze more qualitative aspects of task performance as measured by accuracy, grammatical complexity, lexical richness, and the argumentation structure of the students' output. That is, the authors wanted to see how motivational factors were linked to how people interacted with each other, and not just how much language they produced.

The study produced two main new findings. The first finding was a negative one: The overall impact of the motivational variables on the quality of the produced language was relatively low, although the learners' general attitudes towards the L2 course had a significant positive relationship with the accuracy of the speech produced. In other words, while motivation seemed to be closely related to the degree of the students' active engagement in a task, it had only a rather weak link with the quality of the language outcome. This would suggest that the quality of interaction is a function of linguistic variables related to various aspects of the speakers' communicative competence, which is, of course, good news, since it indirectly supports the basic assumption underlying communicative language teaching that focused language instruction can improve the quality of L2 communication.

Although it was by and large true in the study that the relationship between motivation and the quality of argumentation was limited, the second main finding of the Kormos and Dornyei (2004) investigation concerned a notable exception to this: the number of counterarguments

was significantly affected (r = .62) by task attitudes among those students who took the task seriously: Participants with a favorable attitude to the task were more willing to express disagreement with their partners' view than students who were not that keen on the task. This is an important finding, because counterarguments are at the heart of argumentation: They are the main instigators of real negotiation, and therefore the observed strong link extends the claim made by Dornyei and Kormos (2000) and Dornyei (2002) that motivation influences general learner engagement by showing that it also affects specific, *task-appropriate* engagement. In this respect, the study highlighted again that low-motivated students can be pulled along by their more highly motivated interlocutors, as attested to by the strong correlation *(r - .68)* between the interlocutor's task attitudes and the number of arguments produced by those students who originally did not take the task seriously.

Although the findings of the three studies reported above are not conclusive, they seem to support the conception of "motivational processing" during task completion. We do find interferences between various levels of motivation (e.g., when certain factors only operate if they are accompanied by high task-attitudes), and in communicative L2 tasks the interlocutors' motivational disposition turns out to be a significant factor, affecting the speaker's appraisal and action control processes. Thus, task motivation needs to be considered within a larger context of dynamically interacting synchronic and diachronic variation.

In the rest of the chapter we first present empirical data (derived from a vocabulary learning study) to validate the general task processing system described earlier, using structural equation modeling, a technique that can produce various goodness of fit indices about models submitted to analysis. Our analysis also includes the comparison of novice and expert learners' motivational processing to see whether learners who have succeeded in reaching the expert level are characterized, on average, with more efficient task processing skills. On the basis of the results, we examine how the proposed model can be extended to apply to interactional tasks, with an emphasis on how learner involvement in interactional tasks is co-constructed at several levels (e.g., discourse level and motivational level). Finally, we make suggestions for future research possibilities which employ a dynamic, process-oriented research paradigm to study the psychological basis of L2 interaction.

Method

Participants

The participants included 259 (130 male, 129 female) Mandarin-speaking learners of English: forty-nine students from a Taiwanese university,

and 210 students from a Chinese university. All were undergraduate freshmen majoring in a wide range of disciplines, including business and management, geology, chemical engineering, computer science, and applied foreign languages. Before participating in the study, the two groups of learners had received English education for more than six years. All the students were approximately at the same level, with a vocabulary size of about 4,000 word families (as shown by the vocabulary tests taken by the participants).

Instruments

The three latent variables in the model were assessed by a number of self-report measures: task execution was operationalized as *Vocabulary Learning Achievement* and Strategic Learning to depict both the outcome and process of task execution. Action control was operationalized as *Self-regulatory Capacity*. Appraisal was assessed by four scales, *Satisfaction, Helplessness, Skillfulness,* and *Self-efficacy* The details of the indictors are as follows (for a summary, see Table 5.1):

