**International Journal of Modern Education Research**
2017; 4(6): 96-100
http://www.aascit.org/journal/ijmer
ISSN: 2375-3781

AASCIT American Association for Science and Technology


**Keywords**
Self-Efficacy,
Individual Interest,
Achievement Goals,
Intrinsic Motivation

Received: July 25, 2017
Accepted: November 14, 2017
Published: December 5, 2017

# Appraisal of the Motivational Ecology: A Dynamic View of Motivation

**David Palmer**

School of Education, University of Newcastle, Newcastle, New South Wales, Australia

**Email address**
David.Palmer@newcastle.edu.au

**Citation**
David Palmer. Appraisal of the Motivational Ecology: A Dynamic View of Motivation. *International Journal of Modern Education Research.* Vol. 4, No. 6, 2017, pp. 96-100.

**Abstract**
In recent years there has been increasing recognition that a student's motivation for learning is not a long-term predisposition, but rather it can vary at different times and in different contexts. Thus, motivation can be regarded as a dynamic phenomenon that is sensitive to personal and environmental influences. At the present time however, there is no consensus about what processes would be involved in a dynamic system of motivation. In this paper, it will be argued that the personal and contextual influences can be interpreted as a motivational ecology, and appraisal of the motivational ecology determines the level of motivation at different times and in different situations.

## 1. Introduction

Motivation has been defined as the process in which goal-directed behavior is initiated and sustained (Schunk, 2004). In recent years, it has been recognized that there are many individual and contextual factors that can influence student motivation in learning tasks. Many of these factors are not stable, since changes in topic, pedagogical techniques, interactions among students, and the behaviors of the teacher can all occur during a lesson (Turner & Patrick, 2008). As a result of this issue, a number of authors have recently stated the need for more dynamic, integrated, and situated views of motivation (Ainley, 2012; Maehr & Zusho, 2009). Currently however, the processes involved in such a dynamic system of motivation are still open to question. The purpose of this paper is to suggest a possible mechanism for a dynamic view of motivation.

## 2. Factors Influencing Motivation

In educational settings, there will be a number of personal and contextual factors that might help to determine whether a student will feel motivated towards a learning task. First, each student can be expected to have a range of relatively stable predispositions and belief structures, including self-efficacy beliefs, individual interests, achievement goals, expectancy/value beliefs, and psychological needs for novelty, competence, autonomy, and relatedness (see Pintrich & Schunk, 2002). Each of these can influence whether students are willing to become engaged in learning. For example, students try to avoid tasks for which they have a low self-efficacy (Bandura, 1997), whereas they seek out information in topic areas in which they have individual interest (e.g., Ainley, Hidi & Berndorff, 2002), and they are likely to apply themselves to experiences that will satisfy psychological needs (Niemiec & Ryan, 2009). In addition, social and cultural factors such as parental involvement and socioeconomic background can also influence motivation (Blom & Severiens, 2008; Kek & Huijser, 2011).

At the same time, a student might also be experiencing some relatively transient personal factors that can influence his/her motivation to learn. For example, self-regulatory processes may have created a proximal goal, or *intention to learn*, and this can be expected to influence willingness to initiate activity toward that goal (e.g., Boekaerts & Cascallar, 2006). On occasion, students may also experience strong, negative emotions including anxiety, and these have been linked to procrastination in learning tasks (e.g., Schraw, Wadkins, & Olafson, 2007). In addition, if students are experiencing significant fatigue, pain, hunger, or discomfort, then they will experience less motivation towards learning (e.g., Menna-Barreto & Wey, 2008).

To these should be added the contextual and social factors that are peculiar to the classroom. Adolescent students are particularly sensitive to peer relationships, so the presence of either supportive or non-supportive peers can influence their willingness to interact in learning tasks (Patrick, Ryan, & Kaplan, 2007). Their perceptions of the teacher, including the extent to which they perceive that the teacher cares about and will help them, can also influence their task-related engagement (e.g., Patrick, Ryan, & Kaplan, 2007). The presence of distractions can influence the extent to which students are able to attend to a task (Anthony, 2009). Finally, novelty is known to arouse student interest in learning (e.g., Renninger & Hidi, 2011) so the extent to which the teacher uses this strategy might influence the extent to which they become engaged.

In summary, a range of factors may influence whether students become motivated towards learning tasks. In this paper, the term *motivational ecology* will be used to refer to this array of personal, cultural, and contextual factors that impact on motivation. For each individual student, the motivational ecology may contain all of the factors mentioned above, or only some of them, or other factors in addition to those listed above, according to personal and contextual differences. The nature of the beliefs and predispositions are likely to vary from student to student, and students' intentions and emotions, as well as the pedagogies, peer groups, and teachers can vary in different classes. Consequently, each student in a class has a potentially *unique* motivational ecology, the nature of which can change throughout the day as the student experiences a range of different subjects and learning modes.

