Chapter 4

Understanding Learning and Motivation in Context: A Multi-dimensional and Multi-level Cognitive–Situative Perspective

Simone Volet

Studying psychological phenomena in social contexts, rather than with a sole focus on the individual agent represents one of the major shifts in educational psychology research in the last decade. This shift, accompanied by tensions between mainstream theorists, prepared to take into account contextual influences on individual endeavours, and those promoting the view that the situative perspective subsumes the individual, is noticeable across several fields of research. This chapter discusses the conceptual and practical usefulness of adopting a multi-dimensional and multi-level cognitive–situative perspective for understanding learning and motivation in context. After a brief review of the emergence of the person-in-context position, recent research on transfer of learning across contexts is presented to illustrate the usefulness of the framework for understanding international students' experiences in their familiar (home) learning environment and the less familiar (host) setting. Empirical evidence of subjective interpretations and ambivalence in what constitutes appropriate learning across cultural–educational contexts supports the usefulness of the multi-dimensional perspective and the significance of understanding the experiential interface of learning and motivation in context.

In the second part of the paper, the framework is expanded into a multi-level perspective of person in context. It is argued that conceptualising contexts at different levels of specificity is critical for understanding the complex configuration of relatively stable motivational belief systems influencing behaviours, intra-individual variability across classroom activities, and individual continuous attuning to the affordances of specific tasks and activities in situation. Empirical evidence of differentiated patterns of stability and change in goals and self-efficacy, when students move across contexts and communities of learning, provide support for a multi-level framework. The findings are interpreted in light of dynamic interactions between relatively broad and enduring socio-cultural influences at the societal and general educational levels, the affordances created by the cultural educational practices of specific communities of learning at home and abroad, and the meaning given by students to their experiences in the two contexts.

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Emergence of the "Person in Context" Position

The conceptual shift towards a person-in-context perspective can be observed in at least three fields of research related to learning and motivation The first is *cognitive psychology*, which has found itself under attack from situativity theory and socio-cultural perspectives in the last decade. These latter perspectives have stressed the significance of socio-cultural influences in the development of cognition, motivation and learning and reciprocally how students' beliefs and behaviours affect the community of learning that they belong to. The mutual influence of socio-cultural, situative perspectives and individual cognitions can be found in recent models of self-regulation of learning, which have become more systemic in nature (e.g. Biggs, 1996; Boekaerts, 1992; 1999). Although there is a general consensus on the view that multi-dimensional and dynamic models are required for further conceptual advances in understanding and designing instruction (Salomon, 1991; Cobb & Bowers, 1999), there is less agreement on which dimension should become the central part of such models. Cognitive theorists such as Vosniadou (1996) have claimed that, cognitive psychology can provide a unified perspective if it "take[s] into consideration the biological, environmental and sociocultural constraints in which mental activity takes place" (p. 106). In contrast, others such as Greeno (1998), have argued that the situative perspective can provide, "a synthesis that subsumes the cognitive and behaviourist perspectives" (p. 5).

Recent attempts to reconcile the cognitive and situative epistemological positions have highlighted some of the fundamental tensions (Anderson *et al.*, 1996; 1997; Billett, 1996; Greeno *et al.*, 1996; Greeno, 1997; 1998; Hickey, this volume) but also some important points of agreement (Anderson *et al.*, 2000). Many researchers seem to agree on the complementary rather than contradictory nature of the cognitive and situative approaches for understanding the learner in context. According to Billett (1996, p. 277), the two perspectives can enrich each other "by providing a basis for understanding thinking and acting which they could not achieve on their own". For Anderson *et al.* (2000, p. 12) in order to progress towards more "useful design principles for resources and activities of productive learning", "both are needed" and "both should be pursued vigorously".

Similar trends towards a person-in-context perspective can be observed in *motivation research.* Already ten years ago, Weiner (1990) had argued that "school motivation cannot be divorced from the social fabric in which it is embedded" (p. 120). Ten years later, sociocultural dimensions in the construction of motivation feature in most theory developments worldwide. As stated by Maehr *et al.* (1999), the latest shift in motivation research is from, "thinking about motivation as an internal disposition that differentiates individuals, towards a consideration of the construction of motivation in context" (p. 17). This shift, therefore, does not only focus on the influence of school policies and classroom practices on motivation, which had long been acknowledged in the literature, but recognises and systematically investigates the ways in which organisational settings, school cultures and practices interact dynamically with students' motivational beliefs

during experiences of learning. In other words the shift calls for a closer examination of the dynamics of motivation in situation.

Boekaerts' (1999) theory of motivated learning, for example, has stressed how "students and instructional contexts influence one another", and more specifically how "students' motivational beliefs interact with the cues present in diverse social, physical and instructional contexts" (p. 43). As part of her argument for researching the dynamics of change in motivation, she claims that although the instructional context within which students acquire new knowledge and skills can be quite stable and trigger "habitualised" behaviours, the content covered and the social context vary continuously, which calls for investigations of "context-sensitive" behaviours (Boekaerts, this volume). A similar position combining context sensitive appraisals with relatively stable motivational beliefs is adopted by Op't Eynde *et al.* (this volume). Both claim that emotions in the classroom are contextualised and unstable since they are based on students' unique continuous appraisals and interpretations of events as they unfold. They also recognise that event-specific appraisals are influenced by students' identity, prior experiences, belief systems and knowledge developed over participation in numerous other practices — and which can reflect age, personal history and home culture variables. There is growing empirical evidence of cognitive, motivational, volitional and emotional sensitivity to tasks and activities in relation to relatively stable factors and macro-level contextual influences (Boekaerts, 1997; 1999; Schiefele & Csikszentmilhalyi, 1995; Turner *et al.*, 1998; and Volet, 1997) and of knowledge structures activated in response to situational cues and circumstances (Boekaerts & Niemivirta, 2000; Pintrich, 2000). Overall, this research highlights the mediating role of subjective interpretations and appraisals of situations on learning goals and engagement.

The growing importance of the person-in-context position is also noticeable within mainstream cross-cultural psychology. A body of so called *cultural or contextualist cultural* research has emerged as an alternative to the mainstream cross-cultural universalist research orientation. Like situated cognitive theorists, cultural/contextualists psychologists, many of them from non-western countries (Bond, 1986; Bergen *et al.*, 1996; Kagitcibasi, 1996; Sinha, 1986) have claimed that cognition, motivation and behaviours have little meaning outside the specific cultural environments in which they are embedded and therefore cannot be compared in abstraction across contexts — a typical approach adopted by cross-cultural psychologists. Studies which simply compare the cognitive or motivational characteristics of groups of students from different countries or ethnic groups and do not identify or measure the aspects of culture assumed to be responsible for observed variations (Betancourt & Lopez, 1993) have been criticised. Yet, according to Bergen *et al.* (1996), Kagitcibasi (1992), Kim & Berry (1993) and Sinha (1996), the cross-cultural and cultural positions do not need to be in competition. They should rather be seen as complementary, each enriching the other. Misra, in Bergen *et al.* (1996), argues that the aim of an indigenous Indian psychology, for example, is "not to generate a set of mutually exclusive, culturally-based orientations that fail to regard or appreciate the alternatives" but rather to "generate orientations that intersect and interpenetrate" (p. 498). Similarly, Valsiner &