- *Vocabulary* Learning *Achievement* was measured both in terms of the size and depth aspects to generate a comprehensive profile of vocabulary knowledge. Size was indicated by the combined scores of the 2,000, 3,000, and 5,000 levels from Schmitt, Schmitt, and Clapham's (2001) Vocabulary Levels Test (VLT). Depth was indicated by the combined scores of a collocation test, a polysemy test, and prompted productive written form test (for more details see Tseng & Schmitt, in press).
- Strategic Learning covers both the quantity and the quality dimensions of strategic learning behaviors (for more details see Tseng & Schmitt, 2008). The quantity dimension, referred to as Strategic *Vocabulary Learning Involvement,* was assessed by 22 items using a rating scale ranging from 1 = "Never" to 7 = "Always," whereas the quality dimension, referred to as *Mastery of Vocabulary Learning Tactics,* involved thirty-two items using a rating scale, ranging from 1 = "Never Used" to 5 - "Yes, and with lots of mastery."
- *Self-regulatory Capacity* was assessed using a self-report questionnaire, the Self-regulatory Capacity in Vocabulary Learning scale developed by Tseng, Dörnyei, and Schmitt (2006). Based on Dörnyei's (2001) system of motivational self-regulation, this battery involves five sub-scales: (1) commitment control, (2) metacognitive control, (3) satiation control, (4) emotion control, and (5) environmental control, and uses six-point Likert-scales ranging from 1 = "strongly disagree" to 6 – "strongly agree."
- *Appraisal* was operationalized by four scales involving twenty-eight

Table 5.1 Summary of the Measures of the Hypothesized Model

Latent Variables	Indicators	Number of items	Scales
TASK EXECUTION	Vocabulary Achievement	2	• Size of Vocabulary Knowledge: 2000, .3000 and 5000 levels tests • Depth of Vocabulary Knowledge: collocation, polysemy and written form tests
	Strategic Learning	2	• Strategic Vocabulary Learning Involvement: 7-point Likert-scale ranging from 1 - "Never" to 7 - "Always" • Mastery of Vocabulary Learning Tactics: 5-point Likert-scale ranging from 1 — "Never Used" to 5 = "Yes, and with lots of mastery"
ACTION CONTROL	Commitment Control	4	6-point Likert-scale ranging from 1 = "strongly disagree" to 6 — "strongly agree"
	Metacognitive Control	4	
	Satiation Control	4	
	Emotion Control	4	
	Environment Control	4	
APPRAISAL	Satisfaction	8	6-point Likert-scale ranging from 1 = "strongly disagree" to 6 = "strongly agree"
	Skillfulness	4	
	Helplessness	6	
	Self-efficacy	10	

Likert-type items (ranging from 1 - "strongly disagree" to 6 — "strongly agree"): *Satisfaction, Helplessness, Skillfulness,* and *Self-efficacy.* Satisfaction, helplessness, and Skillfulness are concerned with the specific appraisal regarding the actual use of learning tactics, whereas self-efficacy is associated with the appraisal of vocabulary learning in general (for more details see Tseng & Schmitt, 2008). This helps generate a comprehensive profile of appraisal measurements in terms of both specific and general perspectives.

Procedures

A pilot study was carried out and, as a result, amendments were made to various measures. The main study was administered in early December, 2004. The procedures used for participant recruitment and administration of the study in both Chinese and Taiwanese research sites were the same.

First, the purpose of the questionnaire was explained to the participants, and consent forms collected. When the participants completed the entire study, Chinese participants received 10 Renminbi, and Taiwanese participants received 150 New Taiwan dollars for joining the project.

Data Analysis

The data were analyzed by means of structural equation modeling (SEM), using Amos 4.0. SEM is a complex statistical procedure used to interpret the relationship among several variables within a single framework. Its strength is that we can specify directional paths (i.e., cause effect relationships) between the variables and SEM evaluates the feasibility of these. Thus, the procedure makes it possible to test cause-effect relationships based on correlational data, which correlation analysis cannot provide, thereby combining in effect the versatility of correlation analysis and the causal validity of experimental research (see Dörnyei, 2007).

With regard to the technical details of the analysis, in order to identify the hypothesized model, the paths between strategic learning and task execution, satisfaction and appraisal, and commitment control and action control were fixed to 1 to establish the scales of the three latent variables. With 11 factor indicators, the number of data points (variances and covariances) in the hypothesized model were $[11*(11+1)]/2$ - 66, and the hypothesized model included a total of twenty-five parameters (eleven unfixed path coefficients, eleven measurement error variances, and three residual error terms). Therefore, the hypothesized model could be identified and tested with 41 degrees of freedom (66 - 25 = 41).

