Reviews of Psychological Studies and Educational Practices Focusing on Improving Student Learning Skills: Suggestions for Addressing the Gap Between Academic Studies and Classroom Practices

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Promoting student learning skills is one of the important goals of school education. However, case studies involving educational practices suggest that students do not develop such skills to a level that would make them autonomous in learning. In addition, studies about school practices in Japan have suggested that efforts at developing student learning skills in schools are not adequate. To address this problem and to contribute to the promotion of student learning skills development, this paper examines relevant research areas including educational practices. It firstly introduces variations in learning skills suggested in the learning strategies research area. Secondly, it summarizes the developmental processes and factors relating to the use of learning strategies. Thirdly, the paper provides an overview of research areas and educational practices that promote the development of learning skills. Finally, it proposes a future direction to address the problem.

Key Words: Students’ learning skills, autonomous learner, learning strategy, classroom practices, factors and teaching methods to promote learning skills

1. Introduction

Learning skills comprise one of the most important sets of competencies that students ought to acquire in school education. When students graduate from school and go out into society, they have to deal with a more complex environment that is full of information, and in which they need to learn new knowledge and skills that they had not been able to acquire during their period of schooling. The process of acquiring new knowledge and skills in such an environment is quite different from the one in school: there would be no teachers to carefully explain the content and to guide learning. Thus students need to seek the necessary information, read and learn by themselves. In this process, the use of much higher learning skills is required.

However, case studies involving educational practices suggest that students do not always acquire sufficient learning skills. For example, case studies in personal tutoring conducted by Ichikawa (1998) and his colleagues showed that many students’ manifested difficulties arise from a lack of such skills. Nakamura (1998), one of the authors who contributed to the case report book edited by Ichikawa (1998), provided an example of a student who struggled to remember Chinese kanji characters as a consequence of relying heavily on rote memorization, and neglecting to consider the meaning of the component parts of Chinese kanji characters.

In addition, studies relating to school practices in Japan suggest that school efforts at enhancing students’ learning skills are often inadequate. For example, Seo (2007) conducted a survey in one Japanese prefecture (Shizuoka) about how schools provided instructions to promote students’ learning skills, and found that some schools simply made a pamphlet about how to learn and distributed this to students. Her survey results revealed that continuous and long-term educational practices to support students’ learning skills development were rarely provided in schools. In addition, Uesaka’s (2011) survey in 31 schools collaborating with a national university in incorporating psychological findings in
classroom teaching, showed that there were problems in teaching learning skills in schools: The content taught as learning skills in those schools focused only on what and how long students should learn (e.g., third-grade students should do homework for 30 minutes, and fourth graders should do homework for 40 minutes; students should learn and practice writing Chinese kanji characters at home), and how to learn was not sufficiently covered.  While such problems about learning skills instruction are found in school educational practices, many research studies have in fact been conducted about learning skills. This means that the findings in research have not influenced daily classroom practices and a gap exists between academic research and what is provided for students in schools. To address this problem, the current paper firstly introduces variations in learning skills that have been suggested in the learning strategies research area. Secondly, it provides an overview of the developmental processes and factors relating to the use of learning strategies. Thirdly, it summarizes key findings in research and educational practices aimed at enhancing student learning skills. Finally, the paper suggests viable future directions to overcome the problems that have been identified.

2. Variations in Learning Skills

One of the crucial aspects of learning skills is the possession of competence in using learning strategies. Many previous studies, several of which will be briefly described in this section, have demonstrated the effectiveness of using learning strategies to enhance the quality of learning outcomes.

Many kinds of effective learning strategies have been proposed in the research areas focusing on students’ effective learning. It is impossible to introduce all of these learning strategies here, but it is helpful to describe the several categories into which they can be placed. Three main categories are used in this review: cognitive strategies, meta-cognitive strategies, and external resource strategies. These three categories of learning strategies will be introduced and explained in the following sub-sections.

Cognitive Strategies. The first cluster of learning strategies is referred to as “cognitive strategies”, and it started to be discussed after a study conducted by Marton & Säljö (1976). Through interviews with university level students, they distinguished two levels of processing. One involves a shallow level of processing, in which learning strategies such as just reading materials repeatedly and writing without thinking about the meaning are included. The other involves a deep level of processing, in which learning strategies like adding meaning to memorize more effectively are included. As shown in a review carried out by Ramsden (1988), studies have demonstrated that learners who employ a deep level of processing achieve more than learners who use a shallow level of processing. Both types of processing—the shallow and deep levels of processing—are called “cognitive strategies”.

