SUPPORTING THE LEARNING PROCESS pdf

1: Pearson Prentice Hall: eTeach: Supporting and Motivating Adolescent Thinking

This retrieval process is the psychological basis for transfer of learning. Transfer failure is potentially one of the most costly gaps in the training of workers and the education process in general.

These programs open up endless opportunities for students to communicate with experts or children from many countries and cultures. You can link to these services from anywhere in the world. For example, by using virtual docent programs, you can pre-arrange a meeting and connect to wonderful tours, lectures, and question-and-answer sessions. These content-rich experiences give students engaging and valuable opportunities for learning. Hogan uses content-rich experiences in his classroom. Hogan is a 5th grade teacher at a school in a low socioeconomic neighborhood. Eighty five percent of the students in the school qualify for free or reduced-priced lunches. Ninety percent of his students are minorities and three students are ELLs. Hogan is certified in elementary and special education and 45 percent of his students have disabilities, the maximum allowed within education laws and mandates. Hogan is proud of his students. They have worked well in collaborative learning groups throughout the year with great success. At the end of the year, Mr. Hogan and his class are completing a unit on ecology in jungle environments, and he decides to schedule a trip for his students to visit the local museum of natural history and meet with the educational team and docent. He is aware that most of his students have never visited the museum due to financial and transportation barriers. Hogan decides to explore the possibility of a virtual field trip. He has heard other teachers talking about these types of trips, and he wonders how it will work in his very diverse classroom. When he contacts the museum, they inform him that they would be glad to help with this project. They tell him that the museum has a Web site with a virtual tour as well as a listing of museums around the country that have virtual habitat exhibits. Hogan is delighted and proceeds with planning. The class is divided into five collaborative learning teams for this project. Each collaborative group is a heterogeneous mix of students that is representative of Mr. Each student is assigned a lead role within his or her group. Each group will make a minute presentation about life in a jungle habitat that includes related study and support materials to be shared with the class. Each group has a film director, a recorder, a wiki director, a spokesperson, and a trip coordinator. The film director is responsible for capturing images for the group presentation. The director will load these videos and images to the wiki for review. After all group members give feedback on their preferences, the film director edits the media resources on the wiki. This role would be a good choice for a child with disabilities because these students typically thrive in a technological environment. The recorder is in charge of recording the dialogue that will be used to narrate the presentation and compiling all contributed material. The recorder will create a wiki page that lists all the contributions that are expected from all group members. This role is a great role for a student with strong writing skills. This responsibility includes creating an engaging appearance and working closely with the recorder to include accurate information. The recorder will provide most of the written work to support the wiki director. This would be another good role for a child with a disability. The spokesperson will be the primary presenter for the group. This role includes making arrangements with Mr. The trip coordinator works closely with Mr. Hogan to ensure that the group is tuned in when they need to be. This person is responsible for posting directions on the wiki for all needed resources. The trip coordinator will also coordinate with the ESL teacher to make sure that all information is presented in other languages as necessary. This role will require organizational skills and can be filled by an ELL student. With technology, there is a place and role for everyone! Creating Motion-Centered Experiences in the Classroom Meaningful manipulatives are multisensory tools that are very beneficial for students with diverse learning styles. Earlier in this chapter, we talked about globes and number lines as examples of manipulatives. Working with manipulatives can be more like an integrative brain function when used in motion-centered experiences. TouchMath is a good example of one such set of tools. For this multisensory math program, students begin by using concrete materials such as beans or pieces of cereal to practice counting. Students soon move on to touching points on the manipulated numeral set and other materials that come with the program. Over time, students are able to learn the content by simply using other surfaces for tapping out numbers or using

visualizations of previous problem-solving techniques to help them remember math concepts and calculations. For more information, you can log onto www. Using Auditory Materials in the Classroom Auditory materials come in an increasing number of formats and can be classified in multiple ways. MP3 players are very popular, pocket-sized devices that play music and other types of audio recordings. Students can use them to play podcasts such as archived recordings from their classes or information transferred from other sites. MP3 players provide flexible access and give students the ability to repeat recordings for clarification and additional information. Many electronic books are available as free downloads in MP3 formats for pleasure or extended learning opportunities. Amazon offers the Kindle 2, which delivers text-to-speech playback for an extensive list of books, newspapers, and blogs. You can also use this device for your own documents. This device opens up many additional avenues of access for students with reading challenges. The National Instructional Materials Accessibility Standard NIMAS requires textbook publishers to produce standard source files that allow their publications to be easily translated into talking books, Braille, and large-print formats. For students who have challenges reading print, alternative formats help them with their reading difficulties. Department of Education and offers many audio book options. You can visit Bookshare at www. Some teachers may question whether there is any value in using these specific resources and other computer- and Internet-based activities. According to the U. These students, often referred to as the Millennials, prefer to use the Internet and seek information that is more abundant, accessible, and up-to-date. In a report, the U. Students spend more time on the Internet than they do watching television. The largest group of new users of the Internet from â€”02 were 2- to 5-year-olds. Computers can help students increase their performance on standardized tests. Technology promotes inclusion for students with disabilities. This term generally refers to a group of new Internet applications that promote the use of, contribution to, and creation of information. Blogs, wikis, podcasting, and social networking are some of the most widely used applications Churchill, Blogsâ€”Students can use blogs for discussions with friends or other groups of individuals. They can be integrated as digital bulletin boards where students can share, self-evaluate, and participate in group evaluations and feedback sessions. Students can also include art and photography on their blogs. Blogs also hold great promise for use in journaling in student activities Utecht, Wikisâ€”Wikis are Internet-based collections of information that can be as expansive as Wikipedia or as simple as compiling information into a camping trip organizer. Teachers can use wikis for adding information to research topics, posting outstanding student work, or reporting news to parents on a bulletin board. You can visit Wikispaces at www. Podcastingâ€”Podcasts are easy and affordable audio recordings of activities or presentations that students can listen to on their personal MP3 players. Students can use podcasts to access new information, record their own presentations, and review content that is presented or archived in this format. Social Networkingâ€”Social networking sites such as MySpace and Facebook provide great opportunities for students to link and communicate with students from all over the world. For diverse students, these sites can promote and improve their writing abilities. The following links are great resources that provide more in-depth information on Web 2. Blogs in Plain English:

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2: Instructional scaffolding - Wikipedia

The goals of the research have been to identify the kinds of learning that happens through making; describe and communicate this learning for the fields of informal learning research and practice; and recommend ways to design programs that support children's and families' engagement in this learning.