After making some modifications on the model so that appropriate goodness of fit indices could be obtained, we compared two subsamples, novice and expert learners. Based on their Vocabulary Learning Achievement, the participants were divided into three groups: high, intermediate, and low achievement vocabulary learners, with 86, 87, and 86 subjects, respectively. In the current study, low-achievers comprised the novice group and high-achievers the expert group (the intermediate achievers were excluded from this analysis).

Results

Figure 5.2 presents the schematic representation of the proposed model of motivational task processing. As can be seen, in order to operationalize Dörnyei's model described above (and schematically presented in Figure 5.1), we hypothesized three causal links between three latent variables in a circular manner: First, learners appraise the quality of task execution, then this appraisal leads to action control decisions, which feed back to further task execution.
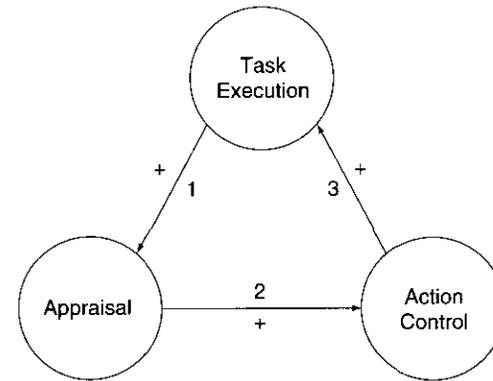
Figure 5.2 The Hypothesized Structural Equation Diagram of Motivational Processing

The first step of the analysis involved computing goodness of fit indices for the proposed model. At this point we found that the results of model evaluation did not support the suitability of the hypothesized model [χ^2 = 184.09 (df= 41, $p<$ .01), goodness of fit index (GFI) = .90, adjusted goodness of fit index (AGFI) = .83, comparative fit index (CFI) = .89, Tucker-Lewis index (TLI) = .85, incremental fit index (IFI) = .89, normed incremental fit index (NFI) — .86, root mean square error of approximation (RMSEA) - .12]: Of the several different goodness of fit indices only the GFI reached the threshold of acceptability. To improve the model, we executed the Lagrange multiplier test (Kaplan, 2001), and the results showed that by allowing an error correlation between vocabulary learning achievement and vocabulary learning efficacy we can obtain substantially improved data fit. This error correlation makes theoretical sense inasmuch as the literature has shown that self-efficacy beliefs and academic achievement are significantly correlated (Pintrich & De Groot, 1990); therefore, we modified the model accordingly (see Figure 5,3).

Table 5.2 shows that five of the eight structural model fit indices computed supported the suitability of the modified model. The three fit indices which did not meet the acceptable fit thresholds (χ^2/df AGFI, and RMSEA) all approached those thresholds. In SEM, it is not uncommon for some indices not to conform fully to the majority trend even with

