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# Self-efficacy issues in learning to teach composition: A case study of instruction[1]

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## ABSTRACT

Secondary music specialists at the University of Newcastle combine the study of education, music and music education within a Bachelor of Teaching/Bachelor of Music double degree structure. Despite their specialist study of music and considerable musical background, they echo the sentiments of many music educators (for example, Beauchamp, 1997; Jeanneret, 1997; 2000) in voicing their lack of confidence in teaching composition in the classroom setting. This paper outlines the results of the refinement of a composition module included in the third year secondary methods subject that endeavours to not only provide students with strategies for the classroom but also build their confidence to implement these strategies. The module framed around Cantwell's (2001) Four Level Model of Cognition, specifying the complex of metacognitive components guiding and directing learning activity. The focus of this model is on the link between composition processes (operative level) and the metacognitive control of those processes at the regulative, dispositional and efficacy levels. The module uses the model in two ways: in its application to 7 - 12 music students learning to compose and, perhaps more importantly, in encouraging the tertiary students to reflect on their own learning, both as teachers and as composers, in relation to the four levels.

## INTRODUCTION

It is only in recent years that research into musical learning has come to embrace more current learning theory as a framework for the design and analysis of musical instruction and learning. This framework has extended understanding of musical processing beyond a primarily perceptual process to one that also embodies understandings of the higher order cognitive and metacognitive elements common to all domains of learning. Recent work by Cantwell and Millard (1994) and Sullivan and Cantwell (1999), for example, has illustrated a critical role for the metacognitive elements of motivation and strategy use in explaining higher quality interpretations of new music in the planning processes of musicians. Similarly, Irvine, Cantwell & Jeanneret (1999; in progress) have demonstrated significant differences in the level and quality of metacognitive activity of expert and novice musicians undertaking composition tasks.

Our purpose in this paper is to describe a unit of study undertaken by undergraduate music education students confronted with the task of teaching in the area of composition. For novitiate teachers to teach unfamiliar content is not unusual - indeed for those actively involved in teacher education, this is the norm for most practicum sessions. Nonetheless, there are issues inherent in these situations that are of theoretical and empirical importance in understanding not only the processes of teaching and learning but also of understanding the nexus between the two that is critical to the development of student teachers. We contend that how student teachers resolve the challenge of teaching unfamiliar content is directly linked to factors related to the process of learning that material, particularly in the link between affective and cognitive factors. The key issue in explaining the reticence of music education students to teach composition is the effect of negative competency judgements. That is to say, the degree to which a student teacher holds negative beliefs about his/her own competence in

