

Chapter 1 : Anmelden " Google Konten

Responsive Classroom is an evidence-based approach as defined in the ESSA. Independent research has found that the Responsive Classroom approach is associated with higher academic achievement, improved teacher-student interactions, and higher quality instruction.

Teachers are subjective insiders involved in classroom instruction as they go about their daily routines of instructing students, grading papers, taking attendance, evaluating their performance as well as looking at the curriculum. Traditional educational researchers who develop questions and design studies around those questions and conduct research within the schools are considered objective outside observers of classroom interaction. But when teachers become teacher-researchers, the "traditional descriptions of both teachers and researchers change. They collect student work in order to evaluate performance, but they also see student work as data to analyze in order to examine the teaching and learning that produced it" p. So, What is Teacher Research? Mohr Teacher research is inquiry that is intentional, systematic, public, voluntary, ethical, and contextual. What Do Teacher Researchers Do? Her publications include articles about teacher research including Revision: The rhythm of meaning , a book co-authored with Marion MacLean entitled, Working together: A guide for teacher researchers and their newest book co-authored book entitled, "Teacher-researchers at work. Bryan Bardine from Kent State University also has an essay about research to practice entitled, "Teacher research: Many teachers, already overburdened with curriculum requirements, accountability requirements, and all the day-to-day pressures of keeping a classroom running wonder why they should take on one more thing. To them, I can truthfully say, Teacher Research is not an add-on; it is a way of being! And the person who does that is you, the classroom teacher. My first experience with Teacher Research occurred seven years ago. A colleague and I conducted research about how multiple intelligences theory could impact student learning. We saw effects far beyond those we had read about. That research affected me so profoundly that I now organize my classroom within a multiple intelligences framework. My classroom centers are related to the different intelligences, I teach children to value and respect the "different kinds of smart," and I invite children into the classroom community of learners by "opening windows" Gardner to their strengths and interests. Two years later, I changed the way I organized my writing and art centers to reflect a philosophy of "communicating in one hundred languages" Reggio Emilia, Italy. Again, the "Communication Center" is now a major part of my classroom. This past year, I conducted a year-long research project on the relationship between play and learning. The twists and turns of my research journey opened many doors for my students and me. The enriched classroom environment that resulted would not have occurred without the research stance, question, and journey. Teacher Research empowers teachers to make a positive difference in terms of classroom practice; it enables us to provide relevant information about teaching and learning in actual classrooms. She was named Fairfax County Teacher of the Year in Teacher research and knowledge. National Writing Project, p.

Chapter 2 : 5 Free Research Tools for the Classroom - Simplek12

research is the process of conducting classroom research to answer questions or solve problems about teaching and learning involving a specific group of students in a particular setting" (Cruikshank Jenkins, Metcalf, , p.).

Whether researching material for a paper or trying to locate and evaluate information on the job, students need to develop the critical thinking and problem-solving skills required to effectively find and evaluate information. While students may think they know how to use the Internet, it can often be difficult to sift through the sheer volume of information to find accurate, quality information. Take a look at a couple of our favorite tools for both researching and finding quality information, and organizing it in a way that increases comprehension and retention. Available for the desktop or as a mobile app on Apple or Android devices, InstaGrok is an educational search engine that filters content to make sure it is classroom-appropriate. Groks show key facts related to the search topic with the original links, and will even include videos and images as a part of the concept map. These visual maps also make it easy to access cited sources. Other features include a handy journal feature that students can use to take detailed notes while they are researching, and can also quiz themselves on the information. The best way to see how InstaGrok works is to see it for yourself. Take a look at this page for more ideas on how you can use this research tool in your classroom. Help Students Document Research Have you ever wondered, "What is an easier way to help students document research? One of the benefits of using Google Docs in the classroom is the additional help provided by Google via all of the wonderful features of their free word processing tool. In the above 3-Minute Classroom Problem Solver video, Kim Munoz shows how you and your students can use the Research feature in Google Docs to add relevant research to papers, along with the proper footnotes and citations. This cuts down on potential distractions and keeps students focused on the task at hand. Explore more of the writing features of Google Docs, all through the expertise of an experienced technology trainer with years of classroom experience. She explains how to utilize the latest Google Docs features fully, such as integrated reference tools and collaborative revision tools to help you and your students embrace digital writing. Organize Ideas the Easy Way Are you looking for a simple way to organize ideas for your classroom? Take a look at Popplet. Available on the web and as an iOS app, Popplet allows you to capture and organize your ideas via concept maps. Concept maps, also referred to as mind maps or spider diagrams, are a great way to visualize ideas and store information. This takes traditional concept mapping to a whole new level. Ever wondered how to keep your students focused while searching, and ensure they are only searching the correct classroom materials? After setting up your free Google account, you can create as many custom search engines as you like, making it easier than ever to search online with students. Take a look at the video above and learn how to set up your own search engine in just 3 minutes. Take a look at Wolfram Alpha. Available on the web and mobile devices, Wolfram Alpha is a new type of search that gives dynamic answers to your questions. While there are applications for art and music, many of the uses center on the math and sciences, making this unique search engine perfect for any STEM classroom. The best way to see exactly how Wolfram Alpha works is to see it for yourself. Here are just a few of my favorite ways to use Wolfram Alpha, with clickable examples to show exactly how it works: Display visual aids using graphing. H2O Gather scientific information on general topics. Join master technology trainer Shelly Terrell as she covers a variety of free apps that get students to bookmark, annotate, categorize, cite, and take notes. She shares other apps that let them curate their research and display it in highly visual and engaging ways. Come discover 15 free digital research apps that are great for teachers and engaging for students. Tell me about it in a comment on this article. She writes frequently about education topics, and is passionate about tools and techniques that inspire young learners. You may reach her with ideas and comments at editor simplek

