

Final Research Proposal

The Influence of Learning Communities on the Transfer of Knowledge

San Jose State University

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### Abstract

This research proposal addresses the question: *how does the composition of a learning community influence the transfer of knowledge?* It defines Knowledge Management and collaborative knowledge exchanges. The research employs the use of the Myers-Briggs Personality Inventory, a widely used and well-respected industry standard, to characterize the members of learning communities. Then through observation of learner group sharing within a Knowledge Management System, it strives to determine the effect of the composition of members within a group on a learning community.

keywords: *Knowledge Management, Knowledge Sharing, Communities of Practice*

## **Introduction**

Information Science studies the process of storing and retrieving information. Records and Information Managers are responsible for the efficient capture, use and control of information about the activities and transactions of an organization (ARMA, 2007). Knowledge Management [KM] is a specialized area of records management that identifies and captures organizational knowledge. KM aims to turn the intellectual assets of an organization into profit. In the past, having an information technology [IT] infrastructure in place allowed organizations a competitive edge, but now the majority of organizations have built an IT infrastructure that is relatively homogeneous across industry clusters (Carr, 2004). Merely having IT no longer provides the same benefits. In the last two decades, KM has grown as organizations realized the benefits of capturing organizational knowledge that exists in the minds of the individuals so that it can be shared and reused.

Knowledge refers to facts, information, or skills people gain from experience and learning. Knowledge can be practical or theoretical. It can be equated to understanding the context in which the facts, information or skills come into play (Apple, 2011). Members of organizations develop specialized knowledge and skills over time. Knowledge is different than information. Information is facts or data that can be represented and conveyed in a symbolic representation (Apple, 2011). Information can exist in a database, but is meaningless until a person makes connections and understands it. Knowledge exists in people's minds with contextualization of the data. Words like 'insight,' 'expertise,' and 'ideas' describe knowledge.

There are two widely discussed types of knowledge: explicit and tacit. Explicit knowledge refers to information that can be readily shared, or codified. An example of explicit knowledge would be the proportions of flour, yeast, salt and water in a bread recipe. Tacit

knowledge refers to information that is not readily shareable because it is a more personal understanding. An example would be knowing when dough has been kneaded enough when making bread. There is another type of knowledge that is less discussed in literature: implicit knowledge. Implicit knowledge refers to knowledge that can be implied by situations. In graphic design, it is implicit knowledge at work when viewing an advertisement for bread featuring a mixing bowl and a floured surface, implying that it tastes as fresh as homemade.

Two common forms of KM solutions available are knowledge banks (databases) for explicit information sharing, and knowledge exchanges (forums or wikis) for tacit knowledge sharing. This research proposal focuses on knowledge exchanges to capture and share knowledge. In the last two decades, there has been an increase in discussion regarding how Communities of Practice [CoPs] can be used to encourage knowledge sharing between individuals who share a common area of interest. CoPs generally are informal groups engaged in voluntarily sharing experiences with the goal of learning 'best practices' or 'lessons learned' (Agresti, 2000; Koenig, 2012). One of the themes found in research literature is the emphasis on the "importance of social relations in understanding knowledge creation, retention and transfer" (Argote, McEvily, & Reagans, 2003, p. 576).

The question addressed by this research is: *how does the composition of a learning community influence the transfer of knowledge?* While it is recognized that group-work in all forms is a challenge to some; the composition of the group often determines its success or failure in knowledge sharing. By examining how individuals share information using an information exchange, this research hopes to identify the qualities that make some learning communities successful and others less so. Specifically, the research will look at the relationship between how the groups were formed, the characteristics of the individuals that make up the groups, and the

learning community's demonstration of understanding in the knowledge exchange. This research also will attempt to determine if the acquired understanding is a reflection of the group formation, or some other variable. The results of this research can be used when forming learning communities to enable more effective knowledge sharing activity.