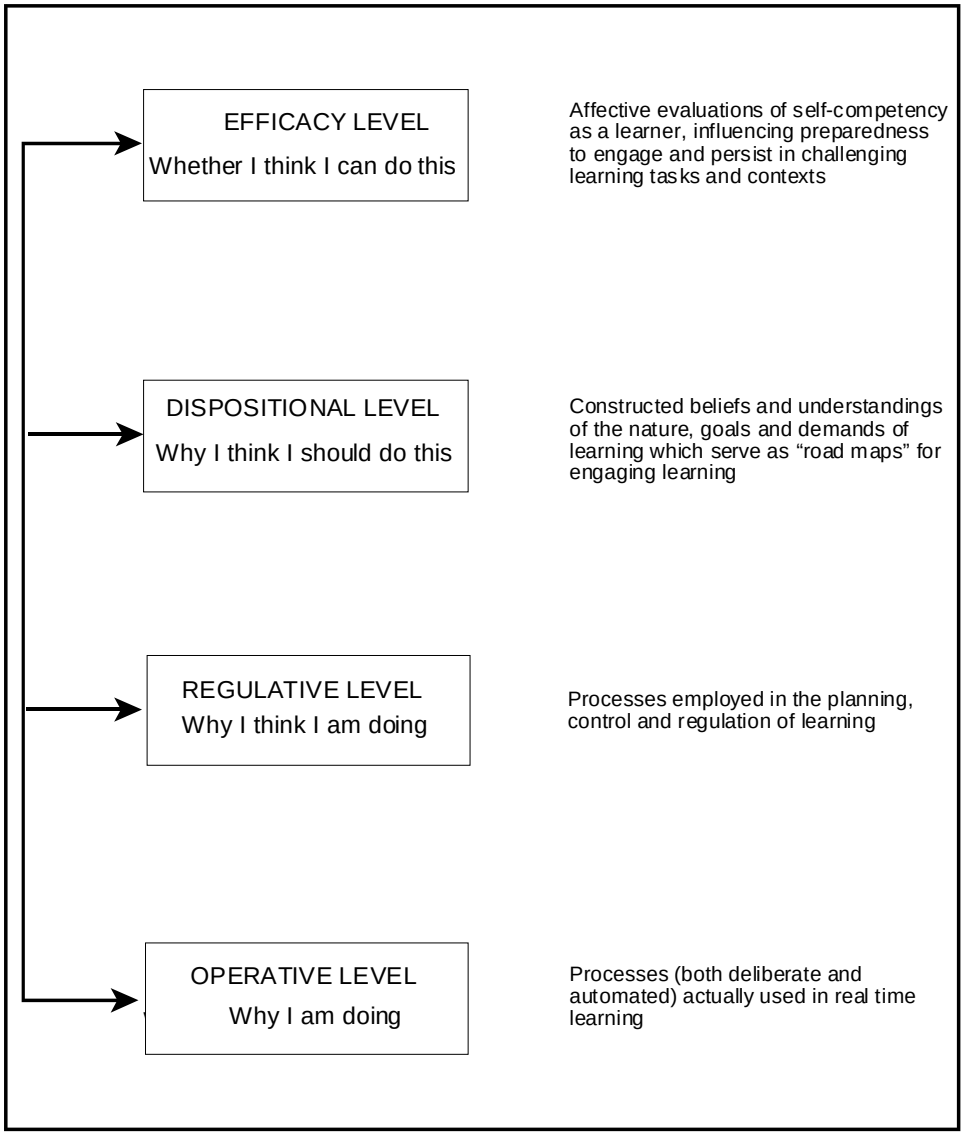
composition may mediate subsequent competency judgements in teaching composition. Two foci emerge from this supposition which are fundamental to our paper: the degree to which affect and cognition can be linked in terms of a framework for analysing learning, and the degree to which such a framework can inform pedagogical practice to facilitate music education students' capacity to teach unfamiliar content. We contend that the interactive relationship of affect and cognition drives individual student learning. More specifically, we contend that negative affect can induce what Garner (1987) terms "flawed" metacognitive knowledge - often an underestimation of the quality of prior knowledge that determines and reflects low efficacy judgements. We also propose an instructional framework within which students are encouraged to engage in a "metacognitive rethink" of their existing competencies in composition as a prelude to engaging in a planning task for teaching composition.

