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Report

Social Learning: Building a Foundational Understanding

I, like many people, have benefitted greatly from the knowledge and experience of people I have known and interacted with throughout my life. From their stories I have gained insights I would have otherwise not been privy to, and from their perspectives I have adapted my own strategies for functioning in the wider world. Whether with parents, teachers, friends or co-workers, interpersonal relationships allow individuals to learn from the experience of others and thereby expand their own developing understanding of the world. Although I have long been aware of the influence interpersonal relationships have had on my development, it was not until I started working for the Children's Technology Workshop in the summer of 2008 that the significance of this type of learning was made clear to me. As a precursor to my synthesis project in which I will explore how constructivist learning is used and may facilitate social learning opportunities in CTWorkshop programs, the purpose of this paper is to build my understanding of social learning, as the term is described below, so that I may be better prepared to examine its use in my synthesis project. Beginning with a brief description of CTWorkshop and my experience with the company, this paper describes how individuals can benefit from social learning, types of social learning, factors a learner brings to the social learning exchange, factors an instructor brings to the social learning exchange, and the next steps I will take for my synthesis work. Although social learning can take place in any environment in which people share interpersonal exchanges, this paper focuses on the learner/instructor relationship, in which a learner is gaining information from a more knowledgeable or experienced instructor.

Let me tell you about where I work

CTWorkshop designs and runs programs that engage children in creative projects using robotics, video game design, architecture, digital music, and video production to develop critical

thinking, motivation, and self-efficacy in children ages 7-13. I was particularly excited about being hired by this organization because the company touts constructivist learning as the methodology underlining their programs and work. CTWorkshop focuses on goal-oriented learning, active engagement, collaboration, dialog, and reflection- all topics studied in the Critical and Creative Thinking Program. The position seemed an ideal opportunity for me to move beyond theory and put what I've learned in CCT into practice.

I began working for CTWorkshop as an instructor in their summer "individualized learning camp", or icamp, and was immediately impressed by the man directing the program. Only a few years older than me, the director has a background teaching martial arts, after-school programs, and theater, and has been running the icamp program for three years. The summer I worked with him, he began each new camp session by talking with the campers about creating the icamp "container"- a space of support and respect in which everyone could have fun and work at his or her own pace without being degraded or belittled. He spoke and acted with authority but also with inclusiveness, and although he demanded campers respect his position as director, he also knew when to be goofy, playful and silly. It was fascinating to watch his interactions with the students.

Halfway through the camp season I took a few weeks off to take the Critical Thinking course with David Martin. One of the main themes we discussed was the importance of creating a culture of thinking within the classroom- creating an environment in which good thinking practices are considered natural and "everyone is doing it" (Tishman, 1995). When I went back to work I realized that the camp director was creating something very similar at icamp- a culture of learning- and he was doing it through social interactions: Campers were learning from him, from each other, from the instructors. I was learning too. I was learning by watching the campers interact with the director, campers interacting with other campers, campers interacting with instructors, the director interacting with instructors, and so on. I was learning from all these interpersonal exchanges and began to realize how influential social learning can be.

What do I mean by “social learning”?

Social learning can take place in any situation in which people share interpersonal exchanges, as social in this use refers to the way in which individuals behave and interact with each other. Groups of individuals interacting with each other create a society, and the shared beliefs, values, and behaviors of the society create that group's culture; it is through interpersonal social interactions that the beliefs, values, and behaviors of a society are communicated and taught (Stone, 2008). When we do not learn from knowledge and experience gained through human relationships and interaction, then we must rely on gaining information directly from encounters with stimuli without interacting with another person in the process; perhaps we learn by reading a book, watching a documentary, or through our own trial and error in attempting to accomplish a task or goal. Although development can certainly be enhanced through direct experience with stimuli, social learning allows us to learn from the knowledge already obtained by others without having to experience everything for first-hand for ourselves (Bandura as cited by Falik et al., 2006). Additionally, learning from social interactions can expose us to concepts and processes that we would otherwise not be aware of. Although individuals have an actual development that defines existing cognitive functions such as memory, problem-solving and strategizing, exposure to new processes can aid the development of potential functions that are not yet defined (Vygotsky, 1978). By observing, with various levels of consciousness, the interpersonal interactions that take place between ourselves and others or that take place between other individuals, we can enhance and develop our own abilities and learn how to help others develop theirs.

Why is social learning valuable?