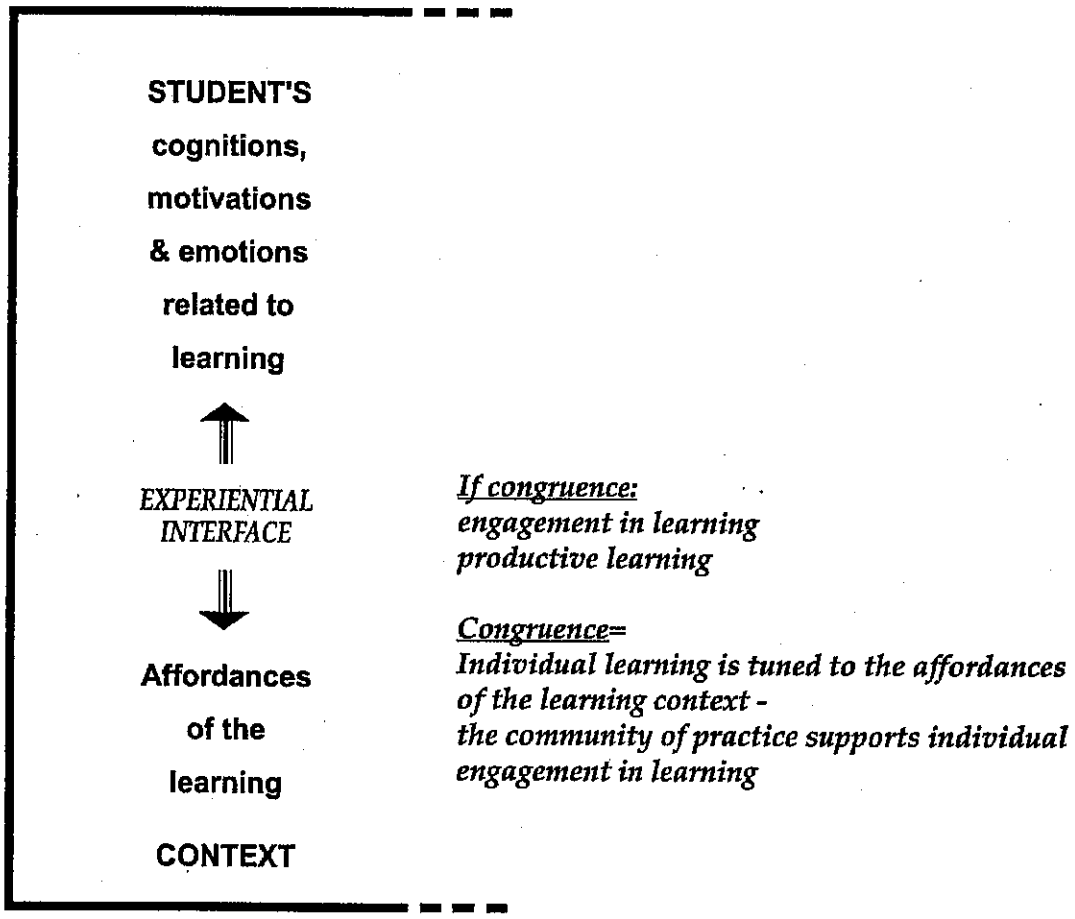
Lawrence (1997) argue that cultural psychologies distinguish themselves from cross-cultural traditions by their effort "to provide a systemic account of how culture participates in the psychological functioning of human beings" (p. 82).

Overall, the rationale for the emergence of a cultural perspective alongside mainstream cross-cultural psychology (Berry, 1997) bears some functional resemblance to the emergence of a situative perspective alongside mainstream cognitive psychology (Vosniadou, 1996) and motivation theory (Hickey, 1997). Attempts at reconciliation also have been proposed (Katcibasi, 1996), but the respective benefits and possible integration of the cultural and cross-cultural approaches are still being debated. In neither field of research does theory development seem to be mature enough to provide a coherent framework which reconciles the different epistemological perspectives. Yet, consistent across all three fields is the growing importance given to contexts as providing the socio-cultural conditions which support or alternatively constrain the development of cognitions, motivations, emotions, attitudes and behaviours. Whereas most educational psychologists would agree with the importance of contexts in their work, the major challenge is how to conceptualise the learner in context and how to analyse their mutual interactions (Anderman & Anderman, 2000). For Hickey (this volume), an additional challenge is how to reconcile "the inevitably conflicting interpretations within multidimensional efforts".

A Multi-dimensional Cognitive–Situative Perspective for Understanding the Person–Context Experiential Interface

The basic framework presented in Figure 1 illustrates the person-in-context from a combined cognitive and situative perspective, loosely conceptualised at the level of the classroom. The top part represents a student's cognitions, motivations and emotions related to learning or "effectivities" to use a term coined by Snow (1994). The bottom part represents the affordances (Gibson 1979/1986; Greeno, 1998; Gruber *et al.*, 1995) of the social and physical learning context. It refers to the instruction and support provided by the teacher, the behaviour of other students, and the cultural norms, value systems, and social expectations prevailing in that setting, and which are assumed to be understood and shared by all individuals participating in those activities. In the middle part of the framework are the mutual interactions between the two components during a learning experience. Finally, the overall enclosure stresses the view that while from a psychological viewpoint, the two components can be conceptualised and examined as distinct entities, from a situative perspective all participants and physical and social dimensions form an integral part of the so called socio-cultural context, or community of practice. The notion of "experiential interface", which is at the core of a (socio)-cognitive perspective, may be substituted by the notion of "experiential engagement" within a situative perspective.

The layout of Figure 1 highlights the tensions which arise when trying to conceptualise and visually represent context from a combined cognitive and situative



EXPERIENTIAL ENGAGEMENT IN COMMUNITY OF PRACTICE

Figure 1: A multi-dimensional cognitive-situative framework for understanding learning and motivation experiences in context.

perspective. From a cognitive perspective, the most critical aspect is the interface between an individual's effectivities and the (affordances of the) context — whether perceived, observed or inferred. The activation of prior knowledge and beliefs, situational interpretations, immediate emotions and the construction of meaning take place at this experiential interface. In contrast, from a situative perspective, the most critical aspect is the *experience* and engagement in the community of practice. Although a combined cognitive–situative framework may be cumbersome to conceptualise and represent, it is argued that the complementary nature of concepts, perspectives and analyses is critical for enriching our understanding of learning and motivation in context. In our research on international students' experience of learning across contexts, a pragmatic approach (Cobb &

Bowers, 1999; Hickey, 1997; McCaslin & Good, 1996) bringing together concepts from both perspectives was considered desirable to reveal the significance of subjective, culturally and experientially based interpretations of educational practices.

Figure 1 shows congruence at the interface, when the learning context supports students' engagement and learning, and reciprocally when students are attuned to the affordances of the learning environment. Depending on the learner's characteristics, prior experience, motives and preferences, and their cognitive, motivational and emotional online appraisals of the immediate task, congruence may be achieved by teacher-regulation, shared regulation or self-regulated learning practices (Vermunt & Verloop, 1999). In other words, what produces congruence is expected to vary across groups and individuals, task purposes and subject matter. It is also expected to change for the same person over time and across situations, although some consistency is expected overall.

The two-way arrow, at the interface, highlights the mutual, reciprocal influences of effectivities and affordances. It is important at that point, to specify that shared standards and subsequent expectations by students and teachers are subjective, and thus may not necessarily reflect context-independent principles of effective learning and motivation. While there is an assumption that productive learning could not be achieved without minimal shared standards and expectations, there is no assumption that congruence in academic and social expectations will necessarily lead to productive learning in real-life situations — due to possible competing local circumstances. In most cases, however, the effectivities–affordances interface in the classroom does reflect congruence. Teachers are attuned to the characteristics of their students, and design educational activities which produce "constructive frictions" for effective learning (Vermunt & Verloop, 1999). Reciprocally, students are attuned to the expectations of their familiar educational environment and keen to participate productively in learning activities. The notion of congruence at the experiential interface highlights the subjective nature of what students and teachers perceive as appropriate learning. Occasional mismatch is observed when some students are unwilling or unable to benefit from the opportunities provided by the learning environment, or reciprocally when the instructional approach does not support their special needs or circumstances, and ends up inhibiting their motivation, engagement and learning.

Criticality of the Experiential Interface

More substantial mismatch in intersubjective perceptions, and consequent lack of congruence, is noticeable when students move across different educational settings. The educational literature has highlighted the multi-dimensional, mutual adjustments experienced by students and teachers or supervisors in the first year of high school, the first year at university, the first year of postgraduate study, or the first weeks in a new job. The norms and expectations that are prevailing in a particular context are often tacit rather than explicit. Their significance becomes more salient when newcomers join a community of practice and attempt to apply the

knowledge and skills — which were valued in their previous learning environment — within the new setting. Re-establishing congruence can be difficult because of the subjectively perceived nature of what are appropriate cognitions, motivations and behaviours. According to Rogoff & Chavajay (1995), students have to learn to "discern the relations ('transfer') between genres of activity across contexts as they, together with others, participate in and contribute to bringing about those activities" (p. 871). When communities of practice do not assign the same meaning or value to given behaviours, the transition process required to re-establish congruence in expectations among participants can be difficult, making the promotion of "adaptive dispositions" (Hess & Azuma, 1991) in both students and teachers critical.