*Characterising the role of affect in learning*

Recent theoretical work in student learning has ascribed an increasingly important role to affective factors as mediators of the quality of student learning. This is illustrated in current work, for example, linking motivation (eg. Midgley & Urdan, 2001), self efficacy (Zimmerman, 2000)) and volition (Lopez, 1999) with more positive engagement with learning and more positive learning outcomes. Affect has been shown to influence not only the preparedness of individuals to undertake challenging novel tasks, but has also been shown to influence the nature of the engagement, and therefore of the quality of the actual learning processes employed. Cantwell (2001) has conceptualised this relationship in a four level model of student learning. This model specifies four interactive components underlying learner activity in any domain (see Figure 1): an *operative* component descriptive of the real time cognitive operations used in the process of learning; a *regulative* component descriptive of those processes used in planning, controlling and regulating the learning processes, a *dispositional* component descriptive of the beliefs and understandings about learning that act to drive the likelihood and form of regulative activity; and an *efficacy* component descriptive of situationally induced competency judgements influencing the quality of engagement and volitional behaviours. Conceptually, the regulative, dispositional and efficacy components represent different aspects of metacognitive knowledge, while the operative component represents implementation at the cognitive level. It is contended in this model that what occurs at the operative level is both driven by and reflective of decisions made at the metacognitive level of task analysis. The process of metacognitive decision making is further presumed to include interactions between the three metacognitive components. Efficacy judgements, for example, as the most powerful form of affective input, are likely to predict qualities of task engagement through the situationally determined judgement of potential competence in addressing and completing the task (eg. Witkowski & Steinmeier-Pelster, 1998). Such decisions are mediated by the student's conception of the task and task requirements and the extent to which the student feels he/she has the wherewithal to complete the task. For example, individuals can be said to approach learning with an array of understandings and expectations about learning. Individual theories of knowledge and knowing (eg epistemological beliefs; beliefs about intelligence; self-regulatory knowledge; depth and breadth of domain knowledge), as well as individual theories of self as learner (eg motivation goals, attributional beliefs, prior efficacy judgements) all contribute in a situationally specific way to determine both the direction and form of task engagement, and through this, the quality of regulative activity in controlling real time learning.

In the present paper, Cantwell's (2001) model provides a framework through which both the curriculum in composition was constructed and reactions of students analysed. That is, the model provided a context for designing an instructional sequence that acknowledges the need to minimise affective barriers to learning. By focussing on self-efficacy enhancement in task activity, and by providing feedback to students that acknowledges the role of self efficacy in directing future engagement, many of the traditional barriers to teaching how to teach composition could be overcome. The focus of instruction became explicitly metacognitive in intent, rather than relying on a problematic assumption that simple exposure to composition activity will facilitate a willingness to teach composition.

**Figure 1**: Four level model of cognition (Cantwell, 2001)




## THE SETTING

We report here on an instructional programme for a class of 13 third year music education students. The students were enrolled in a four year Bachelor of Teaching/Bachelor of Music degree, all undertaking a compulsory methods subject for secondary music specialists.

### *The subject*

The subject has an overall focus on assessment and program development for secondary music curricula but is particularly centred on the development of knowledge and skills in the areas of listening and composition. Composition in this music education context is not the "pure" act of composing from an external or internal inspiration but a structured activity aimed at internalising and understanding the concepts of music by manipulating sound. That is not to say that totally open-ended

compositional tasks are not a part of the music curricula. The module endeavors to show students that considerable skill and knowledge development needs to take place before most high school level students are able to tackle open-ended tasks.

### *The students*

All students in the subject had extensive prior experience in performance, music theory and were all experienced in reading and utilising notated score. As a preliminary exercise, students were asked how they felt about incorporating composition in their classroom programs. Two students offered that they felt somewhat comfortable with the idea but qualified this by adding that they had both done a composition elective in the Bachelor of Music side of the degree. The remaining eleven students stated they didn't feel confident, for a number of reasons. The most prevalent reason offered was that they did not feel confident in their own ability to compose and therefore were not "qualified" to or comfortable with the thought of involving their future students in these activities. One student suggested that as she was not a composer, she was not qualified to assess her students' compositions. A number of the students referred to their own experiences as high school students, saying that they rarely did composition as a class activity and when they had, they remembered the experience as confusing and lacking direction. One student in particular, remembered her teacher announcing the Year 12 class would spend the next three weeks writing the mandated composition to be submitted for their Higher School Certificate examination. She also remembered feeling inadequate and uncomfortable because she didn't know how to begin the task, far less what direction it might take. She went on to say that she was very worried about how she would teach the composition components of the music syllabi.

## THE TASKS

The module involved the completion of three tasks of increasing complexity. The aim was not to associate any task directly with each of the four levels of Cantwell's (2001) model, but rather to structure student work in such a way so as to progressively reduce the affective barriers to engagement with composition, and by so doing facilitate a more mastery oriented and volitional approach to the teaching of composition. This approach is consistent with the interactive nature of Cantwell's model.

