

Self Regulated Learners and Distance Education Theory

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Introduction

This paper will define the issue of self-regulated learning and how it relates to students using technology and those involved in distance learning. This approach is grounded in constructivist theory. It presumes that students who are active and take control of their own learning at any age level or in any learning situation perform better and achieve better results. The students who already use these tactics must nurture them. Those students who do not have the skills must develop them to be more successful. Distance education students who have developed this style will be more successful than those who have not. In addition, technology allows students to take control of their learning. They are more involved in the decision-making that occurs.

Definition

Self-regulated learning is one of several strategies learners can apply. It refers to students who can:

"... approach education tasks with confidence, diligence, and resourcefulness. They are aware of when they do or do not know something. They seek out information when needed and follow the necessary steps to master it. When they encounter obstacles such as poor study conditions, confusing teachers, or abstruse text books they find a way to succeed." (Zimmerman 1990).

Lidner and Harris (1993) identify six dimensions of self-regulated learning.

1. Epistemological beliefs: a person's own understanding of their system of knowing. Knowing about this gives a person the ability to see where they fit into learning or how it influences them. It also influences confidence. The more the learner understands about a particular situation the more success they will experience. Pre-tests or pre-instruction discussion can heighten this awareness.
2. Motivation: The will to learn or get better at learning has to come from internal or external motivation. In the case of the self-regulated learner this motivation comes from recognizing the importance of the task at hand and through personal development. "Motivation is enhanced when students perceive they are making

progress in learning." Shunk (1991)

3. Metacognition: Knowledge about cognition and awareness of one's own thinking and learning. This fits with the use of learning strategies. The student must know what tools they have in the toll box and how well they use them. This creates a more active involvement on the part of the learner as they have to asses the situation based on their own abilities and use the learning skills that they see as appropriate or successful.
4. Learning strategies: Strategies the learner is aware of and how they utilize them. Students need the skills to handle various learning situations. This means a shift from content. To skill development. Giving the student a system of strategies and helping to develop them is a major step towards creating self-regulated learners.
5. Contextual sensitivity: The ability to understand a particular learning situation and how to identify the problem and solve it. This skill can be developed by shoeing the learner how to identify problems. Learners who do not know what they are being asked to solve will never achieve success. They may not know To look for clues or important information contained in the question. Working through examples will build this skill. Have part of the solution to each problem be the identification of what is being asked for.
6. Environmental utilization/control: Use of external resources to achieve solutions. Personal experience and knowledge can add to a person's ability to reach a solution, Learners should be taught to broaden their view of learning to include other resources. Often times events or items we see are not being related provide us with valuable assistance.

Shunk (1991) sees self-efficacy as the major determinant of ability to control one's own learning. He refers to the importance of self-concept and the belief or lack of belief in your ability as a major influence on student success. Those with a high sense of self efficacy will work harder and persist longer when they experience difficulties. Those with low self-efficacy will not only do worse at tasks, they will also tend to avoid difficult ones altogether. He also believes that motivation is enhanced when a person believes that they are doing better. Perceived control, expectations and values, attributions and self-concept are all influences of a person's self-efficacy.

Zimmerman (1990) lists the following characteristics of a student who is a self-regulated learner as self-evaluation, organization and transformation, goal setting and planning, information seeking, record keeping, self-monitoring, environment structuring, giving self-consequences, rehearsing, memorizing, seeking social assistance, and reviewing. These characteristics show how actively involved a self-regulated learner must be. They do not complete work and then simply move onto the next task. They consume what they are involved with, learn it , know it, wait for feedback and then if necessary revise or redo it.

How to Teach It

Most learning occurs outside of the regular school lifetime. For this reason it is important to use the time in school to prepare the students not only for learning the set curriculum but to give them the skills to learn in the less-defined world around them. The jobs of today and the future require workers who can problem solve, think creatively, and work in a successful team environment. They must be able to generate dynamic solutions to changing objectives. There must be more emphasis in developing these skills before the students enter the job market. The skills of the workplace must become

important skills of the school market.