## 3. The Mechanism of the Motivational Ecology

It is important to recognize that, within the motivational ecology, some of the factors may be positive, in that they will tend to support motivation to learn, whereas others may be negative, in that they will tend to work against it. For example, Durik and Harackiewicz (2007) reported that "individuals who enter learning situations with high levels of individual interest in the topic are... eager to engage in the learning activity. In contrast, individuals who enter situations with low individual interest in the topic are unlikely to become engaged in the activity" (p. 598) which implies that high individual interest would be a positive factor and low individual interest would be a negative factor. Other positive factors might include positive task value, mastery goals, a self-regulatory intention to learn, and favorable external factors such as supportive peers and a supportive and enthusiastic teacher. Negative factors might include negative attributional beliefs such as learned helplessness, negative emotions such as anger, the presence of disruptive peers, or discomfort, hunger, and fatigue.

Thus, a student's motivational ecology could comprise a mixture of positive and negative factors. A particular student might enter a history lesson for example, with a mastery goal for learning in history, and may sit with supportive peers, but may have missed some sleep the previous night, and may be experiencing some hunger pangs. In this type of situation, it is difficult to predict whether or not the student will feel motivated to learn. It would be sensible to assume though, that at some level in the brain, the *positive and negative factors would need to be weighed against each other* in order to determine the outcome. Put simply, when the perceived positives outweigh the perceived negatives, then the student would be more likely to focus attention on the learning task.

As evidence for this proposal, it might be predicted that when there are more positive factors and less negative factors in a particular time and place, then the student would feel motivated towards the task at hand. For example, Hidi and Harackiewicz (2000) reported that student interest was higher when there were higher levels of perceived value, usefulness, relevance, and autonomy. Similarly, Palmer (2009) reported that the highest levels of interest occurred when the task contained multiple attributes including novelty, physical activity, and social interaction, but interest was lower when only one or two of these factors were present. On the other hand, when there are powerful negative factors, such as negative self-view, negative peer relationships, or boring teaching, then interest, attention, and concentration are reduced (Boulton, Trueman, & Murray, 2008; Renninger & Hidi, 2011; Young, Robinson, & Alberts, 2009). Thus, the existing evidence points to increased levels of motivation when background factors are mostly positive rather than mostly negative.

In summary, it can be argued that the amount of positiveness and negativeness in the motivational ecology may determine whether students feel motivated towards the learning task at hand. This implies that, at some level in the brain there must be an *appraisal* process in which positive and negative factors are compared. Sometimes this would result in positive motivation but on other occasions it would not, depending on the relative balance of perceived positive and negative influences at that particular place and time.

# 4. Appraisal of the Motivational Ecology

One issue though, is that people do not seem to spend a lot of their time consciously appraising the positive and negative factors in the internal and external environments before they decide whether they want to learn. However, the process of appraising these factors does not need to be demanding or time-consuming. There are three likely reasons for this: hierarchical organization within the motivational ecology; automatic responses to routine situations; and partly subconscious processes, as follows.

## 4.1. Hierarchical Organization Within the Motivational Ecology

Using regression analyses it has been possible to identify hierarchical relationships between some of the factors that may influence motivation. For example, perceptions of autonomy can affect values (Kaufman & Dodge, 2009), parental support influences value and efficacy beliefs (Vekiri, 2010), and control beliefs can predict goal orientations (Buluş, 2011). It is likely that achievement goals and self-regulatory intentions may occupy relatively high levels within this hierarchy, as a number of factors, including ability beliefs, interest and perceived usefulness can significantly predict intentions (Gao, Lodewyk, & Zhang, 2009), and achievement goals are based on a number of beliefs about competence, ability, effort and standards (Pintrich, 2000a).

However, there is also evidence that the structure of this hierarchy might vary according to the context, the strength or type of belief, and the individual student. For example, task value can be more or less predictive depending on the context (Sungur, 2007). The effects of achievement orientation can vary with different patterns of task interest (Graham, Tisher, Ainley, & Kennedy, 2008), and low or high self-efficacy can have different impacts on performance goals (Braten, Samuelstuen, & Stromso, 2004), which implies that the strength or type of belief an affect the hierarchy. Finally, Shell and Husman (2008) found that students who are highly self-regulated are more influenced by performance approach goals (i.e., doing well relative to others) than are students who are more intrinsically motivated, which implies that there can be individual differences in the hierarchy. Thus, the evidence points to a dynamic and complex hierarchy of factors. A hierarchy can logically be expected to produce a small number of highly *salient* factors that are representative of the lower order factors. For example, Posner and Rothbart (1998) proposed that self-regulatory intentions can sometimes be the single most predictive indicator of behavior. In this way, consideration of a small number of highly salient factors would greatly simplify the process of appraisal.

