

Enhancement of Quality Learning: Capitalizing on the SAL Framework

Huy P. Phan, University of New England, Australia
Jack Maebuta, The University of the South Pacific, Fiji

Abstract: Quality learning in higher education is an impetus and major objective for educators and researchers. The student approaches to learning (SAL) framework, arising from the seminal work of Marton and Säljö (1976), has been researched extensively and used to predict and explain students' positive (e.g., critical reflection) and maladaptive behaviors (e.g., work avoidance). It is prudent for educators to cultivate and encourage students to actively construct and make sense of their own learning, rather than to simply memorize and reproduce contents for assessment purposes. In this review, we revisit and examine the SAL theorization within the contexts of higher education. We scope the importance of quality learning and propose three major elements in our discussion, which may foster deep, meaningful learning inclination: assessment strategies, the classroom milieu, and alignment of learning objectives. We conclude this theoretical article with an offering of issues for continuing research development. This focus, in our view, is significant as we believe the SAL framework is not robust in its explanation of students' learning behaviors in different sociocultural settings.

Keywords: Quality Learning, SAL, Tertiary Students, Continuing Research Development

Introduction

The notion of quality learning is an impetus for educators' consideration. In the field of Education, for example, educators and researchers have proposed a number of theoretical orientations, which help explain students' learning and academic successes in achievement contexts, for example – *achievement goal orientations* (C. Ames, 1992; C Ames & Archer, 1988; Harackiewicz, Barron, Pintrich, Elliot, & Trash, 2002; Senko, Hulleman, & Harackiewicz, 2011), *future time perspective* (De Volder & Lens, 1982; Mehta, Sundberg, Rohila, & Tyler, 1972; Seijts, 1998), and *expectancy-value* theory (DeBacker & Nelson, 1999; Wigfield, 1994; Wigfield & Eccles, 2000). Researchers have, over the past three decades, shown considerable interests in the student approaches to learning (SAL) framework (Biggs, 1987; Marton & Säljö, 1976). The SAL framework, originating from Marton and Säljö's (1976) qualitative work, has made a major contribution to the study of motivation and learning.

It is valuable then, for us to revisit the important tenets of the SAL orientation (Biggs, 1987; Marton & Säljö, 1976) in the contexts of higher education. We provide, in particular, an overview and detailed scoping of this theoretical orientation, and how it may explain students' quality learning and academic successes. We also examine, in the latter section of the article, a few major issues that have been noted in previous research (Mugler & Landbeck 1997; Phan 2013; Phan & Deo 2007) for continuing research development.

Quality Learning and the Importance of SAL

Learning in higher education contexts is more than just the ability for one to memorize and produce a given fact (e.g., "List down and discuss briefly three major points about Black hole"). One could say, in this instance, that learning extends beyond the realm of a performance-approach orientation, whereby normative evaluation practices play a major role. This perception of learning, in relation to performance and producing facts, is limited and entails a more restrictive and biased pedagogical approach to teaching in classroom settings – for example, an educator's stipulation of learning objectives that emphasize and encourage the recall of facts, the imparting of contents that lack authenticity, interest, and task value, etc. In a similar vein, an educator may adjust his/her pedagogical approaches in order to facilitate and encourage more performance-based learning.

Quality learning is an important emphasis and espouses the tenets of authenticity and constructive meaning (Phan, 2013). Individuals' engagement in meaningful dialogues and learning is paramount, whereby mastery of specific concepts and skills is a major focus for consideration (e.g., improving one's own critical analysis of reading tasks). In the area of teacher education, continuing theorizations have been made to account and enhance students' quality learning in various academic contexts. The NSW Model of Pedagogy (NSW Department of Education and Training, 2003), for example, is rather unique and details three pivotal components: (i) intellectual quality (e.g., encouraging deep learning), (ii) quality learning environment (e.g., stimulating a positive classroom milieu), and (iii) significance (e.g., promoting meaningful learning). Other theoretical models of teaching and learning (e.g., expectancy-value theory: Wigfield, 1994; Wigfield & Eccles, 2000) share similar attributes, and connote and focus on the significance of deep and meaningful knowledge.