Schools at all levels have been slow to recognize the change that is occurring in students (both in institution-based and distance situations). Students come to the classrooms (real and virtual) with different expectations and experiences than those which are dealt with in teacher preparation schools. These are the generations raised on television (Strommen and Lincoln, <http://www.ilt.columbia.edu/k12/livetext/docs/construct.html>). They use remote controls, all their toys blink and make sounds, they are bombarded with new information every second. They have already developed a basic ability to work with significant amounts of information. They can process and make sense of this information better than the previous generation. The need to use and further develop these skills is not what they find when they come to school. The contrast between the school world and the outside world is pronounced. Schools are more systematic, less technologically driven, and are low on information and entertainment value. All the exploration and freedom that they had right up to kindergarten is now gone. Schools are missing a golden opportunity to work with these new skill sets.

More and more teachers are finding it hard to deal with information age learners when they have been trained for the industrial age system. The role of the teacher should be changing to be one who designs experiences where learners examine thinking and learning, collect, record and analyze data; form and test hypothesis; reflect upon previous understandings; and construct their own meanings. (Crotty 1995).

McKenzie (<http://www.pacificrim.net/~McKenzie/grazing1.html>) points out the need to "teach students to graze and digest the offerings thoughtfully in order to achieve insight.". Students must be able to assess not only the situation but their own abilities. They must be made aware of what strategies to use. When designing classes there must be more student input. Flexibility and choice must be built into the school day. Assignments should place the emphasis on what the student can gain and learn on their own. Given general guidelines or a theme, the students should be able to process what they discover using higher level skills. Synthesis, analysis, and probing are all important for a successful self-regulated learner. This approach is often in direct contradiction to traditional "memorize and regurgitate" learning. In this method the student learns to play a system that rewards the ability to memorize and recall. Those who do not follow the chosen path are identified as problem students even though they may be learning in a way that is very effective for them.

For many years the sciences claimed to be the only area where problem centred-learning could fit. The scientific method of theorizing and exploring validity was viewed as a natural way to learn. This way was not transferred onto any other aspect of the curriculum. History is memorized dates and events. English was a study of language and important works. Phys Ed was learning the moves and the rules and executing them properly. Teachers used workbooks, multiple choice questions, step by step systematic instruction. This is changing. Historians study social history, Phys Ed allows more individualization with the emphasis on personal skill development and improvement.. English allows students to express their own thoughts and ideas through their own writing. Learning is moving towards a more student, personal approach but it has room to move further.

The current system is not the fault of the teacher. Classes have to be designed to foster

constructivism. An institutional shift in planning along with a change in the way teachers are trained can go along way to reaching the goal of developing self-regulated learners. Lebow (1993) lists five principles in integrating constructivism into class design.

Principle 1. Maintain a buffer between the learner and the potentially damaging effects of instructional practices.

- Increase effectiveness on the affective domain of learning.
- Make instruction personally relevant to the learner.
- Help learners develop skills, attitudes and beliefs that support self-regulation of the learning process.
- Balance the tendency to control the learning situation with a desire to promote personal autonomy.
- Classrooms and learning should be set up to allow for success. Give more responsibility to the student. Make them want to take hold of the new style of learning and be successful.

Principle 2. Provide a context for learning that supports both autonomy and relatedness.

- Real-life examples relevant to the learner and their environment allow internalization. Students should find personal meaning in what they are studying.

Principle 3. Embed the reasons for learning into the learning activity itself.

- Make the outcomes of the assignment fit into the procedure. If you are studying customs of another country have the learners discover what they are and apply them in class for a day or week.

Principle 4. Support self-regulated learning by promoting skills and attitudes that enable the learner to assume increasing responsibility for the developmental restructuring process.

- Create a list of skills the student should try to achieve. Include with this a set of easily implementable steps or logical sequences. Feedback will be critical to give the learner reinforcement and correction when needed.

Principle 5. Strengthen the learner's tendency to engage in intentional learning processes, especially by encouraging the strategic exploration of errors.

- An oral review of mistakes or debriefing helps to increase the ability to reflect. Point out the need to examine a problem and then determine the best strategy to use in solving it.