Later studies have added more detail to the classification of cognitive strategies. For example, Weinstein & Mayer (1986), renamed strategies that employ a shallow level of processing “rehearsal strategies”, and divided deep level of processing strategies into two types: “elaboration strategies” and “organization strategies”. The efficacy of using elaboration and organization strategies was demonstrated in an experimental study reported by Manalo (1999): participants who spontaneously used strategies involving elaboration and organization of pseudo foreign words they were asked to learn significantly outperformed in a subsequent test those students who used rehearsal and other shallow processing strategies.

Meta-cognitive Strategies. The second cluster of learning strategies is called “meta-cognitive strategies”. Meta-cognition pertains to objective reflection and monitoring of one’s own cognitive states and processes. Thus meta-cognitive learning strategies refer to learning activities in which learners reflect on their mental processes and control their behaviors based on the results of monitoring. Examples of meta-cognitive learning strategies include “comprehension monitoring strategies” proposed by Weinstein & Mayer (1986), and “self-evaluation” which was included in a list of learning strategies
made by Zimmerman and Martinez-Ponz (1986).

“Lesson induction” proposed by Ichikawa (1993) is another example of a meta-cognitive learning strategy. This strategy is one in which learners objectively reflect on their learning processes, and induce lessons about the reasons behind successes and failures. To write notes on lessons learned is also recommended. Terao (1998) demonstrated empirically the effectiveness of lesson induction: when students used this strategy, more successful learning outcomes ensued. In addition, Terao showed that when learners induced high quality lessons that can be applied in other situations, more effective subsequent problem solving was promoted. Ellis and Davidi (2005) and Ellis, Mendel, and Nir (2006) proposed a similar strategy which they called “After-Events Reviews (AERs)”. They also showed the effectiveness of the strategy.

External-resource learning strategies: The third cluster of learning strategies is external resource learning strategies. In cognitive psychology, when reasoning, human beings are considered to use not only internal resources but also external resources such as diagrams and other people. Based on this view, using resources existing outside of the mind is also considered as an effective learning strategy.

Using diagrams in solving problems is one example of this kind of learning strategy, and had been proposed in old research studies like those conducted and reported by Polya (1945) and Schoenfeld (1985). A meta-analysis conducted by Hembree (1992), which targeted mathematical problem solving studies, demonstrated that using diagrams is the most effective strategy among the strategies proposed by Polya (1945).

Another example of external resource learning strategies is “help-seeking”, such as when students use friends and teachers around them as resources. However, this kind of help-seeking is not always effective. As Nadler (1998) explained, there are two types of help-seeking: one is “dependent help-seeking” and the other is “autonomous help-seeking”. If students take the dependent help-seeking approach, in which students just ask for answers to questions without caring about the reasons how the answers were obtained, it would not contribute to their development as autonomous learners.

Some researchers have named this cluster differently, like “resource control learning strategies” (e.g., Seo, Uesaka, & Ichikawa, 2008). In these cases, some other learning strategies such as managing time and controlling attention are included in the cluster. For example, Weinstein & Mayer (1986) proposed learning strategies like concentrating attention and controlling anxiety and motivation, in addition to cognitive and meta-cognitive strategies. When this cluster includes these kinds of learning strategies also, then it might be more appropriate to call it another name like “resource control learning strategies”—as noted above.


The research area of learning strategies also proposed some factors that affect the use of learning strategies. After briefly describing the developmental processes underlying the use of learning strategies, the current paper briefly reviews factors that have been found to influence the use of learning strategies.

Developmental Processes Underlying the Use of Learning Strategies. When considering the developmental processes behind the use of learning strategies, findings in the memory strategies research area, particularly in small children, provide some useful insights: learners’ typical processes prior to sufficient acquisition of learning strategies can be classified into three steps—namely, mediation deficiency, production deficiency, and utilization deficiency.

The first step is a lack of learning strategies. Reese (1962) found that a small child would not use a verbal labeling strategy when remembering targets provided for memorization and, as a result, the child’s performance remains at a lower level. This stage has been named “mediation deficiency” as it is a stage during which the child essentially lacks sufficient knowledge of the required strategy.

