

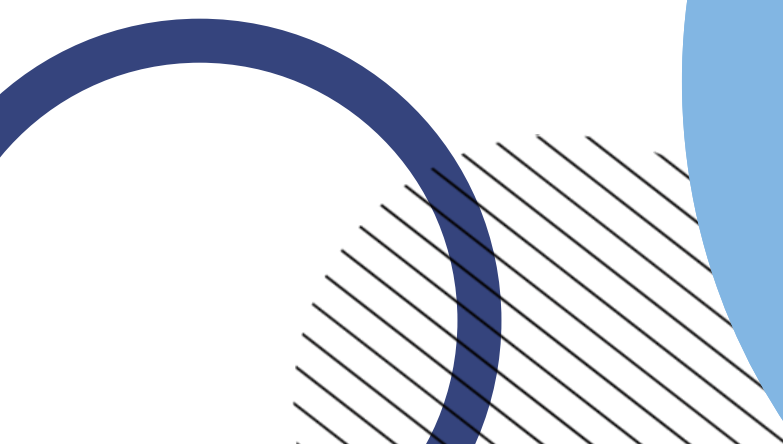
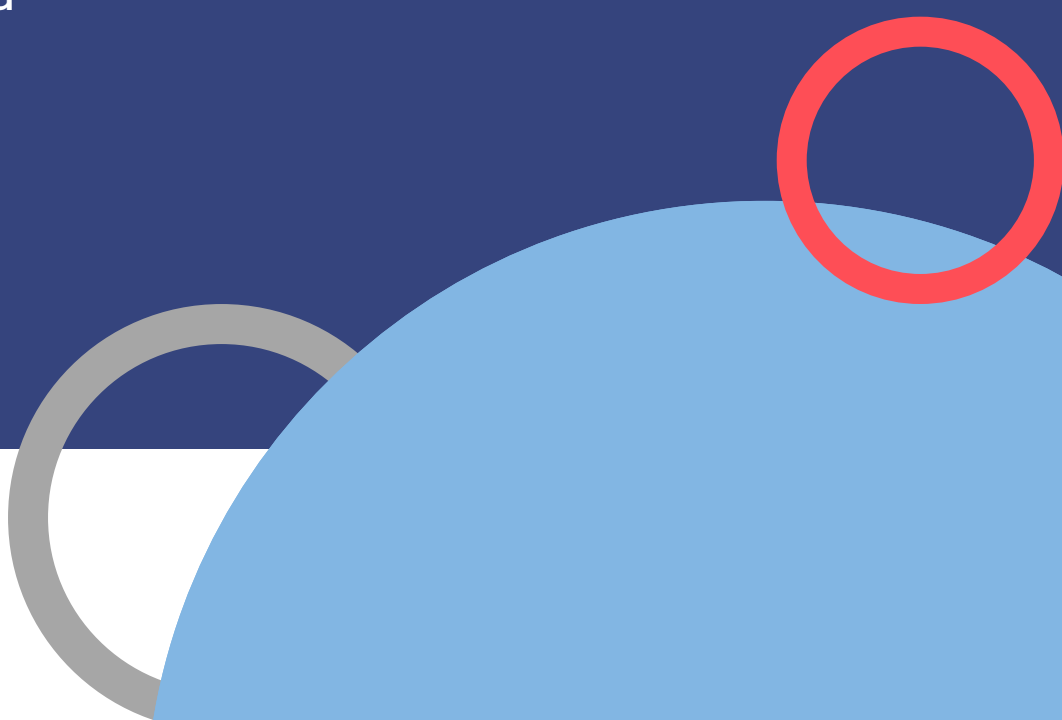
ASSESSMENT RESOURCE GUIDE

A BAM-C Project in Collaboration with San Francisco State University

Laura Gutierrez Correa
Helena Almassy
Bruce Simon
Kim Seashore



This work is licensed under [Creative Commons Attribution NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/)



bamc
bay area math collaborative

TABLE OF CONTENTS

<u>Introduction</u>	1
<u>Definitions</u>	5
<u>Formative</u>	7
<u>Writing to Learn Math</u>	15
<u>Peer Assessment</u>	18
<u>Feedback</u>	20
<u>Oral</u>	23
<u>Posters</u>	25
<u>Lesson Design</u>	27
<u>Quiz Companion</u>	29
<u>Other Articles of Interest</u>	32

To view this resource guide online, follow the QR code!