This psycho-social phenomenon will be illustrated by two examples from research related to international students from Singapore and Hong Kong studying at high school in their home country, and then at university in Australia (Volet, 1999a; 1999b). This research, which has taken a dual cognitive–situative perspective, has compared the nature and significance of perceived (students, teachers) socio-cultural appropriateness of transfer of learning at the experiential interface in the two learning contexts. Using the original framework as a basis, the left-hand part of Figure 2 assumes that after multiple mutual interactions and years of participation in the same cultural educational context, congruence has been achieved in students' familiar home community of practice.

The challenge starts when these students move to the Australian university context. The right-hand part of Figure 2 shows four types of subjective experiences in the transfer of learning across contexts: congruence, ambivalence, difficulty, and incongruence (see Volet, 1999b). Congruence is re-established in the host environment, if the learning practices which students bring with them travel well, and like at home, are perceived by all parties as congruent with what is valued in the new setting. One example of re-establishment of congruence across the two cultural–educational contexts, is the development of informal study groups or peer support groups (See Figure 3a). As illustrated in this figure, there is converging evidence from multiple studies and data sources such as observations, questionnaires, personal accounts and reflection in interviews, that the majority of Singaporean and Hong Kong students spontaneously form study groups at high school in their home country, and that once at university in Australia, they tend to re-create similar groups. Tang's (1996) studies in the Hong Kong context converge with Singaporean students' own accounts (Volet & Kee, 1993; Tan *et al.*, 1999) to show that spontaneous collaborative learning and interdependent practices are common in both Asian countries. The collaborative activities carried out in these groups appear to have functional similarity across contexts and are widely perceived in each setting as adaptive to the characteristics of that environment.

With regard to the host university setting, our own studies (Volet, 1999b; Renshaw & Volet, in progress) have shown significant differences in the amount of spontaneously formed study groups among international students from Confucian Heritage Countries backgrounds in comparison to local Australian students. They also revealed that the typical informal peer support groups of

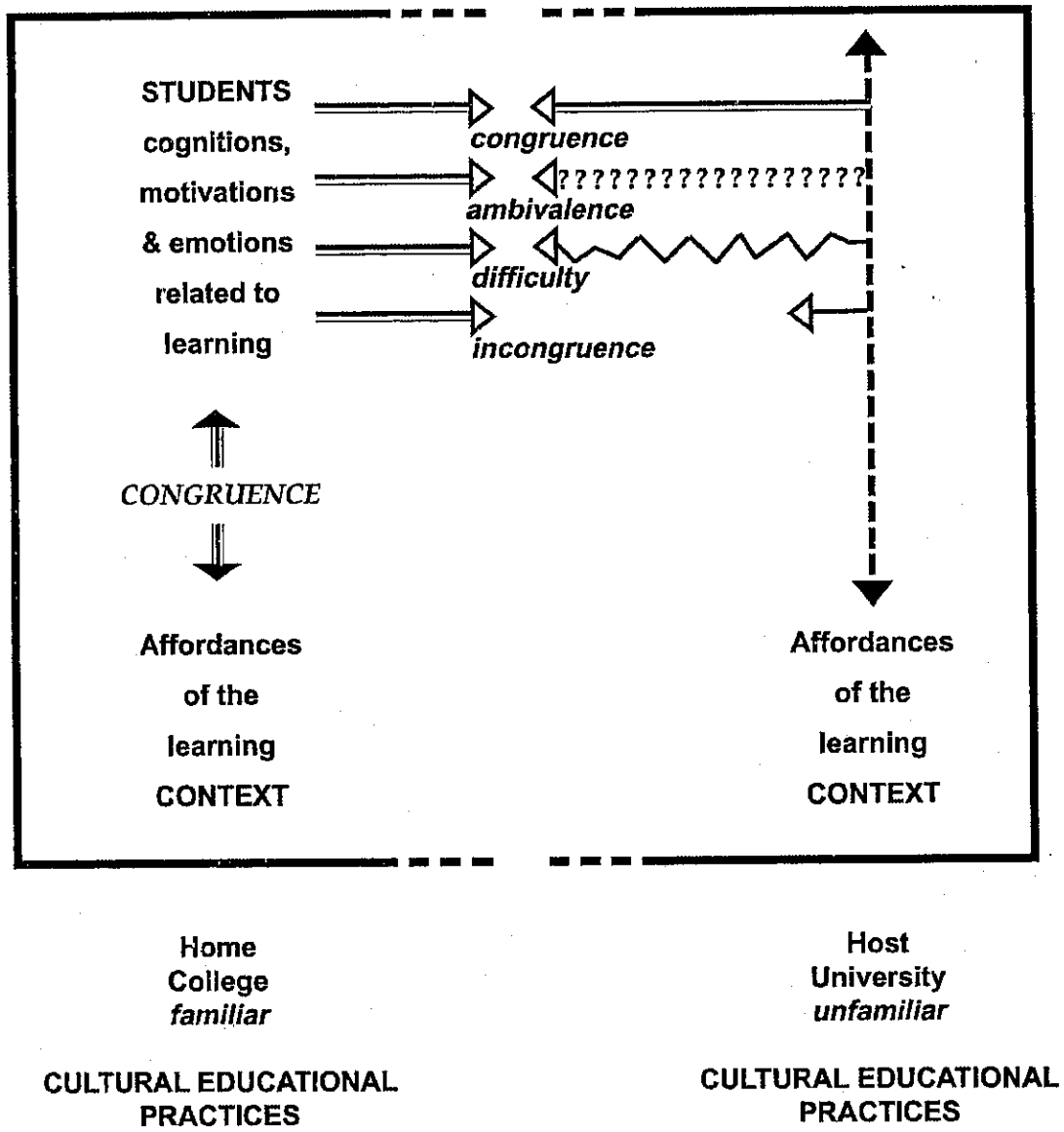


Figure 2: Different experiences of learning and motivation in familiar vs. unfamiliar contexts/cultural educational practices.

students from Asian backgrounds almost exclusively consist of co-nationals or other international students from Asian backgrounds (Volet & Ang, 1998; Smart *et al.*, 2000). Questionnaire as well as interview data have highlighted the positive impact of these groups on students' emotional and academic adjustment in the new cultural–educational context. From a cognitive, motivational or emotional perspective, these practices represent evidence of effective self-regulation of learning to adjust to an unfamiliar learning setting. It may be argued, however, that these regulatory behaviours were necessary (for cognitive, motivational as well as emotional purposes) to "compensate for inadequacies" (McCaslin & Good, 1996) in the induction process (or lack of) in the host environment.