### **Literature Review**

Knowledge is specific to the context in which it is used. It is "difficult to reduce to a product that can be consumed without context" (Wenger, McDermott, & Snyder, 2002).

Knowledge is different than information. Information can exist in a database, but is meaningless until a person makes connections and understands it. While information is only raw data, 'human processing' is required for it to be transformed into knowledge. Divergent thinking (brainstorming, mind mapping, and free writing), and convergent thinking (norming data, applying standard procedures, and inductive/deductive reasoning) are processes used to create new knowledge (Akiyoshi, 2008). Through knowledge creation, information is transformed within a context into new insight based upon the prior knowledge of the information consumer (Bindé, 2005; Kimble & Bourdon, 2008).

Organizations rely on KM to provide a strategic advantage over competitors (Badii & Sharif, 2003; Bindé, 2005; Kimble & Bourdon, 2008). Knowledge is unmanageable until it is captured, extracted, modified, or represented in some practical manner (Akiyoshi, 2008). A Knowledge Management System [KMS] is defined as a data-centered, context-aware Information Technology and Communication [ITC] system (Badii & Sharif, 2003). ITC approaches tend to confuse knowledge and information. Organizations mainly focus on capturing explicit knowledge, and attempt to capture tacit knowledge of skilled and experienced workers (Wang, Yang & Chou, 2007) by providing templates, forms, and standard procedures. But just

establishing a KMS is not enough; individual stakeholders must be motivated to use the system as well (Wenger et al., 2002).

KMS attempt to help organizations create, capture, store, and apply knowledge, but often the intent is to share knowledge. The IT term 'Knowledge Sharing' implies sharing knowledge using databases in an ITC system (Akiyoshi, 2008). KMS can be separated into two categories: Technology-oriented and Human-oriented. Technology-oriented KMSs can be centrally located, making it easy to control, and manage the stored information. In a system like this, the organization can control access, and individuals contribute 'official documents' to the system. This method often results in users who store drafts and working documents locally before uploading final documentation to the KMS in an effort to avoid incomplete or misrepresentative documentation of processes (Wang et al., 2007). By not fully utilizing the KMS, users can undercut efforts made to capture and control knowledge assets. Human-oriented KMS relies on social networking and collaborative interactions of Communities of Practice [CoPs] to capture knowledge (Wang et al., 2007). Etienne Wenger, a social learning theorist known for his work on CoPs, explains that collaborative networks are a good fit for knowledge sharing (2002). CoPs are different than formal teams within an organization. CoPs could be formed with individuals from different departments within an organization, or externally; e.g., professional organizations (Wang et al., 2007).

Organizations must create a culture that encourages positive attitudes towards knowledge sharing. Kimble and Bourdon, Computer and Information Science researchers, note that individual behavior determines the success or failure of many KM initiatives (2008). If the benefits of using a knowledge repository are not clear to individuals - then the motivation to use the system will also be unclear (Sheehy, 2008). Sheehy, a South Dakota, high school English

teacher, noted that studies have shown that contrived solutions; e.g., Moodle, D2L, and Blackboard, are not conducive to knowledge sharing (2008). The most successful knowledge sharing communities are those that are informally structured by the members of the community itself (Sheehy, 2008). KMSs are most likely to be used when “information is shared collectively, and where members of the organization both draw upon a store of information and also contribute to its maintenance” (Kimble & Bourdon, 2008, p.461).

### **Methodology and Analytic Techniques**

The combination of individuals forming a group is the unit of study. The focus is the influence that a learning community has on the transfer of knowledge as evinced in an informal KMS, specifically a Google+ Event page. The research will be conducted using high school students. The population includes 120+ inner-city students from grades 9-12, ages 14-18. The population is multi-cultural, and includes students of all abilities. The population is made up of students enrolled in the principal researcher’s digital photography course. The research activities take place in an educational setting and involve normal educational practices. It examines grouping strategies for collaborative learning.