Chapter 3 : Definition of Teacher Research | GSE

school/classroom professionals about their own school and classroom work." Classroom research is a cyclical process. Schon (), in his discussion of reflection, talks about problematizing, acting, and reacting. In its simplest form, these ideas represent the cycle of classroom research. Classroom research is about reflecting, acting, and reacting.

Flipped Classroom The flipped classroom approach has been used for years in some disciplines, notably within the humanities. Barbara Walvoord and Virginia Johnson Anderson promoted the use of this approach in their book *Effective Grading*. They propose a model in which students gain first-exposure learning prior to class and focus on the processing part of learning synthesizing, analyzing, problem-solving, etc. To ensure that students do the preparation necessary for productive class time, Walvoord and Anderson propose an assignment-based model in which students produce work writing, problems, etc. Walvoord and Anderson describe examples of how this approach has been implemented in history, physics, and biology classes, suggesting its broad applicability. **Inverted Classroom** Maureen Lage, Glenn Platt, and Michael Treglia described a similar approach as the inverted classroom, and reported its application in an introductory economics course in Lage, Platt, and Treglia initiated their experiment in response to the observation that the traditional lecture format is incompatible with some learning styles. To help ensure student preparation for class, students were expected to complete worksheets that were periodically but randomly collected and graded. Class time was then spent on activities that encouraged students to process and apply economics principles, ranging from mini-lectures in response to student questions to economic experiments to small group discussions of application problems. Both student and instructor response to the approach was positive, with instructors noting that students appeared more motivated than when the course was taught in a traditional format. **Peer Instruction** Eric Mazur and Catherine Crouch describe a modified form of the flipped classroom that they term peer instruction. Like the approaches described by Walvoord and Anderson and Lage, Platt, and Treglia, the peer instruction PI model requires that students gain first exposure prior to class, and uses assignments in this case, quizzes to help ensure that students come to class prepared. Class time is structured around alternating mini-lectures and conceptual questions. After discussion, students answer the conceptual question again. The instructor provides feedback, explaining the correct answer and following up with related questions if appropriate. The cycle is then repeated with another topic, with each cycle typically taking minutes. Mazur and colleagues have published results suggesting that the PI method results in significant learning gains when compared to traditional instruction. He found that students taught with interactive engagement methods exhibited learning gains almost two standard deviations higher than those observed in the traditional courses. Assessment of classes taught by the PI method provides evidence of even greater learning gains, with students in PI courses exhibiting learning gains ranging from 0. Interestingly, two introductory physics classes taught by traditional methods during the assessment period at Harvard show much lower learning gains. Carl Wieman and colleagues have also published evidence that flipping the classroom can produce significant learning gains. Deslauriers et al. Wieman and colleagues compared two sections of a large-enrollment physics class. The classes were both taught via interactive lecture methods for the majority of the semester and showed no significant differences prior to the experiment. Although class discussion was supported by targeted instructor feedback, no formal lecture was included in the experimental group. The control section was encouraged to read the same assignments prior to class and answered most of the same clicker questions for summative assessment but were not intentionally engaged in active learning exercises during class. Although the authors did not address retention of the gains over time, this dramatic increase in student learning supports the use of the flipped classroom model. **Theoretical basis** *How People Learn*, the seminal work from John Bransford, Ann Brown, and Rodney Cocking, reports three key findings about the science of learning, two of which help explain the success of the flipped classroom. By providing an opportunity for students to use their new factual knowledge while they have access to immediate feedback from peers and the instructor, the flipped classroom helps students learn to correct misconceptions and organize their new knowledge such that it is more accessible for future use. What are the key elements of the