## 4.2. Predictable Situations Can Generate Automatic Responses

Rueda, Posner, and Rothbart (2005) argued that routine actions depending on hierarchical schemes can be automatically triggered to well-learned sequences of actions. Many classroom lessons have routine elements, as students will often be sitting with the usual peers, taught the expected subject, by the usual teacher, and often in the usual way, so the classroom climate can have some level of predictability (e.g., Mainhard, Brekelmans, den Brok, & Wubbels, 2011). Consequently, a teacher might simply use a well-rehearsed verbal or physical signal to begin the lesson, and students might react almost automatically by focusing attention on the teacher in anticipation of new information. In these types of situations, there is less need for a fresh appraisal of the motivational ecology. However, this should not be taken as implying that classroom contexts are always predictable, as Turner and Patrick (2008) have argued that a level of unpredictability always exists in classrooms, so student responses are likely to be less rehearsed in less predictable situations.

## 4.3. Subconscious Processes Can Be Involved

Op 't Eynde and Turner (2006) argued that the variety and complexity of factors affecting emotional processes in learning would imply subconscious monitoring of the relationships. Boekaerts and Cascallar's (2006) review concluded that our cognitive system has limited access to the decision-making processes that occur during learning, and that even during self-regulated learning, there is "a highly sophisticated, non-conscious system that integrates an extended network of past representations involving the self, including personal preferences, needs, somatic feelings, and non-conscious options for action in a particular situation" (p. 205). In recent years, the development of techniques such as fMRI (functional magnetic resonance imaging) analyses have confirmed that there are significant subconscious processes involved in motivation. For example, Yordanova et al. (2011) found that even goal-directed behavior, such as focusing attention on a task, is controlled by cortical activation patterns that occur below the level of awareness, and precede the behavior. It is therefore possible that some of the process of comparing positiveness and negativeness could occur at a subconscious level.

# 5. Conclusion

In this paper, it has been argued that the factors influencing motivation can be thought of as a motivational ecology. The motivational ecology comprises contains hierarchies of positive and negative factors, each of which can become more influential or less influential at any particular moment, according to dynamic changes in the internal and external environment. Appraisal of the amounts of positiveness and negativeness in this hierarchy would determine whether students feel motivated to learn particular content at a particular time. This appraisal process would mainly focus on the most influential factors in the hierarchy, and would be at least partly subconscious.

## References


[1] Ainley, M. (2012). Students' interest and engagement in classroom activities. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 283-302). New York, NY: Springer.

[2] Ainley, M., Hidi, S., & Berndorff, D. (2002). Interest, learning, and the psychological processes that mediate their relationship. *Journal of Educational Psychology*, *94*, 545-561. doi: 10.1037//0022-0663.94.3.545

[3] Anthony, K. V. (2009). *Educational counter culture: Motivations, instructional approaches, curriculum choices, and challenges of home school families* (Doctoral dissertation). Available from Educational Resources Information Center. (ED510042)

[4] Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman and Co.

[5] Blom, S., & Severiens, S. (2008). Engagement in self-regulated deep learning of successful immigrant and non-immigrant students in inner city schools. *European Journal of Psychology of Education, XXIII*, 41-58.

[6] Boekaerts, M., & Cascallar, E. (2006). How far have we moved toward the integration of theory and practice in self-regulation? *Educational Psychology Review, 18*, 199-210. doi: 10.1007/s10648-006-9013-4

[7] Boulton, M. J., Trueman, M., & Murray, L. (2008). Associations between peer victimization, fear of future victimization and disrupted concentration on class work among junior school pupils. *British Journal of Educational Psychology, 78*, 473-489.

[8] Braten, I., Samuelstuen, M. S., & Stromso, H. I. (2004). Do students' self-efficacy beliefs moderate the effects of performance goals on self-regulatory strategy use? *Educational Psychology*, 24, 231-247.

[9] Buluş, M (2011). Goal orientations, locus of control and academic achievement in prospective teachers: An individual differences perspective. *Educational Sciences: Theory and Practice, 11,* 540-546.

[10] Durik, A. M., & Harackiewicz, J. M. (2007). Different strokes for different folks: How individual interest moderates the effects of situational factors on task interest. *Journal of Educational Psychology, 99*, 597-610.

[11] Gao, Z., Lodewyk, K. R., & Zhang, T. (2009). The role of ability beliefs and incentives in middle school students' intention, cardiovascular fitness and effort. Journal of Teaching in Physical Education, *28*, 3-20.