The second step is a lack of spontaneity. Corsale
and Ornstein (1980), for example, observed that, compared to seventh graders, third grade children lacked spontaneity in utilizing organizational strategies in memorization tasks even though they possessed knowledge and ability to use those strategies; they were simply unaware of the usefulness of those strategies in deliberate memorization. This study suggested that there is a stage during which students fail to use strategies spontaneously even when they possess knowledge of the strategy. The stage, during which learners do not use a strategy of their own volition even when they know it, is called “production deficiency”.

The third stage is a lack of sufficient skills for using learning strategies. Miller (1994) examined the processes underlying the development of strategic behaviors in memorizing by conducting experiments with 3–13-year old children, and found that some learning strategies did not contribute much (or sometimes did not contribute at all) to enhancing performance when these were used by younger children, even though the same strategies contributed to enhancing performance when used by older children. The stage during which the strategies do not promote performance enhancement even when learners use them spontaneously is called “utilization deficiency” — because the problems occur as a consequence of the learners not being to appropriately utilize those strategies.

Factors that Influence the Use of Learning Strategies. Although many kinds of factors have been reported as influencing the use of learning strategies, the current paper describes these factors using three broad categories into which they can be classified.

The first group is perceptions relating to strategies. This group includes perceptions about the uses of, and costs associated with, learning strategies. McCombs (1988), who proposed a model of decision processes in using strategies, also included perceptions of efficacy and cost of strategies in that proposed model. Other empirical data have also suggested that students are unlikely to use strategies when they lack understanding of the efficacies that those strategies might bring to tasks they have to complete (e.g., Muraya, 2003; Sato, 1998). Moreover, Murayama (2003) revealed that the perceived cost of using learning strategies works as a covariant variable in a path analysis. Although the main concern of Murayama (2003) was different, the results of the study suggest that, if learners perceive using strategies as being costly, then they would not spontaneously use those strategies.

The second group comprises broad beliefs about learning and attitudes about learning. For example, Ueki (2002) revealed that students’ beliefs about learning can be divided into three types: amount of practice orientation in which students most value the amounts of practice to perform well, environmental intentions in which students believe that staying in good learning environments automatically enhances performance, and strategy orientation in which students consider it important to learn strategically as well as to devote the necessary time to learn. Ueki (2002) showed that students’ use of strategies when learning English differed depending on their beliefs about learning.

In addition, broader beliefs about learning have been shown as factors that relate to the use of learning strategies. One of the factors that have been extensively discussed in relation to the use of learning strategies is “learning goal”. In this research area, two goals, mastery goal and performance goal, are distinguished. Mastery goal pertains to abilities that students hope to develop through the experience of learning, and performance goal pertains to what students want to be able to demonstrate they can do as a consequence of learning. As pointed out in a review by Pintrich (2003), many studies have shown that students with a mastery goal tend to use effective learning strategies more compared to those with a performance goal. Another example of an influential factor is motivation, as revealed in studies by Elliot, McGregor, and Gable (1999), and Ito (1996).

These studies about the relationship between students’ beliefs about learning and use of learning strategies suggest that teachers ought to make efforts to change students’ beliefs about learning toward more appropriate orientations when the
teachers engage in the process of trying to change the students’ learning behaviors.

The third group comprises of more external factors than the factors described above. Murayama (2003) discussed the importance of changing assessments to promote students’ engagement in more effective learning behaviors. Toko (2012) pointed out that if teachers want to change students’ learning behaviors, they need to make adjustments to the way the students are assessed in their learning. Students will not change their learning behaviors, even if the teacher emphasizes the importance of changing those behaviors, if assessment methods used in class are not changed. Murayama (2003) empirically demonstrated the influence of assessments on students’ learning behaviors: when a teacher administered fill-in-the-blank questions in class instead of essay questions, students tended to use rote memorization strategies in preparatory learning instead of elaboration strategies.

4. How to Promote the Development of Effective Learning Skills

From an applied perspective, the most important research studies in this area are those that focus on how it may be possible to promote students’ acquisition of effective learning skills. The research studies relating to this topic can be divided into four types based on differences in the methodology used (survey or experiment / educational practices) and the conditions under which instructions are provided (individual / group). These categories, along with examples, are shown in Table 1.

While these research studies have proposed concrete teaching methods which can potentially be applied in real school settings, as noted at the beginning of this paper, students’ learning skills are generally considered to be insufficiently developed and not to be adequately dealt with in instructions provided in schools. This situation suggests that much of the findings from these research studies do not make their way into school classroom practices. Researchers therefore need to additionally consider how useful research findings could effectively be incorporated into daily classroom practices in schools so that they could positively influence students’ learning behaviors.