The research has six stages: (1) students will use a shortened version of the Myers-Briggs Personality Type Inventory as a measure of individual personality-type (see attachment A). The individual research subject’s results will be self-reported; (2) the instructor (principal researcher) will present a lesson and learning activity to develop collaborative learning skills (see attachment B); (3) classes will be randomly chosen to be free to form their own learning groups, or will be randomly assigned into learning groups; (4) learning groups will work collaboratively to complete a learning activity that will be posted to a Google+ Event page (see attachment C); (5) the instructor will draw upon prior experience to subjectively evaluate group work to determine

how close the project comes to meeting the guidelines. The evaluation will use a rubric to code the quality of knowledge transferred within groups (see attachment D); (6) the principal researcher will use the assessment results to determine if there is a relationship between the composition of the learning groups and the demonstration of understanding.

The analysis of the data will focus on the relationship between the variables. The research hopes to identify the qualities that make some learning communities successful and others less so by examining how individuals share information using a community KMS. The variables are seen in the following: (1) self-selected or randomly assigned group formation, and (2) the combinations of the learning communities Myers-Briggs results. The four dichotomies of the Myers-Briggs score: Extraversion-Introversion, Sensing-Intuition, Thinking-Feeling, and Judging-Perception, will be weighted to reflect the predominance of attitudes of the group members (see attachment E).

### **Project Schedule**

December 2012	Completion of CITI training
January 2013	Submission of Request to Determine Eligibility for Exception to SJSU IRB
February 2013	Parental Consent to Participate in Research gathered (See attachment F)
March 2013	Research project data collection
April 2013	Data Analysis
May 2013	Submission of Rough Draft to SJSU Faculty Sponsor (Jason Klatenbacher)
June 2013	Final Revision

### **Qualifications**

The principal researcher has thirteen years experience as a professional educator. This group activity has been offered to students in prior years in alternate formats. The researcher's

prior knowledge of student responses to this project will be invaluable in parsing the results of each group. Also of benefit, is experience using scoring rubrics, subjective student assessment, and knowledge of the classroom activities of participants; e.g. attendance, on- or off-task behavior, prior performance, etc., which may affect learning group output.

### **Significance of Research**

Much research has been done examining how organizations can use social networks and collaborative interactions in a KMS to capture organizational knowledge. KM results in significant savings to organizations, especially those in creative, knowledge-based industries. KMSs can be used to innovate and encourage creative solutions to problems when an organization's members interact collaboratively with a group of peers. The results of this research will be used to be determined if the composition of a group in a learning community influences the success or failure of sharing knowledge. These findings could be used to form learning communities that enable more effective knowledge sharing.

### **Summary**

The importance of KMSs has been clearly demonstrated in research and in practice. It is also clear that in order for KMSs to be effective for sharing tacit knowledge, the CoP using the KMS must be able to see the value of both the knowledge and the system that is being used to share it. In the proposed research, high school students of varying personality types and motivations for learning will be used for the population sample. This can be viewed as a microcosm of the larger world, including industry. When completed, it would be interesting to test the same kinds of KMSs in a professional learning community in a corporate setting to see whether the patterns found in groups of younger learning communities are carried over into professional knowledge sharing communities.

## Attachment A

**MYERS-BRIGGS & ENNEAGRAM PERSONALITY TEST**

*Retrieved from <http://similarminds.com/jung.html>*

Answering these questions accurately requires honest reflection on how you really think, feel, and act in general and maybe taking the test on more than one occasion. Some of the questions on this test measure personality traits differently than you might guess so trying to answer the test in a way you think would be ideal is just going to screw up your results, so just focus on being honest if you want the most accurate results. Read each statement, and then select the answer that most closely reflects your opinion on the scale depicted below.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Very Inaccurate	Inaccurate	Neither Inaccurate or Accurate	Accurate	Very Accurate

1. I rely mostly on my feelings to guide my decision-making.
2. An argument with feeling has more effect on me than a cold rational one.
3. I feel very comfortable around people.
4. I base my goals in life on inspiration, rather than logic.
5. I favor the surreal.
6. I am very social.
7. I tend to value competence more than compassion.
8. I prefer to keep things open and flexible.
9. I tend to be more down-to-earth than head-in-the-clouds.
10. I am extremely sentimental.