Page Share Cite Suggested Citation: Brain, Mind, Experience, and School: The National Academies Press. These collaborative experiences help students understand complex systems and concepts, such as multiple causes and interactions among different variables. Since the ultimate goal of education is to prepare students to become competent adults and lifelong learners, there is a strong argument for electronically linking students not just with their peers, but also with practicing professionals. This trend provides both a justification and a medium for establishing virtual communities for learning purposes. Through Project GLOBE Global Learning and Observations to Benefit the Environment , thousands of students in grades kindergarten through 12 Kâ€”12 from over 2, schools in more than 34 countries are gathering data about their local environments Lawless and Coppola, Students collect data in five different earth science areas, including atmosphere, hydrology, and land cover, using protocols specified by principal investigators from major research institutions. Students submit their data through the Internet to a GLOBE data archive, which both the scientists and the students use to perform their analyses. Students in GLOBE classrooms demonstrate higher knowledge and skill levels on assessments of environmental science methods and data interpretation than their peers who have not participated in the program Means et al. Emerging technologies and new ideas about teaching are being combined to reshape precollege science education in the Learning Through Collaborative Visualization CoVis Project Pea, a; Pea et al. Over wideband networks, middle and high school students from more than 40 schools collaborate with other students at remote locations. Thousands of participating students study atmospheric and environmental sciencesâ€”including topics in meteorology and climatologyâ€”through project-based activities. Using scientific visualization software, specially modified for learning, students have access to the same research tools and datasets that scientists use. Learners are first acquainted with natural variation in climatic temperature, human-caused increases in atmospheric carbon dioxide, and uses of spreadsheets and scientific visualization tools for inquiry. These staging activities specify themes for open-ended collaborative learning projects to follow. Students then investigate either a global issue or the point of view of a single country. The results of their investigations are shared in project reports within and across schools, and participants consider current results of international policy in light of their project findings. Working with practitioners and distant peers on projects with meaning beyond the school classroom is a great motivator for Kâ€”12 students. Students are not only enthusiastic about what they are doing, they also produce some impressive intellectual achievements when they can interact with meteorologists, geologists, astronomers, teachers, or computer scientists Means et al. This was foreseen long ago: As applications have spilled over from other sectors of society, computer-based learning tools have become more sophisticated Atkinson, ; Suppes and Morningstar, They now include calculators, spreadsheets, graphing programs, function probes e. In the Little Planet Literacy Series, computer software helps to move students through the phases of becoming better writers Cognition and Technology Group at Vanderbilt, a, b. For example, in the Little Planet Literacy Series, engaging video-based adventures encourage kindergarten, first-, and second-grade students to write books to solve challenges posed at the end of the adventures. In one of the challenges, students need to write a book in order to save the creatures on the Little Planet from falling prey to the wiles of an evil character named Wongo. The challenge for education is to design technologies for learning that draw both from knowledge about human cognition and from practical applications of how technology can facilitate complex tasks in the workplace. These designs use technologies to scaffold thinking and activity, much as training wheels allow young bike riders to practice cycling when they would fall without support. Like training wheels, computer scaffolding enables learners to do more advanced activities and to engage in more advanced thinking and problem solving than they could without such help. Cognitive technologies were first used to help students learn mathematics Pea, and writing Pea and Kurland, ; a decade later, a multitude of

projects use cognitive scaffolds to promote complex thinking, design, and learning in the sciences, mathematics, and writing. The Belvedere system, for example, is designed to teach science-related public policy issues to high school students who lack deep knowledge of many science domains, have difficulty zeroing in on the key issues in a complex scientific debate, and have trouble recognizing abstract relationships that are implicit in scientific theories and arguments Suthers et al. As students use boxes and links within Belvedere to represent their understanding of an issue, an online adviser gives hints to help them improve the coverage, consistency, and evidence for their arguments Paolucci et al. Scaffolded experiences can be structured in different ways. Some research educators advocate an apprenticeship model, whereby an expert practitioner first models the activity while the learner observes, then scaffolds the learner with advice and examples , then guides the learner in practice, and gradually tapers off support and guidance until the apprentice can do it alone Collins et al. Others argue that the goal of enabling a solo approach is unrealistic and overrestrictive since adults often need to use tools or other people to accomplish their work Pea, b; Resnick, Some even contend that well-designed technological tools that support complex activities create a truly human-machine symbiosis and may reorganize components of human activity into different structures than they had in pretechnological designs Pea, In many fields, experts are using new technologies to represent data in new waysâ€”for example, as three-dimensional virtual models of the surface of Venus or of a molecular structure, either of which can be electronically created and viewed from any angle. Geographical information systems, to take another example, use color scales to visually represent such variables as temperature or rainfall on a map. With these tools, scientists can discern patterns more quickly and detect relationships not previously noticed e. Some scholars assert that simulations and computer-based models are the most powerful resources for the advancement and application of mathematics and science since the origins of mathematical modeling during the Renaissance Glass and Mackey, ; Haken, The move from a static model in an inert medium, like a drawing, to dynamic models in interactive media that provide visualization and analytic tools is profoundly changing the nature of inquiry in mathematics and science. Students can visualize alternative interpretations as they build models that can be rotated in ways that introduce different perspectives on the problems. These changes affect the kinds of phenomena that can be considered and the nature of argumentation and acceptable evidence Bachelard, ; Holland, The same kinds of computer-based visualization and analysis tools that scientists use to detect patterns and understand data are now being adapted for student use. With probes attached to microcomputers, for example, students can do real-time graphing of such variables as acceleration, light, and sound Friedler et al. The ability of the human mind to quickly process and remember visual information suggests that concrete graphics and other visual representations of information can help people learn Gordin and Pea, , as well as help scientists in their work Miller, A variety of scientific visualization environments for precollege students and teachers have been developed by the CoVis Project Pea, a; Pea et al. Or they can investigate the global greenhouse effect Gordin et al. As described above, students with new technological tools can communicate across a network, work with datasets, develop scientific models, and conduct collaborative investigations into meaningful science issues. Since the late s, cognitive scientists, educators, and technologists have suggested that learners might develop a deeper understanding of phenomena in the physical and social worlds if they could build and manipulate Page Share Cite Suggested Citation: These speculations are now being tested in classrooms with technology-based modeling tools. For example, the STELLA modeling environment, which grew out of research on systems dynamics at the Massachusetts Institute of Technology Forrester, , has been widely used for instruction at both the undergraduate and precollege level, in fields as diverse as population ecology and history Clauset et al. The educational software and exploration and discovery activities developed for the GenScope Project use simulations to teach core topics in genetics as part of precollege biology. The simulations move students through a hierarchy of six key genetic concepts: DNA, cell, chromosome, organism, pedigree, and population Neumann and Horwitz, GenScope also uses an innovative hypermodel that allows students to retrieve real-world data to build models of the underlying physical process. Evaluations of the program among high school students in urban Boston found that students not only were enthusiastic about learning this complex subject, but had also made significant conceptual developments. Students are using interactive computer