The important question then, is why does the enhancement of quality learning matter to both educators and learners, alike? Apart from deep, meaningful learning in authentic contexts (e.g., "This aspect of Calculus is interesting; I wonder how applicable this is for my workplace?"), quality learning also entails positive, adaptive behaviors. We contend that encouraging and instilling in-depth learning with quality objectives (e.g., by the end of this unit, students should be able to detail three major implications for applied practice in relation to) may, for example, cultivate a sense of positive well-being, belongingness and cultural identity. Allowing students to negotiate and engage in debates about topical themes and controversial issues may, perhaps, foster appreciative task values (e.g., "I'm glad I've chosen this unit; it really helps me think about what I want to do"), democratic values and citizenship (e.g., "I feel really positive about this; that I have a say in this discussion and not everything is unidirectional"). More importantly, from the perspective of academic achievement and professional development, quality learning may contribute in the prediction of students' future time anticipations (e.g., "This course is very interesting and has highlighted the importance of Economics; this is something I need to consider whether I wish to pursue")(Eren, 2009; Lens, Simons, & Dewitte, 2002; Shell & Husman, 2001).

Consequently, from the mentioning in the preceding sections, we believe that quality learning for students at college and university is paramount. One major implication for educators, for example, involves the articulation and development of institutional policies, instructional practices, and other related pedagogical facets that could result in quality teaching for enriched learning experiences. In this section of the article, we examine in detail the SAL framework (Biggs, 1987; Marton & Säljö, 1976) and how this theoretical orientation features in the facilitation of effective teaching and quality learning outcomes.

The SAL Framework: Theoretical Overview

The qualitative work of Marton and Säljö (1976) established a premise for investigation into the approaches to learning that students may adopt in their studies. This seminal qualitative investigation, published in the *British Journal of Educational Psychology* in the late 1970s, produced preliminary evidence that discerned two major learning approaches, namely *deep-approach* and *surface-surafce*. In this examination, Marton and Säljö asked students to read a text and then interviewed them about what they had learnt from the reading and how they had approached the task. Findings indicated that there were students who were more intrinsically motivated and curious to make sense and seek meaning from their learning, hence, the coining of the term 'deep-level' learning. Students adopting this approach were committed to learning, and they related subject material to meaningful contexts and prior knowledge. In contrast, some students also based their learning on extrinsic motivation of positive and negative reinforcements, hence emphasizing the notion of 'surface-level' learning. Students adopting this approach were more concerned with passing examinations with minimal time and effort expenditure.

The Marton and Säljö (1976) study, consistent with other refinements made (e.g., Biggs, 1987), suggests that a ‘learning approach’ subsumes two major facets: *motives* versus *strategies*. This distinction is a major aspect for consideration, given some researchers continuously use the terms ‘cognitive approach’ or ‘cognitive strategy’ to define ‘learning approach’. This interchange is erroneous, as the latter terms is concerned exclusively with one’s own cognitive strategy engagement, maladaptive or meaningful, to make sense of the contents at hand (e.g., "I find most new topics interesting and often spend extra time trying to obtain more information about them": Biggs, Kember, & Leung, 2001). It is important then, to note that an approach to learning (e.g., a superficial approach) branches to include also a motive as to why one would want to learn, for example – why am I doing this unit?

The achieving-approach to learning, theorized (Biggs, 1987) and tested by a number of researchers (e.g., Kember & Leung, 1998; Phan & Deo, 2007, 2008; Sachs & Gao, 2000), is the alternative to both the deep and surface learning approaches. This approach to learning, according to Biggs’ (1987) conceptualization, suggests that individuals may be motivated to compete and to obtain high academic grades. This achieving approach to learning involves study strategies that are context oriented and involve specific habits, such as systematic organization and the cost-effective use of effort and time management. Biggs’ conceptualization also indicates that the achieving-level dimension may associate itself with both surface and deep-level approaches. For example, a student may systematically rote learn in order to obtain high academic grades or, alternatively, to gain deep meaning of contents, thereby constituting the approaches of “surface achieving” and “deep achieving”, respectively. Similar to these two approaches, the achieving-approach encompasses both motive (e.g., "I want top grades in most or all of my units so that I will be able to select from among the best positions available when I graduate": Biggs, 1987) and strategy (e.g., "I summarise suggested readings and include these as part of my notes on a topic": Biggs, 1987) facets.