*Task 1*: The four week composition module began with some very simple tasks adapted from Howard's (1990) *Learning to Compose*. For example, students were given a simple quaver rhythm with a beat organisation 2 + 3 + 2 + 2 and a task with a number of parameters that would result in the creation of a short piece for two non-melodic percussion instruments. They also worked with the concept of decoration using a Javanese *balungun* and Orff instruments. At the end of each exercise they were asked to reflect on the purpose of the activities: what knowledge and skills were being developed? How could you adapt this activity using a different repertoire base? Where would it fit within a learning sequence?

*Task 2*: The next section of the module dealt with slightly more complex tasks that would lead to a listening focus. In other words, students would begin with a composition activity that highlighted features of the listening repertoire to follow. For example, students were given the *crotchet - quaver - crotchet - rest* rhythm found in the opening 26 bars of the second movement of Beethoven's Seventh Symphony, without knowing the source. After agreeing that the rhythm was rather dull and uninteresting, they were asked to arrange it for at least two melodic and three non-melodic classroom instruments in any way they wished, the purpose of the task being to create interest. After each of the groups had performed their versions, they listened to the Beethoven version to examine how he used the same rhythm. The purpose of the activity was to explore methods of creating variety and then focus on the way in which another composer had tackled the problem. The students commented on how focussed their listening became having engaged in the problem solving exercise themselves. They were able to identify clearly the techniques common to both their versions and Beethoven's, and those that were different as well as acknowledging that Beethoven was able to draw on considerably greater resources. They were, essentially, listening with "composers' ears" and

discussed the task in terms of strategies used to solve the problem of creating variety and interest.

*Task 3*: The final compositional task involved students working in small groups to produce a more substantial work. Each group was given quite specific parameters for the task such as the tonality, the metre, a suggested rhythmic vocabulary, number of melodic and rhythmic parts, etcetera, a week to prepare their initial melodies, and approximately one and a half hours of the class time to work through the remainder of the task before performing for the rest of the group. The students were surprised at how well the compositions worked given the constraints of resources, time and the job of combining their individual parts, and expressed pride in their efforts. The most important part of this exercise, however, was the discussion that took place afterwards. The three groups were given quite different parameters in an effort to highlight the amount of musical knowledge and understanding they already possessed. For example, the composition that resulted from the group given a Japanese scale was by no means an effort at authentic imitation but demonstrated certain traits such as a sparseness in texture and appropriate tone colours that gave it a certain ethereal, Japanese quality. While no members of the group had made a study of Japanese music, they did have a concept of how it sounds and the ability to, in one sense, replicate the ambience. The students were surprised how the design of the task drew on less conscious knowledge they actually possessed, and produced a reasonably well-structured composition of over two minutes duration. Student initiated discussion then turned to strategies for how they might, if time were available, refine and polish the work and how the whole process could be used in order to guide senior high school students in preparing their submitted composition for the Higher School Certificate.