Table 5.2 Model Fit Indices for the Hypothesized Model

			Model Fit Indices				
χ^2/df	GFI	AGFI	CFI	TLI	IFI	NFI	RMSEA
3.29	.92	.87	.93	.90	.93	.90	.09
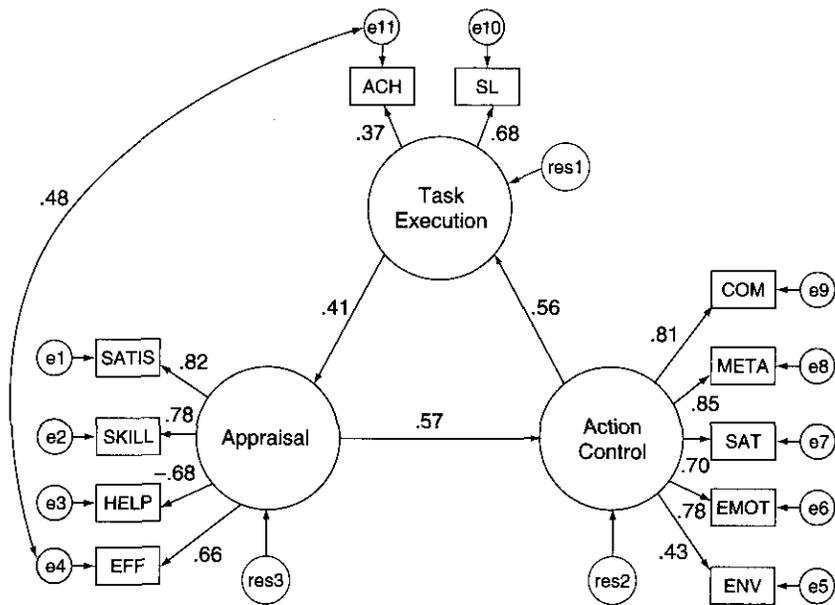
SATIS = Satisfaction; SKILL = Skillfulness; HELP = Helplessness; EFF = Self-efficacy;
COM = Commitment Control; META = Metacognitive Control; SAT = Satiation Control;
EMOT = Emotion Control; ENV = Environment Control; ACH = Vocabulary Learning
Achievement; SL = Strategic Learning

Figure 5.3 The Final Modified Model

adequate models, so we would suggest that the hypothesized model has a
good overall fit with the empirical data.

Expert Versus Novice Models

A useful feature of recent versions of most SEM software is that it
allows for relatively easy multigroup comparisons. Having validated our
proposed model for the whole learner sample, let us now examine
whether there are any differences in terms of motivational processing
between successful (i.e., expert) and novice vocabulary learners. As
described in the Data Analysis section, for this purpose we compare the
bottom and top thirds of the learner distribution based on their vocabu-
lary learning achievement scores.

Figures 5.4 and 5.5 present the two—expert and novice—models. In
multigroup comparisons, AMOS generates a joint set of goodness of fit
indices for the two sub-models, and although the various indices are
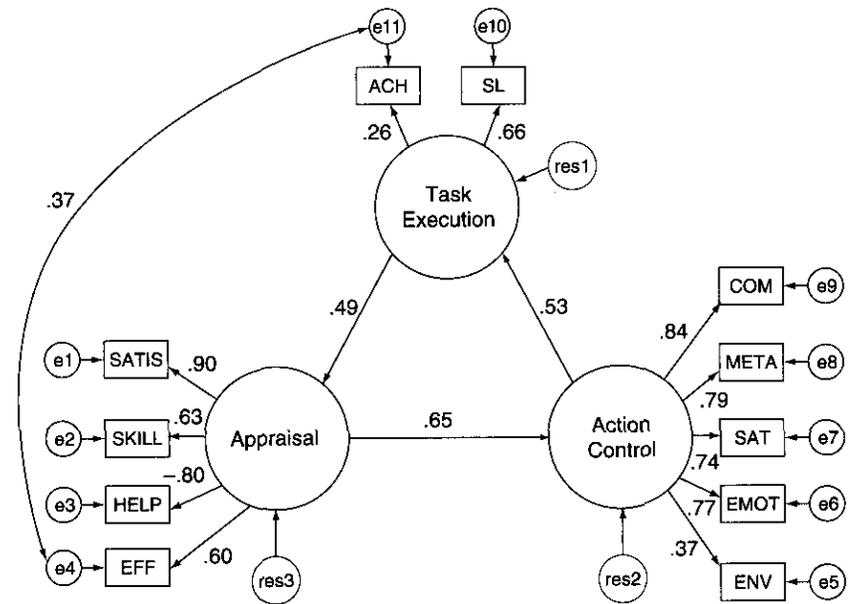somewhat lower than for the whole sample, several indices, including