flipped classroom? Provide an opportunity for students to gain first exposure prior to class. The mechanism used for first exposure can vary, from simple textbook readings to lecture videos to podcasts or screencasts. For example, Grand Valley State University math professor Robert Talbert provides screencasts on class topics on his YouTube channel , while Vanderbilt computer science professor Doug Fisher provides his students video lectures prior to class see examples here and here. Provide an incentive for students to prepare for class. In all the examples cited above, students completed a task associated with their preparation. The assignment can vary; the examples above used tasks that ranged from online quizzes to worksheets to short writing assignments, but in each case the task provided an incentive for students to come to class prepared by speaking the common language of undergraduates: In many cases, grading for completion rather than effort can be sufficient, particularly if class activities will provide students with the kind of feedback that grading for accuracy usually provides. Provide a mechanism to assess student understanding. The pre-class assignments that students complete as evidence of their preparation can also help both the instructor and the student assess understanding. If automatically graded, the quizzes can also help students pinpoint areas where they need help. Importantly, much of the feedback students need is provided in class, reducing the need for instructors to provide extensive commentary outside of class Walvoord and Anderson, In addition, many of the activities used during class time e. Provide in-class activities that focus on higher level cognitive activities. If the students gained basic knowledge outside of class, then they need to spend class time to promote deeper learning. Again, the activity will depend on the learning goals of the class and the culture of the discipline. In other contexts, students may spend time in class engaged in debates, data analysis, or synthesis activities. The key is that students are using class time to deepen their understanding and increase their skills at using their new knowledge. Where can I learn more? CFT Director Derek Bruff has a couple of good blog posts on flipping the classroom with some great embedded references. The flipped learning network is a professional learning community focused particularly on the use of screencasting in education. References Berrett D The Chronicle of Higher Education, Feb. Anderson LW and Krathwohl D A taxonomy for learning, teaching, and assessing: Brain, mind, experience, and school. Crouch CH and Mazur E Ten years of experience and results. American Journal of Physics Improved learning in a large-enrollment physics class. Classroom lectures go digital. The New York Times, June 24, Interactive-engagement versus traditional methods: A six-thousand-student survey of mechanics test data for introductory physics courses. A gateway to creating an inclusive learning environment. The Journal of Economic Education Blending Active Learning with Web Technology. Upper Saddle River, NJ: Psychological Science in the Public Interest 9: A tool for learning and assessment. Retrieved [today's date] from <http://Vanderbilt University Center for Teaching>.

Chapter 4 : Flipping the Classroom | Center for Teaching | Vanderbilt University

Undertaking classroom research is seen as an effective form of CPD. This free course, An introduction to classroom research, provides a basic introduction to research design and illustrates two methodologies, case study and action research, by drawing on examples from the classroom.