microworlds to study force and motion in the Newtonian world of mechanics Hestenes, ; White, Through the medium of interactive computer microworlds, learners acquire hands-on and minds-on experience and, thus, a deeper understanding of science. Sixth graders who use computer-based learning tools develop a better conceptual understanding of acceleration and velocity than many 12th-grade physics students White, ; see Box 9. In another project, middle school students employ easy-to-use computer-based tools Model-It to build qualitative models of systems, such as the water quality and algae levels in a local stream. Students can insert data they have collected into the model, observe outcomes, and generate what if scenarios to get a better understanding of the interrelationships among key variables Jackson et al. In general, technology-based tools can enhance student performance when they are integrated into the curriculum and used in accordance with knowledge about learning e. But the mere existence of these tools in the classroom provides no guarantee that student learning will improve; they have to be part of a coherent education approach. Initially, teachers working with the Jasper Woodbury playground adventure described above had trouble finding time to give students feedback about their playground Page Share Cite Suggested Citation: Experiments conducted with typical seventh-, eighth-, and ninth-grade students in urban, public middle schools revealed that the software modeling tools made the difficult subject of physics understandable as well as interesting to a wide range of students. Students not only learned about physics, but also about processes of inquiry. We found that, regardless of their lower grade levels 7â€”9 and their lower pretest scores, students who had participated in ThinkerTools outperformed high school physics students grades 11â€”12 on qualitative problems in which they were asked to apply the basic principles of Newtonian mechanics to real-world situations. In general, this inquiry-oriented, model-based, constructivist approach to science education appears to make science interesting and accessible to a wider range of students than is possible with traditional approaches White and Fredericksen, An interactive Jasper Adventuremaker software program allows students to suggest solutions to a Jasper adventure, then see simulations of the effects of their solutions. The simulations had a clear impact on the quality of the solutions that students generated subsequently Crews et al. Opportunities to interact with working scientists, as discussed above, also provide rich experiences for learning from feedback and revision White and Fredericksen, When its formative assessment resources are added to these curricula, students achieve at higher levels than without them e. Teachers incorporate information from the diagnoser to guide how they teach. Hunt and Minstrell Another way of using technology to support formative assessment is described in Box 9. Classroom communication technologies, such as Classtalk, can promote more active learning in large lecture classes and, if used appropriately, highlight the reasoning processes that students use to solve problems see Chapter 7. This technology allows an instructor to prepare and display problems that the class works on collaboratively. Students enter answers individually or as a group via palm-held input devices, and the technology collects, stores, and displays histograms bar graphs of how many students preferred each problem solution of the class responses. This kind of tool can provide useful feedback to students and the teacher on how well the students understand the concepts being covered and whether they can apply them in novel contexts Mestre et al. Like other technologies, however, Classtalk does not guarantee effective learning. The visual histograms are intended to promote two-way communication in large lecture classes: But the technology could be used in ways that have nothing to do with this goal. With such a use, the opportunity to expose students to varying perspectives on problem solving and the various arguments for different problem solutions would be lost. Thus, effective use of technology involves many teacher decisions and direct forms of teacher involvement. Peers can serve as excellent sources of feedback. Over the last decade, there have been some very successful and influential demonstrations of how computer networks can support groups of students actively engaged in learning and reflection. Computer-Supported Intentional Learning Environments CSILE provide opportunities for students to collaborate on learning activities by working through a communal database that has text and graphics capabilities Scardamalia et al. These notes are labeled by categories, such as question or new learning, that other students can search and comment on; see Box 9. With support from the instructor, these processes engage students in dialogues that integrate information and contributions from various sources to produce knowledge. CSILE also includes guidelines for formulating and testing conjectures and prototheories. CSILE has been used in elementary, secondary, and postgraduate classrooms for science,

history, and social studies. Students worked in small groups to design different aspects of a hypothetical culture of rain forest dwellers Means et al. The group that was charged with developing a number system for the hypothetical culture posted the following entry: It is a base 10 number system too. It has a pattern to it. The number of lines increase up to five then it goes upside down all the way to Another student group in the same classroom reviewed this CSILE posting and displayed impressive analytic skills as well as good social skills in a response pointing out the need to extend the system: We all like the number system but we want to know how the number 0 looks like, and you can do more numbers not just 10 like we have right now.

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3: Process and Tools Support Learning at all Levels | AdvancED

Read chapter 9 Technology to Support Learning: First released in the Spring of , How People Learn has been expanded to show how the theories and insig.

Our attitudes about education can inspire theirs and show them how to take charge of their own educational journey. Be a role model for learning. Through guidance and reminders, parents help their kids organize their time and support their desires to learn new things in and out of school. Pay attention to what your child loves. Is he a talker or is he shy? Find out what interests him and help him explore it. Tune into how your child learns. Many children use a combination of modalities to study and learn. Some learn visually through making and seeing pictures, others through tactile experiences, like building block towers and working with clay. Still others are auditory learners who pay most attention to what they hear. And they may not learn the same way their siblings or you do. By paying attention to how your child learns, you may be able to pique his interest and explain tough topics by drawing pictures together, creating charts, building models, singing songs and even making up rhymes. Practice what your child learns at school. Many teachers encourage parents to go over what their young children are learning in a non-pressured way and to practice what they may need extra help with. Read aloud regularly, even to older kids. If your child is a reluctant reader, reading aloud will expose her to the structure and vocabulary of good literature and get her interested in reading more. And let kids pick the books they like. Book series are great for reluctant readers. When you cook together, do measuring math. When you drive in the car, count license plates and talk about the states. When you turn on the blender, explore how it works together. When your child studies the weather, talk about why it was so hot at the beach. Connect what your child learns to the world. Find age-appropriate ways to help your older child connect his school learning to world events. Start by asking questions. Then ask what she could do to help such as sending supplies to hurricane victims. This will help your child become a caring learner. Help your child take charge of his learning. While you may want to supplement school with outside activities, be judicious about how much you let or urge your child to do. Kids need downtime as much as they may need to pursue extra-curricular activities. Therefore, monitor your child to see that he is truly enjoying what he is doing. Keep TV to a minimum. Learning something new yourself is a great way to model the learning process for your child. Take up a new language or craft, or read about an unfamiliar topic. Show your child what you are learning and how you may be struggling. You might even establish a joint study time.

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4: Engaging students in learning | Center for Teaching and Learning

In other schools, teachers have organized their learning around the development of standards and assessments of student work, evaluating both student learning and the effectiveness of their own teaching in the process.

