

# PRE-COURSE ANALYSIS

Sample High School



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# Pre-Course Analysis (Sample High School)

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## Background

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[High School Pilot], is located in [City, State]. Last year, [HS Pilot] adopted a 1:1 configuration using Google Apps for Education (GAfE) running on Chromebooks. Per The Technology Director's estimate, about half the faculty has been motivated to research, experiment, and share their view of best practice as innovators, early adopters, or early majority. Compared with most schools, this is very fast progress.

However, diffusion to the remainder of teachers in the high school has stalled. These comprise two of Everett Rogers' diffusion adoption groups: "late majority" and "laggards". The laggards make up 15-20%: their students do use personal computers at all in class. The late majority (25-30%) direct their students to use the Chromebooks, but in ineffective ways, limited to "substitution" and without the student-centered approach that 1:1 is designed to enable.

# Analysis Plan

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Data Gathering took the following forms:

1. **Interviews** ([Appendix 1](#)):  
held with Technology Director, 1:1 Coordinator, Target Group
2. **Survey** ([Appendix 2](#)):  
taken by all faculty during a full-school faculty meeting.
3. **Focus Groups** ([Appendices 3 & 4](#)):  
held with early adopters, student-centered learning advocates.
4. **Analysis Reflection and Planning Meeting** ([Appendix 5](#)):  
conducted with school administration.

Data Gathering from these forms was used to answer the following questions:

1. **Goal Analysis:** (Interviews) What are the current standards?  
What do administrators expect?
2. **Learner Analysis** (Interviews, Survey):  
What is current practice? Is our Target Population (TP) sufficiently literate in the use of Google Apps for Education (GAfE), such that an online course will be sufficient to help TP members meet articulated standards?
3. **Barrier Analysis** (Survey):  
What do members of the TP say prevents them from meeting standards now? What common assumptions, practices or attitudes are held by the TP that could be addressed by online training?
4. **Environmental Analysis** (Survey):  
Which barriers (real or perceived) are a function of the TP's experience of their environment? Which would block motivation to participate in online training and targeted change? What changes need be made to overcome these barriers?
5. **Task Analysis:** (Focus Group): What skills, knowledge and attitudes are required for standards-compliant student-centered 1:1 learning in a GAfE environment?
6. **Instructional Analysis:**  
Which knowledge, skills and behaviors will this course target?

A major target for this process was the design and application of a four-page survey ([Appendix 2](#)), conducted with all faculty to address these questions:

1. **Beliefs:** What do teachers say they believe?
2. **Self-Efficacy:** What do teachers say about themselves as tech adopters?
3. **Current Practice:** What do teachers say they are doing in the classroom?
4. **GAfE Skills Readiness:** How GAfE literate are teachers?
5. **Perceived Personal Barriers to Full Adoption:** (Skills, Knowledge, General Attitudes)?
6. **History with Tech Support and PD:** What have other Tech PD tried, with what success?
7. **Perceived Personal Barriers to Online Training:** What happened in the past? What is in the way now? What would Professional Development need to offer to get buy-in?
8. **Interest in a Summer Course:** Would they take one, if compensated? What topic(s)?

# Analysis Report

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## Interviews

### *Initial Interviews with The Technology Director and Target Population*

It was clear after the first interview that there were as yet no articulated local standards requiring teachers to make use of the 1:1 configuration in classes. [HS Pilot] was still exploring what works but not requiring diffusion of innovation. The Technology Director offered the following description of how informal, evolving standards are described by the technology department:

“We talk about the importance of students creating, making, and designing using the technology for the purpose of choosing what students learn, how they learn it, and how they showcase their learning with a mention that it can maximize student choice and voice with the result often being greater engagement in learning. This seems to be what 1:1 looks like for us.”

The Technology Director admits that he neither formally supervises teachers nor speaks for [High School Pilot] leadership about school building level goals held for teachers. A process for developing technology integration standards would need to be initiated and sanctioned by the principal. The principal had to this point not made any requirements of teachers.

Structured interviews were used to explore early majority teacher understandings and attitudes about expectations (or the lack of them) regarding adoption. The Technology Director expressed that as he was not in a supervisory role, he could safely conduct interviews (see [Appendix 2](#)) with six representatives from the target population and expect open responses. The interviews were conducted, recorded and transcribed, and their follow-up discussion built solid shared understandings about the target population, performance context, and learning contexts.