Such studies have been undertaken for every level of language, from phonetics to pragmatics, and for almost every current teaching methodology. It is therefore impossible to summarize their findings here. However, some more general issues have been addressed. Research has indicated that many traditional language-teaching techniques are extremely inefficient. Research on this at different levels of language has produced quite different results. Traditional areas of explicit teaching, such as phonology, grammar and vocabulary, have had decidedly mixed results. It is generally agreed that pedagogy restricted to teaching grammar rules and vocabulary lists does not give students the ability to use the L2 with accuracy and fluency. The effectiveness of corrective feedback has been shown to vary depending on the technique used to make the correction, and the overall focus of the classroom, whether on formal accuracy or on communication of meaningful content. The vocabulary items taught were deemed relevant for all learners, regardless of age, and, according to Pfeffer, they are among the most commonly used nouns in everyday German language. This concept goes beyond the consideration of the content knowledge as isolated from the pedagogical knowledge teachers must possess to effectively cater to the needs of their students. In order to illustrate how pedagogical content knowledge operates in reference to a specific knowledge domain, we can turn to the field of second language teaching. Pedagogical knowledge refers to the different instructional approaches and techniques used to teach languages as well as the consideration of how the linguistic knowledge progresses and grows in complexity along the continuum of a curriculum. This pedagogical knowledge also involves a growing understanding of content choice and pedagogy that views language learning as communication, performance in tasks, student-centered instruction, attention to accuracy and message. It also includes ways to help learners overcome these difficulties. The two main aspects of pedagogical content knowledge presented here correspond to the two domains defined by Ball, Thames and Phelps [21] as knowledge of content and teaching as well as knowledge of content and students respectively. The consideration of all these components constitutes the pedagogical content knowledge language teachers need to possess to become effective practitioners. E-Learning The term E-Learning 2. In contrast, the new e-learning places increased emphasis on social learning and use of social software such as blogs, wikis and podcast. Learning takes place through conversations about content and grounded interaction about problems and actions. Advocates of social learning claim that one of the best ways to learn something is to teach it to others. Some feel, however, that schools have not caught up with the social networking trends. Few traditional educators promote social networking unless they are communicating with their own colleagues. The use of modern technology has made it more practical for second language learners to actually practice speaking. Though if they are in very different time-zones, finding a suitable time can be a challenge. Another approach is to use speech recognition software. However, in recent years as technology improved and prices fell, schools around the world introduced tablet computers to the classroom. And so the required computing power is already in the hands of an increasing number of children. One of the major advantages of using speech recognition software is that it can give feedback and so can be used to help improve pronunciation.

Chapter 5 : What is Classroom Based Research

LOI_Classroom_Research_Activity; Research-Related Activities in USU Classrooms / Checklist YES Students will be required to take the CITI certification course. Students must pass with an overall average of 80%. YES Students will be required to draft a Letter of Information when needed.

Most classroom-based activities do not constitute research. Classroom-based activities that mimic research e. If students have a priori intention to collect data that may be used for publication or to contribute to generalizable knowledge, they will need to submit a separate application for IRB review to cover their conduct of research activities while participating in the class. Instructors may wonder why oversight approval is needed for classroom research CR activities. For activities considered research, IRB must determine the nature of the research e. While other levels of institutional approval may be needed to carry out research, no human subjects research can be carried out without IRB approval 45 CFR In addition, instructors are asked to consider the importance of clarity and transparency in communicating with community members about the nature of their participation in research-related activities i. Clear communication will help maintain and strengthen bonds with our broader community i. In order to achieve maximum balance between cutting-edge, rigorous pedagogical practices and optimal protection of human participants in research activities, PIs must: Notify the IRB of the course name and number Provide a description of the specific assignment that requires research-related activities. If at all possible describe the potential participants and methods to be used in the research. If such information is not available at the time of the application, please provide the scope of possible work. Typically this is already in the syllabus in the form of a detailed description of the course requirement. Verify that students enrolled in the course will: PIs are responsible for reviewing all research-related materials e. Specifically, PIs must be careful to ascertain: Research-related activities are of minimal risk. For example, participants may not be queried regarding sensitive material e. Audio recordings may be permitted, if they are necessary to the teaching method being utilized in the course. Please note that if audio recordings are taken, they must be destroyed prior to the end of the course. If you would like your students to audio or video record an interaction with a participant, please consider an exempt application rather than the Classroom Research application. No use of deception No Interactions with children under 18, pregnant women, fetuses, prisoners, or persons with limited ability to give consent PIs are responsible for reporting deviations from protocol and unanticipated problems or events to the IRB see p. A new semester will require a new protocol to be submitted. Any classroom-based research activities that are designed a priori to develop or contribute to generalizable knowledge must be approved by the USU IRB under standard protocol review procedures prior to the activities taking place. Students who engage in course research activities that were not intended to produce generalizable knowledge but that nonetheless do, can submit a USU IRB protocol under exemption 4 for review and approval. These students must document CITI certification at the time of data collection and appropriate consent procedures in order to obtain approval. The LOI will be reviewed and approved by the instructor. Instructor must be a Ph. In the case that other instructors are teaching the course, a Ph. Investigator Handbook Guidelines for Classroom Research Any time you or your students are doing research with people human participants you must submit the research for review by the Institutional Review Board IRB. Some research is considered exempt from full-board IRB review and can be approved more quickly; however this type of research must still be submitted to the IRB using the online system Protis. When developing research projects, consider the following guidelines to ensure projects receive a quick turn-around from the IRB: Topics should be kept relatively innocuous. For example, a survey about how often homeowners water their lawns would be innocuous; a survey about their involvement with illicit drugs would not. Keep all information anonymous; i. If there is a need for follow-up with the participants students can use code numbers; in that case the data must be kept confidential this is not the same as anonymous and the data and code numbers must be kept separate and in a secure place at all times. This is very hard to do in a class situation, so we recommend sticking to anonymous, cross-sectional study designs. If you are doing observational research and the observation is done in a public place elevator, laundromat, grocery store,