Element of threat Physical Organism The physical organism provides individuals with the perceptual apparatus for sensing the world around them. Pilots, for example, must be able to see, hear, feel, and respond adequately while they are in the air. A person whose perceptual apparatus distorts reality is denied the right to fly at the time of the first medical examination. All perceptions are affected by this need. Just as the food one eats and the air one breathes become part of the physical self, so do the sights one sees and the sounds one hears become part of the psychological self. Psychologically, we are what we perceive. A person has physical barriers which keep out those things that would be damaging to the physical being, such as blinking at an arc weld or flinching from a hot iron. Likewise, a person has perceptual barriers that block those sights, sounds, and feelings which pose a psychological threat. Helping people learn requires finding ways to aid them in developing better perceptions in spite of their defense mechanisms. To teach effectively, it is necessary to work with this life force. Spectators at a ball game may see an infraction or foul differently depending on which team they support. The precise kinds of commitments and philosophical outlooks which the student holds are important for the instructor to know, since this knowledge will assist in predicting how the student will interpret experiences and instructions. Those things which are more highly valued and cherished are pursued; those which are accorded less value and importance are not sought after. Self-Concept Self-concept is a powerful determinant in learning. A negative self-concept inhibits the perceptual processes by introducing psychological barriers which tend to keep the student from perceiving. They may also inhibit the ability to properly implement that which is perceived. That is, self-concept affects the ability to actually perform or do things unfavorable. Students who view themselves positively, on the other hand, are less defensive and more receptive to new experiences, instructions, and demonstrations. Time and Opportunity It takes time and opportunity to perceive. Learning some things depends on other perceptions which have preceded these learnings, and on the availability of time to sense and relate these new things to the earlier perceptions. Thus, sequence and time are necessary. A student could probably stall an airplane on the first attempt, regardless of previous experience. Stalls cannot really be learned, however, unless some experience in normal flight has been acquired. Even with such experience, time and practice are needed to relate the new sensations and experiences associated with stalls in order to develop a perception of the stall. In general, lengthening an experience and increasing its frequency are the most obvious ways to speed up learning, although this is not always effective. Many factors, in addition to the length and frequency of training periods, affect the rate of learning. The effectiveness of the use of a properly planned training syllabus is proportional to the consideration it gives to the time and opportunity factor in perception. Element of Threat The element of threat does not promote effective learning. In fact, fear adversely affects perception by narrowing the perceptual field. Confronted with threat, students tend to limit their attention to the threatening object or condition. The field of vision is reduced, for example, when an individual is frightened and all the perceptual faculties are focused on the thing that has generated fear. Flight instruction provides many clear examples of this. During the initial practice of steep turns, a student pilot may focus attention on the altimeter and completely disregard outside visual references. Anything an instructor does that is interpreted as threatening makes the student less able to accept the experience the instructor is trying to provide. Learning is a psychological process, not necessarily a logical one. Trying to frighten a student through threats of unsatisfactory reports or reprisals may seem logical, but is not effective psychologically. The effective instructor can organize teaching to fit the psychological needs of the student. If a situation seems overwhelming, the student feels unable to handle all of the factors involved, and a threat exists. So long as the student feels capable of coping with a situation, each new experience is viewed as a challenge. A good instructor realizes that behavior is directly influenced by the way a student perceives, and perception is affected by all of these factors. Therefore, it is important for the instructor to facilitate the learning process by avoiding any actions which may inhibit or prevent the

attainment of teaching goals. Teaching is consistently effective only when those factors which influence perceptions are recognized and taken into account. Insight Insight involves the grouping of perceptions into meaningful wholes. To ensure that this does occur, it is essential to keep each student constantly receptive to new experiences and to help the student realize the way each piece relates to all other pieces of the total pattern of the task to be learned. As an example, during straight-and-level flight in an airplane with a fixed-pitch propeller, the RPM will increase when the throttle is opened and decrease when it is closed. On the other hand, RPM changes can also result from changes in airplane pitch attitude without changes in power setting. Obviously, engine speed, power setting, airspeed, and airplane attitude are all related. True learning requires an understanding of how each of these factors may affect all of the others and, at the same time, knowledge of how a change in any one of them may affect all of the others. This mental relating and grouping of associated perceptions is called insight. Insight will almost always occur eventually, whether or not instruction is provided. For this reason, it is possible for a person to become an electrician by trial and error, just as one may become a lawyer by reading law. As perceptions increase in number and are assembled by the student into larger blocks of learning, they develop insight. As a result, learning becomes more meaningful and more permanent. Forgetting is less of a problem when there are more anchor points for tying insights together. It is a major responsibility of the instructor to organize demonstrations and explanations, and to direct practice, so that the student has better opportunities to understand the interrelationship of the many kinds of experiences that have been perceived. Pointing out the relationships as they occur, providing a secure and nonthreatening environment in which to learn, and helping the student acquire and maintain a favorable self-concept are key steps in fostering the development of insight. Motivation may be negative or positive, tangible or intangible, subtle and difficult to identify, or it may be obvious. Negative motivation may engender fear, and be perceived by the student as a threat. While negative motivation may be useful in certain situations, characteristically it is not as effective in promoting efficient learning as positive motivation. Positive motivation is provided by the promise or achievement of rewards. These rewards may be personal or social; they may involve financial gain, satisfaction of the self-concept, or public recognition. Motivation which can be used to advantage by the instructor includes the desire for personal gain, the desire for personal comfort or security, the desire for group approval, and the achievement of a favorable self-image. The desire for personal gain, either the acquisition of possessions or status, is a basic motivational factor for all human endeavor. An individual may be motivated to dig a ditch or to design a supersonic airplane solely by the desire for financial gain. Students are like typical employees in wanting a tangible return for their efforts. For motivation to be effective, students must believe that their efforts will be suitably rewarded. These rewards must be constantly apparent to the student during instruction, whether they are to be financial, self-esteem, or public recognition. Lessons often have objectives which are not obvious at first. Although these lessons will pay dividends during later instruction, the student may not appreciate this fact. It is important for the instructor to make the student aware of those applications which are not immediately apparent. Likewise, the devotion of too much time and effort to drill and practice on operations which do not directly contribute to competent performance should be avoided. The desire for personal comfort and security is a form of motivation which instructors often forget. All students want secure, pleasant conditions and a safe environment. If they recognize that what they are learning may promote these objectives, their attention is easier to attract and hold. Insecure and unpleasant training situations inhibit learning. Everyone wants to avoid pain and injury. Students normally are eager to learn operations or procedures which help prevent injury or loss of life. This is especially true when the student knows that the ability to make timely decisions, or to act correctly in an emergency, is based on sound principles. The attractive features of the activity to be learned also can be a strong motivational factor. Students are anxious to learn skills which may be used to their advantage. If they understand that each task will be useful in preparing for future activities, they will be more willing to pursue it. Another strong motivating force is group approval. Every person wants the approval of peers and superiors. Interest can be stimulated and maintained by building on this natural desire. Most students enjoy the feeling of belonging to a group and are interested in accomplishment which will give them prestige among their fellow students. Every person seeks to establish a favorable self-image. In certain instances, this self-image may be submerged in

feelings of insecurity or despondency. Fortunately, most people engaged in a task believe that success is possible under the right combination of circumstances and good fortune. This belief can be a powerful motivating force for students. An instructor can effectively foster this motivation by the introduction of perceptions which are solidly based on previously learned factual information that is easily recognized by the student. Each additional block of learning should help formulate insight which contributes to the ultimate training goals. This promotes student confidence in the overall training program and, at the same time, helps the student develop a favorable self-image. As this confirmation progresses and confidence increases, advances will be more rapid and motivation will be strengthened. Positive motivation is essential to true learning. Negative motivation in the form of reproofs or threats should be avoided with all but the most overconfident and impulsive students. Slumps in learning are often due to declining motivation. Motivation does not remain at a uniformly high level. It may be affected by outside influences, such as physical or mental disturbances or inadequate instruction. The instructor should strive to maintain motivation at the highest possible level.