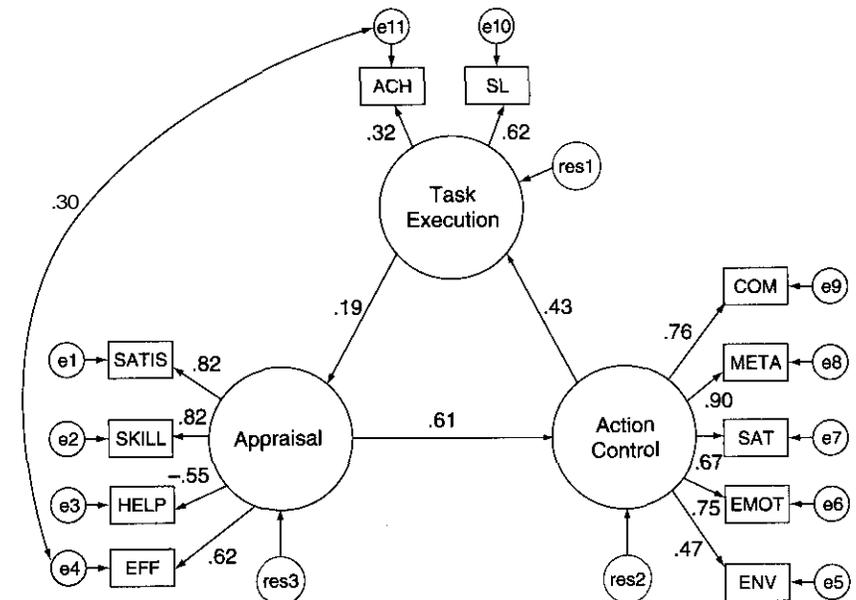Figure 5.4 The Outcome Model for Expert Learners

Figure 5.5 The Outcome Model for Novice Learners

the crucial χ^2/df ratio, suggest that the two models can be empirically supported (χ^2/df =1.98, CFI = .93, IFI = .92, RMSEA = .07).

The comparison of the expert and the novice models reveals one major difference regarding task-motivation processing: There is a significant difference in the path from task execution to appraisal in the two models. For novice vocabulary learners, the appraisal process is much less a function of the actual process and outcome of task execution (path coefficient - .19, squared path loading — .04) than it is for high achievers (path coefficient = .49, squared path loading - .24)- the squared path loadings indicate that the effect of this causal path for expert vocabulary learners was six times stronger than that for their novice counterparts!

How can we interpret this substantial difference? In accordance with the causal logic of SEM, the comparison suggests that novice learners do not base their appraisal sufficiently on the reality of the execution process, that is, they fall short of the mark in properly monitoring and evaluating their learning activity/outcomes relative to the expert learners. This means that their appraisal is out of line, and therefore it simply cannot facilitate the activation of effective action control mechanisms to enhance, scaffold, or protect learning-specific action, even though these novice learners would be in dire need of those. Thus, the achievement-evaluation mismatch leads to a downward spiral, which is in stark contrast to the motivational processing of expert learners, for whom—as the data suggest—the appraisal system works effectively and who can therefore activate task-appropriate action control mechanisms to further increase the effectiveness of their learning process.

Discussion

The analysis of the data has shown that it is reasonable to assume a circular process of motivational task processing in which appropriate signals from the appraisal system concerning task execution trigger the need to activate relevant action control strategies, which in turn further facilitate the execution process. That is, the first finding of this study is that Dörnyei's broad model presented in Figures 5.1 and 5.2 has received empirical validation.

The subsequent comparison of novice and expert learners produced a very interesting difference. Although the circular task-processing model was validated in both subgroups, the novice model revealed a serious "spanner in the works," that is, a mismatch between the task execution process and the appraisal of the quality of this process and its outcome by novice learners: Whereas expert learners were found to be competent in appraising their ongoing achievement and identifying areas in their learning that needed to be adjusted or improved, novice learners seemed to fall short of this evaluation and could not, in turn, activate necessary

scaffolding strategies. This is in line with Mayer's (1999) general assertion that "[e]xperts and novices may differ *quantitatively*—in terms of how much they know - • as well as *qualitatively*—in terms of what they know" (p. 240).