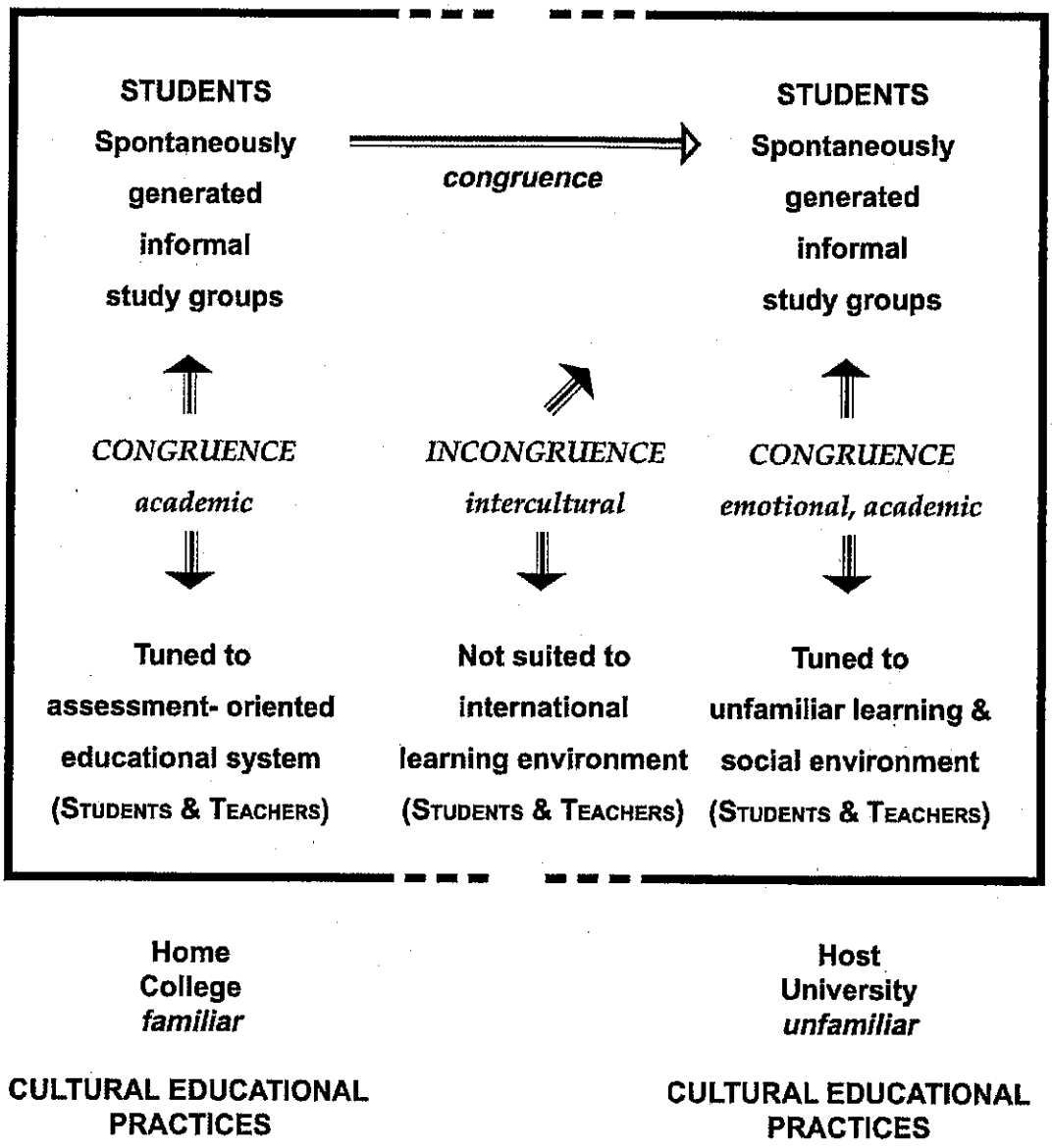


Figure 3a: Experiencing *congruence/incongruence* in learning across contexts/cultural educational practices.

Regardless of the cultural–educational setting, there is evidence that informal support groups are perceived by both students and teachers as being well attuned to the learning environment and to the special circumstances of international students. With one exception, however. From the perspective of educators (and many students) who consider international campuses as creating unique opportunities for intercultural learning, informal peer support groups which include only international students are maladaptive since they prevent students from engaging in cross-cultural encounters and ultimately achieving intercultural learning (Volet, 1999c; Volet & Ang, 1998). This phenomenon highlights the subjective and multidimensional nature of the notion of appropriateness of learning. Appropriate for

what and under what conditions? With regard to international students at university in Australia, informal study groups of peers experiencing similar socio-cultural adjustments appear ideal to meet their members' emotional and academic needs. But at the same time, mono-cultural groups are perceived by the same individuals as maladaptive and incongruent from a perspective of international education and intercultural learning. Our preliminary work on the issue of social cohesion at university in Australia (Smart *et al.*, 2000) revealed that teachers, as well as students, are well aware of the difficulty of simultaneously addressing emotional needs and intercultural development. This is reflected in the following comments, *"we will stick to our own culture and friends ... you are more comfortable with them"* or *"only when you are working with friends of your own culture can you really tell them how you feel"* (Volet & Ang, 1998, p. 10), but also *"we prefer mixed group, cross-culture group, we want to know what each other's culture offers"* or *"I prefer mixed group because of the new experience and new ideas"* (p. 11).

A second example of the significance of mutual dynamic interactions between effectivities and affordances in an international education context is reflected in the practice of cue-seeking in order to conform to task requirements (see Figure 3b). Cue-seeking refers to students' deliberate, systematic search for information related to forthcoming assignments and tests. It can involve, for example, quizzing teachers, searching for model answers or checking on past examination questions. Extensive use of such strategies was revealed in research with Hong Kong (Tang & Biggs, 1996; Biggs, 1996) and Singaporean students (Volet & Kee, 1993) studying in their home country. That research has shown how assessment-oriented systems in both countries have created students who are street-wise when it comes to test-taking. They have learnt to deliberately look for cues for each specific academic task and to adjust their learning strategies accordingly. Within the highly assessment-oriented educational systems in Hong Kong and Singapore, cue-seeking has traditionally been assigned a positive connotation, and is perceived by both students and teachers as adaptive and appropriate to the characteristics of the learning context. Reciprocally, the learning context supports active use of these strategies, as revealed in Singaporean students' accounts of some teachers assisting them analyse past examination papers for hints about possible questions in future papers (Volet & Kee, 1993).

Once transferred to the host university context, however, that same strategy acquires an ambivalent status. Interview data with staff and students revealed feelings of frustration and anger by both students and teachers created by a division of opinion as to whether cue-seeking behaviours represent appropriate learning strategies. From the point of view of students, this strategy was seen to be highly adaptive to find out about learning requirements in the new unfamiliar learning environment, even though they realised that the system was not as highly assessment-oriented as in their home country. But some teachers did not agree. They viewed students' cue-seeking behaviours as inappropriate at university. They expressed the belief that students who behaved in that way were only interested in getting the right answers to get good marks, at the expense of understanding the materials, *"... they feel that teachers are meant to teach and students are meant to*