biology classroom, public park, hallway of the student center , the research will be classified as exempt from full IRB board review. This means no video or audio taping. However, an IRB application must still be submitted. Research done on the internet may or may not be considered public. Many listserves consider themselves private, so it is appropriate to ask permission of the listserve group or internet community you are observing. The IRB recommends that course research assignments involving study of human participants be submitted to the IRB prior to the beginning of classes so that any potential problems can be identified in a timely manner. Approvals must be granted before students begin work on the project.

Chapter 6 : Second-language acquisition classroom research - Wikipedia

Classroom-based research, also known as Teacher Action Research, is the kind of practical, get down in the dirt research that educators can use to improve student learning. It is not focused on getting published (although classroom-based studies may be published) but rather on improving student learning.

This software captures audio, video, as well as computer content and makes it available on the web. Tegrity integrates a scheduling system that automates this process. Although a great and effective solution, one issue was the pricing model, which is based on an entire campus student population. Adobe Connect Adobe Connect Professional is an online distance-learning solution. It allows for live meetings, collaboration, and trainings as well as educational sessions. This software has the ability to archive any event and make it available to a large web audience. This is great for planned and ad-hoc meetings. It has a whiteboard feature that allows for annotations by all meeting participants. The new version includes a distance-learning education component with virtual classrooms. Adobe Presenter is a similar product that allows users to pre-package events and make them available to an unlimited audience. The pricing is based on licenses needed. UCR Currently owns licenses for Connect-Professional live events , and 10 for Presenter packaged events for archive. Access to all archived events is unlimited. John Heraty from Entomology is using Connect for online collaboration with graduate students locally, as well as at those at other campuses around the country Distance learning application includes History Professor Dana Simmons, who met individually with each of her students. This session consisted of live audio and video from her home to her classroom Presenter was used to package the DETCHE conference sessions The Vice Provost for Undergraduate Education used it to present and archive a live semina r on pedagogy Presenter has been used to prepare various IT trainings. Smart Technologies Bridgit Bridgit is online conferencing software. This software allows users to share their desktop, or a virtual whiteboard. It includes the ability to share a webcam, enhancing the collaboration experience with audio and video. Users are also able to allow remote control of desktops, but we found a delay in this part of the software. This software does not have the ability to archive sessions. The software requires a server to establish the connection, and a client to be downloaded to the desktop. UCR currently owns user license. We found this software to be very basic, but good enough for small collaborations. Course Capture Podcasting UC Riverside has developed an automated podcast system for general assignment classrooms. At the request of faculty, classroom computers can be configured to capture lecture audio. Faculty need to simply wear the wireless lapel microphone and turn on the classroom computer. Courses in non-General Assignment Classrooms can be captured using a portable recorder. To control access, Podcast subscriptions for courses are posted in iLearn. Mediasite Mediasite is a hardware-based solution that support online course-casting and automated archiving of events. In this solution also supports live webcasting of events, including live video, audio, and computer content. This solution requires the installation of a media streaming server for web streaming, as well as an administrator server to manage schedules and control the various hardware units. Accordent Accordent is also a hardware-based solution that supports live-streaming presentations and automated archiving of events. This solution also requires the installation of a media streaming server for web streaming and an administrator server to manage schedules and control the various hardware units. Echo - Apresso Anystream Echo is another hardware-based solution that automatically archives events on a schedule. This solution also requires the installation of a media streaming server for web streaming, as well as an administrator server to manage schedules and control the various hardware units. Mainly with sync issues of computer content. The known issues have been resolved with newer software versions. Podcast Producer - Apple based The Apple solution is based on several components. This is not a pre-packed hardware or software solution, but rather a creative solution that leverages various Apple products. The final product should be a high quality capture of computer content, made available for streaming or podcasting. The solution will capture a course, and publish it for streaming or podcasting, using the following steps: The Epiphan hardware encoder captures any VGA signal being displayed on screen - this can be the classroom computer, document camera, or laptop. Faculty need only turn on the projector and computer and wear a