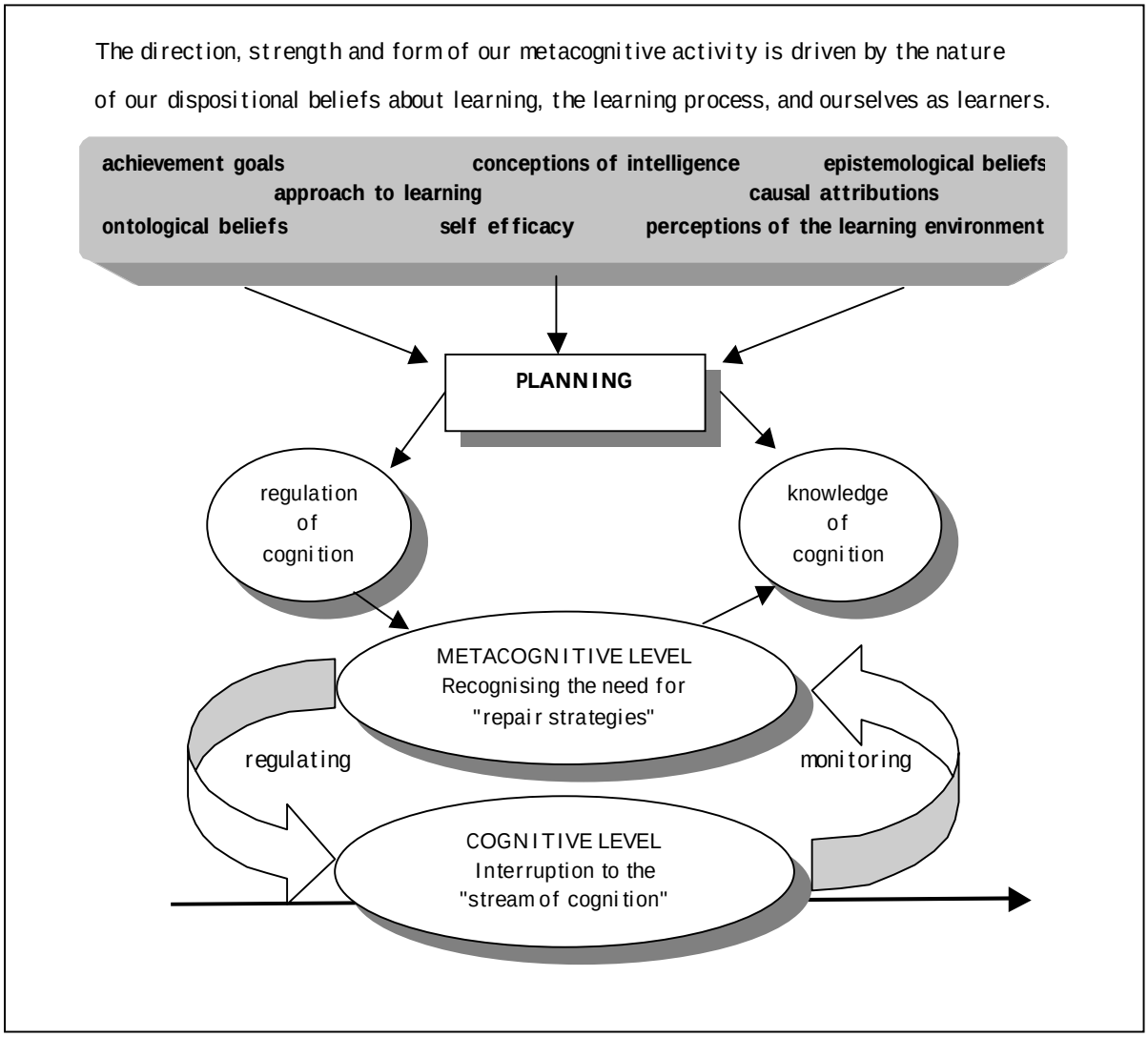
## INTERPRETATION OF STUDENT COMMENTS

At the completion of the unit of work, students were asked to reflect upon their experience. Two factors appear to stand out in the way students reacted to the preliminary activity: (1) they did not feel they had the knowledge base appropriate to engaging a composition task, and (2) they interpreted this lack of knowledge in terms of a diminished sense of present and future competence both to engage in a composition task and to teach a composition task. That is to say, student appraisal of the situation incorporated both negative cognition in terms of prior knowledge and negative affect in terms of their capacity to ultimately master the composition tasks confronting them.

We frame these initial reactions of the students in terms of Cantwell's (2001) four level model of the learning process. We have previously argued that musical learning can be explained through consideration of processes involved at the operational, regulative, dispositional and efficacy levels of learning (Cantwell, Jeanneret, Sullivan & Irvine, 2000; Cantwell & Jeanneret, 2000). In this paper, we suggest that musical learning related to composition and teaching composition can be developed using the model as a theoretical base and that it is the dispositional and efficacy levels that are particularly important with this group of students. Figure 2 contains reference to a number of "dispositions" individuals can hold and the degree to which, and the form in which, these exist is a matter of individual difference. It is our experience (elaborated on below) that the students' "understandings", "theories", and "beliefs" coupled with their self efficacy in the area of composition can be powerful obstacles when they consider how they might integrate these activities into their teaching programs

