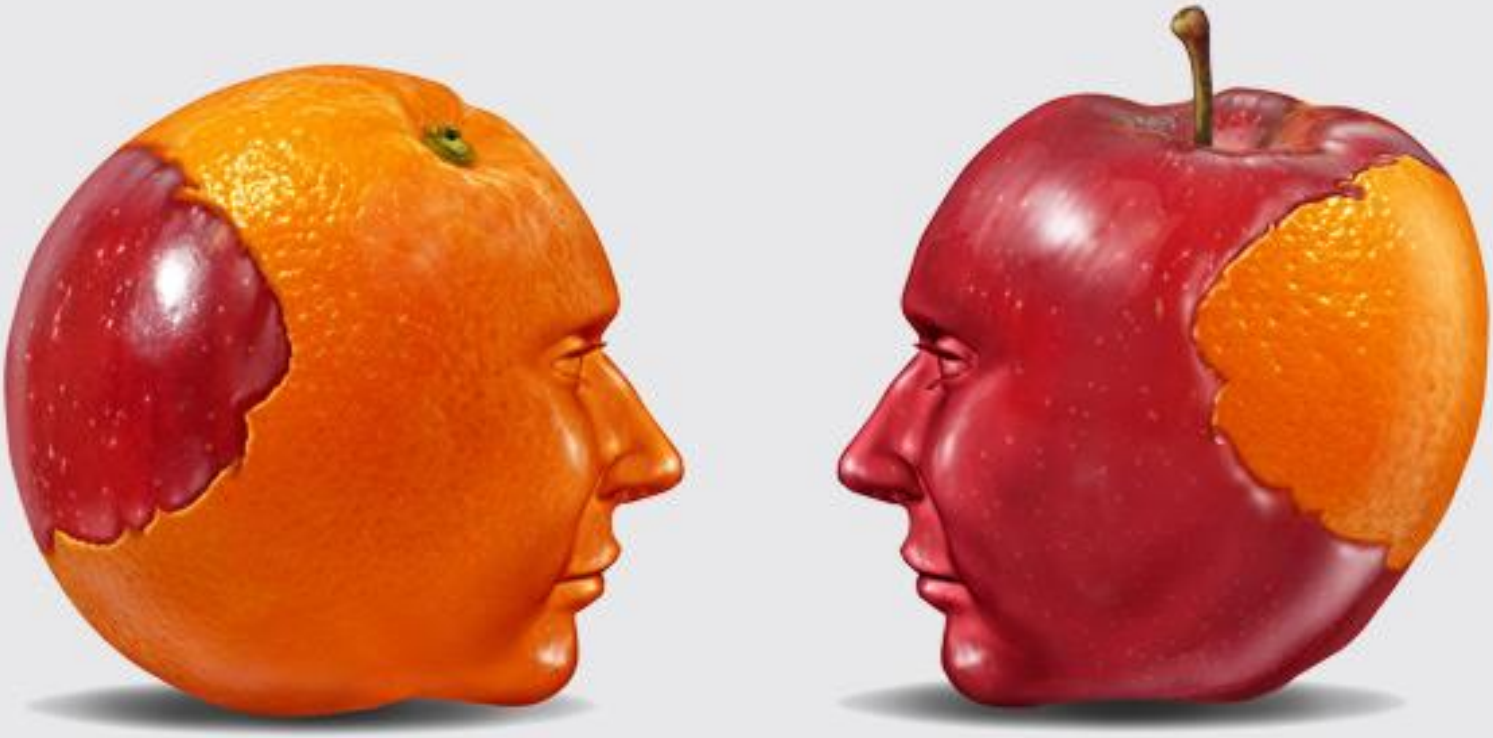
Social Learning



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About the Tutorial

Social Learning is a cognitive process that takes place in a social context. It explains the behavioral learning that occurs in human beings purely through their sense of observation and retention, even in the absence of any facilitator or educator. It expands beyond traditional methods of learning where teaching reinforcements are employed to educate people.

This is an introductory tutorial that explains how Social Learning occurs in individuals through their interpretation of rewards and punishments with respect to actions.

Audience

This tutorial is designed primarily for those professionals who want to improve their interpersonal skills and communication better at the workplace. It is designed to help people improve their aptitude and skill-sets through observation and learning.

Prerequisites

Before proceeding with this tutorial, you are expected to have a calm mindset and be open to exploring the suggestions mentioned here.

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1. Social Learning – Bobo Doll Experiment

Social Learning is a cognitive process that takes place in a social context. It explains the behavioral learning that occurs in human beings purely through their sense of observation and retention, even in the absence of any facilitator or educator. It expands beyond traditional methods of learning where teaching reinforcements are employed to educate people. Social Learning also occurs in individuals through their **interpretation of rewards and punishments** with respect to actions.