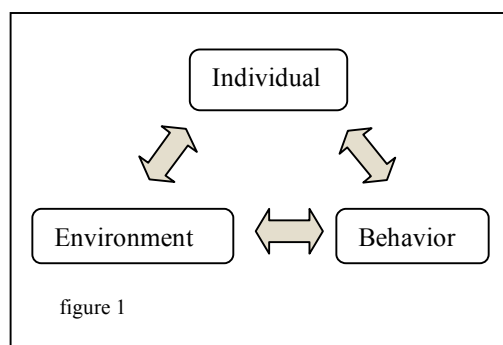
By utilizing the learning opportunities available through social interactions, human growth can be developed both for human cultures as a whole and for individuals within a culture. When individuals living in a shared environment adopt similar beliefs and behaviors, they can apply those shared interests to achieve common goals (Stone, 2008). By

communicating those shared beliefs and behaviors groups develop a collective culture that one generation can pass down to the next. In this way successive generations can benefit from the knowledge and experience of their predecessors instead of needing to rediscover knowledge every time they need to accomplish a task. Because newer generations do not need to “reinvent the wheel”, they invest their energy and attention in building on existing knowledge to further the progress of their culture.

Similarly, individuals benefit when they learn from the experience and knowledge of others without having to experience everything first-hand for themselves (Bandura as cited by Falik et al., 2006). If a child came to icamp and could not learn from the experience of his more knowledgeable instructors, he would simply be given access to the software and left to figure out how to make it work to complete a project. Perhaps instructors may restate information the child has already read in the program, but instructors would not be able to reframe the information in more accessible forms for the camper, would not be able to give the child examples, or be able to help the child think through difficult concepts. The camper would be completely responsible for learning the skills involved in using the computer program without the aid of social interactions with the instructors. As can be imagined, this learning process would take a great deal of the child’s time, energy, and effort; if the child was able to benefit from the experience of others, he would be able to invest more energy into developing his ability to apply the information instead of figuring out what the information means. As leading social cognitive specialist A. Bandura says, individuals’ “intellectual self-development would be stunted if they could not draw on this heritage of knowledge in each realm of functioning and, instead, had to rediscover it, bit by bit, through their own trial-and-error activity” (Bandura, 1989).

What does social learning look like?

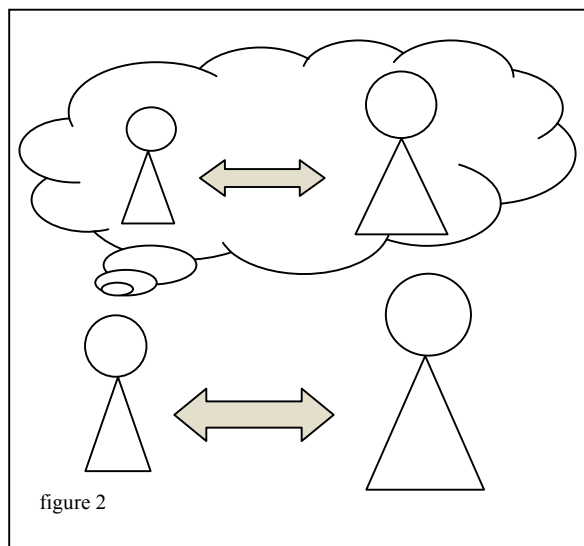
Bandura describes social learning as the process by which individuals (including their biological and cognitive characteristics), their behavior, and their environment (including their social environment and relationship to it) all interact and affect each other in reciprocal



processes (figure 1), and people learn by observing the effects of these reciprocal processes (Bandura, 1989). As each component interacts and affects another, both are changed and the possibilities for both are altered. If, for example, the icamp staff knows a child with autism will be attending camp a certain week, that knowledge

will affect how the camp session and activities are structured. Maybe that means making sure there is a quiet space available for that child if she needs it or seating the child next to a friend she is comfortable with. In any case, before that child has even entered the space, she has already altered the camp environment, and those alterations will affect possibilities for that child and her behavior; if the child needs a quiet space to go to when she is frustrated and does not have access to such a space, she is likely to behave in ways that are disruptive, unhealthy, or even dangerous when she is upset. In this way, the child and her behavior affect and are affected by conditions of her environment. As Bandura explains, the interactions and reciprocal alterations that occur through social learning processes create a human component that is both a product and a producer of their behavior and environment, because the individual affects and is affected by both (Bandura, 1989). Having made changes to the child's environment, the icamp staff can observe the interaction between the child, the altered environment, and the child's behavior, and evaluate if and how those changes affected additional changes for each component.