11. I make friends easily.
12. I tend to trust the mind more than the heart.
13. I tend to value fairness more than feelings.
14. I tend to be more comfortable with the known than the unknown.
15. I am very introspective.
16. I frequently come up with ideas/solutions out of nowhere.
17. I frequently do things without a specific schedule or plan.
18. I am extremely interested in abstract ideas.
19. I prefer to keep my spaces clean.
20. I often start/do things at the last minute.
21. I value compassion over analytical reasoning.
22. I tend to be more practical than abstract.
23. I tend to prefer actual examples to theoretical ones.
24. I avoid unnecessary interaction.
25. I talk a lot.
26. I am extremely passionate.
27. I tend to prefer the specific to the general.
28. I am extremely outgoing.
29. I am a private person.
30. I am more of a planner than an improviser.
31. I tend to be organized.
32. I am somewhat disorganized.
33. I tend to be more realistic than conceptual.

- 34. I focus far more on possibilities than present reality.
- 35. I think rules and regulations are necessary.
- 36. I require lots of time alone to recharge.
- 37. I tend to be spontaneous.
- 38. I tend to analyze things objectively and critically.
- 39. I am far more casual than orderly.
- 40. I am very open.
- 41. I value solitude immensely.
- 42. I prefer structured environments to unstructured ones.
- 43. I find it difficult to approach others.
- 44. I tend to make specific plans before taking action.
- 45. I tend to pay more attention to my thoughts than my feelings.
- 46. I greatly appreciate strangeness.
- 47. I am weird.
- 48. I tend to make decisions based on logic and facts.

**Submit**

## Attachment B

**Collaborative Learning Lesson Plan****Learning Objective**

To learn how to work collaboratively and cooperatively in groups.

**Resources**

Several copies of photo for use in step X

Poster board for use in step X

Ruler, Triangle, or T-Square

Scissors

Glue Stick

Markers, pens, pencils

**Introduction**

1. Explain the roles of participants in groups:

**Leader:** Takes the lead in making sure the group work is completed.

**Recorder:** Keeps track of group members' ideas and collects cropped photo proofs.

**Reporter:** Presents the group's work to the class. Is able to explain the group process.

**Group Member(s):** Work actively with the group to complete the assigned task. All members of the group, regardless of leader, recorder, or presenter role is a group member.

2. Explain the group task:

Work with their groups to assign group roles

Complete the group task

Create display board

Present group solution to the class

3. Remind students not to get distracted by the group task. The purpose of the activity is to practice working in groups.

**Procedure**

1. Introduce yourself to the group by describing what skills or knowledge you can bring to the group in regards to the project.
2. Determine group roles. The group Recorder makes a note of the group member roles.
3. The group Leader reads the project instructions to the group.
4. The group Leader passes out copies of the photo to all group members.
5. Group Members brainstorm ways to simplify the composition of the photo. Use a pencil or pen to mark copies with suggested crop marks. The group Recorder takes notes and collects copies (or creates a copy) of the photo representing possible crop marks.
6. The group decides on the best solution. Cutting one of the photocopies, and using the poster board to mount the result.
7. Label the front of the board with your group number.
8. Label the back of the board with the names of all group members.
9. The group Reporter presents the group's solutions to the class.

**Deliverables**

A cropped and mounted photo

Group notes and brainstorming documentation

**Assessment**

Individual grades are based upon observed interactions, as opposed to comparative, scoring.