Bobo Doll Experiment

Albert Bandura is a psychologist who is the David Starr Jordan Professor Emeritus of Social Science in Psychology at Stanford University. For almost six decades now, he has been making significant contributions to the field of education and to many fields of psychology. He is often credited as being the **originator of Social Learning Theory**, and is also responsible for the influential 1961 Bobo doll experiment.

A **Bobo doll** is an inflatable plastic toy that has a heavy bottom. This helps to stabilize the doll when someone tries to knock it over. You could say a Bobo doll cannot be made to lie on its side. This doll often is painted to resemble a clown. It became a huge hit with the children when it was introduced first in the 60's.

Albert bandura conducted a social experiment by taking 72 children and making them participate in a very interesting experiment that would later become a **watershed moment in the world of Child Psychology.**
The participants were 36 boys and 36 girls, all between the ages of 3-7 years. Out of these 72 children, 24 children were put into a **Control Group**, which means that no experiments will be conducted on them.

The rest 48 were organized into two groups:

- **Aggressive** – 24 children who would be exposed to an aggressive model.
- **Non-aggressive** – 24 children who would be exposed to a non-aggressive model.

First Stage of the Experiment

To prevent any peer influence or distraction from other children, each child was subjected to the experiment individually. Each child, along with an adult model, was sent to a toy room named **Toy Room-1** that had two sections. In one section, the child was left to play with a lot of interesting toys. In the other section, the adult model was left with a toy set, a Bobo doll, and a hammer. The adult model plays with the toy set and ignores the Bobo doll. Before leaving the room, the child was told that he won't be allowed to play with the toys that the model played with. This process was followed with all the 48 children with the objective of creating frustration in the mind of the child.

Now one after the other, the children in the **Group Aggressive** were resent to the room with the adult model, and this time, the adult model will exhibit aggressive attitude towards the doll by hitting it with the hammer, kicking it, slapping it, shouting at it, and making punching sounds. This goes on for about ten minutes, and after that, the adult model will leave the room, and the child will be taken to a new toy room, **Toy Room-2**.

In the case of the **Group Non-aggressive**, the same sequence was repeated however, in this case, the adult model will keep playing with his toy set for ten minutes, and completely ignore the Bobo doll. After that, the child would be taken out of the room, after the model.

Second Stage of the Experiment

In the second stage of this experiment, the children from both the groups are taken one by one to Toy Room-2 that was filled with much more attractive toys than there were in Toy Room-1. The child was allowed to play with the toys for some minutes, and when it appeared that the child has really started to enjoy playing with the toys, he was told that he cannot spend any more time in Toy Room-2 as the other children are waiting, but he can go back and play in Toy Room-1. This was done to further build up the frustration in each child.

Once the child was in Toy Room-1, he was allowed to play for about half an hour there. This time they were told that they can play with the adult model's toys too, if they want. It was found that the children who were in Group Aggression were more aggressive in venting their pent-up frustration. In fact, they had learnt to direct their anger towards the Bobo doll, and repeatedly punched it, hit with the hammer, and shouted at it.

The same experiment was also conducted with another set of 48 children who were divided into a group of 24 boys and another group of 24 girls. This was done to check the effect of aggression based on gender. It was found out that when the children were exposed to aggressive adult models of the same gender, they were **more likely to follow their aggressive actions**, as opposed to the model being from the opposite sex.

Outcome of the Experiment

Perhaps the most interesting phenomenon that was observed in this experiment was that lesser number of children from **Group Non-aggressive** expressed their displeasure in violent manner as compared to even the children in the Control Group, who were not exposed to any model.

This strongly supported Bandura's theory that children model themselves by observing others and learn from their observation. A non-aggressive model had somehow impressed upon them a non-aggressive manner of expressing displeasure.

Lastly, it was also found out **that boys were generally more aggressive than girls**. When all instances of aggression were added up, it was found that male children exhibited 270 aggressive actions – like shouting at the Bobo doll, hitting it with hammer, kicking the doll, or slapping it – as compared to 128 aggressive actions exhibited by females.

The now-famous outcomes of this experiment caused a revolution in the way people understood the psyche' of a child and brought a sea-change in the attitude of people towards education. This brought to prominence to a **different kind of learning called Social Learning** that has co-existed with our traditional methods of learning for years.