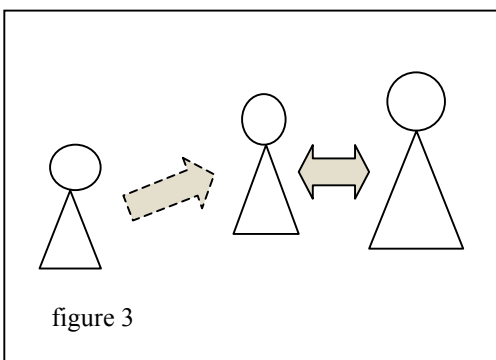
The environmental factor of social learning refers partly to the individual's relationship to his social environment, and the nature of that relationship determines which subset of social learning is taking place. In a direct social learning situation, an individual learns by observing his immediate involvement in an interpersonal interaction (Bandura, 1989) (figure 2). In this scenario the individual reflects, in a varying range of consciousness and depth, on how his/her behavior affected an interaction with another person and uses what is learned from that



reflection to inform future behaviors in similar social interactions. As an example, consider a camper who does not want to participate in a group break activity because he would rather be on the computer making his video game; the child complains to the instructor that the group activity is stupid, he doesn't want to play, and that he just wants to work on his video game. The instructor responds by explaining that all campers need to

take a break from their computers to rest their eyes and their minds, and that although the child will not be forced to participate in the group activity, he will not be allowed to use his computer during that time. If the instructor's response remains consistent in subsequent interactions with that child and other children, the camper will know that complaining to the instructor does not result in him being able to work on his game during group breaks, and this knowledge provides options for him to change his behavior next time the situation arises. Whether or not the child chooses to change his behavior depends on various factors that will be addressed later in this paper, but the direct interaction of the camper and the instructor creates an opportunity for learning.

Social learning through vicarious observation occurs when an individual is not

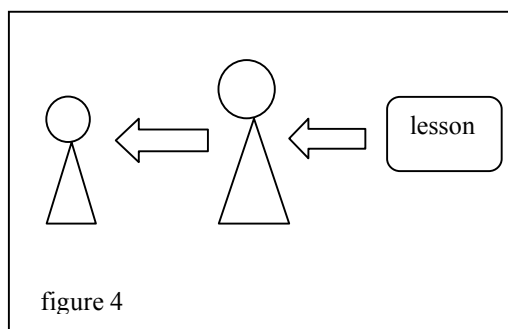


immediately involved in an interpersonal interaction but watches an interaction happening between other people and learns from that observation (Davis & Luthans, 1980) (figure 3). The individual watches an exchange between other people and uses information gained through that observation to inform her own

future behavior in similar situations. Consider a situation in which a camper who has already

made one successful program then tries a more difficult challenge on his robotics project but does not succeed in making this second program operate as intended. An instructor commends the child for taking a risk and trying something new. Another child may watch the exchange between the first camper and the instructor and learn through observation that it is ok to try new tasks even if you are not sure how to do it, and could therefore be encouraged to challenge himself in his projects instead of just trying tasks he already knows he is good at. As Bandura explains, this type of social learning allows one to learn from situations not experienced first hand (Bandura, 1989); since our own first-hand experiences are limited, it is to our benefit to learn by watching others so we can refer to that information in future situations we might encounter (Falik, Feuerstein & Feuerstein, 2006).

A third type of social learning occurs when an individual experiences learning that is shaped by another, more knowledgeable person (Falik et al., 2006). In mediated learning, the more knowledgeable person regulates the learning experience of an individual by controlling factors such as stimulus, duration, and reinforcement to provide an effective learning experience for the learner (Davis & Luthans, 1980) (figure 4). Some forms of mediated learning require the learner to closely re-enact actions carried out by the mediator with little room for variation (Bandura, 1989). Learning to make functional transitions in a video game, for example, requires precise and standardized actions that cannot be changed much if the goal is to be successfully



accomplished. More abstract types of mediation, such as learning to make digital music, allow for greater flexibility on the part of the learner. In such abstract mediation, the instructor is not teaching the learner how to perform specific actions, but is instead teaching

the underlying principles used to accomplish a type of task; the learner can then apply those principles to other, related, types of tasks (Bandura, 1989). In either type of mediated learning, a mediator guides the learning process by selecting the type of stimuli the learner is exposed to,

organizing the way in which the chosen stimuli is presented, and regulating the length of exposure in order to ensure the learner can maintain attention (Falik et al., 2006). This intention on the part of the mediator is what distinguishes 'modeling' from 'mediating'. In each type of social learning discussed in this paper, the interactions and people involved can be considered models, or examples, of learning- whether or not the people in question intend or realize they are being looked to as models of behavior. In mediation, however, instructors are not only aware of their roles as models, but also structure their teaching in ways that will make the material most accessible to the learner.