### *Summary of Target Population (TP) Interviews*

1. ***TP struggles with time required for routine tasks (receiving assignments, managing students at different stages of work).*** If 1:1 management can streamline regular tasks (permit error-free submission of student work which is never lost) and provide clear feedback (showing which students have completed work and now are “on their own”), it will likely be used.
2. ***Most of the TP still run traditional teacher-centered classrooms.*** In a 1:1 configuration, such teachers will require students to face the back of the room so that they can see student screens. This monitoring sacrifices the opportunity to build the trust with students required for student-centered learning. Changes to this practice will indicate success of the course.
3. ***Students understand that each teacher has different expectations for behavior and will adapt to each classroom.*** While teachers complain that there are few enforced

shared standards for expectations and discipline, pursuing this difficult goal could be a red herring.

4. **Using Google Chat is a common way students demonstrate distraction from teacher-directed activities.** Teachers can be counseled to respond to this kind of activity as formative feedback about engagement or clarity of instructions, rather than as an opportunity for a power struggle.
5. **TP want any professional development to provide subject-specific (e.g. Math) modules.** Teachers will not respond to generalized examples that do not match their subjects. Therefore, course cohorts should be registered based on their subjects, and examples and models should focus on subjects taught by the registrants in their sections.
6. **TP requires timely human responses to online work submissions and requests for assistance.** The role of Early Adopters will be pivotal, not only during the online course (as mentors and technical assistance providers) but as just-in-time supports and integration coaches (during the following school year to support transfer).

## Gap Analysis

### *Gap Analysis: Technology Integration*

Dr. Ruben Puentedura's SAMR model of technology integration describes an adoption continuum that The Technology Director often refers to: from **Substitution** (using a new technology to do what the older did), to **Augmentation** (finding ways for technology to enhance learning in new ways, but with the old tasks), to **Modification** (changing tasks to make use of technology affordances, where significant student achievement improvements occur), and finally to **Redefinition** (where the tasks and classroom structure change in more revolutionary ways).

The Technology Director's goal is that all teachers in the late majority group (who currently use 1:1 for "Substitution" activity only) adopt practices in keeping with Augmentation towards Modification stages reached by the early majority. He would like to see this happen by the end of the next school year.

Further, The Technology Director hopes that all early majority and early adopters will move up one stage on the SAMR continuum, and produce plans and student work examples, with supporting data, demonstrating the deeper integration of technology in accordance with Modification and Redefinition stages.

However, because The Technology Director's vision and goals had not yet been embraced by the principal, they could not be presented to the target faculty. Any progress towards further adoption would need to remain entirely voluntary, unless a different consensus emerged, perhaps as a result of organization around the goals of this training, something The Technology Director hoped for.

## Gap Analysis: Student-Centered Learning

In the process of interviewing The Technology Director and co-designing goals for this course, we arrived at three teacher fluencies that support later SAMR stages. Effective 1:1 GAfE teachers are comfortable with:

1. Supporting student-centered learning as a frequent classroom norm;
2. Using GAfE tools efficiently to manage a blended learning environment;
3. Designing blended learning projects that combined these two fluencies.

As with the Redefinition phase of SAMR, the move from teacher-centered to student-centered learning (embodied in Active Learning, Collaborative Learning, and many other approaches) requires a gradual and sometimes messy paradigm shift involving deep changes to beliefs and habits. Contemporary learning theories support the importance of student-centered learning as an instructional strategy, particularly in 1:1 environments. Some studies reinforce this connection, though more research is needed.

## Clarity Brightbytes Survey

Analysis began with results from an annual Clarity survey ([Appendix 1](#)) administered at the end of last year. Most significant findings (with implications for the teacher survey and course design) are below.