SUPPORTING THE LEARNING PROCESS pdf

5: The Role of Parents . Supporting Your Learner . Going to School . Education | PBS Parents

Learning something new yourself is a great way to model the learning process for your child. Take up a new language or craft, or read about an unfamiliar topic. Show your child what you are.

Essential features[edit] There are three essential features of scaffolding that facilitate learning. This interaction should be collaborative for it to be effective. The third feature of scaffolding is that the scaffold, the support and guidance provided by the expert, is gradually removed as the learner becomes more proficient. The support and guidance provided to the learner is compared to the scaffolds in building construction where the scaffolds provide both "adjustable and temporal" support to the building under construction. This support is weaned gradually until the learner is independent. The selection of the learning task: The task should ensure that learners use the developing skills that need to be mastered. After choosing the task, the teacher needs to anticipate errors the learners are likely to commit when working on the task. Anticipation of errors enables the scaffolder to properly guide the learners away from ineffective directions. Scaffolds could be organized in "simple skill acquisition or they may be dynamic and generative". Scaffolding is not limited to a cognitive skill but it also relates to emotive and affect factors. During the task the scaffolder expert might need to manage and control for frustration and loss of interest that could be experienced by the learner. Helped by their parents when they first start learning to speak, young children are provided with informal instructional formats within which their learning is facilitated. By contrast, bed-time stories and read alouds are examples of book-centered parenting events Daniels, without scaffolding interaction. Scaffolding is changing the level of support to suit the cognitive potential of the child. More support is offered when a child is having difficulty with a particular task and, over time, less support is provided as the child makes gains on the task. An essential element to the ZPD and scaffolding is the acquisition of language. For instance, a recent study recorded verbal scaffolding between mothers and their 3- and 4-year-old children as they played together. Then, when the children were six years old, they underwent several measures of executive function , such as working memory and goal-directed play. In particular, scaffolding was most effective when mothers provided explicit conceptual links during play. Vygotsky was convinced that a child could be taught any subject efficiently using scaffolding practices by implementing the scaffolds at the Zone of proximal development. Students are escorted and monitored through learning activities that function as interactive conduits to get them to the next stage. Thus the learner obtains or raises new understandings by presenting on their prior knowledge through the support delivered by more capable individuals Raymond, Several peer reviewed studies have shown that when there is a deficiency in guided learning experiences and social interaction, learning and development are obstructed Bransford, Brown, and Cocking, In writing instruction, typically support is presented in verbal form discourse. Dialogue may range from casual talk to deliberate explanations about features of written language. Clay shows that what may seem like casual conversational exchanges between tutor and student actually offer many opportunities for fostering cognitive development, language learning, story composition for writing, and reading comprehension. Conversations facilitate generative, constructive, experimental, and developmental speech and writing in the development of new ideas Smagorinsky, Some ingredients of scaffolding are predictability, playfulness, focus on meaning, role reversal, modeling, and nomenclature. An example of soft scaffolding in the classroom would be when a teacher circulates the room and converses with his or her students Simon and Klein, The teacher may question their approach to a difficult problem and provide constructive feedback. According to Van Lier, this type of scaffolding can also be referred to as contingent scaffolding. The type and amount of support needed is dependent on the needs of the students during the time of instruction Van Lier, Unfortunately, applying scaffolding correctly and consistently can be difficult when the classroom is large and students have various needs Gallagher, Scaffolding can be applied to a majority of the students, but the teacher is left with the responsibility to identify additional scaffolding. In contrast with contingent or soft scaffolding, embedded or hard scaffolding is planned in advance to help students with a learning task that is known in advance to be difficult Saye and Brush, For example, when students are discovering the formula for the Pythagorean Theorem in math class, the teacher may identify hints

or cues to help the student reach an even higher level of thinking. In both situations, the idea of "expert scaffolding" is being implemented Holton and Clarke, Reciprocal scaffolding, a method first coined by Holton and Thomas, is a method that involves a group of two or more collaboratively working together. The scaffolding is shared by each member and changes constantly as the group works on a task Holton and Clarke, According to Vygotsky, students develop higher-level thinking skills when scaffolding occurs with an adult expert or with a peer of higher capabilities Stone, Conversely, Piaget believes that students discard their ideas when paired with an adult or student of more expertise Piaget, Instead, students should be paired with others who have different perspectives. Conflicts would then take place between students allowing them to think constructively at a higher level. Technical scaffolding is a newer approach in which computers replace the teachers as the experts or guides, and students can be guided with web links, online tutorials, or help pages Yelland and Masters, Educational software can help students follow a clear structure and allows students to plan properly Lai and Law, Directive and supportive scaffolding[edit] Silliman and Wilkinson distinguish two types of scaffolding: The question-answer-evaluation sequence creates a predetermined standard for acceptable participation and induces passive learning. The nature and role of the triadic dialogue have been oversimplified and the potential for the roles of teachers and students in them has been undermined Nassaji and Wells, Instructionists and constructionists approach giving guidance within their own instructional frameworks. Scaffolding involves presenting learners with proper guidance that moves them towards their learning goals. Providing guidance is a method of moderating the cognitive load of a learner. In scaffolding, learners can only be moved toward their learning goals if cognitive load is held in check by properly administered support. Instructionists tend to give a higher level of guidance in light of the inquiry driven style of learning. With each piece of a complex task being broken down, instructors give guidance for each of the separated parts of the learning. In this way, higher guidance is a function of reducing cognitive load when students are working in a more individual manner. Constructivists approach guidance differently as a result of their focus on transfer. The role of guidance is to ensure that cognitive load is moderated while the learner works at more complete and complex task; guidance is given during aspects of the task that will help enable transfer. Amount of guidance[edit] Research has demonstrated that higher level of guidance has a greater effect on scaffolded learning, but is not a guarantee of more learning. Multiple conditions do not guarantee greater learning, as certain types of guidance can be extraneous to the learning goals or the modality of learning. With this, more guidance if not appropriate to the learning can negatively impact performance, as it gives the learner overwhelming levels of information. Context of guidance[edit] Constructivists pay close attention to the context of guidance, because they believe instruction plays a major role in knowledge retention and transfer. Similarly, other studies [24] [25] [26] illustrate how students construct different understandings from explanation in isolation versus having a first experience with the material. A first experience with the material provides students with a "need to know", [19] which allows learners to reflect on prior experiences with the content, which can help learners construct meaning from instruction. Worked examples provide students with straightforward goals, step-by-step instructions as well as ready-to-solve problems that can help students develop a stronger understanding from instruction. For instructivists the timing of guidance is immediate, either at the beginning or when the learner makes a mistake, whereas in constructivism it can be delayed. Research on intelligent-tutoring systems suggests that immediate feedback on errors is a great strategy to promote learning, as the learner is able to integrate the feedback from short-term memory into the overall learning and problem solving task; the longer the wait on feedback, the harder it is for the learner to make this integration. In this view, for learners to construct knowledge they should be provided with the goals and minimal information and support. Applications that promote constructivist learning require learners to solve authentic problems or "acquire knowledge in information-rich settings". Some authors see instructionism as a highly prescriptive practice that mostly focuses on the formation of skills, that is very product-oriented and is not interactive; [36] or that is a highly structured, systematic and explicit way of teaching that gives emphasis to the role of the teacher as a transmitter of knowledge and the students as passive receptacles. Both of them use the term guidance as means to support learning, and how it can be used more effectively. The difference in the use of guidance if found in the philosophical assumptions regarding the nature of the learner,