INTRODUCTION

This project began as a formal Literature Review to gather and annotate scholarly articles about the use of alternative assessments in higher education math classrooms. In this case, “alternative assessment” means anything that is not a traditional high stakes quiz or summative exam. Our goal was to not only provide information for instructors to diversify and change their assessment methods, but also provide them with tools to start implementing alternative methods of assessment, giving access to new ideas and materials without requiring too much additional time.

We began by investigating Formative Assessment because this broad category often includes assessments designed to assist an instructor in learning about students’ understanding of the material covered in a course. Our main resource was Google Scholar, where we found many articles about Formative Assessment strategies. The initial search phrases included: formative assessment strategies in mathematics community colleges and alternative assessment mathematics community colleges. The goal was to find research articles that included formative or alternative assessment strategies and which described the tools or activities/strategies implemented. Narrowing the search by mathematical topic, ie. formative assessment in calculus, yielded more articles that included actionable and replicable assessment strategies.

We quickly found keywords that yielded the target type of articles and organized our search around these keywords. Such keywords included: Formative, Writing to Learn Math, Self- and Peer Assessment, Feedback, Oral, Posters, Lesson Design and Quiz Companion. These keywords would guide us throughout the investigation.

Our next step was to take each keyword and use them as new search phrases in Google Scholar. After reading abstracts and deciding if we wanted to include the article, they were organized into a database created in the platform Notion.

We noted for each article, author, title, APA citation of the article, year published, relevance rating (1-5 stars), article URL, abstract of the article, feasibility level (grab and go, etc.), and finally, we section a justification section called: **I like this because...**

The articles we included had feasibility levels including **Grab and Go**, **Needs Prep Time**, **Make From Scratch**, and **Instructions Not Included**.

- **Grab and Go** - resources/activities provided in the article can be used by an instructor without any preparation
- **Needs Prep Time** - worksheets/examples are available within the article, but need some time 5min - 60min to be adjusted for class,
- **Make From Scratch** where a worksheet or partially completed example was given and needs even more development time
- **Instructions Not Included** which means you can find the theory and ideas but you would have to develop all the material.

Once we had a reasonable number of articles to review on our list, we engaged in deeper reading and took notes on the contents by completing the I like this because... section. In this section, we attempted to summarize our reason for including the article..

Finally we organized the “final” resource by the keyword categories (Formative, Writing to Learn Math, etc.)

HOW TO USE THIS RESOURCE

You will find the individual resources categorized by the keyword categories found in our search: Formative, Writing to Learn Math, Self Assessment, Peer Assessment, Feedback, Oral, Posters, Lesson Design and Quiz Companion. For each category you choose to explore, there will be the original published link URL to the individual research paper as well as a SFSU Box link to download the PDF. Additionally, each article is accompanied by a usability scale with low, medium, and high scores, which correspond to the feasibility categories that we used at the beginning of the research: **Grab and Go (low)**, **Make From Scratch (medium)**, and **Needs Prep Time (high)**. Then you will see a section called, **Why we included this**. In that section, you will see why the researchers have included the resource in their notes (links to the I like this because... section in the researchers notes). The last section, **Highlights**, shows the key elements that make the resource valuable to this project.

Some articles fit into multiple categories, that is, an article may be geared towards Self-Assessment but also have valuable ideas for Feedback, those articles include tags that are bold with the other category they fit into.

Finally, at the end, you will find Other Articles of Interest that were studied but weren't included in the resources for a variety of reasons including, the articles or resources failed to include ready-to-use examples or materials that instructors can quickly take and apply in class. However, we considered that the theory for Formative assessment may be of interest for instructors who aim to expand their knowledge-base for the courses they teach.

DEFINITIONS

Formative

The goal of formative assessment is to monitor student learning and provide ongoing feedback that can be used by teachers and students to guide improvements while the learning is still underway. Despite all the other categories fit in this category as well (since all the resources of this product correspond to Formative Assessment), in this category you can find the resources that have information and activities about the other categories, for example, you'll find feedback, peer and self assessment, posters and lesson design, all in one resource.