However, nothing had drawn attention towards it in such a significant manner like the Bobo Doll experiment. In fact, this experiment stands as one of the most-often quoted experiments of all times, and has become so closely associated with Alfred Bandura that people now refer to Bandura as the **Bobo Doll guy** and the toys to as **Bandura Doll**.

Bobo Doll Experiment with Reward and Punishment

In 1961, Albert Bandura followed up his study with a different set of participants, but this time, he introduced the concept of **reward and punishment for deeds**. Children of the ages 3 to 7 were put into three separate groups:

- **Reward Group –** the model was rewarded for his aggressive behavior.
- **Punishment Group –** the model was punished for his aggressive behavior.
- **Control Group –** the model wasn't said anything for his aggressive behavior.

The participants in the **Punishment Group** were shown a video in which an adult model would be abusing, hitting, and screaming at a Bobo Doll. After that, the model would be reprimanded, punished, and given warnings of not to ever do it again.

The participants in the **Reward Group** were shown the same video, however there was a small change – the model was later rewarded with candies and was praised with pleasant-sounding sentences like "Well done!", "Bravo!" etc.

The participants in the **Control Group** would be shown the same video, however the model would neither be rewarded nor reprimanded for his/her actions. The video cut after the abusive action against the Bobo doll was over.

After showing this video, the participants were left individually in a toy-room that had a Bobo doll. It was observed that the children from the Punishment Group exhibited lesser aggressive behavior towards the Bobo doll, as compared to the children from the Control Group and those in the Reward Group.

Would you like to guess which group had the most number of participants exhibiting aggressive behavior? Well, no points for guessing there – yes, it was the **Reward Group**. The results of the experiment shows that rewarding or punishing actions definitely influence if the corresponding behavior is imitated or not. This mode of learning was termed **modelling**.

What Modelling Tells Us?

Modelling indicates that **children learn to model their behavior by imitating** the actions of the people around them, and their learning about an action is highly influenced by the rewarding or punishing of that particular action. Their understanding of good action or bad action is based on first observing that action, and then, imitating it if the action is rewarded, and avoiding it if the action is punished.

There had been a hot debate for years now on the amount of influence media-depicted violence has on the psyche' of the young adults. Bandura's Bobo Doll experiment was the first one to provide conclusive evidence that there is a significant link between what children observe and what they practice.

Of three groups of children, one group were made to watch a film **where a human model was behaving aggressively to the Bobo doll**. In the second group, the children were shown a film with a similar theme, however in this case, it was an animated film and there was a cartoon cat abusing the Bobo doll instead of a human being. All the children in both these groups were shown the film individually so that their behavior is not influenced by peer observation and analysis. The third group was the control group.

Children from the **second group** were individually taken to a toy-room where they were told things that increased their irritation levels, and then were left with a bobo doll. It was observed that the children from the first and second group were visibly more aggressive towards the bobo doll, when compared to those in the control room. They even had the same choice of weapons that their models had used, in their respective videos, on the bobo doll.

Outcome of the Experiment

This experiment provided irrefutable evidence that **children exposed to violence, whether real-life, film, or cartoon, exhibit more aggressive behavior** than children who haven't been exposed to such acts of violence. The ongoing debates on how media influences the minds of people stems from this very real and practical experiment.

It proved that children became aware of actions through observation and imitated them based on their analysis of the results. For example, a child raised in an abusive household might see that his father silences his mother by hitting her repeatedly, so the next time he wants his mother to remain silent, he might imitate or endorse the same abusive action (**modelling**) towards his mother to make her quiet (**reward**).

Violence Ratings, MPAA ratings, and many other such ratings were initiated to restrict the exposure of children and young adults to potentially corrupting images and sights from movies, games, animated series, cartoons and other such forms of entertainment. Media censorship was given huge importance.

2. Defining Social Learning

It's a widely known fact that chimpanzees are the smartest animals that are known to mankind. We base this fact on the finding that while other animals use their paws and snouts to dig into a hive of termites, risking these tiny insects entering their respiratory passages, the chimpanzees use a stick to poke into the hive, and just lick the termites sticking to the stick.

If we were to think about it, if chimpanzees really were that smart, why don't they just learn to make more sophisticated tools to dig out the termites, like a plough or a shovel? Why don't they design something like a trowel that will help them scoop out the dust, just the way we humans do?

The reason behind this is that **the chimpanzees lack something that humans have, and it's called Social Learning**. It is this ability to watch from our surroundings and learn from them is what has helped us immensely in making the transition from a cave-dwelling individual to the social animal we see today. In sharp contrast, if we were to fast-forward a million years from now, we will still see chimpanzees poking sticks into hives and licking off termites.