[37] but they also differ in their views around the quantity, the context and the timing of guidance. Applications[edit] Instructional scaffolding can be thought of as the strategies that a teacher uses to help learners bridge a cognitive gap or progress in their learning to a level they were previously unable to accomplish. In the early studies, scaffolding was primarily done in oral, face- to-face learning environments. In classrooms, scaffolding may include modelling behaviours, coaching and prompting, thinking out loud, dialogue with questions and answers, planned and spontaneous discussions, as well as other interactive planning or structural assistance to help the learner bridge a cognitive gap. This can also include peer mentoring from more experienced students. There are a wide variety of scaffolding strategies that teachers employ. One approach to looking at the application of scaffolding is to look at a framework for evaluating these strategies. This model was developed based on the theoretical principles of scaffolding to highlight the use of scaffolding for educational purposes. The first is the instructors intentions and the second refers to the means by which the scaffolding is carried out. These groups highlight the instructors intentions for scaffolding [40] Scaffolding means: These groups highlight the ways in which the instructor scaffolds [40] Any combination of scaffolding means with scaffolding intention can be construed as a scaffolding strategy, however, whether a teaching strategy qualifies as good scaffolding generally depends upon its enactment in actual practice and more specifically upon whether the strategy is applied contingently and whether it is also part of a process of fading and transfer of responsibility. The context of learning i. Instructional scaffolds Advanced organizers [44] Tools that present new information or concepts to learners. These tools organize information in a way that helps learners understand new and complex content. Examples of advanced organizers are:

SUPPORTING THE LEARNING PROCESS pdf

6: Teacher Learning That Supports Student Learning - Educational Leadership

Teacher modeling is one effective method (i.e. the teacher shows how collaboration is done), while avoiding homogeneous groups and grouping by ability, fostering individual accountability by assigning different roles, and evaluating both the student and the group performance also support collaborative learning.

By Gaye Gronlund As a parent, you want your children to learn all that they canâ€”to grasp math concepts, to be curious about exploring the world, and to learn to read and write. Did you know that you can help your son or daughter academically by playing with them? Play and learning go together! What kind of play helps children learn the best? Play that really engages childrenâ€”play that they will focus on and stay with even when problems arise. This kind of play helps children develop their approaches to learningâ€”in other words, the ways they respond to learning situations. Curiosity about the world, initiative and problem solving, and focused attention and persistence are just a few approaches to learning that children develop through play. In the early years, parents can help children develop the skills to be better students by playing with them. Yes, as they enter kindergarten and the elementary years, children need to have some understanding of letters and numbers. However, if they have not developed solid approaches to learning, they will not be as successful in school settings. Encouraging Toddlers at Play Joey is 20 months old. He has a basket full of toys, including rattles, soft plastic blocks, a set of stacking rings, stuffed animals, and cloth and plastic books. This is typical toddler play behavior. Joey is curious about the world and is looking at it another wayâ€”through the slats in the basket! Joey loves to shake the rattles to hear the different sounds or to stack two or three blocks and knock them down. His attention to each might be up to five minutes or so, which is just right for his age. He may solve problems as he tries to place the rings on the stacking post or to add more blocks to a tower. He comments about what he is doing: Do you see it hiding behind the chair? Does everything look different from under there? Can you try to put just one on top of another gently? Encouraging Preschoolers at Play Alicia is 4 years old. Through her pretend play Alicia learns to think abstractly. When she holds a block in her hand and uses it to pretend to talk on the phone, she is using the block as a symbol for something else. And, since letters and numbers are abstract because they are symbols of what they represent, pretend play is one way a child develops her understanding of letters and numbers. They give her paper and crayons so that she can pretend to write grocery lists. They encourage her to count how many items she has placed in her toy shopping cart. They accept her scribbles and letter-like shapes as her writing just right for 4-year-olds and help her when the numbers get a little mixed up. Alicia will work with puzzles for long periods of time, too, especially if her dad joins her. Together, they figure out strategies for putting the pieces together. She may turn the pieces around, trying out different ways until she is successful. She is developing problem solving and persistence as she does so. Your Role as Your Child Plays Playing with your child helps keep your child engaged in the kind of play where learning occurs. Your interest, questions, and comments as you play alongside will help your child use toys productively. And the two of you will have lots of fun together! She works with teachers, families, and programs across the country and writes books and articles about play, standards, assessment, and curriculum.

SUPPORTING THE LEARNING PROCESS pdf

7: Supporting the Development of Creativity | NAEYC

Interpreting learners' statements and actions and shaping productive experiences for them require an understanding of child and adolescent development and of how to support growth in various domains -- cognitive, social, physical, and emotional.