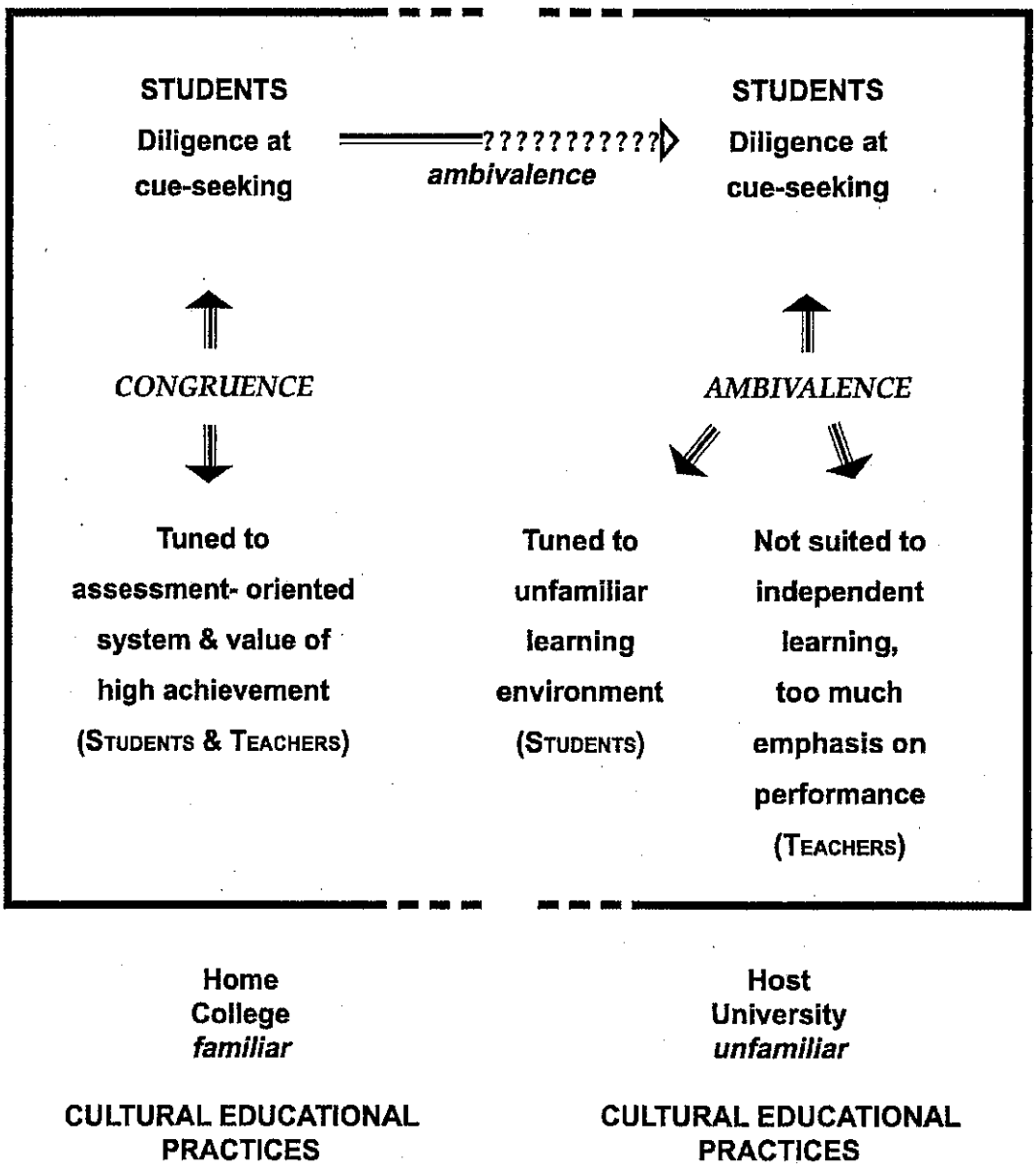


Figure 3b: Experiencing *ambivalence* in learning across contexts/cultural educational practices.

work hard and give the right answer", so they ask *"What am I supposed to do?"*, *"You are responsible for teaching me. You must tell me what to do"*. Many teachers thought that such beliefs were nurtured by educational practices in students' home country, *"... [they] are used to be directed"*. On the one hand, these teachers praised the diligence and engagement of students, but at the same time, they thought that cue-seeking was a bad coping strategy since it demonstrated a dependency in learning and a lack of disposition to exercise self-direction. Teachers' reactions revealed frustration and resistance, *"I have to resist [telling them] and keep throwing the responsibility to them"*. Yet, whether these same teachers'

instructional and assessment practices do support and scaffold students' development of more autonomous forms of learning was unclear.

Furthermore, one could argue that the value of, respectively, teacher-regulated and student-regulated learning practices vary across cultural–educational contexts, and this would contribute to the experience of ambivalence in international education settings. Theories of the self in different cultural contexts (Markus & Kitayama, 1991; Triandis, 1989) have highlighted how independent vs. interdependent construals of the self affect cognition, motivation, emotions and behaviours. Singaporean students' accounts of their learning at college back home revealed that reliance on the teacher for close guidance was valued and encouraged. (Note: The recent promotion of "being able to think independently and creatively" across the whole educational system in Singapore (Chang & Hung, 1999) may produce changes in expectations and practices). Nevertheless, while it seems reasonable to expect that all students would have developed some skills for self-regulated learning by the time they start university study, this may only be achieved once they have "internalised the social structural supports" of that environment (MacCaslin & Good, 1996, p. 660). In the context of international education, which requires studying in a relatively unfamiliar cultural educational environment, co-regulated learning (MacCaslin & Good, 1996) or shared regulation of learning (Vermunt & Verloop, 1999) practices seem best suited for scaffolding and socially situating students in the host learning context.

In conclusion, these examples illustrate the significance of multidimensional and dynamic aspects of learning and motivation in context. Studying practices in different contexts (Anderson *et al.*, 2000) and at the experiential interface of learner and context (multiple perspectives) have revealed that what constitutes adaptive or appropriate learning is not only subjectively perceived but is also situated in particular communities of practice. Exploring the extent of congruence in expectations and interpretations — or alternatively ambivalence, difficulty or incongruence — was found critical to address some of the misconceptions related to international students' learning at the individual level (cognitive angle, the level misunderstood by teachers) and to interpret their origin at the systemic level (situative angle) which gives meaning and authenticity to cognitions and behaviours (Salomon, 1991). Findings of continuous adjustments by both students and teachers at the experiential interface highlight how groups and individuals provide the social context for each other's practices. Contexts, therefore, should not be conceived as static entities but as dynamic communities in need of individual reciprocal understanding (Volet & Tan-Quigley, 1998) in order to ensure that the dynamic interactions between participants support productive learning.

Locating the Experiential Interface within a Multi-level Perspective of Person and Context

The second part of this chapter proposes to locate the dynamic experiential interface within a broader, multi-level perspective of person and context. Starting from

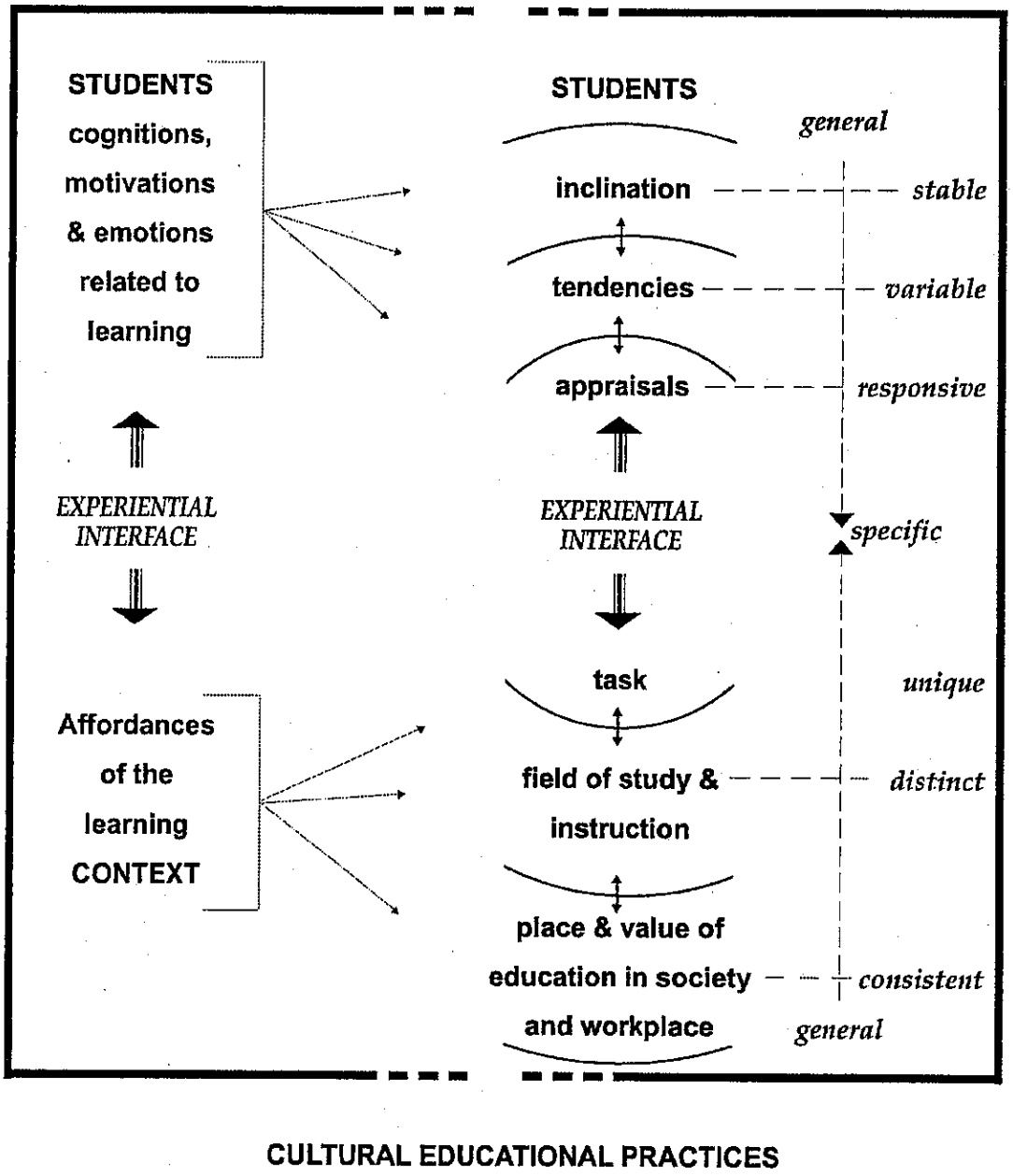


Figure 4: A multi-dimensional and multi-level cognitive-situative framework for understand learning and motivation in context.

the basic cognitive–situative framework presented earlier, Figure 4 shows how person and context can be conceptualised at different levels of specificity. As illustrated by the vertical arrow, the most specific and critical level is the experiential domain, i.e. the level of an individual's appraisals of the current activity in its real life social setting. More general levels of both "students" and "context" are conceptualised at the periphery, away from the immediate experience but with an overarching influence on the interactive and dynamic processes that are activated during a learning experience.