Factors the learner brings to the social exchange

Regardless of the type of social learning that is being experienced, the factors learners bring to an exchange, whether consciously or unconsciously, will affect their receptiveness to opportunities to learn from interpersonal interactions. Information learners have obtained from previous experiences can concur with information gathered in new learning and thereby reinforce those ideas, or the information can conflict. Such a conflict, or cognitive discourse, can either cause people to rethink what was previously thought and thereby develop more complex thinking as they reconcile the conflict, or it can cause people to simply reject the new information so that they do not have to contend with the difficulty of considering conflicting information (Bandura, 1989). For example, a boy could come to icamp with a belief that fashion design is a topic that is only appropriate for girls. This belief could stem from past social learning experiences in which the boy observed or heard other males claim that fashion design isn't manly, or perhaps the boy has seen only girls express an interest in fashion and therefore has never thought to associate males with fashion design. The boy comes to icamp with the assumption that fashion design is not manly, but then sees a male instructor working on a fashion design project that involves designing uniforms for sport teams. The child is faced with a cognitive discrepancy; not only is the instructor doing a fashion design project, but the context of his project is a subject that is often thought of as "manly". In thinking about this discrepancy, the

child can choose to change his initial belief that fashion design is only appropriate for girls, or he can choose to reject that the instructor is engaging in a “manly” fashion design project and hold on to his previous belief. It is likely that the child will not change his mind about the gender associations of fashion design right away; as Luria and Vygotsky explain, people tend to require prolonged cultural exposure to ideas before they can make strong connections about the world (Luria & Vygotsky, 1993). But regardless of whether the child changes his previously held belief right away, changes it later, or never changes his belief, his previous experience has affected his receptiveness to the learning opportunity.

A related way that previous experience and knowledge can affect a person’s perspective is by shaping her perception of an instructor’s intent and authority (Levy, Collins & Nail, 1998). This perception can have a dramatic affect on a learner’s receptiveness to a social learning opportunity, because if the learner does not accept the validity of the instructor than the legitimacy of the instructor’s information is also likely to be undermined. If a child comes to icamp and does not take camp instructors seriously because they are not “real teachers”, then the child is automatically discrediting the knowledge those instructors have because in the camper’s eyes they do not have authority. Similarly, an instructor that tries to encourage a camper to accomplish a difficult task could be rejected by the child because she interprets the instructor’s encouragement as being insincere and simply a part of his job.

A person’s receptiveness to learning may also be affected by her motivation in a situation. Bandura describes three types of motivation factors that affect how a person will respond to a social learning experience. In direct motivation, an individual is motivated by the desire to receive an award or to avoid receiving a punishment (Bandura, 1989). If an instructor’s response to a child that is talking during a demonstration is to tell her that if she does not stop talking she will be given a time-out, that child is motivated to be quiet because she knows if she is not she will receive an unwanted punishment. Likewise, if an instructor responds by telling the child that if she is quiet during the demonstration she will be able to pick the group break game,

the child is motivated to be quiet because of the promise of an award in return for good behavior. In vicarious motivation, the child is inspired to behave in ways that reflect the behavior of those she wishes to emulate. If one camper is being particularly helpful and an instructor thanks that child for his assistance, other children who see that exchange may imitate the boy's behavior through a motivation to be similarly praised. If a child is motivated by intrinsic motivation, or personal standards, her internal values drive the desire to behave in certain ways. Because personal standards take time to develop in a person, intrinsic motivation also takes time to develop, and a child may be motivated by other factors before she learns behaviors that increase personal satisfaction (Bandura, 1989).

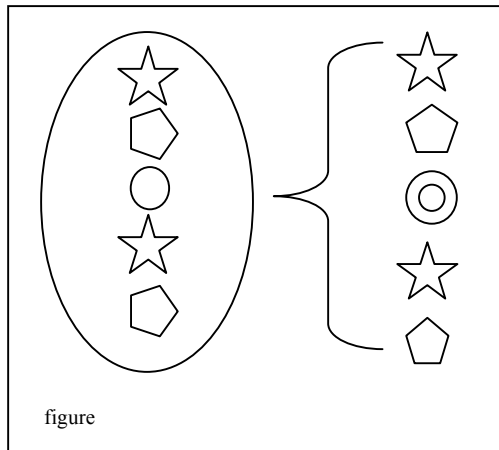
How do learners react to social learning interactions?