Planned collegiality and inquiry. Are we providing these avenues for teacher learning? In response to an increasingly complex society and a rapidly changing, technology-based economy, schools are being asked to educate the most diverse student body in our history to higher academic standards than ever before. This task is one that cannot be "teacher-proofed" through management systems, testing mandates, or curriculum packages. What kinds of preservice training and ongoing professional development will make teacher success more likely? What Teachers Need to Know First, teachers need to understand subject matter deeply and flexibly, so that they can help students create useful cognitive maps, relate ideas to one another, and address misconceptions. Teachers need to see how ideas connect across fields and to everyday life. This kind of understanding provides a foundation for pedagogical content knowledge Shulman , which enables teachers to make ideas accessible to others. The audience is also key: A skillful teacher figures out what students know and believe about a topic and how learners are likely to "hook into" new ideas. Teaching in ways that connect with students also requires an understanding of differences that may arise from culture, family experiences, developed intelligences, and approaches to learning. Teachers need to be able to inquire sensitively, listen carefully, and look thoughtfully at student work, as well as to structure situations in which students write and talk about their experiences. This builds a foundation of pedagogical learner knowledge Grimmett and MacKinnon Motivating students requires an understanding of what individual students believe about themselves, what they care about, and what tasks are likely to give them enough success to encourage them to work hard to learn. Teachers need several kinds of knowledge about learning. Teachers need to think about what it means to learn different kinds of material for different purposes and how to decide which kinds of learning are most necessary in different contexts. Teachers must be able to identify the strengths of different learners while addressing their weaknesses. In addition, all teachers need tools to work with students who have specific learning disabilities or needs. And because language is the gateway to learning, teachers must understand how students acquire language, so that they can build language skills and create accessible learning experiences. Teachers need to know about curriculum resources and technologies to connect their students with sources of information and knowledge that allow them to explore ideas, acquire and synthesize information, and frame and solve problems. And teachers need to know about collaborationâ€”how to structure interactions among students so that more powerful shared learning can occur; how to collaborate with other teachers; and how to work with parents to learn more about their children and to shape supportive experiences at school and home. Finally, teachers need to be able to analyze and reflect on their practice, to assess the effects of their teaching, and to refine and improve their instruction. New Strategies for Teacher Learning Acquiring this sophisticated knowledge and developing a practice that is different from what teachers themselves experienced as students requires learning opportunities for teachers that are more powerful than simply reading and talking about new pedagogical ideas Ball and Cohen, in press. Teachers learn best by studying, doing, and reflecting; by collaborating with other teachers; by looking closely at students and their work; and by sharing what they see. This kind of learning cannot occur in college classrooms divorced from practice or in school classrooms divorced from knowledge about how to interpret practice. Good settings for teacher learningâ€”in both colleges of education and schoolsâ€”provide lots of opportunities for research and inquiry, for trying and testing, for talking about and evaluating the results of learning and teaching. The "rub between theory and practice" Miller and Silvernail occurs most productively when questions arise in the context of real students and work in progress, and where research and disciplined inquiry are also at hand. Better settings for such learning are appearing. Some are one- or two-year graduate programs for recent graduates or midcareer recruits. Others are five-year models for prospective teachers who enter teacher education as undergraduates. In either case, the fifth year allows students to focus exclusively on

the task of preparing to teach, with yearlong, school-based internships linked to coursework on learning and teaching. Studies have found that graduates of these extended programs are more satisfied with their preparation, and their colleagues, principals, and cooperating teachers view them as better prepared. Extended program graduates are as effective with students as are much more experienced teachers and are much more likely to enter and stay in teaching than their peers prepared in traditional four-year programs Andrew and Schwab , Denton and Peters , Shin Many of these programs have joined with local school districts to create Professional Development Schools. Like teaching hospitals, these schools aim to provide sites for state-of-the-art practice that are organized to support the training of new professionals, extend the professional development of veteran teachers, and sponsor collaborative research and inquiry. Both university and school faculty plan and teach in these programs. Beginning teachers get a more coherent learning experience when they are organized in teams with these faculty and with one another. Senior teachers deepen their knowledge by serving as mentors, adjunct faculty, co-researchers, and teacher leaders. Thus, these schools can help create the rub between theory and practice, while creating more professional roles for teachers and constructing knowledge that is more useful for both practice and ongoing theory building Darling-Hammond These new programs typically engage prospective teachers in studying research and conducting their own inquiries through cases, action research, and structured reflections about practice. They envision the professional teacher as one who learns from teaching rather than as one who has finished learning how to teach, and the job of teacher education as developing the capacity to inquire systematically and sensitively into the nature of learning and the effects of teaching. This is like the approach to knowledge production John Dewey soughtâ€”one that empowers teachers with greater understanding of complex situations rather than seeking to control them with simplistic formulas or cookie-cutter routines. Training in inquiry also helps teachers learn how to look at the world from multiple perspectives and to use this knowledge to reach diverse learners. As Lisa Delpit notes, We all interpret behaviors, information, and situations through our own cultural lenses; these lenses operate involuntarily, below the level of conscious awareness, making it seem that our own view is simply "the way it is" p. Teachers concerned with democratic education must develop an awareness of their perspectives and how these can be enlarged to avoid a "communicentric bias" Gordon et al. These goals suggest a new relationship between research and practice. For most of this century, policymakers sought knowledge to aid in the remote control of teachingâ€”generalizable dictums that could shape teaching via texts, curriculum packages, and teacher manuals. By contrast, the kind of learning found in rich professional development settings has several key features Ball and Cohen, in press: It is centered around the critical activities of teaching and learningâ€”planning lessons, evaluating student work, developing curriculumâ€”rather than in abstractions and generalities; It grows from investigations of practice through cases, questions, analysis, and criticism; and It is built on substantial professional discourse that fosters analysis and communication about practices and values in ways that build colleagueship and standards of practice. These elements need to be part of a seamless process of professional learning that begins in preservice education, continues through the early years of induction, and extends through years of developing accomplished practice. This approach is common elsewhere around the world and in a growing number of schools in the United States. Professional Learning in Practice Countries like Germany, Belgium, and Luxembourg have long required two to three years of graduate-level study for prospective teachers on top of an undergraduate degree in the subject s to be taught. Education courses include the study of child development and learning, pedagogy, and teaching methods, plus an intensively supervised internship in a school affiliated with the university. In both France and Japan undertook major teacher education reforms to extend both university- and school-based training. In France, all candidates now complete a graduate program in newly created University Institutes for the Preparation of Teachers that are connected to nearby schools. In Japan and Chinese Taipei, new teachers complete a year-long supervised internship with a reduced teaching load that allows for mentoring and additional study. By Japanese law, first-year teachers receive at least 20 days of inservice training and 60 days of professional development. Master teachers are released from their classrooms to advise and counsel them. In both Japan and China, new teachers watch other teachers at length, discuss problems of practice, present and critique demonstration lessons, and, with groups of colleagues,