In this section, studies in each of the categories noted are briefly reviewed. In addition, some of the problems that may affect their use in daily educational practices are pointed out so that possible ways of addressing those could be considered.

Experiment-Based Research with Groups: Learning Strategy Research and Self-regulated Learning Research. Under this category, the representative research areas are those that focus on learning strategies and self-regulated learning, in which psychological and experimental methods are applied to groups of participants in order to reveal effective teaching methods for enhancing learning skills development.

In the learning strategies research area, large-scale programs to enhance learning skills development have been developed. Examples include CORI (Concept-Oriented Reading Instruction; Guthrie, Van Meter, & Hancock, 1998; Guthrie, Wigfield, Barbosa, Perencevich, Taboada, Davis, et al., 2004; Guthrie, Wigfield, & VonSecker, 2000) and SRSD (Self-Regulated Strategy Development; Graham & Harris, 2003; Harris & Graham, 1999; Sawyer, Graham, & Harris, 1992), which are aimed at enhancing student use of reading strategies. In CORI, after the provision of explicit instructions in strategies such as questioning and summarizing, teachers show models of how students should use those strategies, and then students practice them in real learning contexts. Guthrie et al. (2004) demonstrated that CORI’s beneficial effects maintained even 12 weeks following students’ completion of the program.

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Although there exist some exceptional studies in which students were personally supported in educational practices (e.g., Zimmerman & Campillo, 2003), psychological methods have been used to develop students’ learning skills in most of the studies in self-regulated learning. Traditionally, many of the studies in this area have focused on supporting university level students (e.g., see reviews by Schunk & Zimmerman, 1994, 1998; Zimmerman & Schunk, 1989), but more recent research studies have included empirical investigations in elementary and secondary schools (e.g., see meta-analysis by Dignath, Buettner, & Langfeldt, 2008).

Although many studies have now been conducted in schools as evidenced in the review by Dignath et al. (2008), findings from such studies have not been used in daily classroom practices—at least, not in Japan. Results of meta-analyses suggest that the effects of studies conducted by teachers in schools are lower than those of studies conducted by researchers. De Corte, Mason, Verschaffel, & Depaepe (2011) pointed this out and suggested the possibility that teachers often do not sufficiently understand the principles proposed in research. One crucial future direction in studies under this category is the development of ways to connect research findings and teachers’ daily learning behaviors.

**Experiment-Based Research Focusing on Individual Students: Tutoring Research.** In contrast to learning strategies and self-regulated learning research that primarily conducts experiment-based studies with groups, research focusing on personal tutoring and how personal tutoring influences student learning is conducted on an individual basis.

Chi, Siler, Jeong, Yamauchi, and Hausmann (2001) described one of the main findings in this research area: that personal tutoring is more effective than group instructions. Although the targeted variable in most of the research in this area has been how learners understand the material provided, some studies have focused on the development of students’ learning skills. Craig, Gholson, Ventura, Graesser, and the Tutoring Research Group (2000), for example, developed tutoring systems for enhancing the quality of questions that learners produce.

The findings from tutoring research have demonstrated how personal tutoring promotes understanding and problem solving competence, but a number of problems arise when considering how these findings can be used in classroom settings. Firstly, personal tutoring situations are different from classroom group teaching situations: thus the findings are impossible to transfer directly to classroom teaching. In addition, most of the studies in tutoring research have not been aimed directly at the promotion of student learning skills development. Thus, in most cases, the application of findings from individual tutoring research to classroom teaching requires additional research investigations as an intermediate step.

**Educational Practice-Based Research with Groups: Designing Research.** The research areas that have been described in preceding sections basically employ experimental approaches in which experimental group(s) are set up and compared with control group(s). Although the goal of finding out effective teaching principles is shared, some research areas like designing research do not use experimental approaches. Instead, to examine the effectiveness of a principle that has been proposed, they conduct educational practices in which the principle is embedded. The principles examined and found effective through educational practices are called “design principles” (details about designing research were introduced by Miyake & Shirozu, 2003).