**Reflection**

1. How did you feel about the interactions you had within the group?
2. How did your group resolve creative differences to settle upon one solution?
3. What helped your group work together?

## Group Project Instructions

### Case study

### Simplify, simplify, simplify



#### Boy sailor – the snapshot (above)

The young Russian naval cadet centred in the frame does not stand out sufficiently from the other sailors. There are several distracting elements: the white shapes in the background, the shoulder of the foreground sailor, the faces in the top right-hand corner of the frame and the sailor's face cut into the cadet's cap.

**Photographer:** David Präkel.

**Technical summary:** Nikon D100 70-300mm f/4-5.6D AF ED Zoom-Nikkor at 100mm (150mm 35mm equivalent), 1/250 at f/4.2, ISO 200.

At first, many photographers are tempted to pack as much as possible into their images, but the experienced worker knows the real trick is to choose what to leave out. This conscious editing of the scene becomes a curiously satisfying approach that only comes with practice, reflection and experience. Always consider what can be edited out of the image to simplify and strengthen your message. (Moving in closer is usually the best advice.)

When a photographer first realizes the benefits of structuring an image as a way of putting over meaning, they begin consciously to select, frame and arrange. With practice, this becomes second nature. Technical mastery is as important as composition, because the strongest message can only be revealed through a combination of strong composition and skilful photographic technique. You know you have succeeded when you can look back at an image and see that all the elements have a specific function.

A good place to practise these skills is at a big public event. There are scenes being set, characters on show and dramas unfolding everywhere you look. A photographer has to think and act quickly. These images were taken during a visit of the 'Tall Ships', as the naval cadets who crew these sailing vessels from all over the world formed up to parade.



#### Boy sailor – the composed image (above)

Shifting the viewpoint to the right, along with the use of zoom, lets the scene be cropped in-camera, cutting out distracting faces in the background. Longer focal length meant care was needed to avoid shake with a slower shutter speed and to use limited depth of field effectively. Timing was critical to catch the expression, the eyes coming up as the cadet listens intently to the orders from his commanding officer. The space in front of the face implies his presence.

**Photographer:** David Prákel.

**Technical summary:** Nikon D100 with 70-300mm f/4-5.6D AF ED Zoom-Nikkor at 180mm (270mm 35mm equivalent) 1/180 at f/4.8 ISO 200.

**‘What you see in the photograph isn’t what you saw at the time. The real skill of photography is organized visual lying.’ Terence Donovan (British photographer)**

## Attachment C

**Collaborative Group Project (for Data Collection)**

## Exercise

## Lenses and perspective

Formal perspective gives artists a way to represent depth in their images, to realistically portray the third dimension on the flat surface of their canvas or paper. The so-called 'standard lens' is the focal length that offers the closest perspective to 'normal' vision when viewed on a 10 x 8in print held at arm's length. 50mm is the normal 'standard' lens for full-frame digital and 35mm film cameras giving an angle of view of 39°.

Nowadays, we are used to interpreting images and accept even extreme lens perspective in photographs. Most people are happy to accommodate the foreshortened perspective of the long focal length lens or even the distinctive circular images produced by an ultra wide-angle fisheye lens.

A telephoto lens will flatten perspective and appear to bring foreground and background closer together. To embed an object in the environment, a telephoto lens can be used to collapse perspective; very long focal-length lenses can produce apparent relationships between objects that are, in reality, quite far apart. In contrast, a wide-angle lens makes foreground objects appear much bigger than they are, and including a great deal of the background emphasizes perspective effects. Zoom lenses are simply lenses with variable focal length; fixed focal length lenses are described as 'prime lenses'.



Angles of view (above)  
Angles of view of wide (28mm), 'standard' (50mm), 'portrait' (90mm) and telephoto (180mm) focal lengths.



28mm



50mm



90mm



180mm

This exercise can be done with either a range of primes or a zoom lens and explores two situations. Position your camera on a tripod and frame a view. Make a sequence of images with different focal length lenses to explore their different angles of view. As the camera does not move, changing focal length simply produces a fixed perspective and image cropping.