Rationale for a Multi-level Perspective

Although the influence of macro- and micro-level aspects of individuals and contexts are acknowledged in the literature (c.f. Anderman & Anderman, 2000), there have been few attempts to integrate all aspects into a single conceptual framework. The epistemological tensions discussed earlier may have contributed to this situation. Consequently, research exploring the complex configuration and interactions of multi-level dimensions on student learning, motivation and achievement is still limited and fragmented.

The most elaborated model available comes from a cognitive–motivational constructivist perspective (Boekaerts, 1992; 1999). Boekaerts' model of adaptive learning, which incorporates multi-level dimensions of individual (e.g. motivational beliefs, appraisals) and context/situation (subject matter domain, concrete task), provides a theoretically sound basis for examining how domain-specific motivational and appraisals of current learning situations affect learning intentions, goal setting and goal striving in actual learning situations. Boekaerts' empirical research as well as the work of a few others has provided support for the significance of a multi-level conceptualisation in understanding the dynamic experience of learning and motivation in real learning episodes and over a period of time (Boekaerts, 1997; 1999; Krapp, 1999; Volet, 1997).

Given the applied interest in this chapter on learning and motivation across cultures, another multi-level model, this time coming from an anthropological and cross-cultural psychology perspective is also briefly mentioned. Schneider, Lee & colleagues (Schneider & Lee, 1990; Schneider *et al.*, 1994) developed and validated a dynamic and interactive model to explain East Asian academic success. Their work, inspired by Spindler & Spindler's (1987) multi-level conceptualisation of culture uses a "holistic research methodology", including questionnaires and interviews with students, parents, teachers and school administrators, and focuses on a range of macro- and micro-level educational, instructional and learning issues. Their findings suggest that the academic success and high educational aspirations of East Asian Americans are related to a combination of macro-level cultural and socio-economic characteristics, and micro-level interactive relationships among children, parents, teachers and peer groups. The usefulness of combining macro-sociocultural and micro-interpersonal analyses to explain complex patterns of academic achievement across ethnic groups was also highlighted in Ogbu's research (1992).

Describing the Multi-level Framework

The top part of Figure 5, is inspired by Boekaerts' (1992; 1997; 1999) theory of motivated learning. It shows how students' cognitions, motivations and emotions related to learning can be conceptualised and empirically examined at three or more levels of specificity. At the most general, and assumed relatively stable level is a student's inclination to engage in learning in particular ways. Inclination

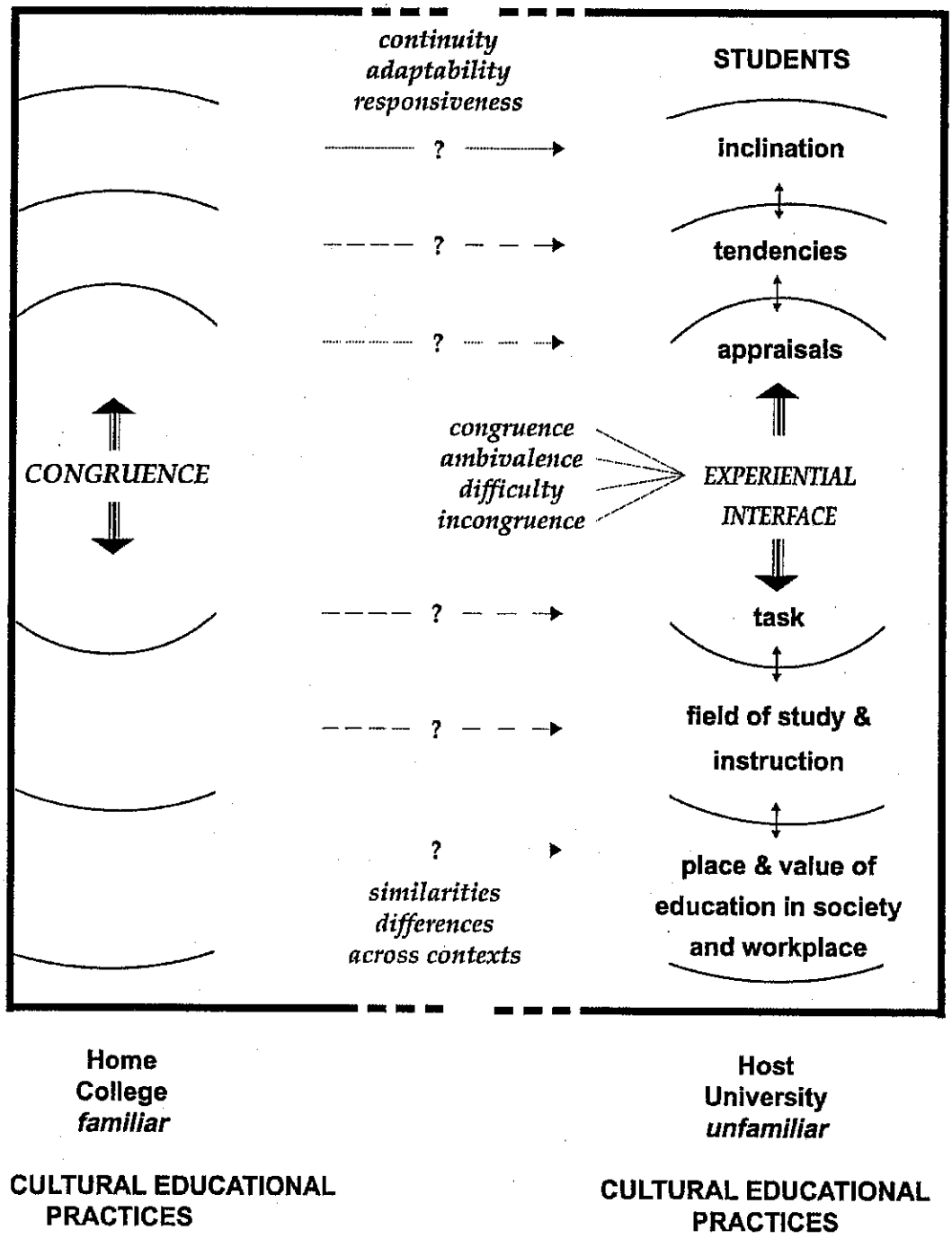


Figure 5: A multi-dimensional and multi-level cognitive-situative framework for understanding experiences of learning and motivation across contexts/cultural educational practices.

reflects overall beliefs and traits characteristics. At university (the applied focus for this chapter), these can include, for example, overall achievement motivation, intrinsic and extrinsic goal orientation, self-efficacy, preferred learning styles and personal views of the value of academic study. At the next level down in the figure

are students' tendencies to engage in learning in particular ways. In Boekaerts' model, tendencies refer to cognitions and motivational beliefs similar to those at the general level, but as they relate to a particular field of study. Our conceptualisation is similar to Boekaerts' but in an addition to field of study, we added a range of other, distinct types of learning environment (described below). At that level, some variability is expected. Studies with school children, for example, have revealed evidence of intra-individual variability in goal orientation and self-efficacy across school subjects (MacCallum, in press) and between cooperative vs. competitive learning environments (e.g., Ames & Archer, 1988). At the most specific level are students' cognitive, motivational and emotional appraisals of their current, immediate task or learning activity. Appraisals are part of the experiential domain which incorporates the most specific level of context. An example of appraisals would be a student's perception of self-competence to complete a particular task and their emotional feelings toward that task. At this level, context sensitivity and responsiveness are expected to dominate, and to mediate the impact of the more general influences, although, as cogently argued by Boekaerts (this volume), habitualised or preferential behaviour may prevail "in the absence of salient contextual information" which are of high personal importance.