1. **Only 10% of [HS] teachers reported their students write online at least weekly, 23% monthly. 62% never do.** This is significant because writing online is a key part of 1:1.
2. **Almost three quarters of teachers report using 1:1 in classes almost daily.** This validated The Technology Director's estimate that 50% use 1:1 well, 25-30% use it but not well, and 20% do not use it.
3. **Only 27% of teachers do online assessment with students at least weekly.** Regular Formative Assessment with GAfE is a powerful opportunity to streamline work and increase feedback.
4. **Very few (10%) teachers use Google Apps regularly to facilitate peer feedback.** This is a powerful use of 1:1, but requires comfort with a student-centered approach.
5. **Only 17% of teachers ask students to collect and analyze data at least weekly. In contrast, 40% of teachers report that students use web tools to receive online information at least weekly. The significant difference between these two percentages is that receiving information is a lower order thinking skill than analyzing it (Bloom).**

## Analysis Findings

Based on the results of the surveys, interviews, and a research review of common barriers to technology integration diffusion, the instructional designer created a list of value lists of beliefs, barriers, and approaches. These beliefs, barriers and approaches were then compiled and used as choices within survey question items. The survey ([Appendix 3](#)) was delivered via Google Form to all high school teachers (54) during a faculty meeting. Below are key highlights.

1. **Less than 50% of teachers are fluent in Google Classroom.** Classroom is GAfE's LMS, a fast onramp to more complex 1:1 management functions that take time to master.
2. **63% of teachers are fluent in Google Docs.** Therefore, nearly half of the target population is not fluent, and will need some refreshers.
3. **Only 22% of respondents are fluent in Google Sheets, and only another 23% are exploring.** Spreadsheets are powerful for analyzing quiz results and rubric self-assessment. An introduction to Sheets should be a focus of a 1:1 management course.
4. **32% are using formative assessment, and 13% are exploring it.** TP is not exposed to formative assessment methods yet. Combining Google Sheets with Formative Assessment will be a powerful offering for the course.
5. **35% of respondents are fluent in Google Sites, and 41% exploring.** Google Sites are key to Project-Based Learning.

## Context Analysis

### Course Survey Results: Context Analysis

1. **39% would like chat turned off, as this is the primary distractor when students use computers.** The Technology Director is against this strategy as it limits possibilities (particularly since chat is necessary for Hangouts and Google+ circles), but it may be necessary for buy-in.
2. **26% want to have software to monitor student screens.** This strategy reinforces teacher-centeredness (at desk watching monitor vs. circulating and correcting).
3. **44% of faculty cite time and priorities as barriers to experimentation and study.** These environmental barriers are beyond an online course's capacity to remedy. However, administrative support behind the course can be associated with accommodations.

## Needs Analysis

### Course Survey Results: Needs Analysis

1. **50% of respondents are interested in a summer course.** This includes a majority of the TP, based on cross-referencing other questions.
2. **50% are interested in an online course on managing 1:1 classes.** This includes a majority of the TP, based on cross-referencing other questions.
3. **60% would prefer a course on 1:1 management with Google Classroom for SLC, and 39% prefer Project-Based Learning (PBL) with Google Sites.** This was a "pick only one" question. The latter choice attracted early adopters and early majority.
4. **21 English and Social Studies teachers would take the online course; 13 Math and Science teachers would, along with 12 "specials" teachers.** To support teacher preferences for learning applications in their content areas, the pilot summer course should be humanities focused.

The following tables include the designer's analysis of faculty survey responses in *italics*.

**Which of these would you like to explore next?**

Program	#	Analysis Notes
Forms	8	<i>This is good information, and expected, given 1:1 Management issues.</i>
Hangouts	7	<i>This is a surprise! Why do teachers want this? Need to find out.</i>
Sheets	6	<i>This is a companion to Forms, so represents 14 out of 15 respondents.</i>
Groups	5	<i>This is of most interest to teachers who are not using Classroom.</i>
Classroom	4	<i>These are teachers who are aware others are using Classroom.</i>
Google +	3	<i>Again, this is a surprise. Why do teachers want this? Need to find out.</i>

**Which one of these SCL activities have you ALREADY tried / MOST like to try with 1:1?**

SCL Practice	Now	Try	Analysis Notes
Students as Teachers	3	6	<i>With Peer Review, this argues for Jigsaw and "Student Work As Study Material" leading to ePortfolios.</i>
Cooperative Learning	6	5	<i>Perhaps teachers can build a 1:1 SCL wiki indexed by Cooperative Learning models (e.g. Jigsaw)?</i>
Peer Review	2	5	<i>Pair Student-As-Teacher with Peer Teaching (students teach each other in Jigsaw) and Peer Review (students review each others' materials with checklists to determine readiness for full-class..</i>
Problem Based Learning	0	5	<i>Pair Cooperative Learning with Problem Based and Discovery Learning as a project model. Teams are given a problem. Within each team, one half does discovery (learn about the content) the other half does PBL (focus on solution) and then they Jigsaw.</i>
Case Studies	3	4	<i>Case Studies should include video (Youtube Closed Captioning for first-run transcriptions then later students edit) and Group Projects.</i>
Game-Based Learning	7	4	<i>High "Already" means Jeopardy-style quizzing, not sims. Webquest Projects can include a role-playing game component.</i>



