The Role of Feedback in Enhancing Students' Self-regulation in Inviting Schools

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Abstract

This paper explores the importance of self-regulation and the role of feedback in encouraging such regulation from social cognitive and socio-cultural perspectives. The effects and value of various influences within the social and cultural environment are reviewed. In the context of inviting schools, thought is presented to the issue of how the 'Five Ps' (People, Programs, Policies, Places, and Processes) all provide various forms of feedback and input that could encourage self-regulation. In particular, the authors discuss how a reporting system that provides detailed and personalized feedback to students in an inviting setting can be one important way of facilitating students to reach their full potential as autonomous learners. Suggestions for consideration by school staff, and for future researchers, are provided.

It can be argued that one of the most important challenges facing teachers today is that of helping students become better *self-regulated* learners.

According to Zimmerman (2000, p.14), "Self-regulation refers to self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals." In the context of schools, self-regulation is evident not only when students control their own behavior in and out of the classroom (self-discipline or self-control), but also when, during lessons, they are able to set their own goals, plan appropriate strategies for achieving these goals, monitor, evaluate and adapt their own actions, and control their effective use of available learning time and resources (Ormrod, 2010). A large body of empirical evidence suggests that self-regulated learners are more effective, confident, resourceful, and persistent in learning (Pintrich, 1995; Schunk & Zimmerman, 1994; Winne & Hadwin, 1998; Zimmerman & Campillo, 2003). Developing well-adjusted and autonomous learners is one of the key aims of all schools that subscribe to the model of Invitational Education (Purkey & Novak, 1996).

Self-regulation

Self-regulation is developed and enacted at multiple levels (Yowell & Smylie, 1999), and there are many influences, internal and external to the learner, that can enhance or obstruct the development of self-regulation.

To assist our understanding of self-regulation in learning contexts it is necessary to consider, from an integrative perspective, the relationship between social influences that control behavior and self-regulation (Volet, et al., 2009; Zimmerman, 2000). Self-regulation can be viewed from both a social-cognitive and social-cultural perspective. Two of the basic tenets of social cognitive theory are that, 1) people can learn from observing others and interacting with them, and 2) that behavior can become increasingly self-regulated. From the social-cognitive perspective, self-regulation is viewed as a reciprocal interaction involving personal, behavioral, and environmental processes (Bandura, 1986; Zimmerman, 2000). In this context, personal self-regulation is a covert process of self-monitoring in order to adjust cognitive and affective states so that an individual can perform with high efficiency. Behavioral self-regulation as described here refers to the processes of self-observation and strategic adjustment of goal setting, actions, and reactions. This self-evaluative process enables a person to make necessary adjustments to improve his or her own responses as necessary for achieving higher performance. This perspective on self-regulation highlights individuals' cognitions and interpretations of contexts that afford or constrain engagement and participation. From the socio-cultural perspective (Vygotsky, 1978), self-regulation is interpreted through the overall dynamic regulatory process by which the social environment supports or impedes individuals' internalization of social and cultural influences (Volet, et al., 2009). Although individual and social regulatory processes are distinct and occurring at different systemic levels, they operate together to influence an individual's learning and development by what might be termed 'co-regulation' (Fogel, 1993). This perspective, at a

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macro level, provides a broader picture in which co-regulation (individual control + social influences) impacts individual development through opportunities to operate and receive feedback within a social context (McCaslin, 2009; McCaslin & Hickey, 2001). In the school setting, these influences typically include the people a student comes in contact with, the programs of study and activities the student engages in, including the processes and practices involved in learning and teaching. They may also include various forms of input and support that fall under the general category of guidance and counseling of students (Lapan, 2004; Lapan et al., 2002).