When a person is confronted with information in a social learning exchange, the individual can respond to the situation in different ways or combinations of ways, and with various levels of awareness on the part of the learner. In response to information gathered in a social learning situation the learner might choose to reject new information and simply not accept the information as valid (Levy, Collins & Nail, 1998). The reason for the rejection could relate to the person's previous experience and knowledge, perception, or motivation, as described above. In a reaction of rebellion, the learner not only rejects the new information, but also acts out in opposition to it (Levy, Collins & Nail, 1998). To compare the difference between rebellion and rejection, consider again the male child who comes to camp believing that fashion design is only appropriate for girls. When this child sees a male instructor engaged in a fashion design project, he can reject the new information by simply refusing to consider the instructor's project as fashion design oriented and instead think of it as a sports project. If, however, the child reacts in rebellion, he might challenge the possibility that fashion design is not just for girls by telling other campers that the instructor is a girl and a sissy. While in both instances the child refuses to accept the new information that fashion design is not a topic just for girls, it is only in the second example that he acts in opposition to that idea.

When an individual conforms to the expressed opinion or desires of another person, she is reacting with compliance; however, the type of compliance depends on the factors that are motivating the individual's behavior. Situational compliance results from direct motivation because the individual complies in order to receive a reward or avoid a punishment (Kochanska 2002). A child that is asked to pick-up her Legos could obey because she may have learned through previous direct or vicarious experiences that if she does not pick-up the Legos she will not be allowed to use them again later. In this case, the child is complying with the wish of the instructor only because the instructor has control over the situation, not because she believes that what the instructor asks her to do is actually right; although she will obey, she will do so with reluctance, possibly while rolling her eyes. However, the girl could comply with the request that she pick-up her Legos and do so willingly. In this committed compliance the child obeys the wish of the instructor not only because she believes what the instructor asks is right, but because she actually assumes that desire for herself.

In other types of interpersonal learning exchanges, the learner reacts to the experience by imitating the behaviors of others (Vygotsky, 1978). However, as Vygotsky explains, just because an individual is able to perform certain actions does not necessarily mean that he understands the principles that govern why those actions are important. A camper might imitate the way he saw an instructor wrap a webcam cord, but the child might not understand that the instructor wrapped the cord that specific way in order to protect the equipment and keep the camera attached to its base. Although by imitating the instructor the child does wrap the cord correctly, because he does not understand the reason why he is performing that action a specific way he is likely to neglect the importance of the action in the future. More importantly, if he does not understand the principles governing how he performs that action he will not be able to transfer that same principle to other tasks, such as wrapping a microphone cord.

Internalization occurs when an individual transfers observed patterns of behavior into his/her internal system of behavior regulation (Wertsch, 1988). When the principles underlying



behavior and the behavior itself is internalized, the learner voluntarily conducts herself accordingly without needing additional supervision (Kochanska, 2002). Internalization involves changes in the recipient's values, beliefs or attitudes that transcend temporary situations to become standard self-regulation (Levy et al., 1998). Because internalization has a lasting effect

on the attitudes and behaviors of the learner, it can be considered the most effective outcome of social learning. Whether one considers the behaviors internalized to be negative or positive, if sustained changes are observed in the learner than he has received and identified with new information and incorporated that new knowledge into her internal values. It is important to note, however, that this transference of external behaviors into internal values is not an exact replication. The learner observes patterns of behavior and adapts those patterns to her own needs, personality, and beliefs (Falik et al., 2006) (figure 5). Consider a group break game of capture-the-flag in which a child is upset because she was tagged out of the game and wants the game to end because she is no longer playing. An instructor is then tagged out of the game, but instead of complaining, he watches the game and cheers for his team. The child sees this behavior and joins the instructor to be a cheerleader for her own team. Perhaps later in the week a different game is played during group break, and the girl is again out of the game before other players. This time she quietly watches the rest of the game on her own without needing the instructor to first model the behavior; she has internalized the principle of good sportsmanship and watching a game while not participating in it. This is a very simplified example; most likely the child would need several modeled experiences of the behavior and possibly even a description of the principles underlying the behavior before she will transfer it to her own internal regulatory system.