An example of a project in which designing research was used is “The Jasper Project” (The Cognitive & Technology Group at Vanderbilt, CTGV, 1997). In this project, video materials were used, in which a main character—Jasper Woodbury—encounters some difficulties that he needs to solve during his adventures. The project’s aim was to promote the development of mathematical problem solving skills in learners through the provision of experiences in solving authentic math problems. This video program is considered to be helpful not only in improving problem solving skills but also in making “smart tools” which are applicable when solving other similar problems. As illustrated by this example, the designing research approach is also focused on
promoting the development of students’ learning skills. Other examples include the “Knowledge Forum” which was aimed at enhancing writing skills (Scardamalia & Bereiter, 2006), and educational practices at the university level which have tried to improve students’ conceptual understanding of cognitive science (Miyake, Miyake & Shirouzu, 2002; Shirouzu, & Miyake, 2009).

Although designing research has contributed practical means for cultivating learning skills and deep conceptual understanding, the approach itself needs longer time periods to identify the design principles and to show how these design principles work in educational practices, compared to other studies using an experimental methodology. Haebara, Ichikawa, and Shimoyama (2001) classified the psychological research methodologies into three types—experiments, survey and practices—and argued that each type of research method has different features and merits, and using different types of research methods, even in the same research area, would contribute to generating clear ideas effectively and quickly.

**Educational Practice–Based Research Focused on Individuals: Cognitive Counseling.** One approach that is used to promote the development of student learning skills in the context of personal tutoring is the cognitive counseling approach (e.g., Ichikawa, 2005). While tutoring research (described earlier) utilizes control groups and pre–determined tutoring materials, the materials and topics treated in personal tutoring are determined according to what the learner (referred to as the “client”) brings—usually in the form of difficulties he or she perceives or experiences. In this counseling context, counselors (who are researchers or teachers) provide support to students after they (i.e., the counselors) learn the basic principles and techniques. They not only instruct clients on topics they do not understand, but also attempt to find out the reasons for the difficulties they are experiencing. Counselors check whether the client has sufficient learning skills, as well as whether there are any deficiencies in the knowledge that the client possesses. Clients are expected to become autonomous learners with adequate learning skills and appropriate beliefs about learning. For example, Kiyokawa and Inuzuka (2003) used a cognitive counseling approach to instruct reading skills. In addition, Uesaka (2010) used the approach to encourage spontaneity in an 8th grade client’s use of “lesson induction”, as well as to teach that client how to solve math word problems that were perceived as being “too difficult”.

Another important goal of cognitive counseling is to identify shortcomings in traditional theories of psychology through the use of those theories in the provision of support to students—and finding out when and where those theories may prove insufficient. In the counseling context, practitioners are encouraged to identify new problems that have not previously been discussed in research and obtain new ideas to address those problems through case studies. For example, Ichikawa (1993) and Uesaka (2010) identified a particular problem in students’ use of learning strategies: students do not spontaneously use diagrams in solving problems even though using diagrams is considered to be an effective learning strategy, and this lack of spontaneity is one important source of failure in problem solving. Some psychological studies have been conducted to reveal participant–related factors (Uesaka, Manalo & Ichikawa, 2007) and task–related factors (Uesaka, & Manalo, 2010) that influence students’ spontaneity in using diagrams, as well as effective teaching methods to resolve the lack of spontaneity problem.

Thus this practical research approach has two goals: supporting each student individually (including addressing any identified deficiencies in his or her learning skills), and proposing new perspectives to current theories of psychology. Both goals are motivated by a desire to establish better connections between educational practices and psychological research findings.

However, cognitive counseling uses a personal tutoring approach; thus, it is difficult for findings revealed through this method to be directly usable in classroom teaching. Findings revealed need to first be modified to fit the requirements of classroom educational practices. Thus more effort is currently required to effectively connect and trans-
late those findings for use in real classroom practices.

5. Future Directions: Utilizing Multiple Methodologies When Supporting the Development of Learning Skills

In the previous section, research areas that propose effective teaching methods for the promotion of learning skills development have been reviewed. Although useful suggestions for classroom teaching strategies have been revealed from these research areas, we need to consider the reality that these findings have not been fully utilized in classroom practices—at least in Japan. In order to address this problem, a new approach that more effectively connects school level practices to research findings is needed.

Ichikawa (1989) pointed out that it is not adequate for educational researchers to simply expect their findings to be used in schools as a consequence of proposing their new ideas through academic papers they write. Ichikawa (1989) emphasized that “it is important for researchers to also participate in educational practices, and to try to incorporate their findings in educational practices”. He also argued that it is important to examine whether findings proposed in academic research contexts are usable in educational contexts. When considering directions for future research based on these ideas, the important point would be to place greater emphasis on the implementation of academic research findings into school practices.