Environmental Factors
Influencing Self-regulation

Research has shown that the development of self-regulated learning can be facilitated by factors operating in the learning environment (Pintrich, 1995; Schunk and Zimmerman, 1994). These factors (or influences) promote self-regulation, for example, by creating a climate where students feel free to take more responsibility for their own learning, providing them with good models of self-regulation to observe and emulate (Zimmerman, 2000). Within the classroom environment, self-regulation can be effected by such outside interventions as providing students with constructive feedback on their efforts, teaching them effective strategies for tackling learning tasks either independently or collaboratively, making learning processes more explicit, and actively encouraging self-monitoring. Teachers should keep students well informed with statements that describe tasks to be attempted and the assessment criteria for achievement in a particular area of study. This guidance is necessary for starting the effective feedback flows that enables self-regulated learning (Rust, Price & O'Donovan, 2003). Of the many environmental influences that enhance or impede the development of self-regulation, feedback is among the most important (Black & Wiliam, 1998; Butler & Winne, 1995; Fisher & Frey, 2009; Hattie & Timperley, 2007; Kluger & DeNisi, 1996).

The Role of Feedback

Drawing upon educational and psychological models, Butler and Winne (1995) outlined a model of self-regulation in which they identified the important role of feedback. After careful analysis of dynamic cognitive activities, they confirmed that feedback is a catalyst in every self-regulated activity, triggering a student's engagement in self-regulated learning. Similarly, feedback (both internal and external) appears as an essential component within some well-established self-regulation models (Bangert-Drowns et al., 1991; Nicol & Macfarlane-Dick, 2006; Pintrich, 2000; Winne & Hadwin, 1998; Zimmerman & Campillo, 2003).

Feedback to learners tends to exist everywhere. For example, when teachers give students descriptive or corrective feedback during an activity, or when they give them written reports on their progress, they are providing intentional feedback. Unintentional or incidental feedback is represented by the positive and negative consequences (outcomes) arising at all times from students interacting with their social and physical environment. It is even suggested that most individuals monitor their environment for feedback signals on how well they are doing in a particular situation, and often actively seek or request feedback from others on how well they are doing (Hawk & Shah, 2008).

In the self-regulated learning model proposed by Nicol and Macfarlane-Dick (2006), they address the issue of how feedback principles help to promote self-regulation. In their model, external feedback refers to the contributions by peers (for example, in a collaborative group context), or teachers' remarks or written progress report, or even some invisible culture within a school setting. Internal feedback refers to the individual's ongoing monitoring and awareness of outcomes and the suitability or inappropriateness of his or her efforts and responses, resulting in the development of an internal self-regulatory process.

Most forms of feedback can be powerful incentives for learning and for becoming a more autonomous learner (Fisher & Frey, 2009; Hawk & Shah, 2008); however, not all types of feedback are equally effective in promoting learning (Hattie & Timperley, 2007; Lipnevich & Smith, 2008). For example, research has shown that individualized narrative feedback, which provides a large amount of descriptive information and is more process-oriented focusing on how to improve and overcome difficulties, is most effective in promoting improvement in student learning (Butler, 1988; Elawar & Corno, 1985; Lipnevich & Smith, 2008). Positive, narrative feedback, which is supportive and non-judgmental, can encourage teacher-student dialogue and foster positive motivation for enhancing self-esteem and autonomy (Hawk & Shah, 2008).

Much of the feedback that skilled teachers regularly provide to individual students during lessons tends to fall within the teaching strategy known as 'scaffolding.' Visual feedback (such as directly demonstrating a skill or process) and verbal feedback (such as giving cues, explanations and error correction) help a learner to close the gap between what he or she can already do unaided and the higher demands of a particular activity or task. Under Vygotsky's (1978) socio-cultural perspective on learning this strategy can be thought of as narrowing the 'zone of proximal development' (ZPD). Vygotsky defines ZPD as the distance between the actual

developmental level of the student and the level he or she can achieve under adult or peer guidance. In other words, feedback is a crucial factor in advancing learning (Eggen & Kauchak, 2009).