# Focus Group Analysis

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## Focus Group Lessons

Extensive planning resulted in a teacher-led, 45-minute focus group to explore practices and paths to student-centered learning among early adopters and early majority ([Appendix 4](#)). Although focus groups were a new practice to [HS Pilot], it was hoped that having no administrators present would enable faculty revelations of “the good, the bad, and the ugly” of SCL adoption. This talk was recorded, with transcript edited and shared with all participants.

A table below summarizes the findings from this focus group, using a coding category. While the focus group occurred after the design process had concluded, findings served to validate all of the assumptions that led to the design, including the central premise that while student-centered learning (from a teacher’s perspective, “learner-centered teaching”) was time-intensive and challenging, faculty members believed the adoption of 1:1 would make / had made it much easier to prepare for and adjust to.

At the same time, a 1:1 seemed to require a shift to SCL: computers provided easy and engaging competition for attention to teachers instructional plans. Teachers expressed a need to surface (make explicit) and respond to student interests and desires in order to obtain and maintain students’ enlistment and energy in instructional goals.

Perhaps the most politically significant local and global lesson from the teacher focus group was the shared frustration with apparent disconnects between articulated and implied administrative priorities. School and teacher evaluation currently values teaching to standardized tests, while student-centered learning requires some de-coupling of curriculum maps in favor of sharing control over paths and pacing with students.

It was clear to focus group participants with SCL experience that giving curriculum coverage first priority makes student-centered learning prohibitively risky and costly, while allowing evolving classroom activity to direct the flow of instruction makes tight curriculum map impractical. Tight curriculum map coupling has functions beyond test preparation: it also affects what teachers may count on students knowing from previous classes. Administrators will not likely advocate for abandoning that coupling.

*AFTERNOTE: This tension is near-universal, and will likely create barriers for any late majority teachers who justifiably feel more risk-averse than earlier-adopting peers. To stimulate discussion around this issue, the following True/False question was included in the eLearning quiz: “High stakes standards testing and student-centered learning are incompatible.” This question serves as a coal-mine canary: If its inclusion results in pushback from school clients who hope to continue to straddle that fence, it can be modified for that instance; but if no objections are raised, it may help school stakeholders consider the political implications of a student-centered 1:1 approach.*

## Findings Review and Planning

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The first planning meeting, which took place on March 17<sup>th</sup>, proved instrumental for bridging the gap between analysis and design. The meeting ([Appendix 5](#)) brought together the instructional designer (via Google Hangout), principal, vice principal, and technology team (The Technology Director and the 1:1 coordinator). Meeting time was used to review survey results and consider the role of administrative leadership in supporting the diffusion of innovation towards full adoption of 1:1 by faculty.

The Technology Director felt the meeting was very positive and stated that the meeting helped him advance shared understandings that had thus far eluded the administrative team. As a result of this March 17<sup>th</sup> meeting, the principal agreed that best practices discovered in the first year of the 1:1 implementation should be articulated and shared with expectation for teacher adoption in the next school year. She also approved the key elements of the course design, including reliance on early adopter teachers as course mentors and online course technical assistance providers.

### Course Format and Platform

Two questions include the in the Course Survey discussed above addressed the design of the online course. The first question was free response. Of 54 respondents, 44 identified problems with online courses, which were coded (to allow for counting). In the list below, 30 respondents identified common issues, while the 14 singleton responses were not included.

#### *When online courses don't work for me, it is usually because....*

- |   |          |
|---|----------|
| <b>1. Directions are inadequate</b>             | <b>9</b> |
| <b>2. I need personal contact</b>               | <b>8</b> |
| <b>3. Lack of motivation to complete course</b> | <b>4</b> |
| <b>4. Poor design of course activities</b>      | <b>4</b> |
| <b>5. Discussion boards are busywork</b>        | <b>3</b> |
| <b>6. Difficulty navigating the LMS</b>         | <b>2</b> |

These barriers can be addressed with a design that includes adequate directions, well-designed activities and bulletin board discussions, employs hangouts for tech support and group check-ins, and offers effective LMS navigation training tutorials. Motivation can be fostered with quality, engaging “sales talk” videos starting each module. The second question addressed teacher preferences with answers given via checkboxes.