Despite the achieving approach to learning, a number of researchers (Justicia, Pichardo, Cano, Berbén, & de la Fuente, 2008; Kember, Biggs, & Leung, 2004; Phan & Deo, 2008; e.g., Richardson, 1994) have since then argued that approaches to learning in educational contexts may be more refined to include simply just two main facets: *reproducing* (e.g., “In this sense, I only want to learn this in order to obtain a good grade at the end”) and *meaning* (e.g., “I am doing this unit because it is interesting, and I want to master and know more about the subject content”). This line of reasoning contends a dichotomy in learning approaches, whereby one’s own motives and strategies connote either a deliberation towards wanting to know more about a subject matter, or learning a particular content because of its mandatory nature.

Our own theoretical perspective, arising from recent studies (Phan, 2013; Phan & Deo, 2007, 2008), differs from the recent proposed positioning that emphasizes the importance of ‘reproducing’ versus one’s attempt to make sense of a subject matter (e.g., Richardson, 1994). We contend that approaches to learning in educational and non-educational contexts are more detailed and complex. This theoretical contention arises, in part, from existing methodological limitations, whereby Likert-scale inventories have been used to gauge into students’ approaches to learning (e.g., Approaches to Studying Inventory (ASI): Entwistle & Ramsden, 1983; Motivated Strategies and Learning Questionnaire (MSLQ): Pintrich, Smith, Garcia, & McKeachie, 1993). Cognitive (e.g., processing strategies) and non-cognitive (e.g., personal self-efficacy) processes are complex, and theoretical insights into approaches to learning require, in our view, other non-quantitative approaches (Phan, 2013). Despite this cognizance, however, researchers have to date used surveys and inventories to validate relations between the two major learning approaches and other related cognitive and non-cognitive processes.

There is empirical evidence, arising from quantitative studies, to indicate that both surface and deep learning approaches relate to a number of psychological constructs, such as achievement goal orientations (C Ames & Archer, 1988; Harackiewicz et al., 2002; Pintrich, Conley, & Kempler, 2003), reflective thinking practice (Dewey, 1933; Kember et al., 2000; Leung & Kember, 2003), personal self-efficacy (Bandura, 1997; Pajares, 1996), and effort expenditure (Zimmerman &

Risemberg, 1997). A deep learning approach, in terms of motives and/or strategies, for example, is associated dialectically with personal self-efficacy beliefs for academic learning and a mastery goal orientation (e.g., "I like school work best when it really makes me think": Dupeyrat & Mariné, 2005; Liem, Lau, & Nie, 2008; Midgley et al., 1998; Miller, Greene, Montalvo, Ravindran, & Nicholls, 1996; Senko & Miles, 2008; Simons, Dewitte, & Lens, 2004; Sins, van Joolingen, Savelsbergh, & van Hout-Wolters, 2008). Self-efficacious students, for example, and those who engage in learning for personal growth and interests (e.g., "I really liked biology since I was a kid; I'm thinking about doing graduate studies in veterinary science") are more inclined to utilize in-depth and meaningful cognitive strategies in the course of their studies (e.g., going to the library and requesting interlibrary loan for a particular text). Students who are disengaged, in contrast, tend to exhibit more maladaptive behaviors in schooling, such as adopting work-avoidance goals (e.g., "I want to do as little work as possible": Harackiewicz, Barron, Carter, Letho, & Elliot, 1997) and, consequently, expending minimal effort in their learning. These students, similarly, would tend to incline towards superficial motives and utilize habitual strategies in their academic learning (e.g., skimming through unit notes with little emphasis on details)(Fenollar, Román, & Cuestas, 2007; Meece, Blumenfeld, & Hoyle, 1988; Phan, 2008). This rationalized interrelation is not surprising, and we contend then that learning approaches and their corresponding outcomes (e.g., a preference for mastery goals) are malleable and predisposition depends, in part, on short-term and long-term goals.