The bottom part of Figure 5 expands on the notion of context and situation. At the most general level — represented at the bottom — are macrosocio-cultural societal dimensions. These refer to the values and belief systems which tend to dominate in a community, in particular the dominant views of the *place and value of university education in society and the workplace*. Societal dimensions are assumed to provide a relatively consistent and coherent framework for the development of overall educational policies and priorities, and the design of new courses, curricula, accreditation and assessment practices at university. At the next level up are the characteristics of a range of distinct and diverse learning environments, for example, overall field of study (environmental sciences or psychology) or form of instruction (teacher-regulated or student-centered; technologically-mediated or face-to-face) but also type of knowledge (scientific or philosophical; theoretical or practical), assessment practices (examinations or assignments carried out in students' own time; multiple choice tests, essays or research projects) and the nature of social learning setting (competitive or collaborative; fostering dependent, independent or interdependent learning). Combining dimensions produces a multiplicity of distinct learning environments which support or inhibit the activation of favourable or unfavourable motivational beliefs and trigger "cognitively mediated" or "habitualised" emotions (Pekrun, 2000). Finally, one level up in the figure is the experiential domain, the most specific level represented by the current task or activity that a student is currently engaged in — the "here and now" of learning. It includes the immediate socio-cultural surroundings, such as current classroom climate, role of peers and degree of social support provided by the teacher for the completion of that particular activity. The experiential interface thus presents a unique configuration of person-in-context dimensions.

Although the framework represents different levels of individual (and context) as nested within one another, there is no assumption that a nested component will

necessarily reflect its encompassing structure. For example, a student's perception of low self-competence for a particular activity may not reflect that student's general tendency to perceive him/herself as competent for similar types of activities. Local circumstances encountered during the activity may trigger different appraisals on that occasion. Salient personal and situational cues can re-arrange the configuration of elements by highlighting powerful physical or social dimensions (such as mood of the day, perception of competing priorities, temporary interference of peer support, anticipation of immediate returns or long-term benefits).

While the significance of examining students' motivational beliefs at different levels of specificity has been highlighted (Boekaerts, 1999), the theoretical and practical importance for educational practice of examining the complex patterns of effectivities–affordances interactions within and across different levels of context has received less attention. One can assume, for example, that university students' general motivational beliefs about learning reflect the macro-level value of university education in their future profession, community and society at large. But alternatively, these beliefs may be mediated by academic priorities, forms of instruction or assessment practices, which themselves could be at odds with the macro-level aspects. Tensions between economic and academic agendas, for example, can create confusion and conflicting influences on educational practices and in turn on students' motives and engagement in academic study at the specific level of units of study and even learning tasks.

Similarly, students' appraisals of a current activity are expected to reflect sensitivity to specific self-task conditions and to the immediate social and physical environment. Yet, there is evidence that students' appraisals also reflect consistency across tasks and situations, which stresses the enduring influence of prior educational experience, typical assessment practices, and the value placed on education in a person's family. Examining the nature and significance of dynamic interactions within and across levels of specificity is therefore important for understanding stability and change in student learning and motivation over a period of time, or when students move across cultural–educational contexts, as in the case of international education and migration.

Criticality of a Multi-level Perspective to Understand Macro- and Micro-level Interactions in Learning and Motivation

Our own research on learning and motivation within and across cultural–educational contexts provides preliminary support for the usefulness of a multi-level perspective. Figure 5 illustrates the multi-level dynamic interactions within an international education setting, and some questions which can be generated. The left hand side of the figure represents the situation in the students' home country with evidence of congruence at the person-in-context experiential interface. The right hand side represents the host university context with multiple levels of specificity for both "students" and "context". As indicated by the question marks in

the top and bottom parts of the figure, the socio-cultural conditions which foster continuity, adaptability or responsiveness in students' motivational beliefs over time and across contexts are not well known. For example, it seems reasonable to assume that the socio-cultural conditions leading to immediate re-establishment of congruence in the host setting have some degree of similarity with the home context. But what type of similarity, to what degree, and at what level of specificity? In the example of spontaneously formed informal study groups, discussed earlier, the similarity was in the function played by such groups at the person-in-context interface, and not between some characteristics of either individuals or contexts.

Acknowledging the situated, multi-dimensional and multi-level nature of the person-in-context perspective raises new questions for learning and motivation research, some related to tensions and possible conflicts between different layers of context. For example, while cross-cultural research has provided evidence that the cultural–educational practices which are valued in particular educational systems tend to foster the development of distinct motivational beliefs, it is unclear whether such beliefs are activated across all situations and tasks. Under what conditions do students' domain-specific, instruction-specific or assessment-specific experiences mediate their general motivational beliefs? What types of motivational beliefs are relatively stable and which ones vary across contexts, situations and tasks? After how much and what kind of participation? What is the magnitude of inter- and intra-individual differences in motivational orientations within and across different levels of context? The research questions which can be generated within a multi-dimensional contextual perspective are endless.

Our research has started to explore the interplay of broad socio-cultural and specific contextual aspects on the construction of different forms of motivation. The presence of large numbers of Singaporean students studying alongside local Australian students in the same classes at two Australian universities created a unique opportunity to explore the issue of stability and change in university students' motivational patterns over time, within and across cultural–educational contexts. On the one hand, evidence of stability over time would support the view that international students' motivational beliefs are not significantly affected by their specific experience in the Australian university setting. On the other hand, evidence of change over time would indicate that students' motivational profiles are malleable and readjusted within a different academic environment. In other words, maintenance of cross-group differences over time would highlight the enduring influence of substantial cultural–educational experiences, while a decrease in cross-group differences would stress the impact of the current specific academic situation in which all students study. Only a few selected findings are presented in this chapter (see Volet [1999a] for an overview).

In a short-term longitudinal study (Volet *et al.*, 1994) with two matched groups of Singaporean and Australian students, we examined the interplay of prior cultural–educational background and current specific learning environment on the development of study motives (using Bigg's Study Process Questionnaire, Biggs, 1987). We found that all significant changes over one semester were in the same

direction for the two groups. Both groups' motivation scores had decreased over time regardless of whether motives were deep, achieving or surface oriented. The decrease in achieving motivation, however, was of a lesser magnitude for the Singaporean group, yielding a significant group difference at the end of the semester. These results suggest that different layers of contextual influences may interact in dynamic ways in students' minds, and can even conflict with one another. Interview data revealed tensions experienced by some students between their overall academic achievement goals and their specific learning intentions for a unit of study, when the latter was not perceived as interesting or directly relevant to their programme of study.

In another small-scale longitudinal study (Volet & Renshaw, 1995), Singaporean and Australian students' learning goals for their first unit of study at university, and their perceptions of study settings for achieving these goals were collected at the beginning and the end of that semester-long unit. The issue of cultural specificity of the instrument for measuring goals was first addressed by analysing whether there were any qualitative differences in the two groups' conceptualisation of goals at the beginning and the end of the unit. The Rasch analyses, conducted separately for each group and for each occasion, revealed that the two groups' perceptions of the stimulus items and their relationships were different at the beginning but that these differences had disappeared by the end of the semester. By then, the ordering and location of the goals were almost identical for both groups. Since the Singaporean students were new to the Australian cultural–educational system, this finding suggests that students' prior cultural–educational experience supported the generation of different conceptualisations of goals (thus the group differences at the onset) but then, the specific study context of the unit and students' experiences within it had influenced both groups' conceptualisation of the relationships of the five goals in a similar way. Furthermore, comparisons of the two groups' learning goals at the beginning and end of semester showed that, after participating in the same learning activities over a semester, Singaporean students' levels of goals (measured with an instrument based on a hierarchy of goals customised to the specific unit of study) had become more like those of the group of local students. The significant relationships between the shift downwards in Singaporean students' levels of goals and their appraisals of the relevance of the unit content to their programme of study (measured with an adaptation of Boekaerts (1999) Online Motivation Questionnaire), provided support for the mediating role of subjective appraisals on the generation of learning goals.