As Hawk and Shah (2008) point out, teachers need to interact positively with their students at an individual level and provide them with constructive developmental feedback not only on their progress but on the most effective ways to learn. Similarly, Nicol and Macfarlane-Dick (2006) emphasize the impact of external feedback on the process of self-regulation. They suggest that feedback should include clarifying to the learner what good performance is, facilitating self-assessment by the learner, encouraging teacher and peer dialogue, and encouraging positive motivation and self-esteem. Teachers' guidance could help students set goals, make good use of learning strategies and resources, and manage their own emotions.

Feedback, from the learners' perspective, is not simply a cognitive process because it influences how they feel about themselves and affects their emotions. As Butler and Winnie (1995, p.254) point out, "Feedback's roles in learning are mediated by a learner's beliefs and knowledge." For example, a learner's prior experience and beliefs can modify the effects of feedback and can thus influence how the underlying causes of failure or success are interpreted. How students interpret external feedback will significantly affect the acquisition of self-regulation and self-efficacy.

School Reporting System
as a Source of Feedback

One of the main ways that formal feedback is provided to students is via the school's reporting system. Reporting is the traditional way to communicate outcomes of education to the people concerned, such as parents, teachers, students and potential employers, and is essential for accountability purposes. Effective reporting not only covers results from assessments in different areas of the curriculum but also includes a broader perspective on the learning and development of the student as a whole (Brookhart, 2004).

A reporting system is not necessarily represented only by report cards but may include multiple reporting tools or practices such as transcripts, testimonials, planned phone calls to parents, seasonal progress notes, guidance portfolios, constructive comments on work samples, and written notes from student-focused conferences (Guskey & Bailey, 2001). In terms of enhancing learning and whole-person development, an effective reporting system provides students with detailed feedback on their progress, and thus helps them become more responsible for monitoring, adapting, and focusing their own efforts. Under an effective

student reporting system, the interactions involved between teachers and students will mutually regulate the learning process.

As stated above, a school's reporting system is a major source of feedback to students and others. However, the overemphasis of its administrative and accountability roles has long inhibited its functions for improving learning and development. Some studies (Rust, Price, & O'Donovan, 2003) indicate that it is hard to find teachers who make learning criteria and standards explicit enough through written documentation or through verbal descriptions in class. Without clear assessment goals or criteria, the feedback that the students receive tends to remain disconnected and often irrelevant (Nicol, & Macfarlane-Dick, 2006). In order to improve this situation, teachers should keep students well informed by written documents containing statements that describe assessment criteria and the standards of achievement. In addition, feedback with more elaborated information should supply essential cues and conditions to assist students to narrow the gap between goals and performance. An effective feedback element within the reporting system could support self-regulated learning.

School Climate

The overarching influence on a learner in the school environment and one in which the various forms of feedback and guidance are embedded, is what is usually referred to as 'school climate.' According to the National School Climate Centre (NSCC, 2011), school climate refers to the quality and character of everyday life in a school as experienced by students and school personnel. This climate reflects the norms, goals, expectations, values, interpersonal relationships, teaching and learning practices, and organizational structures. A positive school climate fosters students' development and learning necessary for a productive, contributing, and satisfying life in a democratic society. The prevailing school climate is acknowledged to be one of the most important influences on students' achievement and success (Purkey, 2011).

Schools vary tremendously in the quality and nature of climate they create for learning. Some do very little to encourage students' self-regulation and self-determination while others recognize such encouragement as fundamental to high quality education. Schools that operate under the 'inviting schools' model (Purkey & Novak, 1996) are more likely to fall within the latter category. An inviting school intentionally creates and maintains a climate that values all students, encourages and rewards initiative, provides opportunities for decision making and problem solving, and strives to make all students feel welcome and successful. In

other words, schools that are operating under principles of Invitational Education are in a very sound position to enhance the development of self-regulation in their students.