The Knowledgeable Other

Many people say that the chimpanzees behave that way because they live in jungles and aren't familiar with the usage of trowels and spades, however pet chimpanzees too have not shown any actions of copying from the members of the family, except the occasional "aping" which is to copy or imitate gestures. It's true that they pick up the techniques of swinging from one branch to another branch, or hunting by watching and imitating others, but there isn't the presence of, what biologists call, a **knowledgeable other** who could teach them to do the same things with higher efficiency.

In short, there has been no evidence of any social learning. Pet chimpanzees kept under observation haven't learnt how to type on the keyboard (the just pound and hammer it with their fists) and haven't learnt how to shovel despite people doing it in their presence repeatedly.

Social Learning is not something that was discovered recently. It's something that has been going on for ages. In fact, it precedes traditional learning where a more formal and structured approach to learning occurs. It is this innate quality of learning from watching the surroundings, and then implementing it on the basis of rewards and punishments is what has made humans use their brains in the most imaginative ways possible.

If an early man would have seen a chimpanzee climbing trees, he wouldn't immediately copy his action, **but will wait to see the reward/punishment**. If the chimpanzee fell off the tree, and seemed to enjoy it, the early man would learn that it's a reward and model the action. On the other hand, if the chimpanzee breaks his legs, the early man would associate the action with punishment and veer off.

Social Learning in Business

What is new is the way business-people have started waking up to the enormous possibilities that platforms like Twitter, blogs, and emails bring to make our learning efforts more reachable and comprehensible.

As a result of the use of technology, learning can be made a more personal and individual exercise, where real-time business problems can be dealt with immediately and effectively. Finally, this also makes learning an affordable and scalable process for the organizations.

According to a survey conducted by Deloitte, US companies spent around $13,675 on social learning tools and services this year, which is 39% higher than what they had spent the previous year. As per industry experts, these spendings will only grow, as newer and more companies get the lookout to connect their employees and engage them in modern, informal and more exact methods of learning with social tools.

Industry experts say that using these social technologies in business can bring about **staggering profits of 1.5 trillion dollars in value** for companies. The interesting part of this statistics is that more than half of this profit can be obtained in improving communication and collaboration among the employees, and enterprises. The companies are very excited on this front, as this is something that they can achieve without any extra investment, just with proper training and briefing.

Over the years, the companies have started to realize that social learning in business can only work if a conducive atmosphere of learning is provided backed by quality social connections. And these online social interactions need to be clearly focused on learning.

Using social learning technology, companies worldwide have been able to effectively share instruction and data with their employees, thereby achieving better collaboration across the workforce, breaking down barriers among employees, and providing extensive knowledge among people across ranks and files.

In a 2013 MIT Sloan Management Review Report concluded that several large organizations have stated that using Social Learning-based business software in their operations had resulted in increasing efficiency of the workforce in the following major areas:

- Encouraging and improving collaboration (71%)
- Identifying expertise (60%)
- Providing internal knowledge (60%)
- Increasing productivity (56%)
- Removing internal barriers (52%)

3. Social Learning vs. Social Networking

People often confuse social learning with social networking. Social learning is not exactly the same as logging in to some account, and browsing through disparate topics, or posting a query and waiting for someone in your contact to provide the answer. **Let's analyze both these cases**. When you browse through different links and news topics, what you are doing is getting information on things that you find interesting, but may not be what you wanted information on. In other words, what you experienced wasn't learning, but knowledge.

When you post a query and wait for an answer, it is more information gathering than learning. Social networking sites were not conceptualized or designed for social learning, hence they lack instruments that can track information, sample it, and make comparative reports on them to see if some actual learning has taken place. That's the reason comparing social learning with social networking is a poor analogy.

Social Learning software, on the other hand, not only provides a purpose and focus to learning, but also tracks your progress and provides a normalized assessment of the achievements of your efforts. Most people who opt for social learning are looking for very specific information, or are interested in honing a very specific skill-set.

They are not into knowing random stuff from different categories. In other words, you could say that those who want to learn something to build their careers are interested in social learning, whereas those who are into leisurely reading opt for social networking.

Larger number of doctors, engineers, architects, and journalists are getting educated online through technologies like Virtual Classrooms, Electa Live, etc.

4. What Industry Says

Social Learning has been designed with the realization that each person's grasping power and speed is personal and unique. Their needs also vary depending on the levels of expertise they are pursuing. Someone might be studying Geology, as he wants to be a geologist, whereas someone could be studying it just to clear his college assessment.

There are people who might need more time to learn something, compared to others who would take lesser time to understand the same thing. When you have a classroom full of students with all these varying needs and requirements, it becomes imperative that an innovative way of learning is implemented that can impact their understanding of the subjects and ultimately their careers in a more positive way.