Another direction for future research would be to identify research questions that are important and meaningful to educational practices. As proposed in cognitive counseling, it might be useful to find out critical problems to examine in academic research contexts from educational practice, and afterwards, to investigate possible solutions to those problems with the use of academic methodologies. However, many studies in the academic arena have come from the researchers’ interests and these do not always match the needs of school educators. These two perspectives, in which educational practices can come before and after psychological examinations, can be combined to produce a cycle in research approach, one that will be discussed in more detail in this paper when explaining a new approach to address the gap between academic studies and educational practices.

Another reason for why findings in research have not been sufficiently used in real classroom practices might be that methodologies used in each research area have tended to be fixed within only one methodology. For example, designing research uses only one methodology: it has used educational practices as an approach, and never the experimental approach. Thus it takes a long time to confirm the reliability of design principles compared to other research areas. However, as Haebara et al. (2001) pointed out, experiments, surveys, and educational practices are different types of methodologies and each has advantages and disadvantages: incorporating plural methodologies to address one educational problem could result in more efficacious production of usable findings for classroom practices.

Based on the ideas described above, Uesaka (2010) proposed a new approach which is called the “REAL (Researching by Extracting, Analyzing, and Linking) approach”. It consists of three phases: extracting students’ problems, analyzing those problems with psychological methods, and linking findings to school practices. In brief, this approach proposes using multiple methodologies when examining effective teaching methods to achieve a particular goal, and encourages conducting educational practices before and after conducting psychological research with experiments and/or surveys.

The purpose of the first phase in the REAL approach is to identify problems that are valuable to examine in academic contexts from educational practices by the researchers themselves participating in educational practices. By the experiences the researchers gain in supporting students with interventions drawn from previous research findings, not only the effects of the support provided but also insufficiencies and limits of theory proposed and constructed from previous academic research could be revealed.
The second phase is when the problems found out in educational practices are examined more rigorously with the use of experiments and surveys. This is one of the crucial points of difference compared to the designing research approach, in which experiments are not used. New ideas to address problems found through educational practices are generated during the second phase of the REAL approach. These findings not only contribute to providing possible solutions to the identified problems but also to proposing new perspectives to develop traditional theories in academics.

The third phase is when findings revealed in psychological studies conducted during phase two are used in school practices. Teaching methods proposed directly from experiments and surveys are usually impossible to immediately use in school practices. The kinds of devices needed for implementing findings in schools therefore need to be considered more carefully in concrete terms. This third phase addresses one of the shortcomings in previous research: that researchers did not sufficiently attend to the concrete educational implementations of their findings. Moreover, the third phase of the REAL approach provides opportunities for the generation of fresh ideas for improving the studies based on experiences gained from the school practices. This could therefore lead to starting another cycle of the REAL approach.

Uesaka (2010) not only proposed the REAL approach but also demonstrated a concrete example of its application to one of the key problems in student learning strategy use—that of students not spontaneously using diagrams in attempts at solving problems, even though teachers use many diagrams when instructing in class. Here, the students’ problem was found through educational practices (cognitive counseling) during the first stage (“Extracting”). During the second stage (“Analyzing”), surveys revealed the lack of spontaneity of diagram use among students (Ichikawa, Seo, Kiyokawa, & Uesaka, 2007), participant–related factors relating to spontaneous diagram use were examined (Usaka, Manalo & Ichikawa, 2007), and experiments which examined task–related factors (Usaka & Manalo, 2012) and teaching methods for promoting diagram use (Uesaka & Manalo, 2007, 2008a; Uesaka, Manalo, Ichikawa, 2010) were conducted. Furthermore, during the third stage (“Linking”), educational practices based on research findings were conducted to examine how it might be possible to use those findings in school contexts (Uesaka & Manalo, 2008b).

Uesaka’s (2010) idea, described above, is one strategy that could be used to address the problem of dissociation between academic research studies and educational practices. Other viable strategies for addressing this problem likely exist—or could be developed. Raising educational researchers’ awareness about the limited use of their findings in school practices could also be beneficial as this could instigate initiative on the part of those researchers for greater interaction with the wider educational community. Ideally, in future, many other viable proposals for addressing the gap between educational practices and academic research findings would be put forward and, as a consequence, the quality of classroom practices would change for the better — directly contributing to the enhancement of students’ learning skills development.

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