What is notable too, from our examination of the empirical literature, is the analogous relation between the two major approaches to learning and reflective thinking practice (Leung & Kember, 2003; Phan, 2007). This intertwined relationship is, again, pivotal to the cultivation and encouragement of quality learning in higher education contexts. Pedagogical strategies and/or learning objectives that entail complexities (e.g., a scholarly piece of group work that involve and call for an articulation of hypotheses), in this sense, stimulate intellectual curiosity and positive perceptions of task value (e.g., "I really appreciate doing this task; it makes me think critically and I realize now that it may relate to my career plan"), facilitating in this process engagement of meaningful learning and deep cognitive strategies (e.g., critical reflection (e.g., "As a result of this unit I have changed the way I look at myself": Kember et al., 2000)). Simplistic and low-key learning objectives (e.g., the listing of three major tenets from Lev Vygotsky's sociocultural theory of cognitive development), in contrast, instill habitual engagement (e.g., "If I follow what the lecturer says, I do not have to think too much on this unit": Kember et al., 2000) and automaticity, giving rise to disengagement and maladaptive habits, such as a preference for a surface learning approach to learning. Consequently, as a point of recommendation, we believe that quality learning outcomes, such as an emphasis on one's ability to postulate a particular theory may involve a number of aspects, for example – the structuring of unit materials (e.g., increasing complexities in expectations) and instructional practices (e.g., opportunities for student negotiation and debate), periodically.

Implications for Teaching

From the brief theoretical overview in the preceding sections, it is prudent that we consider utilizing the SAL framework (Biggs, 1987; Marton & Säljö, 1976) to foster and encourage exceptional teaching and quality learning. The nature and characteristics of the various approaches to learning enable us to understand students' motives for their learning and how and why they succeed, academically. Other theoretical orientations, approaches, and/or strategies are also available, but the SAL system is rather unique as it discerns and explains both positive and maladaptive behavioral outcomes in educational and non-educational settings. There has been an emerging interest recently from researchers (e.g., Phan, 2009; Phan, 2013) to pursue exclusively in the promotion of deep, meaningful learning. This avenue of inquiry is significant and

emphasizes a focus on mastery, rather than superficial learning subjects to normative evaluation practices (e.g., “It is important that I come first in this unit, ECO101, and shows this to my family”).

The SAL framework (Biggs, 1987; Marton & Säljö, 1976) enables us to discern two distinctive approaches to learning: *reproducing contents* versus an *inner desire to make sense of one’s own learning*. What is important then, consequently, is an identification of instructional policies and practices that could assist and facilitate students’ academic engagement in deep learning motives and strategies. Encouraging students to opt for deep learning motives and meaningful cognitive strategies, in our view, provides a basis for quality learning. In this section of the article, we discuss three major psychosocial and pedagogical approaches: assessment and evaluation practices; the classroom milieu; and learning objectives.

Assessment strategies. Emphasis pertaining to deep learning involves a rethinking in assessment strategies and educators used these in classroom settings (Keppell & Carless, 2006). It has been observed, for example, that traditional assessment types such as multiple-choice tasks and short-answer questions (e.g., “In three lines, outline explain the term ‘imprinting’”) entail quick learning with a mindset in the reproduction of contents. In many cases, these types of traditional assessment tasks facilitate superficial learning and memorization of facts, rather than striving for quality outcomes and academic excellence. Alternative assessment tasks, in contrast, may signify and emphasize personal improvement, mastery of key concepts, and deep learning. Research in the area of achievement goals (C. Ames, 1992; Urdan, 2004; Urdan, Kneisel, & Mason, 1999), for example, has yielded findings that show the de-emphasis of normative evaluation and social comparison practices when one uses non-traditional assessment methods. .