The Case Study of URS

A recent example of this type of Social Learning can be found in URS, a construction and technical services company with numerous clients world over. They were working on a project when a breakthrough technology was announced, and the management decided to share critical instructions on implementing this technology among its 8000 employees working in seven separate business groups, spread across six major offices, while they are working on multiple project sites and facilities.

URS opted for **River, a web-based knowledge sharing and social learning tool** developed by Triple Creek. It connects you to learning engagements and provides you learning and collaborative tools, which you can use to share information with others. Because of this software, all of URS' employees were able to access structured learning,

irrespective of their job location and designation. Different departments and teams within the organization are now exchanging technical knowledge and by opening up relevant online communities to obtain business solutions. This has helped small-to-medium companies with limited resources to also connect with a network of experts and advisors.

URS's energy and construction division managed to accomplish these objectives by implementing its social learning program that they have named as the URS Knowledge Network. All of this has led industries to wake up to the **fact that social learning is the only way to get larger assignments handled** through collaborative effort and interactive technology.

In the **MIT Sloan Management Review Report**, it was observed that the four main reasons organizations aren't open to the concept of social learning are:

- They have many pre-existing priorities.
- They haven't developed a strategy for it.
- They don't have a proven profitable precedent.
- They have conflicting and competing operations.

Experts claim that many of these reasons have been given by companies who are start-ups, or small/medium scale companies, who haven't diversified or set up operations in many different countries. Both these workplaces will not have a lot of exposure to challenging situations, as they would be content to operate within their comfort zone. However, when the same businesses face a situation at work that they won't have any expertise on, the first place they would look for solutions is online. And when they do that, they automatically get initiated to the world of social learning.

5. Social Learning Strategies

Many companies have started implementing a lot of best practices that help incorporating social learning in workplace. Many of these practices are developed keeping in focus some clear objectives. These objectives are result-oriented learning, increasing creativity through imaginative approaches to work, and connect with people on real-time issues.

To meet these objectives, companies have come up with the following strategies:

Strategy 1: Focus on Learning

Many social learning tools are just social networking tools or social media forums in reality, that don't have a clear, focus-driven approach to learning. Most of the times, they are just randomly written articles that don't directly address any problem. The intent is not to learn, but in expanding their membership base.

Social Learning Tools must provide specific learning programs. The objectives should be to help people realize their learning goals. People using social learning tools must get real-time assistance when they need it. **People must collaborate on similar ideas to reach a faster and more efficient conclusion**. A critical factor to consider is the structure provided within them. The aim should be to provide result-oriented career-specific learning that can be compared with corporate training standards.

Lastly, people should be given the freedom to learn as per their convenience, without anybody guiding them through a structured flow. This gives the learners the control to develop their knowledge on the areas of their choice and gain expertise on that.

Strategy 2: Quitting Traditional Learning Methods

Companies who want to associate social learning with their workplace have now started to add LMS (Learning Management System) software as a social feed. However, this is not a step that sufficiently addresses the concern of the employees. These social feeds only provide for an instructor or subject matter expert to put a query across to, but that is not enough.

The social aspect of learning needs to have provisions where people could discuss the answers with their colleagues and see whether such solutions have had success in other real-time implementations. These provisions should allow people to have conversations before a training, and after that as well.

Strategy 3: Structure Learning on Real-life Scenarios

Companies realize that hardly anyone would be interested in taking time out of their busy schedule to sit in a training where they are taught on something irrelevant to their jobs. Many people won't like to spend time after work in a place where they are not learning something that directly improves their performance, or something that doesn't have a direct relation to their work responsibility.

People need experts and experienced peers to share scenario-based information, as well as giving answers to questions that might arise exactly at the time they will be needed. That will help these professionals to get very specific and exact answers that address the situations precisely. This reduces the time they look around on bogus sources for answers, and helps them doing their jobs quicker and better.

Social Learning experts stress on the need to treat every single professional as an individual who will have his own pace of working and giving output. By treating everyone asking a query as a unique person, the learning becomes personalized and customized to the needs and specification of the individual employee.

Strategy 4: Change in Attitude toward Learning

Many companies are yet to fully embrace social learning as they lack a clear understanding of the positive impact it can have on their business. This is where companies who have witnessed significant improvement in their company's bottomlines need to step forward and share their experience, and provide a clear idea that social learning not only improves the soft skills of an employee, but also delivers on business generation and profits.