Writing to Learn Math

Communicating our ideas is always at the forefront of the "doing" of mathematics, whether it is spoken or written, symbolic or descriptive. Learning how to write ideas, logic arguments, and transforming the natural language to symbolic writing are essential in mathematics. Writing to Learn Math articles discuss: why writing is important in math, explain its benefits, and include writing exercises.

Peer Assessment

This category corresponds to the resources that included any information regarding students assessing the learning or understanding of material of their peers.

Feedback

Feedback refers to information provided by an instructor, peer, book, self, etc, about one's performance or understanding. This category corresponds to the resources that included any information regarding the purpose, effects, types and how to provide feedback.

Oral

Oral assessment includes any assessment of student learning that is conducted, wholly or in part, by word of mouth. This category corresponds to the resources that included any information regarding the importance of students' articulating their ideas, exposing their thinking to peers and teachers through speaking, and developing their ability and confidence to communicate in work-like environments. You will find tips and activities as well.

Posters

A poster consists of a single sheet of paper or single online page that is printed with some type of visual message that serves as a channel to share information.

Posters provide a great opportunity for instructor and peer feedback! During preparation, students must think about how to present their work to impact on their readers and work on their communication skills. If the poster is done in a group, this is a great opportunity for discussion and cooperative learning.

Lesson Design

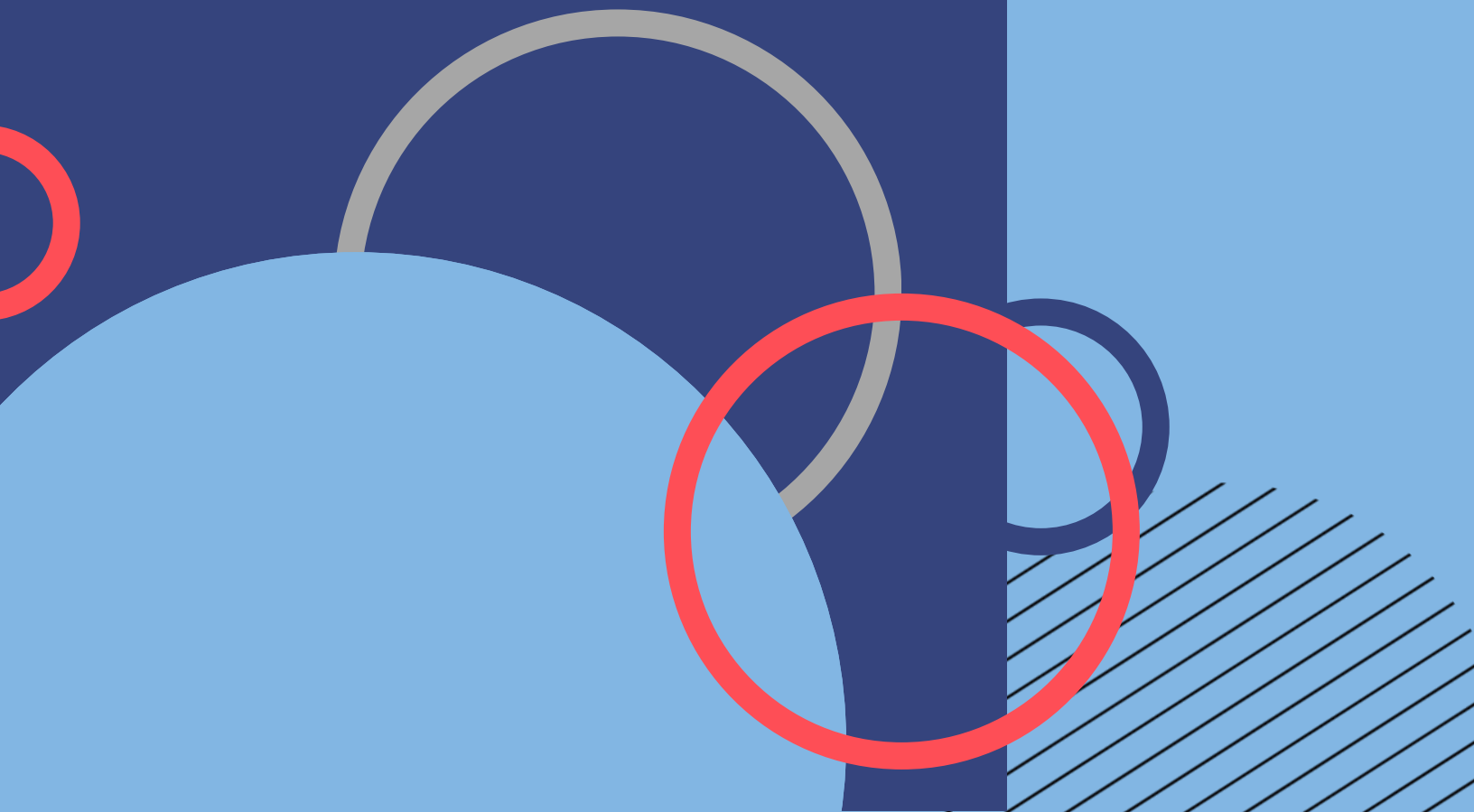
The resources presented here include examples of activities and strategies that show how a lesson can be organized and orchestrated.