#### *Which of these design elements would you want to see in the next online course you take?*

- |   |           |            |
|---|-----------|------------|
| <b>1. Start with the basics</b>                   | <b>12</b> | <b>22%</b> |
| <b>2. Assume we know the basics</b>               | <b>13</b> | <b>24%</b> |
| <b>3. Flexible Schedule (go at own pace)</b>      | <b>25</b> | <b>46%</b> |
| <b>4. Regular weekly schedule (all together)</b>  | <b>4</b>  | <b>7%</b>  |
| <b>5. Everyone learns the same thing together</b> | <b>2</b>  | <b>4%</b>  |

<b>6. Optional after-school Hangouts</b>	<b>5</b>	<b>9%</b>
<b>7. Optional evening Hangouts</b>	<b>4</b>	<b>7%</b>
<b>8. Use Google Classroom as Home Base</b>	<b>18</b>	<b>33%</b>

Responses revealed a clear preference (46%) for flexible over weekly scheduling (7%).

A split existed among teachers wishing to “start with the basics” (22%) and those proposing course design “assume we know the basics” (24%). This can be addressed by providing optional but clearly marked help text. Initial instructions for activities can be minimal, with links to optional video walkthroughs and other expanded supports. Of respondents who expressed a preference for LMS platform, a majority (33%) preferred Google Classroom over Schoology (2%). This supports teachers learning Google Classroom first as students, second as designers.

Unfortunately, Google Classroom exhibits a limitation common among Learning Content Management Systems (LCMS) regarding content sharing: Resources shared during a course are not available to students afterward. Moreover, relative full LMS platforms course interface in Google Classroom is extremely limited, requiring minimalist sharing. Google Classroom needs to be paired with a Learning Content Management System if learners are to be given opportunities to go beyond required readings, or if readings and resources need be available after the course ends.

Taken together, 16% of respondents would find Google Hangouts helpful, with a split over preference for attending course meetings in the afternoon (9%) versus evening (7%). Because of the importance of involving Early Adopters and supporting Face-to-Face contact, we will hold one weekly recorded hangout-on-air at each time, staffed by an Early Adopter, and encourage teachers to watch the hangout of their choice if they did not participate in a live Hangout.

It is anticipated that access to archived Hangout sessions will boost participation in successive hangouts. If attendance in live Hangouts were consistently low, the instruction designer may choose less complex live classroom tools (e.g. GoToMeeting), or downgrade to telephone conference calls.

## Principal Approvals

Key course approaches were approved by the principal for collaborative action.

- 1. Immediate Principal Involvement:** Although framed as an online course and components, the solution is designed for organizational change, and will require advocacy and some disruption of schedules. The school principal, along with technology director, will have an active role in preparing the high school for the course by enlisting early adopters, setting aside time for coursework promoting course goals and building leadership objectives in meetings, and celebrating the successes of course participants throughout the year. A mentoring relationship was established to guide the principal in executing these functions effectively to meet the overall goals.
- 2. Early Adopter Teaching Assistants (TAs):** The course is designed to be scalable, based on MOOC models, without an instructor presence required. MOOCs rely on peer

feedback to provide a human component. Because all schools who are ready for 1:1 adoption will already have early adopters who can serve as mentors and coaches, the course is designed to enroll these as mentors and facilitators. Early adopters often seek leadership opportunities and are willing to serve as teaching assistants (TA). A ratio of 6 teachers per TA is sought; Ideally, TAs will share the content area specialties of the course section.