People need to realize that Social Learning is not some out-of-box, experimental practice that is being implemented to gauge its effects. Social learning comes naturally to people and that has been the case for centuries. We are only engaging technology into it and making the experience faster, smoother and better.

Prolinnova, a multi-stakeholder program, focuses on highlighting the dynamics of indigenous farming techniques by promoting local innovation in agriculture. The idea is to provide a forum where the farming techniques handed over to farmers from their forefathers would be compared with scientific techniques using empirical data, and the ones that are better will be practiced.

A farmer-led Innovation Fair held last year is one example of the work that Prolinnova does using social learning-type approaches. The fair was organized by farmers themselves, as it made them familiar with a reliable support group beyond their immediate network.

6. Social Learning in Workplace

Our ability of expressing ideas, thoughts and feelings through language, so that we can connect with others to achieve goals that that benefit us mutually is what defines human beings as a race. It is this capability of ours to grow through observation-based innovative learning that is one of the most significant gifts we have.

Many of us imagine learning to be an individual effort towards the pursuit of knowledge. Many would picture a guy sitting at his desk or at his computer as an ideal image of learning. However, with the world going global, there are more things to learn than ever now and while that's a good thing mostly, it often does come with its own unique set of challenges.

To handle these situations and challenges, the new idea is to merge collective knowledge in such a manner that immediate relevant details can be provided in a real-time situation. Professionals worldwide are forming communities where they learn about common interests and pursue their passion by mutual sharing of knowledge and interaction.

It took 1000 unsuccessful attempts for Thomas Edison to invent the electric bulb. After he invented the bulb, he was asked one day how he felt about failing a 1000 times. Edison replied, **Each failure was a step closer towards success.** A question that springs to my mind after reading this anecdote is, if Edison were living in today's time, would he have taken that many attempts to make the bulb? How efficient it would have been, if he had a chance then to compare notes and learn of methods that failed so that he could have taken a fewer steps towards success.

Scientists are now witnessing that working individually on select projects alone are not effective, as there is **very less progress in mega-projects** that way. They find that by sharing experience and expertise together, many of them can realize if their initial approach is correct. But no other industry perhaps realizes the need for Social Learning today as Information Technology.

As a programmer puts it so beautifully, "there was never a time when I felt so close to another soul, and yet so alone, when I googled an error and the search returned only one result- a thread by another programmer with the same problem. And no answer."

There is a growing demand for social learning as Software developers feel the need for a learning portal or tool, where they **can learn short-term skills** that helps them in their immediate task, as well as working on long-term skills that will benefit them throughout their careers.

For example, consider these following two scenarios:

- **Scenario 1:** A developer comes into a co-worker's office and notices him using a coding sequence tool that had many user-interactive development commands for restructuring his code. The developer realized that he could have also done the same restructuring to his codes using these development environment's refactoring tools and saved a lot of time, **only if he had known about it.**

- **Scenario 2:** While going through a blog, a software developer read about Scrum, an interactive online meeting interface that helped teams reduce communication issues by allowing them to status updates. The developer realized that her own team faces the same issue, and tried Scrum. This experience was so good that she made this as a working principle for her team.

Social learning in software engineering is the practice of referring to the efforts of past software engineers so that the effort and time taken for present software engineers can be minimized. As we could see from the above two scenarios, social learning in software engineering is not new. On the contrary, **it is applied in many stages of day-to-day functioning** and helps us find the solutions to our most immediate queries.

The cycle in which social learning is used in software engineering:

- Professionals engage in a software engineering-related task.
- Information about that task is then recorded for future reference.
- A new person attempts a similar task and starts looking for reference.
- Elements of prior task are compared with the new task and references drawn.

Relevant elements of the old task are presented to the new programmer as a recommendation to improve that immediate or future task. This not only provides a real-time assistance for fixing issues immediately, but also builds a database of working examples of similar cases for future programmers.

After sufficient iterations, these development tools would have gotten so optimized that the new programmer would only have to make small, customized changes to the largely unchanged script and deliver his work faster and accurately.

7. Principles of Effective Social Learning

What makes one technique that facilitates social learning more effective than another? This is a question that is becoming increasingly important to find the answer to, especially now when hundreds of social learning software are queueing up to cater to employee needs and training.

Let's identify the nine principles of good social learning techniques:

Recording Efficiency

Techniques that provide social learning shouldn't burden the user with the task of recording information. This information should be automatically recorded so that the developer might learn from his past mistakes by simply going through the older versions of the codes. For example, a blog post on Scrum takes minimal disk space, but provides plenty of assistance to people who are tasked with writing codes from scratch by providing them with tons of relevant resources and similar codes.