[12] Graham, J., Tisher, R., Ainley, M., & Kennedy, G. (2008). Staying with the text: The contribution of gender, achievement orientations, and interest to students' performance on a literacy task. *Educational Psychology*, 28, 757-776.

[13] Hidi, S., & Harackiewicz, J. M. (2000). Motivating the academically unmotivated: A critical issue for the 21st Century. *Review of Educational Research, 70*, 151-179.

[14] Kaufman, A, & Dodge, T. (2009). Student perceptions and motivation in the classroom: Exploring relatedness and value. *Social Psychology of Education, 12*, 101–112. doi: 10.1007/s11218-008-9070-2

[15] Kek, M., & Huijser, H. (2011). Exploring the combined relationships of student and teacher factors on learning approaches and self-directed learning readiness at a Malaysian university. *Studies in Higher Education, 36*, 185-208. doi: 10.1080/03075070903519210

[16] Maehr, M. L., & Zusho, A. (2009). Achievement goal theory: The past, present, and future. In K. Wentzel & A. Wigfield (Eds.), *Handbook of motivation in school* (pp. 77-104). New York, NY: Routledge.

[17] Mainhard M. T., Brekelmans M., den Brok P., & Wubbels T. (2011). The development of the classroom social climate during the first months of the school year. *Contemporary Educational Psychology 36*, 190–200.

[18] Menna-Barreto, L., & Wey, D. (2008). Time constraints in the school environment: What does a sleepy student tell us? *Mind, Brain, and Education, 2*, 24-28.

[19] Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education, 7*, 133-144. doi: 10.1177/1477878509104318

[20] Op 't Eynde, P., & Turner, J. E. (2006). Focusing on the complexity of emotion issues in academic learning: A dynamical component systems approach. *Educational Psychology Review, 18*, 361-376. doi: 10.1007/s10648-006-9031-2

[21] Palmer, D. H. (2009). Student interest generated during an inquiry skills lesson. *Journal of Research in Science Teaching, 46*, 147-165.

[22] Patrick, H., Ryan, A. M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology, 99*, 83-98. doi: 10.1037/0022-0663.99.1.83

[23] Pintrich, P. R., & Schunk, D. H. (2002). *Motivation in education: Theory, research and applications*. Englewood Cliffs, NJ: Prentice-Hall.

[24] Posner, M. I., & Rothbart, M. K. (1998). Attention, self-regulation and consciousness. Philosophical Transactions of the Royal Society of London B, 353, 1915–1927.

[25] Renninger, K. A., & Hidi, S. (2011). Revisiting the conceptualization, measurement and generation of interest. *Educational Psychologist, 46*, 168-184.

[26] Rueda, M. R., Posner, M. I., & Rothbart, M. K. (2005). The development of executive attention: Contributions to the emergence of self-regulation. *Developmental Neuropsychology, 28*, 573-594.

[27] Schraw, G., Wadkins, T., & Olafson, L. (2007). Doing the things we do: A grounded theory of academic procrastination. *Journal of Educational Psychology, 99*, 12-25.

[28] Schunk, D. H. (2004). *Learning theories: An educational perspective*. Upper Saddle River, NJ: Pearson Prentice Hall.

[29] Shell, D. F., & Husman, J. (2008). Control, motivation, affect, and strategic self-regulation in the college classroom: A multidimensional phenomenon. Journal of Educational Psychology, 100 (2), 443-459.

[30] Sungur, S. (2007). Modeling the relationships among students' motivational beliefs, metacognitive strategy use, and effort regulation. *Scandinavian Journal of Educational Research, 51*, 315-326.

[31] Turner, J. C., & Patrick, H. (2008). How does motivation develop and why does it change? Reframing motivation research. *Educational Psychologist, 43*, 119-131. doi: 10.1080/00461520802178441

[32] Vekiri, I. (2010). Boys' and girls' ICT beliefs: Do teachers matter? *Computers & Education, 55*, 16-23. doi: 10.1016/j.compedu.2009.11.013

[33] Yordanova, J., Albrecht, B., Uebel, H., Kirov, R., Banaschewski, T., Rothenberger, A., & Kolev, V. (2011). Independent oscillatory patterns determine performance fluctuations in children with attention deficit/hyperactivity disorder. *Brain, 134*, 1740-1750. doi: 10.1093/brain/awr107

[34] Young, M. S., Robinson, S., & Alberts, P. (2009). Students pay attention! Combating the vigilance decrement to improve learning during lectures. *Active Learning in Higher Education, 10*, 41-55. doi: 10.1177/1469787408100194.