These are not radical or impossible tasks. Too often for the sake of time we do not revisit previously prepared instruction to improve upon it. A simple review with the above list in mind can lead naturally to modification of existing courses. Construction of new material can be based on the revised work and that which is already being applied

Application to Distance Education

Distance Education students are a special group. They are separated from the institution. They are working in a learning environment that is different than what they may see as comfortable. There are two specific groups which appear in this category. The first group is made up of adult learners. They have been trained for traditional face-to-face lecture style of learning. Many have been away from the school system for a long time. Their confidence may be low. Their learning skills may be rusty and they may be unfit for a new style of learning. Usually their motivation level is high. They have a will to learn, a desire to improve job or social standing, and possess a craving for knowledge. The other group is younger school-aged students. They are used to daily supervision and guidance in a classroom. They have not developed the initial confidence or abilities as learners. Their motivation is low or average but may be more able to adapt to a new style of learning. Both groups have to develop their skills to not only do well but to survive.

Students working in a distance education environment do not have the same support systems as institution-based learners. They do not have a face-to-face instructor. They may not have other immediate classmates, or a tutor. Those who work or live in isolated settings may have only themselves to rely upon. This is where the importance of self-regulated learning is an important issue. These people are in many cases "doubly disenfranchised" (Reekie, 1996). Not only do they have to be made aware of how to become successful they often have to develop these skills independently. They need a personal inventory list to show them where they are presently as learners and how to develop their areas of weakness.

These learners have to be shown that answers to many different questions can be found in their environment. Resources in the form of knowledgeable people, libraries, business can all help to support the learner. Studying a class on economics in the North may seem lonely but government offices, the local grocery store and the people who run them can give an excellent re-enforcement to material being learned from a book or computer. They have to build up the confidence in themselves to be able to deal with course issues locally. The "institution knows best" model has always been the nemesis of distance education. When the learner realizes that what they are studying not where they are studying is the important aspect then they can feel that their work can be as good as anyone else's. One problem that they have is a lack of modeling. Modeling can be the demonstration of a physical task or it can be mental modeling of thought patterns and inquiry methods. There is no one to show them a good or, for that matter, a bad example of how to complete a task. They have no leaders as is often the case in the classroom. Now this may be an advantage to those who are self-regulated in that they can create without influence. The non-regulated student needs someone to show them. This builds confidence and allows the student to develop frames of reference for future learning. Modeling for distance students may be in the form of videotapes or audioconferencing, but showing and talking about experiences will give the learner a better ability to construct their own meaning of the situation. Local peer tutors are important helpers.

Learners have better success when they work together (Strommen and Lincoln, <http://www.ilt.columbia.edu/k12/livetext/docs/construct.html>). This community and co-operative approach must be built into the structure of distance education classes.

The skills associated with self-regulated learning must be identified and taught to help achieve success. Discouraging a motivated distance learner may possibly dissuade them

from future education. Support structures are necessary to help the chances of success and to build a confident learner. (Workman and Stennard 1996) point to the need for a well developed support structure for distance education students. They identify the single most important element of success for students as the local help person who kept their confidence up during the course.

Using examples from our own experience can lead to the "Aha! I can do it." Or the "I've done that. It makes sense to me." type of learning experiences. To be able to internalize and relate to what you have already done builds confidence and shows learners that they can control their own learning.

Although it might not be immediately apparent constructivism is easier to accomplish in a distance setting. By nature of the design of distance education courses the student has a great amount of control. This may not be over all elements of the course material, but the way in which material is used and shaped is determined by the learner.