28mm



50mm



90mm



180mm

Now move the camera and with a definite subject in your image, try keeping that subject the same size in the frame by moving the camera as you change focal lengths (use the same focal lengths as before). You will need to be very close to the subject with the wide angle and some distance away for the longer focal lengths. This sequence will show dramatic changes in perspective and the relationship between subject and background.

## Attachment D

**Coding Rubric**

	Emerging	Understanding	Applying
<b>1.0</b> Project Specifications	<b>1.1</b> Subject matter doesn't satisfy project. Images are missing, or there are too many.	<b>1.2</b> Images meet the minimum requirements to satisfy project; subject matter could be improved, some images are technically flawed.	<b>1.3</b> Images are a clear demonstration of project requirements. Images appear carefully chosen. Proper size, labeling, and resolution.
<b>2.0</b> Composition	<b>2.1</b> Images taken in a snapshot manner, distracting from the composition. Background is busy or distracting.	<b>2.2</b> Image composition could have been improved with a simple change of angle, or positioning of the subject.	<b>2.3</b> Strong composition resulting from camera position and subject placement.
<b>3.0</b> Image Quality	<b>3.1</b> Images are not focused and/or exposed properly.	<b>3.2</b> Images slightly out of focus creating distraction.	<b>3.3</b> High-quality images, both exposed and focused properly.
<b>4.0</b> Concept	<b>4.1</b> Project doesn't display understanding of the key concepts.	<b>4.2</b> Project displays understanding of the project concept.	<b>4.3</b> Project displays strong and effective communication of the project concept.

Source modified from Cameron Crouch's Digital Photography Rubric [foothilltech.org/fths-staff-pages/cameron-crouch](http://foothilltech.org/fths-staff-pages/cameron-crouch)

Attachment E

**Four Dichotomies of Myers-Briggs Inventory**

Scales

<b>E</b>	Extraversion	<i>Energy</i>	Introversion	<b>I</b>
<b>S</b>	Sensing	<i>Information</i>	Intuition	<b>N</b>
<b>T</b>	Thinking	<i>Decisions</i>	Feeling	<b>F</b>
<b>J</b>	Judging	<i>Lifestyle</i>	Perceiving	<b>P</b>

Group Example

Subject 1	I	S	F	J
Subject 2	E	N	T	P
Subject 3	E	N	T	P
Subject 4	E	N	F	J

Visual Representation of Group

				E	I				
				S	N				
				T	F				
				J	P				

Verbal Description of Group

More Extroverted than Introverted

More Intuitive than Sensing

Balance of Thinking/Feeling

Balance of Judging/Perceiving

Attachment F

February 5, 2013

Dear Parent or Guardian:

I am your student's Digital Photography teacher. I am also a student at San Jose State University. I request permission for your student to participate in a research study I am conducting examining how communities of learners share knowledge.

I hope to use the results of this study to make changes in the way students are grouped during class activities to increase learning.

The study consists of the following activities:

1. Your student will be asked to complete a short Myers-Briggs Personality Inventory at <http://similarminds.com/jung.html> and then report the four-letter result.
2. Your student will be assigned to a group: either choosing their own groups or random group formation.
3. The groups will complete a learning activity that is part of the normal lesson plan.

This group project will be explained in terms that your student will understand. Your student will not be required to participate unless he or she is willing to do so. This activity will not be graded, however feedback will be given to groups, and the activity itself is an interesting learning activity.

Only I will have access to the results of the Myers-Briggs Personality Inventory as reported by your student. At the end of the research project, a summary of group results will be made available to all interested parents. If you would like to receive these results, please provide your email address. If you do not wish to receive the results via email address, you may provide a mailing address. Results should be available approximately August 2013.