The similar pattern of change for both groups, in their perceptions of the usefulness of different study settings was consistent with the data on learning goals, providing further support for the influence of specific learning experiences (via subjective appraisals) on students' beliefs about learning. The quantitative analyses of change over time in Singaporean students' appraisals of "Consulting with their tutor outside tutorial classes" provided results which were consistent with the interview data on home and host experience. On arrival, students were thinking that asking clarification questions was expected after class rather than during class. This reflected their experience at college in Singapore, where students were

expected to *"ask the friends first"*, and once they had formulated a common question, they would *"go as a group to ask her. Because the teacher feels that you will be a distraction to the others ... if you are the only one who doesn't understand"* (Volet & Kee, 1993, p. 15). After one semester at university in Australia, students' appraisals reflected local practices. They were aware of their lack of confidence in speaking up, *"... lack the confidence ... so we dare not speak up"* and *"... tutors could encourage ... quite intimidating in the big group"* p. 41).

Other investigations of the impact on student motivation of respectively broad socio-cultural and specific cultural–educational aspects of context were carried out by sub-dividing the Australian student group on the basis of students' ethnic background (country of birth). Three groups of students studying in the same programme of study at the same university in Australia could therefore be compared: Australian students born, and fully educated in Australia and of dominant anglo-saxon backgrounds; Australian students born in Singapore but fully or partly educated in Australia due to migration; international students just arrived from Singapore for the duration of their university degree. Each group was expected to have encountered a unique configuration of socio-cultural and educational experiences, characterised by some similar and some different characteristics to the other groups. The results of this study (which used an adaptation of Pintrich's MSLQ 1991; Volet, 2001) revealed that socio-cultural experiences had a significant and lasting impact on students' levels of extrinsic goal orientation (regardless of whether goal orientation was conceptualised with a self or a social focus). As expected, and in line with other research evidence of the higher achievement motivation of students from Confucian Heritage Cultures (Salili, 1995), the group of Australian students born and fully educated in Australia scored significantly lower on both measures of extrinsic goal orientation than either the group of Australian students from Singaporean background or the group of international students from Singapore.

The lack of significant differences in extrinsic goal orientation between the two groups of students from Singaporean backgrounds suggests that schooling in an Australian vs. a Singaporean setting had a minimal impact on their motivational orientation for their business studies. Similar results were obtained with matched sub-groups of students (age, gender and program major taken into account). Evidence of the enduring impact of broad socio-cultural influences on the value of education among Asian groups has also been reported in American research (Schneider *et al.*, 1994). Consistent with our findings, Schneider & colleagues found that Japanese American parents of 4th generation children placed a higher intrinsic value on education for self-improvement in comparison to parents of European American descent. On other aspects of education, however, they found that the Japanese American parents' responses reflected the impact of American cultural–educational practices.

Differentiated findings also emerged with our cross-group comparisons of self-efficacy which showed an opposite pattern of results. Unlike for extrinsic goal orientation, the significant differences for self-efficacy were between the two groups of students from Singaporean backgrounds and not between the two

sub-groups of Australian students. These results do not agree with repeated findings in cross-cultural studies, of Chinese-ethnic students' tendency to display lower levels of self-efficacy in comparison to their Western counterparts (Triandis, 1995; Salili, 1995). Our research, using a multi-level operationalisation of context, suggests that such differences may in fact disappear after a period of time in a different learning setting. The group differences in the cross-national studies, thus, may have to be interpreted as evidence of adaptation to specific educational practices rather than as the product of cultural values grounded in essentialist, static conceptions of culture (as context). In Singapore (Chew, 1997; Gopinathan, 1997) as in Hong Kong (Salili, 1995; Stevenson & Stigler, 1992) students are typically faced by highly competitive school systems, which put pressure on them to continuously strive for high levels of excellence — whether for maintaining the public ranking of their school or for the purpose of securing a place in the best possible college or university. Under such circumstances, it seems reasonable to assume that once in the less harsh study environment of an Australian university and given their relatively high academic achievement in comparison to their Australian counterparts, it is not surprising to find that the group of Singaporean students' level of self-efficacy is boosted. These interpretations are consistent with Zimmerman's (2000) claim that students' self-perceptions of efficacy are distinctive from related motivational constructs because of "their specificity and close correspondence to performance tasks" and "their sensitivity to variations in experience and task and situational context" (p. 89).

Conclusion

In this chapter, it has been argued that a multi-dimensional and multi-level cognitive–situative perspective is essential for understanding learning and motivation in context. A framework incorporating these elements was discussed and data from research on international students' experience of learning and motivation in different cultural–educational contexts was provided as preliminary support of the usefulness of the framework.

Within a combined cognitive–situative perspective, the experiential interface of the learner in context and the learner's experiential engagement in learning are emphasised. It is assumed that when learners participate in a learning experience (whether a learning task, classroom activity or unit of study), their motivational beliefs, orientations and habitualised forms of engagement for this type of learning are activated. These cognitions — which have developed over years of participation in various cultural–educational activities and contexts — interact with subjective appraisals of the affordances and constraints perceived in the immediate learning situation. These subjective appraisals mediate the direct impact of activated beliefs and orientations, and lead to goals, engagement and forms of participation which reflect context-sensitivity — rather than simply habitualised approach. Our research at the micro-level of learning showed that when individual learning is attuned to the affordances of the learning context and reciprocally

when the community of practice supports individual engagement in productive learning, congruence is achieved and productive learning can occur. Alternatively, when there is a mismatch between learners and teachers' subjective perceptions of what constitutes appropriate learning and motivation, ambivalence and difficulties are experienced.

Our proposal to locate the experiential interface within a multi-level perspective of person and context aims at capturing the holistic nature of the acting person in context (Ford, 1992) and the complexity of real-life learning situations. Within a multi-level cognitive–situative perspective, experiential engagement is conceived as socially situated, multi-dimensional, reflecting the past and at the same time oriented towards the present and the future. The learning situation in which a person participates is conceptualised as social and physical, complex and dynamic, and providing proximal and distal levels of affordances and constraints. Moving from naturalistic classroom studies to global and multi-level research settings is conceptually and methodologically challenging. Within a multi-level, cognitive–situative perspective, it becomes possible to explore, for example, how and why short-term goals for an immediate activity may interfere with future aspirations, how some behaviours may be at the same time congruent and adaptive to satisfy immediate motivational needs and incongruent and maladaptive for long-term well-being, or how local educational practices may enhance or alternatively inhibit the development of positive appraisals of students who belong to communities with different self-systems (Markus & Kitayama, 1991; Volet 2000).

One major issue related to multi-level research is the nested nature of some contexts. To date, little attention has been given to the dynamic interactions of cultural–educational practices in contexts which are nested within one another — as is the case with learning contexts. Classroom activities (micro-level) take place within educational institutions which prioritise certain policies, instructional approaches and assessment practices (meso level). Yet, these activities and practices may not always be congruent, which creates confusion in learners. At another level, schools and universities operate within broader communities with close links to the world of work. The value placed within educational institutions on critical thinking, and intellectual rigour may clash with vocational and instrumental views of schooling and higher education in society (macro-level). Gurtner *et al*'s research (this volume) revealed how a lack of congruence between messages conveyed at macro- and micro-levels can inhibit efforts to foster engagement in learning. Investigating the dynamics of motivation across levels of specificity ideally requires the use of mixed research methodologies, where traditional surveys, involving multi-level designs and person-centered analyses are combined with repeated experience sampling, classroom observations, discourse analysis, online and video-recall interviews and other evidence of typical and specific cultural–educational practices.

To conclude, it is argued that motivation in learning contexts is best understood if conceptualised as a dynamic construct, and as a dual psychological and social phenomenon. The interplay of relatively consistent, distinct and unique aspects of contexts with relatively stable, variable and responsive motivational beliefs and

appraisals highlights the systemic and situated nature of learning, where both individual and situational dimensions affect students' motivation and engagement in learning.

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