3. **Regular Set-Aside Time:** All participants will be given 90 minutes of in-service time every other Wednesday for individual and group work on the course. In addition, Course Mentors will be given 90 minutes on alternate weeks to prepare for mentee follow-up, work on course customization, discuss emerging issues and successes, and help refine the role as a group.
4. **Formative Evaluation by Peers:** Because Google Classroom is not a robust LMS, it is not designed to receive data from eLearning modules such as Captivate or Storyline. However, because the course is ungraded, this limitation poses no concern. Students will provide artifacts and activity through the Google Classroom interface, and evaluate each other's' work using rubrics and Google forms that generate performance data. TAs will access this course data to initiate offers of support and coaching to participants, and course designers can later access course data to inform redesign.
5. **Use of Google Hangouts:** All participants will have access to on-demand videoconferencing with each other and with course TAs through Google Hangouts. The on-site orientation will include training in Hangouts for technical assistance, and the course will include optional hangouts in the afternoon and the evening as scheduled by Course Mentors. Hangouts sessions will also be recorded for participants who cannot attend either live session. Hangouts will be managed as events so that sign-ups determine whether they are held. The principal and district administrators will occasionally attend hangouts based on pre-registration. These Hangouts (both live and recorded) will help develop a live community cohort.
6. **Transference Plan:** It is understood that an online course alone is insufficient for transfer. After the course, principals will be encouraged to set aside time for teachers to collaborate on designs, and to plan a district or regional conference at which teacher showcases can be shared and discussed.\*

*\* NOTE: This last strategy requires early buy-in and very active involvement by a range of actors in the performance environment.*

## Appendices

### Appendix 1: Clarity Research

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See <http://www.iowaaea.org/what-is-clarity/>

- A. **Production:** [At Least Weekly %, Monthly %, Every Few Months %, Never %]
  - 1 Students Write Online: 10,23,3,63
  - 2 Students Use Online Space for Docs: 73, 3, 7,17
  - 3 Students Collaborate Online with Students 33,23,13,30
  - 4 Students Collaborate Online with Teachers 33,23,10,37
  - 5 Students Use 1:1 In Class: 73 (almost daily),16,3,3,7
- B. **Assessment:** [At Least Weekly %, Monthly %, Every Few Months %, Never %]
  - 1 Students use Online Testing: 27, 30, 23,20
  - 2 Students use Online Formative Assessment (Polls): 23,23, 17,37
  - 3 Students give Peer Feedback in Class: 27,23,10,40
  - 4 Students give Peer Feedback Online: 10,10, 0, 80
- C. **Personalization:** [At Least Weekly %, Monthly %, Every Few Months %, Never %]
  - 1 What Students learn:**
    - a Conduct Research: 43,33,13,10
    - b Collect and Analyze Data: 17,40,13,30
    - c Identify and Solve Authentic Problems: 27,30,13,30:
    - d Get Online Info: 40,10,7, 43
    - e Cite Online Sources: 32, 34, 21,13
  - 2 How Students learn it:**
    - a Online Course Material, 60,17,3, 20
    - b Homework Online: 63,10,3,23
    - c Online Audio & Video: 37, 20, 13, 30
    - d Digital Textbooks: 40,10,7,43
  - 3 How Students showcase their learning:**
    - a Present Slideshows: 23,33,17,27
    - b Create ePortfolios: 3,23,10,63

Only 10% of teachers reported their students write online at least weekly, 23% monthly. 62% never do. This is significant for the course because writing online is a crucial part of 1:1. How can 50% be doing 1:1 well without this? It is possible that teachers did not interpret “write online” as students creating Google documents. This needs to be clarified.

Almost three quarters of [HS] teachers report using 1:1 in classes almost daily. This validates The Technology Director’s estimate that 50% use 1:1 well, 25-30% use it but not well, and 20% do not use it. Although Google Forms, used with the Flubaroo add-on, automate testing and formative assessment, only 27% of teachers have students use online testing weekly. This is a powerful opportunity to streamline their work and increase feedback, and should be included in the online course.

## Appendix 2: Target Population Interviews.

#	Topic	Question	Purpose
1	PBL Course	If we offered an online class on 1:1 Project Based Learning, would you take it? Why/Why Not?	Closed=>Open. ID Interest
2	1:1 Course	If we offered a class on managing 1:1 classes, would you take it? Why/Why Not?	Closed=>Open. ID Interest
3	Online PD	Have you taken online courses before? What worked well? What did not?	Closed=>Open. ID design.
4	Vision of Good 1:1	Describe a 1:1 lesson you ran that went particularly well. Why does that stand out in your mind?	Open. ID values.
5	Goals for Good 1:1	Describe a 1:1 lesson you heard about another teacher using that interested or inspired you. What did you like?	Open. Get sense of peer shares.
6	Student-Centered Learning	What does "student-centered-learning" mean to you? Are you trying to do more of it in your classes? How is that going?	Open. ID understanding of underlying approach.
7	Behavior Management	In your 1:1 lessons, how do you deal with student misbehavior (going off task, not following directions, breaking the acceptable use policy)? How do other teachers do it? What would make this less of a problem?	Open: Determine barriers and remedies.
8	Important Skills	What do you think the most important skills are for teaching effectively in a 1:1 environment?	Open: Reflection (if there is time)
9	General Tech Dept. Feedback	Is there any advice you would give our Tech Department about how to help more teachers succeed with 1:1 classrooms?	Open: Catch-All inspired by previous questions.