In the fields of Education, Medicine, and other domains of functioning, a number of non-traditional assessment types have been used, for example – peer assessment and evaluation (Cheng & Warren, 1997; Sivan, 2000), personal portfolios (Tang, 1994), and innovative feedback processes (Carless, 2002). These assessment types (e.g., e-portfolios) used in various degree programs, differing from traditional methods such as formal examination, have been found to stimulate critical thinking and active reflection of learning and professional development (Conrad, 2008; Kish, Sheehan, Cole, Struyk, & Kinder, 1997).

Classroom environment. The classroom climate is an important feat for both educators and researchers to consider in their quest to promote deep and meaningful learning (Dart et al., 1999; Dart et al., 2000; Langan, Sheese, & Davidson, 2005). Recognizing the impact of the classroom environment arises, in part, from a need for us, as educators, to encourage individual growth and mastery in personal competence. This emphasis aligns closely to research in the area of achievement goal structures (C. Ames, 1992; Maehr & Midgley, 1996; Urdan, 2004), whereby one major focus entails the saliency of mastery goals. This line of inquiry, applying to the context of SAL, has implications for applied educational practices. One educational implication, in this analysis, entails the design and structuring of institution and classroom climates that, in turn, foster deep learning and de-emphasize normative evaluation and social comparison practices. The question then, is how do we cultivate a learning environment that entices a sense of autonomy and non-threatening experiences for students?

There are different psychosocial facets that may be considered to define a classroom social milieu, for example – (i) teachers’ attitudes and behaviors towards students, (ii) a physical and interpersonal space where there is dynamic participation and social interaction, and (iii) the availability of information and resources (Rana & Akbar, 2007; Wilson, 1996). There is empirical research that has yielded findings, attesting to the relations between the classroom environment and students’ approaches to their academic learning (Meyer & Muller, 1990; Wong & Watkins, 1998; Yuen-Yee & Watkins, 1994); for instance, some researchers have found that perceptions of clear objectives and quality teaching from instructors and teachers result in students preferring a deep learning approach (Lizzio, Wilson, & Simons, 2002; Nijhuis, Segers, & Gijsselaers, 2007). This evidence, collectively, indicates the importance and dynamics of a classroom social milieu,

calling in this case for the strengthening and fostering of certain psychosocial facets that enable mastery and deep learning (e.g., providing resources that are culturally appropriate for learning).

Alignment of teaching and learning objectives. There is increasing emphasis in higher education for lecturers and instructors to align their teaching to quality learning outcomes. This alignment, drawing from the 3P theoretical framework (Biggs, 1999), indicates three interrelated aspects that define the teaching and learning processes: learning objectives, teaching strategies, and assessment outcome (Biggs & Tang, 2007). This close association, according to Biggs, forms the basis for students to engage in deep motives and strategies that then enable the acquiring of meaningful learning. From an applied teaching perspective, it is important for a unit of study (e.g., ECO101) to have clear learning objectives that align closely to Biggs' SOLO taxonomy (Biggs, 1995). The structuring of learning objectives, for example, may emphasize and reflect an order in increasing complexities (Biggs, 1999; Biggs & Collis, 1982; Biggs & Tang, 2007), ensuring in this case quality outcomes, critical reflection, and deep learning. The learning of motivation theories in the unit Psychology may include objectives that align closely to Biggs' cognitive levels of *relational* or *extended abstract* reasoning (e.g., "Why is it important for us to understand classroom motivation from sociocultural perspectives?"). Similarly, the teaching of Physics may include asking students to postulate what would happen when two objects of different masses free fall in a vacuum that contains non-gravitational force. These questions, of course, require in-depth understanding of unit materials and suggest that the skimming of unit notes and quick reading are inadequate, and do not provide the necessary skills for hypothetical reasoning, higher-order abstraction, etc.