Self-Regulated Learning and Technology

True constructivism allows students to explore and create their own meanings. With the use of technology especially the World Wide Web and the Internet, this self-guided exploration can occur more easily than ever before. Hyperlinks and hypermedia allow jumping around and following an idea or a series of ideas. Paths are determined by the learner. They may stop and read and watch and learn when they get to an interesting spot. Decisions are made to skip ahead, go back, and stop - all based on personal choice. Compare this with learning dictated by a teacher, video or a book. There are some similarities but the control is not in the hands of the learner. The web is a more useful tool for constructivist learning. Those who work with this tool still have to be given the skills to use it properly. They must be made aware of the choices they have on the web. They must know not to stop at the first site. They must learn to question what they are reading. They must be able to synthesize and look for patterns and information in what they are working with. With the personal computer and the WWW, constructivism has found a way to help the student take charge of their learning. Books, libraries, actual things all exist to provide support for students. Still, boundaries exist. You could learn and come up with your own ideas but the body of knowledge available to you depends on where you are. Urban students have a greater access to resources and experiences. It gives them extra ammunition in their thought processes. The web has not only made more information available and stretched the boundaries, it has also brought access to those who were previously unable to get a large variety of information. Think of the rural filed trip versus the urban field trip. Rural students often have one trip to one place which means limited exposure and experience. The urban kids can get to more places, more times and therefore get more brain-stretching. They do more personal construction of knowledge. With the development of the WWW better meaning making opportunities are afforded to all students. The number of virtual filed trips and new experiences for anyone regardless of where they are is limited only by the imagination and the speed of the connection.

Traditional uses of new technologies also expose weaknesses in using technology without proper planning. The case of computer conferencing using a teacher centered, topic-centered e-mail is a perfect example. The class even though not set in a classroom environment relies on the guidance of the teacher. Topics are presented, opinions are given. Some people contribute actively while others simply lurk. There is little dynamic

dimension to the learning. The level of interaction is low.. The students do not discover new material outside of what is suggested by the teacher's course content. Contrast this with a computer-mediated-communication system such as First Class. Here many different areas of interest exist. Learners can join small content specific groups to learn about and explore knowledge. They can create their own areas of interest and share knowledge with those who know and those who want to know. This leads to more feedback, more discussion, and more co-operative learning.(Klemm and Snell)The student uses the technology to build on their own interests and discoveries related to the topic of the course.

Conclusion

When students are taught to use themselves as the ultimate learning tool then they can achieve great things. This approach to learning shifts the emphasis from the institution to the learner. Self-regulated, independent learners take responsibility for what they learn and how far they can go with this knowledge. These skills will have to be built on the processes and basic knowledge of learning. Once established the new learner can work effectively and successfully with technology, teachers and other students.

References

- Crotty, T. (1995). Constructivist theory unites distance leaning and teacher education. DEOS News, Vol. 5, no. 6.
- Gardiner, L. F.(1994). Redesigning higher education: Producing dramatic gains in student learning. (ERIC Document Reproduction Service No. ED 394441 94.
- Jonassen, D. H. (1995). Operationalizing mental models: Strategies for assessing mental models to support meaningful learning and design supportive learning environments, <http://csc195.indiana.edu/csc195/jonassen.html>.
- Klemm, W.R., & Snell, J.R. Enriching computer-mediated group learning by coupling constructivism with collaborative learning. <http://cwis.usq.edu.au/electpub/e~jist/klemm.html>.
- Lebow, D. (1993). Constructivist values for instructional systems design: Five principles toward a new mindset. Educational Technology Research and Development, 41, 4-16.
- Lidner, R.W., & Harris, B.R. (1993). Teaching self-regulated learning strategies. In M.R. Simonson and K. Abu-Omar (Eds.). Proceedings of Selected Research and Development Presentations at the 1993 National Convention of the Association for Educational Communications and Technology, New Orleans, LA. Ames, IA:AECT, 641-654.
- McKenzie, J. (1994) Grazing the net: Raising a generation of free range students. <http://www.pacificrim.net/~McKenzie/grazing1.html>.
- Strommen, E. F.,& Lincoln, B.(1992). Constructivism, technology, and the future of classroom learning. <http://www.ilt.columbia.edu/k12/livetext/docs/construct.html>.
- Schunk, D.H.(1991).Self-efficacy and academic motivation. Educational Psychologist,

26, 207-231.

Workman, J. J., & Stenard, R. A. (1996) Student support services for distance learners. DEOS News, Vol. 6, no. 3.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, 25, 3-17.

Anonymous (1995) Building an understanding of constructivism. *Classroom Compass*, Vol 1, no.3.