Factors the instructor brings to the social learning exchange

Because the instructor can potentially influence the behavior of a learner in a lasting way, the factors that the instructor consciously or unconsciously brings to the learning exchange are just as important as those brought by the learner. Although an instructor can engage in a social learning exchange without being fully aware of her participation, the level of the instructor's awareness of the exchange will affect the interaction. Conscious intentionality of goals and stimuli used in the learning interaction enables the instructor to direct the learner's attention to the appropriate stimuli and communicate the goals of learning. As described by the Feuerstein Instrumental Enrichment Program, intentionality requires the instructor to draw the learner's attention to specific stimuli that function in relation to specific goals (Falik et al., 2006). This can be done in part by emphasizing how certain stimuli differ from other stimuli. If, for example, a child working on a video game project does not understand what a sprite is and the instructor tells the child that a sprite is what a character looks like on the screen, the instructor has answered the child's question, but has not connected that answer to the greater goal of the child understanding the principles involved in game design. If the instructor instead explained to the child that each character in game is made of two parts, an object that does the action in a game and a sprite that is what the object looks like so the character can be seen, then the instructor has provided a more intentional response that relates to the broader goals of the child's task.

Clearly established goals for the learning exchange gives the instructor a defined objective by which to organize information and also can explicitly communicate the reason and importance of the information to the learner (Falik et al., 2006). Goals may involve teaching specific content information, such as what commands govern specific functions in a robotics program, or can involve developing the learner's cognitive strategies, such as how computer files can be organized for easy access. If the instructor's goals involve developing the learner's cognitive strategies, explicitly communicating how the behaviors being taught can apply to other

tasks will help the learner understand how transfer the information; without this explicit communication, the learner is likely to associate those behaviors with only one specific task (Ageyev, Gindis, Kozulin & Miller, 2003).

How an instructor chooses to organize information also affects the learning interaction (Falik et al., 2006). When information is effectively organized, concepts build upon each other in increasing complexity to form a cohesive understanding of the principle or task. Before an instructor can expect a camper to make a smooth stop-motion animation movie, for example, she must first help the child build an understanding of the concepts involved in the process. This might begin with first giving examples of stop-motion movies the child has seen and explaining how those movies were made by making a small movement to an object, taking a picture, making another small movement and taking another picture, and then putting all the pictures together to create the illusion of movement. Once the child has a basic understanding of what stop-motion animation is the instructor can begin to build on that understanding with more complex concepts and have the camper experiment with hands-on activities involving those concepts. Organization also involves forming metaphors and examples that make the information accessible to the learner. The instructor may liken how successive pictures are filmed to create the illusion of movement to a flipbook with drawings of a stick figure that seems to move, and thereby create a tangible concept in the mind of the learner.

For an individual to learn and respond to new information, the material must be presented with consistency to prevent confusion on the part of the learner (Wertsch, 1988). If new information is not consistent, than the learner can receive conflicting messages and potentially misunderstand the message being communicated. Consider, for example, the child asked to pick-up her Legos. In the past the child has refused to pick-up her Legos and as a result, the instructor would not let the girl use those materials again later in the day. The same girl notices that another child using Legos refuses to pick them up, but later in the day sees the instructor allow the second child to use more Legos. The first child has now received conflicting

messages from the instructor on the use and respect of equipment, the first being that you can only use equipment if you take care of it, the second being that if you don't take care of equipment you can use it anyway. As a result of this inconsistency the first child can interpret the instructor's lesson in several different ways; perhaps she will learn that sometimes you can get away with not taking care of your equipment, or perhaps she will learn that the instructor plays favorites and that some campers don't need to take care of equipment while others do. In either case, the lack of consistency in the instructor's approach affects the learning exchange.

Where I go from here

Through this paper I have explored concepts of social learning to develop my own understanding of the factors involved in social learning exchanges between instructors and learners. Although this paper has not included all theories and ideas of social learning, this project has helped me develop a foundational understanding social learning and its importance to individual development. From this understanding I am now prepared to expand my exploration of how this type of learning is used in CTWorkshop programs. As part of that effort I will also be examining how the methodology used in CTWorkshop programs may affect the facilitation of social learning. The company uses the term "constructivist learning" to describe its educational approach, and explains that their use of the term includes active engagement, constructive, intention, complexity, context, conversation, reflection, and collaboration. For my synthesis I will analyze if/how these learning tools are used in our winter icamp sessions, and if/how those tools may create opportunities for social learning.

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