imagine and act out how students might respond to certain presentations of material. Because schools in other countries provide for this kind of regular collegial exchange, teachers share knowledge and refine their practice throughout their careers. Without these supports, learning to teach well is extremely difficult. After this hazing, many leave. Others learn merely to cope rather than to teach well. After entry, teachers are expected to know everything they will need for a career, or to learn through workshops mostly on their own, with few structured opportunities to observe and analyze teaching with others. As one high school teacher who had spent 25 years in the classroom once told me: Some school districts have begun to create new models of induction and ongoing professional development for teachers and principals. The emphasis shifted from outside consultants to in-house experts. Problem posing and problem solving supplanted the recipes and prescriptions for effective schools that teachers had heard for years and never managed to implement. On one such day teachers spent two hours individually reading research about grouping. During another day, they worked in cooperative groups to share their perceptions on the research they had read. On yet another day, the staff met to engage in the process of consensus building with the goal of reaching a decision about grouping practices in the school Miller and Silvernail , pp. As part of a self-study, 10 teachers followed 10 children through a school day. Even before participative management was initiated at Fairdale, the teachers started changing things. In other schools, teachers have organized their learning around the development of standards and assessments of student work, evaluating both student learning and the effectiveness of their own teaching in the process. The result is a greater appreciation for what matters and what works, as well as what needs to change to promote student success. Professional development strategies that succeed in improving teaching share several features Darling-Hammond and McLaughlin They tend to be: These approaches shift from old models of "teacher training" or "inservicing" to a model in which teachers confront research and theory directly, are regularly engaged in evaluating their practice, and use their colleagues for mutual assistance. The Benefit for Students Growing evidence suggests that this kind of professional development not only makes teachers feel better about their practice, but it also reaps learning gains for students, especially in the kinds of more challenging learning that new standards demand Darling-Hammond , NFIE Creating a profession of teaching in which teachers have the opportunity for continual learning is the likeliest way to inspire greater achievement for children, especially those for whom education is the only pathway to survival and success. Toward a Practice-based Theory of Professional Education. Teaching as the Learning Profession, edited by L. Doing What Matters Most: Investing in Quality Teaching. Schools for Developing a Profession. Cultural Conflict in the Classroom. The Sources of a Science of Education. American Educational Research Association. Evolution of a Professional Development School. Schools for Developing a Profession, edited by L. National Foundation for the Improvement of Education. Teachers Take Charge of Their Learning: Transforming Professional Development for Student Success. An Application of Survival Analysis. Foundations of the New Reform. Linda Darling-Hammond is William F. Address correspondence to the author at Teachers College, W. Enter the periodical title within the "Get Permission" search field. To translate this article, contact permissions ascd.

SUPPORTING THE LEARNING PROCESS pdf

8: South Salem Enrichment | supporting the learning processâ€¦

Research has demonstrated that engaging students in the learning process increases their attention and focus, motivates them to practice higher-level critical thinking skills and promotes meaningful learning experiences. Instructors who adopt a student-centered approach to instruction increase.

Learning is believed to be a natural, ongoing, and active process of constructing meaning from information and experience. It is an intuitive and universal human capacity that enables, from an early age, the mastery of symbolic systems such as language, music, and mathematics Gardner Learning is an internally mediated process that is controlled primarily by the learner and is affected by his or her motivation, perceptions, skills, and knowledge. Learning is an intellectual process highly influenced by social interaction and situational context, in addition to personal beliefs, dispositions, and emotions see Figure 1. For adolescent learning to occur, a few things generally happen. First, adolescents are able to connect what they are trying to learn with what they already know, understand, or have personally experienced. Secondly, they are favorably inclined, or motivated, to put forth the necessary effort and time. Adolescent learning, however, is not merely about building on prior knowledge, getting students excited about a topic, reassuring them that they are capable of the work, or keeping them on-task Perkins ; Sizer Adolescent learning involves interactive, purposeful, and meaningful engagement. It happens best under the following circumstances: Adolescents "do something" that makes sense in a larger context, such as confronting real-life issues and problems. Their personal initiative and energy are moved into action through meaningful involvement with relevant and current content. For example, health issues take on new meaning when students conduct a research awareness campaign on the life-threatening impact of cigarette smoking and discuss the ethics of juvenile-targeted advertisement. Their cognitive and affective capabilities are challenged, such as when connections are made between difficult content and its application to personal experiences. For example, physics gains relevance when adolescents observe the movement of playground equipment at the neighborhood park. They can draw upon a variety of resources in the learning environment, including personal experience, the local community, and the Internet. For example, the principles of economics become less mysterious when classes enter into a collaborative enterprise with an area radio station to record and market a CD. Their knowledge and understanding are substantively broadened or deepened. For example, neuroscience becomes less abstract when students use digital imagery to view the workings of the human brain. Adolescent learning is a complex endeavor, yet current research is clear about the conditions that support it APA , Lambert and McCombs ; McCombs and Whisler ; Resnick ; , b. The current literature on learning and learner-centered practices confirms that many personal, intellectual, and social variables interact within the classroom setting and affect adolescent learning APA ; Bransford et al. The broad principles that support an adolescent-centered perspective represent a synthesis of research and theory on teaching and learning see Figure 1. Helping Students Find Connection, Compassion, and Character at School, described the need for students to feel cared about and connected, to be creative and joyful, to have a sense of purpose, and to believe they can exceed the expectations of others. The personal dimension of adolescent learning encompasses these complex and individualized needs, beliefs, and emotions. Adolescent perceptions about personal ability and effectiveness impact their level of motivation and persistence with new learning tasks. Certain favorable mental "attitudes," such as open-mindedness, tolerance, empathy, and intellectual curiosity, help adolescent thinking to expand and develop at a higher cognitive level. Their learning is enhanced when individual differences are acknowledged, respected, and accommodated; when students are motivated through challenge, relevance, choice, and a sense of accomplishment; and when they feel comfortable to express, create, explore, experiment, take risks, and make mistakes. Adolescents are inclined to be more conscious of the opinions of those around them, especially their peers. Elkind referred to the tendency to be preoccupied with what others think as the "imaginary audience" phenomenon. Many adolescents believe that in social situations, all attention is focused on them. As a consequence, they may be overly sensitive. They may react emotionally to kidding, for example, and often hold on to personal feelings of anger or embarrassment. Although students become more socially oriented during the period of adolescence,

their perspectives remain predominantly "me centered" and limited. Reprinted by permission of SkyLight Professional Development.

9: How to Support Childrenâ€™s Approaches to Learning? Play with Them! | NAEYC

approach, I am able to distinguish what making is as a learning process, through the identification of the core learning practices of the making community, and to explore how such learning can be evidenced in the context of a designed informal learning environment.

Published May 17, by My journey: Depending on the group this relationship can make them achieve more if they get on well or they will achieve less if the situation is the opposite. As we are already aware children develop in different ways. Some will be able to finish their work quickly whilst others will still be fidgeting with their pencils. In a group there might be a person causing disruption which would keep all the others from doing their work. It is therefore essential to stop this disruption from taking place. Last time I praised a child who had finished his work which made the others in the group finish theirs quickly too. Pupils also watch the way adults interact with pupils. Easy language should be used when talking to children so they understand what they have to do. One problem that might occur are that learners find something difficult to understand. We could try to simplify the activity for the children to make it easier for them. The pupils might find the activities not interesting enough. The best way to deal with it is to make it more interesting for them by involving them more. Some children might disrupt the lesson due to their behaviour. We need to find out the reason for the disruption and sort out the problem. Sometimes we might notice that the learning equipment is not in working order. There could be inadequate writing materials or not enough worksheets for all children. The photocopier might not be working. The best way to deal with such problems is to check beforehand and if not possible to have a back-up plan ready. The lesson needs to Sometimes the learning environment might not be suitable for the children. It might be too hot or there might be too much noise to distract the pupils. Sometimes there is not enough space for a certain activity. The teaching assistant should try to solve these problems in a reasonable way.

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