From our perspective, the students' sentiments reflected a number of issues related to the four levels of the model. There is a clear lack of task analysis, problem solving skills and strategic knowledge that has contributed to their beliefs and efficacy judgements in relation to their own composing. This, in turn, has coloured their beliefs about how to approach composition as a teacher. These tertiary students' comments would seem to also reflect those expressed by current high school students in a recent study by Bartley, (in preparation). She has collected data from years 7, 9 and 11 students in four high schools about their attitudes to classroom music. Students were asked to indicate and comment on their "least enjoyed" lesson type from performance, listening, theory and composition. While the majority of comments elicited in relation to performance, listening and theory centred

**Figure 2**: Dispositional elements influencing student learning




around the content or activities being "boring", the composition comments were more related to disposition and efficacy: "It's hard to do.", "I feel vulnerable when we compose…", "I can't compose. It is too hard." and "I'm not good at it." The tertiary students were made aware of these data at the end of the module and reflected upon the high school students comments in relation to their own experiences.

It should be noted at the outset that these students were already familiar with the learning model. They first encounter it in their first year psychology of education subject and again at the beginning of this subject where it is discussed in relation to learning in music.

As noted earlier, at the end of the module the students were asked to reflect on the previous four weeks and how they now felt about designing and using composition activities within their teaching programs. There was an unanimous, positive response to *Do you feel more comfortable and confident about composition in the classroom?* The students were then asked to indicate what had taken place in the module that helped them feel more confident (see Box 1).

*What did we do in this module that help to develop this confidence?*
•Actually doing the activities rather than talking about them - I can see how I could develop my own composition skills
•Being presented with a range of simple starting points
•You need to give students specific guidelines
•Being given a range of activities from simple to complex
•Learning about the use of parameters and how setting parameters helps students do the exercise
•The presentation of a range of activities that can build in sequence from Year 7 to Year 12; you can do lots of small tasks that could eventually lead to doing a large composition like the one needed in Music 2
•Composition is a tool to help understand different concepts; the activities can be quite simple and quite small; they build knowledge
•It's now very obvious how you can integrate composition with performing and listening; it doesn't have to be separate
•I can see the relationship between developing the concepts and using composition - I have more of an idea of how composition can fit into the whole music program
•I don't have to be a composer to help students
•You don't have to use notation - students don't have to be able to use traditional notation to compose