Learning objectives play a major role in the conveying of positive beliefs, expectations, and values placed in learning tasks. We believe prescribing learning objectives that vary in complexities may serve a number of purposes, for example – instilling a positioning that learning at university entails more than just the notion of "memorization" or a thinking of "I just need to get a pass". Aims and objectives that are sequentially structured, similarly, may help students recognize the importance of long-term planning and goal settings. Non-immediate goals may, for instance, assist students to orientate towards deep learning motives and strategies in order to succeed, academically (e.g., "I need to allocate some extra time with my lecturer to go through this section" or "I need to do some extra research at the library"). Constructive alignment, then, is integral to the teaching and learning processes, and influences instructors' pedagogical approaches to teaching, such as the structuring of learning objectives and engagement in constructive teaching strategies (Biggs & Tang, 2007).

Reconceptualization for Further Research Development

We alluded earlier that despite its significance, the SAL framework (Biggs, 1987; Marton & Säljö, 1976) also has some major caveats, which in our view require further examination. Inconclusive evidence and scholarly dialogues provide a basis for continuing research development into the various approaches to learning. One interesting line of thoughts, as noted recently emphasizes the person-context interaction factors (Phan, 2012; Phan, Maebuta, & Dorovolomo, 2010), and how these may assist in the development of other methodological approaches that could assess students' approaches to learning. Our positioning posits a need for educators and researchers to consider alternative, non-quantitative inventories that could tap other possible learning motives and strategies. The scope of existing Likert-scale inventories (e.g., the Learning Process Questionnaire (LPQ): Biggs, 1987) is rather limited, and does not necessarily recognize the contextualized psychosocial factors mentioned previously. The work of Kember, et al. (2004), for example, involved a revision of the LPQ and this revision (R-LPQ-2F) entails eight sub-facets: *intrinsic interest* (e.g., "I find that at times studying makes me feel really happy and satisfied") and *commitment to work* (e.g., "I spend a lot of my free time finding out more about interesting topics which have been discussed in different classes") for deep motive, and *relating ideas* (e.g., "I try to

relate what I have learned in one subject to what I learn in other subjects”) and *understanding* (e.g., “I try to relate new material, as I am reading it, to what I already know on that topic”) for deep strategy; and *fear of failure* (e.g., “I am discouraged by a poor mark on a test and worry about how I will do on the next test”) and *aim for qualification* (e.g., “Whether I like it or not, I can see that doing well in school is a good way to get a well-paid job”) for surface motive, and *minimizing scope of study* (e.g., “I see no point in learning material which is not likely to be in the examination”) and *memorization* (e.g., “I learn some things by rote, going over and over them until I know them by heart”) for surface strategy.

What is not clear, though, is whether students in higher education institutions incline and depend on other possible motives and strategies? This question suggests the possibility that approaches to learning may situate and/or contextualize within other systems of change. The person-context interaction (Bronfenbrenner, 1989; Kozulin, 1999; Phan, 2012; Phan et al., 2010; Walker, Pressick-Kilborn, Arnold, & Sainsbury, 2004; Williams, Davis, & Black, 2007) connotes a paradigm shift in theoretical tenets and understanding of individualized cognitive development and other related processes. One clear example, of course, entails the possible embedding of approaches to learning within the person-context framework.. We contend that the notion of contextualization, culturally and/or socially, may influence individuals to deliberate their learning and actions with specific motives (e.g., “I want my parents to be proud of me; I want to achieve good results because it is an expectation”), and adopt learning strategies that are based on historical upbringing.

The theoretical positioning that we propose, drawn from previous cultural studies (Kember & Gow, 1990; e.g., Kember & Gow, 1991; Mugler & Landbeck, 1997; Phan & Deo, 2008; Richardson, Landbeck, & Mugler, 1995; D. Watkins & Astilla, 1982; D. A. Watkins & Biggs, 1996), posits the possible situational placement of individualized approaches to learning within various sociocultural milieus. Does a particular approach to learning in an educational setting co-exist with certain sociocultural attributes? Ideologies, cultural ethos and philosophies, and personal values are significant, and may influence our perceptions about learning, knowledge and the world, in general. The Asian culture, for example, is well known for its accentuation on the notion of interdependency (Markus & Kitayama, 1991) and filial piety (Chow & Chu, 2007). Filial piety is rather unique, as a cultural entity, as it emphasizes loyalty, pride, and honor. Indigenous communities and societies, similarly, share communal beliefs and informal practices, which differ extensively from the Western contexts (Nabobo-Baba, 2006; Phan, 2012). These attributes, in totality, may shape and influence individuals’ perceptions about learning. Some individuals may, in this instance, believe and contend that learning is more than just about the acquiring of knowledge.