Quiz Companion

This category serves to include resources that have assessment strategies that pair alongside a traditional "quiz". The assessment strategies presented can be enacted before, during, or after the quiz.

RESOURCE SECTION: FORMATIVE

Pages: 8 to 14



Assessment Practices in Undergraduate Mathematics

Gold, B.; Keith, S.Z; and Marion, William A.

Usability scale: varies

Why we included this: Assessment Practices are grouped into categories to easily navigate the resource (ie. Cooperative Groups and Problem-centered Methods). It is a FREE resource through the MAA

Each article on assessment includes:

- Background and purpose
- Description of technique
- History of author's use of assessment technique
- Author's findings
- Success factors

[Click To
View
Article](#)

Mathematics Formative Assessment

Tobey, C. R., Keeley, P.

Usability scale: varies

Why we included this: Provides research basis behind the use of formative assessment in the classroom. Introduces 75 Assessment Strategies organized by alphabetical order.

Each strategy includes:

- Description
- How it promotes student learning
- How it informs instruction
- Considerations for design and modification
- Caveats for using a specific technique, etc.

[Click To
View
Article](#)

Forged in failure: engagement patterns for successful students repeating calculus

Dibbs, R. (2019)

Usability scale: **medium**

Why we included this: We find this article very inspiring! The author studies the benefits of formative assessment for students who have failed calculus and which events fostered changes in their affective, cognitive, and behavioral engagement. They found benefits as increasing affective engagement, improving sense of self-efficacy and increasing behavioral engagement.

Highlights:

- A description of the class structure and examples of activities appear in Methods, p. 38.
- In Findings, p.41, you can read students' opinions about the activities.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Mathematics Assessment Project Classroom Challenges A Formative Assessment Lesson.

Mathematics Assessment Resource Service University of Nottingham and UC Berkeley (2015)

Usability scale: **low**

Why we included this: 100 formative assessment lessons! Each lesson consists of student resources and an extensive teacher guide. Each lesson has projector resources as well. These lessons are available free on the website.

Highlights:

- You can find lessons in the High School section covering topics such as algebra, functions, probability, and statistics that are usually taught as reviews in precalculus and calculus.

[Click To
View
Article](#)

Classroom Assessment Techniques. A Handbook for College Teachers

Angelo, T. and Cross, K.

Usability scale: **medium**

Why we included this: You can find almost everything in this book about Classroom Assessment Techniques!

Highlights:

- In p. 7 you can find the seven basic **assumptions of classroom assessment** in which the model is based.
- **grab-and-go** p. 20: Teaching Goals Inventory Self-Scorable with 52 goal statements with the Scoring worksheet.
- In p.28 three step process designed to minimize time and energy required and maximize the likelihood of success for first-time Classroom Assessment efforts.
- **grab-and-go** p. 31: Five suggestions for a successful start.
- Chapter 4 **Planning and Implementing Classroom Assessment projects:**
 - p. 34 The three phases of the Classroom Assessment Project explained step by step.
 - In p. 42 examples of using the One-Sentence Summary to help you elaborate and specify your teaching goals.
 - p.46 **The classroom assessment project cycle: A detailed look.** You can find a step by step to implement it.
 - **grab-and-go** p. 58 The guidelines for success and a checklist for avoiding problems.
 - Chapter 5, p. 62 Twelve examples of successful classroom assessment projects.
 - Chapters 7-9 present **50 different classroom assessment techniques.** In Table 6.1, p. 109, you can quickly locate each assessment technique.