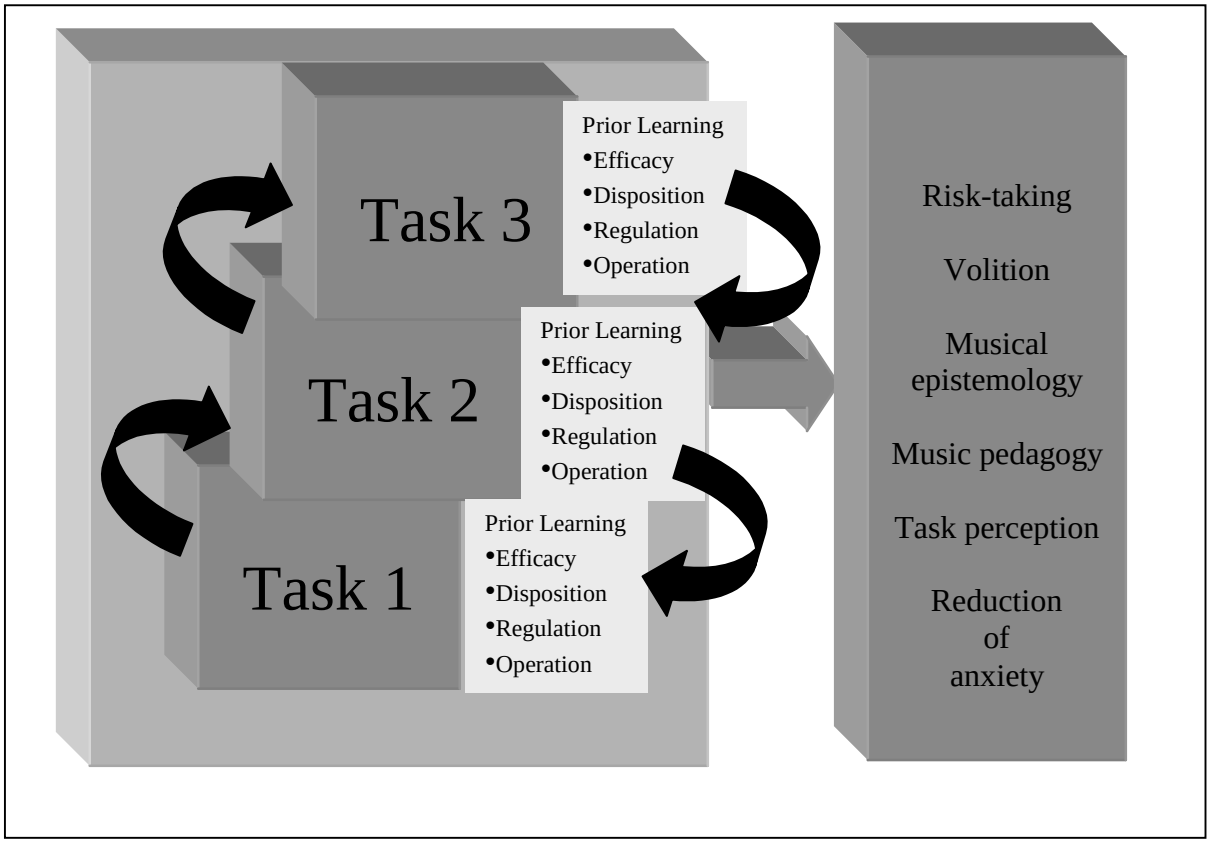
**Box 1:** Representative comments of students completing the course in teaching composition

Based on these qualitative data and observation throughout the four weeks, it would appear that the module has effected some change in the students' attitudes to their approach to teaching composition. Figure 3 illustrates how the instruction and outcomes relate to the Four Level model. Reflecting on the tasks they did in class, it would seem that the students have enough musical knowledge to complete the tasks but their lack of strategies at the Operative and Regulative levels were compensated for by the parameters given for each task. They saw that the tasks had value and purpose and that their own self efficacy was being built in the guise of engaging in the strategies they could use in the classroom. They realised that they were probably more than capable of the final task at the beginning of the module but that the increasing complexity of the tasks served to build their strategic knowledge and focus their attention on task analysis. This increasing complexity also served to subsume some early strategies into automation at the Operative level at later stages, and had the affect of reducing performance anxiety.

## CONCLUSION

This paper invites a reconceptualisation of the ways in which researchers may approach the analysis of musical learning in relation to composition within teacher education. It is apparent from recent research that individuals approach musical problem solving in a variety of ways, many of which display significant qualitative differences in process and outcome. Previous research into other aspects of musical learning such as learning score (Sullivan & Cantwell, 1999), performance (McPherson, 2001) and composition (Irvine et al,1999) have made reference to a common model of musical cognition which contextualises the physical act of musical production, musical perception and so forth, into a broader context of individual differences in metacognitive activity. The source of such individual differences have been postulated in recent work by Cantwell, Jeanneret, Sullivan and Irvine, (2000) to reside in four potential areas of difference: in actual acts of cognition, in regulatory behaviours controlling cognition, in the kinds of dispositions within individuals used to direct regulatory activity and in the efficacy judgements made by individuals controlling the nature of cognitive risk taking undertaken (see for example Cantwell & Jeanneret, 2000; Cantwell et al, 2000). We would also suggest that like these other areas of music cognition, teaching composition not only relies on the properties of musical and pedagogical information but also individuals' dispositions, efficacy, quality of prior musical knowledge and regulatory behaviour.

**Figure 3:** Relating instruction to outcome




Note

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