Inviting Schools

As well as implementing the principles of Invitational Education, an inviting school is one that deliberately adopts policies and practices that are compatible with Invitational Theory (Novak, Rocca & DiBiase, 2006; Purkey & Novak, 1996). Building on this theory, Invitational Education (IE) is rooted in humanistic psychology and promotes the creation of a welcoming school climate and ethos that intentionally values, energizes, and motivates students to realize their individual and collective potential and develop intellectually, socially, physically, psychologically, and spiritually (Stanley et al., 2004; Steyn, 2006). The underlying elements of IE emphasize optimism, trust, respect, and intentionality through recognizing, encouraging, and reinforcing the achievements of all students, placing a focus on students' strengths rather than weaknesses. Invitational Education is recognized as one of the new movements in education that takes full account of students' whole-person development in formulating educational policies, goals and practices (Ellis, 1991). Developing highly motivated, well-adjusted and autonomous (self-regulated) learners is an aim in all inviting schools.

Within the literature on Invitational Education, Maaka (1999) is one of few scholars to highlight how assessment and feedback conducted in an inviting environment can facilitate students to reach their full potential. Reflecting on her valuable experiences teaching in Hawaii and New Zealand, she emphasized that student-centered data from assessments should be reported in ways that could maximize the benefits for each student.

The five domains of Invitational Education (people, places, policies, programs, and processes) are powerful part of environmental components that provide a framework for transforming a whole school to become invitational. Stanley et al. (2004) identified several elements in each domain manifesting various forms of feedback that may encourage self-regulation. People in an invitational environment are characterized by attitudes and actions that are optimistic, respectful, and inclusive. They treasure every individual, regardless of his or her academic performance. When teachers give feedback with a positive attitude and respect, students are more willing to receive the message (Hawk & Shah, 2008). Feedback exists everywhere, not only in the form of written or verbal responses from teachers, but also such practices as publicly displaying exemplary student works or artifacts, and decorating the classroom environment in a manner that intentionally acknowledges every student's

success and makes them feel valued. Such practices tend also to enhance students' pride in their school.

Polices on grading and communicating progress to students can heavily influence the effectiveness of feedback. In an inviting school setting, programs should encourage involvement of all parties, and communications between parties must be productive and mutually beneficial. In line with the Invitational Education model that teaching is to help students achieve their potential in a holistic sense, programs are expected to recognize students' efforts as well as their achievements. Students who feel like they are being supported by teachers are likely to experience higher self-efficacy. Processes should foster self-regulation and encourage high-order thinking skills among students through evaluative opportunities.

Concluding Thoughts

To strengthen the link between theory and practice in a holistic approach, the following are some recommendations for educators, researchers, and policy makers to consider.

There is a need to focus future research on examining contextual factors contributing to every successful self-regulated learning practice. Although the value of social and cultural environmental effects on the processes of self-regulation has been highlighted for more than ten years (McCaslin & Hickey, 2001; Zimmerman, 2000; Schunk and Zimmerman, 1994; Pintrich, 1995), research has not adequately addressed the integration of social and self-regulatory processes in a larger context. It would be valuable to explore how individual learning (accompanied by the acquisition of self-regulation) is affected ecologically by a larger social and cultural environment (Ho, 2004; Lee et al., 2009; Volet et al., 2009).

There is a need for all inviting schools to review the learning and development functions of their existing reporting system. The practitioners in inviting schools should consider how best to improve its function in helping students monitor their own progress and become more autonomous learners. Investigating a reporting system could help to understand how social influences and self-regulation interact in a cohesive manner with the mediation of feedback (Stanley, et al., 2004). It would be valuable to examine a reporting system by using a case study to see if an inviting school setting manifests effective feedback principles. Specifically, future researchers could explore how the school reporting system could enhance individual guidance to students and foster social and self-regulatory processes.

Schools should consider infusing favorable contextual factors by adopting the Invitational Education model to improve school climate.

Guidance provided by teachers should put more effort into strengthening the skills of self-assessment and reflection among their students (Yorke, 2003), because self-assessment can lead to significant enhancement in learning and achievement (Nicol & Macfarlane-Dick, 2006).

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