Participation in this study is voluntary. Your decision whether or not to allow your student to participate will not affect his or her grade in Digital Photography. Even if you give permission

for your student to participate, he or she may choose not to participate. If your student agrees to participate, he or she is free to end participation at any time. You and your student are not waiving any legal claims, or rights because of your student's participation in this research project.

Should you have any questions or if you would like further information please feel free to contact:

Susan Wolfe  
Career & Technical Education  
Principle Investigator  
612-668-4300  
[susan.wolfe@mpls.k12.mn.us](mailto:susan.wolfe@mpls.k12.mn.us)

Stephen Simondet  
Associate Administrator  
South High School  
612-668-4377  
[stephen.simondet@mpls.k12.mn.us](mailto:stephen.simondet@mpls.k12.mn.us)

Keep this letter and complete and return the Consent to Participate in Research to me.

**Attachment:** *Consent to Participate in Research*

## Consent to Participate in Research

### The Composition of Learning Communities and the Transfer of Knowledge

*Susan Wolfe, Career & Technical Education, Principal Investigator*

1. Your student has been asked to participate in a research study that will examine the relationship between the characteristics of the individuals and how learning groups are formed. This research will attempt to determine if learning is a reflection of the group formation, or some other variable.
2. Your student will use a shortened Myers-Briggs Personality Inventory as a measure of individual personality-type. Students will then form learning communities either by random assignment to a group, or by choosing their own groups. Observation of group interactions will be used to subjectively determine the learning performance of groups.
3. This research does not involve any activity that is beyond the normal scope of a classroom activity. The research is being done to improve teaching practice. There are no foreseeable risk or discomfort to students participating in this research.
4. The results of this research will be used to determine if the composition of teams in a learning community influences the success or failure of these groups. These findings could be used when forming learning communities to enable more effective knowledge sharing. Although the results of this study may be published, no information that could identify your student, your family, or you will be included.
5. This research will take place within the normal course of instruction but will not be included in your student's grade. This research is not in addition to normal classroom activities.
6. Questions about this research may be addressed to Susan Wolfe, 612-668-4300 or [susan.wolfe@mpls.k12.mn.us](mailto:susan.wolfe@mpls.k12.mn.us). Complaints about the research may be presented to Stephen Simondet, Associate Principal, 612-668-4377 or [stephen.simondet@mpls.k12.mn.us](mailto:stephen.simondet@mpls.k12.mn.us). In addition, questions about a research subjects' rights may be presented to Pamela Stacks, Ph.D., Associate Vice President, Graduate Studies and Research, at (408) 924-2427.

Please demonstrate that you have read the accompanying instructions and understand the purpose of the research by initialing here \_\_\_\_\_

7. No service of any kind, to which you and/or your student is otherwise entitled, will be lost or jeopardized if you choose not to participate in the study.
8. Your consent for your student to participate is being given voluntarily. You may refuse to allow his or her participation in the entire study or in any part of the study. If you allow his or her participation, you are free to withdraw your student from the study at any time, without any negative effect on your relations with South High School, Minneapolis Public Schools or with San Jose State University. Your student also has the right to withdraw from the study at any time.
9. At the time that you sign this consent form, you will receive a copy of it for your records, signed and dated by the investigator.

**The signature of a parent or legal guardian on this document indicates:**

- a) Approval for the student to participate in the study, b) that the student is freely willing to participate, and c) that the student is permitted to decline to participate, in all or part of the study, at any point.

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Name of Student

---

Parent or Guardian Signature

Date

---

Relationship to Child or Ward

---

E-mail Address (optional)

---

Full Mailing Address (optional)

---

Investigator's Signature

Date

The signature of the principal researcher on this document indicates agreement to include the above named subject in the research and attestation that the subject's parent or guardian has been fully informed of the subject's rights.

*Please demonstrate that you have read the accompanying instructions and understand the purpose of the research by initialing here \_\_\_\_\_*

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