wireless lapel microphone. The Epiphan hardware encoder is connected to a Mac Mini. Podcast Producer will package the capture by adding a header and trailer. Using Applescript, the file is moved to our Apple streaming server. The Apple server will be running a script to update the RSS feed for podcasting. The Apple server will also be running a script to update a webpage with available lectures for streaming. Members of this service are able to schedule calls and automate the connection process for both IP and ISDN based calls. These units establish video calls via standard internet. These units have the ability to establish dual stream calls, consisting of 30 frames per second video S-Video , stereo audio, and a second stream sharing desktop data images in full resolution. Typical IP calls connect anywhere from K to K, depending on the internet bandwidth available and the desired video quality. UCR invested in Polycom to maximize compatibility with other early videoconference users. Tandberg Video Tandberg is another leader in videoconferencing units. In addition to videoconferencing, they also specialize in voice-conferencing devices. Using a standard webcam, this software allows point-to-point IP calls sharing video, audio, as well as desktop. It is very convenient for ad-hoc videoconferences, especially when using this software on a laptop with built-in webcam. This software is limited to K calls. It can use the AIM protocol to establish point to point as well as multi-point connections up to 3. The application includes higher quality audio and video capabilities that scale automatically to bandwidth available. The latest version includes full desktop sharing as well as remote control capabilities. This application supports archiving of sessions. Other Instant Messengers Most popular instant messengers support audio and video, enhancing the interactive experience. Most do not have desktop sharing or archiving capabilities. Here are the more common instant messengers that support audio and video:

Chapter 7 : Classroom Research – Institutional Review Board

IMPACT OF RESEARCH ON CLASSROOM Research has helped to influence education principally through (a) the design of classroom materials, (b) conceptualizing.

Drawing Gallery Classroom Action Research Conducting classroom action research can be a rewarding yet challenging endeavor. Having a well-defined plan will make the process go more smoothly and result in more interesting and useful research. There are several models you can follow to conduct classroom action research, but at its most basic form you will: Identify a problem or research question s. Plan the research including a literature review and theory of understanding or conceptual framework. Collect and organize data. Analyze data and make interpretations. Reflect on the process and what you learned. Share findings and take action. Repeat the cycle with new questions or problems found in your research. Classroom Action Research Model Most models present action research as a cycle, starting with a question and ending with more questions. The image above is intended to capture the cyclic nature of classroom action research. Trustworthiness of Findings For teachers studying their students or studying their own teaching it is important to understand that a major goal of action research is to promote change that supports student learning and success. To attain this goal we need to be able to trust the results of our work and be confident our conclusions are accurate. There are three primary ways to do this. The first is to collect data from more than one source data triangulation or with more than one research method methodological triangulation. In our work we used interview data and written text in addition to the drawings. Triangulation, or using multiple data sources, will add to the trustworthiness of your findings. Another way is to constantly be looking for other explanations or anything that might disprove our findings. This is a difficult thing to do since we are often vested in our theories about what is taking place. But asking "What else could explain what I am seeing? Finally, approaching classroom action research as a cycle will allow you to refine and strengthen your findings. Each time you move though the cycle there are new opportunities to question, observe, and reflect. In this sense, your research builds upon itself to enhance your understanding of teaching and student learning. Conducting Classroom Action Research For more information and models for conducting action research in your own teaching or classroom context, visit the following websites:

Chapter 8 : Multimedia Technologies: Virtual Classroom Research

Information should include the professor's name, the course name and number, the names of all the students completing a classroom project, the titles of all research projects that will be conducted as classroom research, and a two-three sentence description of each project.

Chapter 9 : Research | Responsive Classroom

Google Classroom - Sign in - Google Accounts.