## Appendix 3: Focus Group Plan

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**CO-FACILITATORS:** [Teacher 1][Teacher 2]

**OBJECTIVE:** Develop a shared narrative about the process of moving from teacher-centered to student-centered classroom management.

**COMPOSITION:** A teacher-facilitator and group of 6-10 teachers from **each of these groups:**

- **“Naturals”:** Teachers who teach SCL **naturally**
- **“Converts”:** Teachers who made the SCL transition **PRE-1:1** (no computers involved)
- **“1:1 Converts”** Teachers who made/are making the SCL transition **as part of 1:1**

**FACILITATOR:** A neutral third party with experience in group facilitation, skilled at probing participants' answers. Reacts in real time to the dynamics and nurture it into productive focus.

**SETTING:** A round table (or circle of chairs) **with food and coffee** (for a 1:30 meeting). ]

**PROCESS:**

1. **PREP:** Setup room with recorder, coffee & food, flipchart / whiteboard. Test audio.
2. **FOCUS GROUP:** Follow the outline on the next page, in your own conversational tone.
3. **CLOSING:** At close of meeting, take a photo(s) of flipchart / whiteboard notes and email it to Bram, along with MP3 recording of the meeting. Include email addresses of all teachers attending so that notes can be emailed to them.

**INTRODUCTION (conveyed by facilitator)**

1. **Facilitator Role:** My role is only to guide discussion, probe for deeper answers, and record important data for research, in addition to the audio recording.
2. **Group Member Role:** Your group role is to uncover experiences, feelings and issues and to discover deeper answers by listening and responding to each other.
3. **Boundaries:** It is okay to get negative. What I record will be anonymous when transcribed. You will all receive a copy of the notes I will send to our course designer as a Google Doc, and can comment on anything you feel was not accurately reflected.
4. **Why SCL with 1:1? Go round or review.**
5. Student Centered Learning (SCL) is an ideal match for 1:1 because.....
6. With good SCL, there are fewer discipline problems with 1:1 because....
7. There is still a role for teacher-centered learning, but it is reduced.
8. **What is SCL? Go round with someone taking notes on flip pad or whiteboard.**
9. **Reports By Teacher SCL Situation**

**INTRO:** We are planning an online course to support teachers in making the shift from teacher-centered to student-centered learning. We will consider three perspectives:

1. **SCL Naturals:** Teachers who have always used SCL, or done so for many years.
2. **Pre-1:1 SCL Converts:** Teachers who moved to SCL before 1:1.

**3. 1:1 SCL Converts:** Teachers who are moving to SCL as part of 1:1.

**NATURALS: Who teaches like this naturally?** Anyone may jump in.

- What values and assumptions lead you to SCL?
- What would a random visitor experience in your classroom?
- Describe an example or two of what works particularly well.
- What are your growing edges as a SCL teacher?

**CONVERTS: Who made the transition PRE-1:1 (no computers involved)?**

- Why did you do it?
- What was easy and how did it feel?
- What was hard and how did it feel?
- How did you solve the hard parts?
- What trade-offs have you accepted?
- What are your growing edges?
- Advice to new people making this transition?

**1:1 CONVERTS: Who made the transition as part of 1:1?**

- Why are you doing it?
- What has been easy and how did it feel?
- What has been hard and how did it feel?
- How are you solving the hard parts?
- What trade-offs have you accepted?
- What are your growing edges?
- Advice to new people making this transition?