Privacy Preservation

Techniques that design social learning should safeguard privacy as much as possible. For example, if an author writes about her bad experience in implementing some agile framework for complex projects, then the company said author works for may not want the public to know if the technique did not work. Instead, the author can post her experience with the technique anonymously to maintain the privacy of the enterprise.

Targeting

There should be focus on people who will gain the most. A post in any personal website regarding a technique used for complex projects in agile framework has a good probability to meet the right people, as it can be looked out on the internet. If a developer fails to understand that her team is having issues in coding, she may not think of searching the technique and thus, may not be aware of the post at all, but if a user needs that technique, then she should be able to search for the post in the website.

Trust

They should encourage the developer to believe in the references. When a developer learns about a tool or technique from a colleague, then he gives it a higher value. We've learned that people working in a team trust each other, as they have worked together before and have similar goals. On the other hand, a developer who learnt a tool or technology from a book may not trust the author completely as she doubts that the author is more interested in selling books, as compared to the successful implementation of the technology or tool described.

Rationale

They should ensure rationale for answering questions like why the reference is important for the learner. Say, a blog post on projects in agile framework mentions the issues the author faced and why she believed this technique would help. If a reader of the post has faced similar issues with the same approach, just as the original developer, she may acknowledge the rationale. However, if there are various rationales and the blog post briefs just one, the reader fails to learn why this technique would be helpful for her.

Feedback Efficiency

They should permit learners to share feedback if a recommendation or reference was/wasn't helpful to them. The feedback should also be provided in sections to reduce time taken to browse through all the text. For example, commenting on a technique blog post by reviewing it as important" may draw a lot of readers to that comment, but it will take a lot of effort from the reader to go through the entire comment to see why and where the recommendation or the reference worked or did not work.

Bootstrapping

They should provide advantages of learning without a broad, existing community. For example, learning the ways of efficient working of a large enterprise shouldn't be provided to someone who operates a single person business.

Generality

They should permit the developers to learn different techniques. Readers can learn about different software techniques and innovations from the various interactive tools, as

compared to the blogs where the developers are restricted from asking subjective or open-ended questions, as it was not designed to provide that kind of information.

Techniques for balancing and maximizing these principles can be seen as the future of social learning. While it's not possible to design a single technique that will maximize all of these principles, different situations need to be handled by different techniques and for different tasks. Form the example of blogs we learn that technology can help in facilitating and boosting social learning.

Learning Efficiency

The techniques that simplify social learning should minimize expenditures on learning. It takes time to pick and read databases from a book of databases. Using social learning techniques, there will be no learning overhead enforced on the writer of the book, and any number of learners.

For example, a team frequently misses its deadlines and the manager acknowledges this. The manager goes to the depth over the source code and finds that the reason is the team being subjected to significant technical debt. Thus, the manager encourages and guides the team to counter the issue. This learning acquires essential overhead from the manager who spared time in acknowledging the issue, and also significant time overhead from the team that was spent in learning about the issue and its cause.

8. Social Learning Software: SCRUM

One of the most successful Social Learning programs in today's world is Scrum, an iteration-based, incremental agile software designed to manage product development. It provides a working environment where a development team can work as a unit to reach a common goal. It does this through its daily face-to-face communication model, allowing the members of a team to self-organize by encouraging physical co-location, and close online collaboration of all team members.

A key principle of scrum is that it acknowledges the possibility of customers changing their minds about their needs during production processes, and understands that these unpredicted challenges cannot be easily handled in a predictive or planned manner. Hence, Scrum works on an empirical approach that focuses on optimizing the team's speedy delivery.

The Scrum framework is based on three cores:

- Scrum Master
- Sprint
- Product Backlog

Scrum Master

The job of scrum master is addressing the challenges that the team face while delivering the product goals. Instead of a traditional team lead or project manager, Scrum stands like a barrier between the team and other distractions. The scrum master ensures that the scrum process is used as intended, and often facilitates key sessions, and encourages the team to improve. It takes the responsibilities of a team facilitator.

Scrum Master Service to the Product Owner (stakeholder):

- Providing techniques for effective Product Backlog creation and management.
- Helping the Scrum team understand product planning
- Assisting the product owner optimize the Product Backlog.
- Facilitating Scrum events as requested or needed.

Scrum Master Service to the Development Team:

- Facilitating the Development Team with Scrum's cross-functionality.
- Helping the Development Team in maximizing their output.
- Addressing obstacles in the path of the Scrum team.
- Coaching the team in Self-organizing events and facilitating, if requested.