The social, cultural, and political contexts of higher education institutions may espouse certain learning objectives, expectations, and personal and social criteria. Some institutions, for example, may incline more favorably towards scholarly dialogues, contributions, and academic competitions. By the same token, institutional expectations (e.g., a benchmark for success and/or failure), and social and peer pressure may influence individuals’ perceptions, views, and beliefs about the reasons for learning and acquiring knowledge. Family commitment and values, similarly, as we discussed, may also co-exist to influence individuals’ motives, resolve, and determination to learn and succeed.

Educators and researchers could, in essence, consider existing inventories (Biggs et al., 2001; Kember et al., 2004) and incorporate the proposition relating to the sociocultural attributes of cognitive development. Items that constitute to the two major learning (e.g., “I find that at times studying makes me feel really happy and satisfied”: Kember et al., 2004), at present, do not take into consideration the importance of the person-context relationship. From our previous mentioning, we suggest researchers consider exploring additional items that may delve into other learning motives, for example: (i) *communalism* (e.g., “I find that at time studying together with others makes me feel content and satisfied”, and “I feel that studying with other students makes

my learning more interesting and enjoyable”) and the *well-being of others* (e.g., “I find that assisting others in their learning makes me understand my own learning”, and “I feel committed to help others learn and understand the unit materials”) for ‘inter-related collaboration’ motive; and (ii) *family values* (e.g., “I work hard at my studies because my family values learning and knowledge”, and “I have a strong commitment to learn new things because of my family’s expectations”) and *achievements for pride and dignity* (e.g., “I work hard at my studies because I want to make my parents feel proud”, and “It is dignified in my family for one to learn and to achieve”) for ‘personal, family-committed’ motive. By the same token, we suggest exist learning strategies expand to include other psychosocial possibilities, for example: *clarification* (e.g., “I like to make sense of my learning for in-depth understanding”, and “I try to verify issues as I go through my unit materials”) and *expansion for application* (e.g., “I try to relate what I have learned in this unit for application purposes”, and “When I read a textbook, I try to relate it to everyday applications”) for ‘in-depth application’ strategy. More cognitive emphasis may also include items, such as: “I often visualize in my head, diagrammatically, connections between contents”, and “I often cues to assist me in my learning and understanding of unit contents”).

Conclusion

This review has provided an in-depth examination of the SAL framework (Biggs, 1987; Marton & Säljö, 1976) and its implications for applied research and teaching practices. The synthesis and review of research studies in the preceding sections have provided a detailed scoping for educators to consider the potency of the SAL framework in the teaching and learning processes. Most noticeable, perhaps, is the notion that learning strategies and motives have varying impacts on achievement outcomes, as well as other achievement-related processes. In this analysis, our examination of the literature has discerned different structural relations that then result in either adaptive or maladaptive behaviors. Consequently, the impetus drawn from this inquiry is the recognition that, perhaps, we need to refine the SAL framework in order to accommodate other possible practices and study habits. There have been citations and ongoing reconceptualizations into the differing approaches to learning that students may adopt in their studies. From a critical point of view, we suggest there are many shortcomings that warrant a need for further research development into this area of inquiry. In part then, extending the works that have been conducted so far, we offered our own interpretation and conceptualization for continuing research development.

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ABOUT THE AUTHOR

Dr. Huy P. Phan: Associate Professor, School of Education, University of New England, Armidale, New South Wales, Australia.

Dr. Jack Maebuta: The University of the South Pacific.