## Appendix 4: Focus Group Transcript

Comment summarizing focus group sharing	Category
Teachers need to go SCL in teaching to compete to motivate students once students have devices with options.	1:1 helps SCL
1:1 can make SCL prep easier. PCs empower students to choose among multiple learning paths so it is easier for teachers to let go of control.	1:1 helps SCL.
1:1 media enables students to pursue cultures and contexts of meaning to them. Balances the "one right view" of things unsaid by textbooks or TCL.	1:1 helps SCL.
1:1 supports student contribution to lesson design. Students carry new 1:1 ideas from class to class if teachers let them share - "bee pollination"	1:1 helps SCL.
There are too many 1:1 tools for teachers to master all. Peer teaching needed if SCL means choice of methods.	1:1 helps SCL.
1:1 means teachers can demand higher quality of work from students (SCL quality) when students have their own devices outside class. Class time can be for interaction, not individual work.	1:1 helps SCL.
SCL means students can teach each other 1:1 tech skills.	1:1 helps SCL.
SCL supported when teachers ask students to teach. No single source of expertise or need.	1:1 helps SCL.
Teachers can learn openness / peer sharing with each other from role models of how students share.	1:1 helps SCL.
Admit you are in an innovation / experimentation period and involve students in recognizing that. This is both for SCL and for 1:1.	1:1 SCL Tips
All teachers need to accept the SCL 1:1 goal, but can move forward in their own way. Letting go of old curriculum can be hard.	1:1 SCL Tips

Initial 1:1 SCL activity: students research, create presentations and teach each other.	1:1 SCL Tips
SCL culture is adaptive for students as well as teachers. Freshmen will adapt faster than seniors.	1:1 SCL Tips
Teachers can recognize the source and draw of TCL in order to let go of the practice.	1:1 SCL Tips
To guide 1:1 SCL, teachers need to break down tasks into components and teach to and prep for supporting those components.	1:1 SCL Tips
Because of time required for SCL, teachers must choose between SLC and test prep, and need explicit administrative support for that choice.	SCL Tradeoff
A culture of student sharing is critical for 1:1... It is also important to avoid the power struggles when teachers attempt to prevent students from sharing, as those struggles block SCL.	1:1 Tradeoff
Involving students in co-planning takes time from instruction, unless co-planning is viewed as a learning goal. Making it a goal helps justify SCL.	SCL Tradeoff
Prep patterns change for 1:1 SCL in order to support multiple paths. Open / authentic assessment prep also takes longer. Maybe it gets faster later?	1:1 Tradeoff
Maintaining a teacher presence in class is more demanding for SCL work than for worksheet / written work. So in SCL, teachers have less time to do grading and prep during class.	SCL Tradeoff

## Appendix 5: Leadership Meeting

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**Meeting Goal:** Orient administrators to support SCL 1:1 classrooms, consider options.

### **ORIENTATION: Student-Centered Learning in a 1:1 Environment - The Technology Director**

1. **Why Adopt Student Centered Learning for 1:1 Classrooms?**
  - a. SCL and 1:1 are mutually supportive.
  - b. With good SCL, fewer 1:1 discipline problems.
2. **What does SCL with 1:1 Look Like?**
  - a. Pedagogy: Examples
  - b. Technology: Examples

### **REPORT: Analysis and Survey Results - Bram**

#### **A. ANALYSIS: Where is [HS Pilot] at?**

- 1 Framework: Competency + Level (1.Not Exploring=>2. Exploring=>3.Fluent)
  - a SCL Paradigm Shift
  - b 1:1 Classroom Management
  - c Project-Based Learning (PBL)
- 2 Findings
  - a Clarity Survey: Highlights | Full
  - b Course Design Survey: Highlights | Full
  - c Research on Principal Involvement: Highlights

#### **B. BRIEFING: Online Course Plan**

- 1 Goals: Target "Late Majority" (Rogers)
  - a Move from Exploring to Fluent (1.1=>1.2) in SCL
  - b Move from Exploring to Fluent (2.1=>2.2) in 1:1 Management
  - c Move into Exploring (3.0=>3.1) in 1:1 SCL PBL
- 2 Teacher Preferences
  - a Asynchronous (not possible in Summer)
  - b Mentor Supports ("Early Adopters")
  - c Match to Subject Area and Skill Levels
- 3 Full Plan
  - a Intensive Pilot: Humanities: 6 hrs/wk
  - b Fall Course: STEM +: 2 hrs/week
  - c Orientation (June), Course (August), ADDIE (2015-16), Summer

#### **C. DISCUSSION: Leadership Roles and Next Steps**

- 1 Instructional Leadership Roles
- 2 Building-Level Technology Planning