Scrum Master Service to the Organization:

- Helping the organization adopt to the Scrum's working environment.
- Organizing Scrum implementations within the organization.
- Helping employees and stakeholders understand how to use Scrum.
- Bringing changes to increase the productivity of the Scrum Team.
- Working with other Scrum Masters to increase the effectiveness of Scrum.

Sprint

A sprint (or iteration) is the basic unit of development in scrum, and is restricted to a specific duration. The duration is fixed in advance for each sprint, with two weeks being the most common. Each sprint starts with a sprint planning event that includes defining the sprint backlog, specifying the objectives and task of the sprint, and make an estimated commitment for the sprint goal. Each sprint ends with a sprint review that checks progress, and identify lessons for future improvements.

During the Sprint:

- No changes are made that would hamper the Sprint Goal.
- Quality goals do not decrease.
- Terms can be re-negotiated between Product Owner and Development Team.

Each Sprint has a clearly-defined set of instructions of what is to be done, a flexible plan to guide the team towards the result, and the resultant product. Each Sprint is treated like a project with a one-month deadline. When a Sprint's deadlines become too long, the definition of the final result will keep changing due to numerous inputs, due to which there could be increase in complexity and risk of failure. Sprints enable predictability by inspecting the adaptation of the inputs and ideas with the progress toward a Sprint Goal at least every calendar month. Sprints also limit risk to one calendar month of cost.

Daily Scrum

The Daily Scrum is a 15-minute team-synchronizing activity where the Development Team creates a plan for the next 24 hours. This is done by inspecting the work since the last Daily Scrum and planning the layout of work that could be done before the next one. This is done to reduce complexity.

During the meeting, the Development Team members explain:

- Actions the team-members undertook to realize sprint goals previous day
- Action that need be undertaken to meet team goals for today.
- Obstacles that are preventing or could prevent from achieving sprint goal.

The Development Team uses the Daily Scrum to see how their team's progress is moving towards completing the work in the **Sprint Backlog**. The Development Team or team members often meet immediately after the Daily Scrum for detailed discussions, or to adapt, or replan, the rest of the Sprint's work.

Sprint Review

A Sprint Review is held at the end of the Sprint, where the Scrum Team and stakeholders collaborate on the actions that should be taken next to optimize value, and the presentation of the Increment is intended to elicit feedback and foster collaboration.

Product Backlog

The Product Backlog is a list of all necessary items needed for the achieving the desired result. The unique and best thing about a Product Backlog is that it's never complete. It starts by laying out the initial, best-known and understood requirements.

The Product Backlog evolves constantly with the users and the environment in which Scrum is used. This results in a dynamic backlog which keeps are record of evolving ideas and new inputs at every given step of the implementation, and also gives a prediction as to how these new ideas will change the final output. The product backlog exists till the product exists. Once the final product is over, the product backlog is released to another medium where others can refer to these contents and use them while designing a similar product.

With an average of 20+ active projects and increasing pressure from both internal and external stakeholders, **The Information Systems department** at **H&R Block** was always struggling with their workload. The team started to look for alternate, more efficient ways to get software out the door.

The team researched and found out that the lightweight processes of Scrum methodology were suitable to their needs as it provided a much improved efficiency and effectiveness. For H&R Block, the process was outsourced to The **Braintrust Consulting Group**, who conducted an initial evaluation and assessed the types of projects that H&R Block were operating, evaluated staff capabilities, and built the implementation strategy.

The employees were given a three weeks training to make them familiar with Scrum application. The H&R Block team worked on SCRUM daily; participating in sprint planning, organizing daily meetings, and guiding the team while mentoring the Scrum Master. Once the teams felt comfortable with the process, they got the confidence to get everything started to full roll-out.

In three months, the employees at H&R Block experienced a significant amount of work completion. By coordinating, evaluating, synchronizing and team-efforts, they found that they could now achieve higher efficiency and save a lot of time. Employees working on SCRUM reported **60% higher efficiency and 30% time savings**.

9. Conclusion

Social learning has been with us ever since the beginning, and now we are looking to use greater and newer advances in technology to use this skill in a much better manner. By tapping on to the experiences from person to person, we can build a well-connected system that provides learning in a very personal way, in a way that wasn't ever possible before.

In this tutorial, we have outlined how continuous a process is social learning, and how technology-mediated social learning is going to be the future of many specialized trainings. There will be many companies that will be embracing these advances to impart optimized training to their employees.

By the end of this decade, we would have sampled reports from different software applications that are operating on the concept of social learning, and gauging their performance levels and efficiency, but if initial reports are anything to go by, we are looking forward to an extremely interactive, personal and exciting way of learning that combines our natural desire of learning to the enormous power that technology brings.