At this point we need to be cautious not to over-interpret the data. The rather heterogeneous sample does not make it absolutely clear whether a learner is categorized as novice because he/she is unsuccessful or because he/she is still at the beginning stage of the learning process. Although the fact that all the participants had received a minimum of six years' L2 instruction would suggest that the learners in the novice group were definitely not high achievers, there may be several external factors (e.g., insufficient quality of instruction) contributing to their lower mastery level besides shortcomings in their motivational processing system. However, the observed trend seems to be sufficiently strong and straightforward (i.e., the execution-appraisal link presents the only substantial difference between the two groups) to generate certain hypotheses that will need to be tested by further research. We would propose, therefore, that a potential trouble spot in vocabulary learning (and in SLA in general) is the learners' inadequacy in making realistic and sufficiently specific appraisal of their progress, which prevents them from activating relevant and effective action control strategies that could amend or compensate for any shortcomings.

What are the implications of these findings for dyadic interaction? We saw in the review of the Dornyei and Kormos studies (Dornyei & Kormos, 2000; Dornyei, 2002; Kormos & Dörnyei, 2004) that a prominent motivational feature of these interactions is the co-constructive nature of the underlying psychological process, which reflects well the similarly co-constructive nature of the linguistic process of the actual interaction. Such a dynamic, co-constructive process requires a great deal of sensitivity to the communication partner, to the turn-taking process itself, and to the various features of the jointly constructed discourse—that is, it requires carrying out ongoing evaluation at various levels. Thus, in order to manage the dynamics of dyadic interaction well and make the most of the negotiation process (of both form and meaning), learners need to have the capacity for well-functioning appraisal. Our data indicate that some novice learners have problems with the appraisal process in general, which suggests that they will be unable to participate fully and effectively in dyadic interactions. For example, they may not benefit from their interlocutors' affective "pulling power" or they may not be aware of the manifold cues that govern smooth turn-taking, and we can also speculate that these learners will also be slower to pick up on corrective feedback of various types.

In addition, the process of appraising one's learning process and outcomes is conceptually linked to the process of noticing and, more

generally, to exerting focused attention in the self-evaluation process. It is therefore tempting to go even one step further in our generalization and suggest that any deficiencies in the appraisal system might be linked to problems with noticing and attention in general, which have of course been seen as a key process underlying successful SLA (e.g., Schmidt, 1995, 2001). Thus, we believe that it is not too much of an exaggeration to propose that the quality of motivational task processing is indicative of the quality of the SLA process. In this way, future research might mean-ingfully relate motivational task-processing to issues related to attention, noticing as well as implicit/explicit or incidental/intentional learning (e.g., DeKeyser, 2003; Ellis, 2006; Hulstijn, 2003; Hulstijn & Ellis, 2005). As pointed out in the introduction of this paper, such issues are closely related to the interaction hypothesis (Gass & Mackey, 2006, 2007) as they belong to the mediating factors between communication and acquisition; therefore the study of task motivation in interactional contexts is in many ways the logical extension of Susan Gass's work. This is particu-larly true of the examination of the central role of interlocutor familiar-ity, with Sue being one of the very first scholars in second language studies to highlight the significance of this influence (Plough & Gass, 1993).

Conclusion

Despite the fact that the analyses in the current study were based on cross-sectional rather than longitudinal data, the proposed model repre-sents a snapshot of the ongoing dynamics of the task-motivation process, and our results serve as a heuristic point of departure in the understand-ing of how the dynamics of task-motivation unfolds over time. Our find-ings indicate that some novice learners have problems with appropriately monitoring and appraising their ongoing task execution process, which in turn prevents them from activating the right sort of action control mech-anisms to scaffold their learning. We assume that the significant differ-ence found between novice and expert learners in this respect is due to the fact that novice learners with appraisal deficiencies are less likely to reach more advanced stages than their peers for whom the appraisal sys-tem is effective in producing task-appropriate appraisal signals. On the basis of this we propose that what originally looked like a primarily motivational issue may have broader implications, because problems with one's appraisal capacity can be related to the more general factors of attention and noticing, thus potentially informing any future discussions of implicit versus explicit or incidental versus intentional learning. There is no doubt that further, more elaborate, and focused studies are needed to examine the validity of this claim, but the possibility is certainly exciting enough to warrant such investigations.

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