[Click To
View
Article](#)

Classroom Assessment in Mathematics. Perspectives from Around the Globe

Thompson, D., Burton M., Cusi A. and Wright D. (2016)

Usability scale: **medium**

Why we included this: This book provides excellent tips, strategies and examples on how to give feedback, developing classroom conversations, assessment practices, problem solving and some more.

Highlights:

- Chapter 1, p. 3, you can find a contrast between formative assessment and summative assessment and describes the importance of formative assessment to classroom instruction.
- Part II, Examples of Classroom Assessment in Action: two examples of formative assessment lessons, one concept-based and the other problem-solving, formative feedback questions, and sample work for students to critique.
- **grab-and-go:** p. 14 you can find a guide for problem solving.
- p. 15, Table 2.2 Task genres for concept development and Table 2.3 Task genres for problem-solving lessons, both with sample classroom activities.
- p. 16 guide to formatively assess students' capacity to interpret graphs.
- p. 19 example of a preliminary assessment for a problem solving lesson.
- p. 45 Using Self-assessment for Individual Practice in Math Classes and Technology as a Tool for Classroom Assessment
- p. 186 The Assessment of School Geometry.
- p. 207 Designing for Formative Assessment: A Toolkit for Teachers.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Differential participation in formative assessment and achievement in introductory calculus.

Dibbs, R. (2015)

Usability scale: **medium**

Why we included this: An in-depth description of how formative assessment was implemented is provided by the author. Finally, they describe the achievement of the students using formative assessment.

Highlights:

- Description of what the instructor made during classes and labs in Methods, p. 2090.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Beyond Testing and Grading: Using Assessment To Improve Student Learning

Garfield, J. (1994)

Usability scale: **medium**

Why we included this: The author encourages statistics instructors to implement different assessment methods than traditional tests and quizzes.

The framework and examples can be adapted to a calculus class.

Highlights:

- In p.5 you can find different assessment methods.
- In p. 6 you can find a description of the framework they propose and four examples of assessment activities illustrating the dimensions of the framework.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

A Practical Guide to Alternative Assessment

Herman J., Aschbacher P. and Winters L. (1992)

Usability scale: **medium**

Why we included this: This book is a good guide for creating alternative forms of assessment and brainstorming!

Highlights:

- In p. 8, six strategies for developing assessments.
- p. 10, eight criteria by Center for Research on Evaluation, Standards and Student Testing.
- Figure 2.2, p. 18, summarizes many of the learning principles and describes some implications for instruction and assessment.
- Chapter 3, Determining Purpose, p. 23, is a great guide to start planning your assessment!
- Chapter 4, Choosing Good Tasks, p. 35, gives you the next step in your planning. Answering the proposed questions will help you choose effective assessment tasks.
- p. 41, criteria that will help you critique your assessment ideas before developing them fully.
- p. 58, questions to uncover dimension for scoring criteria.
- p. 75, nine tips for developing and evaluating scoring criteria.
- p. 101, Can the Scores Be Used To Describe What Students Have Learned? Validity for such a purpose requires a good match between those goals and the content of the assessment. You'll find questions that will help you determine whether there is such a match.
- Figure 7.1, p. 107 summarizes some of the strategies presented in the previous chapters.
- p. 120, six concerns that teachers should keep in mind when using portfolios or other comprehensive assessment systems.

[Click To
View
Article](#)

Technology-Based Formative Assessments: Student Perceptions in Pre-Calculus Mathematics.

Hurton, J. (2019)

Usability scale: **high**

Why we included this: It explores the experiences of six students with Google Forms and Desmos as technology-based formative assessments. The students enjoyed using technology in the classroom, making math more visual and tactile. This thesis will give you nice examples, ideas and a framework to start incorporating tech-based formative assessments.

Highlights:

- Examples of Google Forms and Desmos in a functions class since p. 38.
- A summary of the experience is provided in p. 70.
- Finally, in chapter 5, p. 74, you can find key strategies and pedagogical recommendations.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Assessment in Mathematics Education. Large-Scale Assessment and Classroom Assessment

Suurtamm, C., Thompson, D., Young, R., Diaz, L., Sayac, N., Schukajlow, S., Silver, E., Ufer, S. and Vos, P. (2016)

Usability scale: **medium**

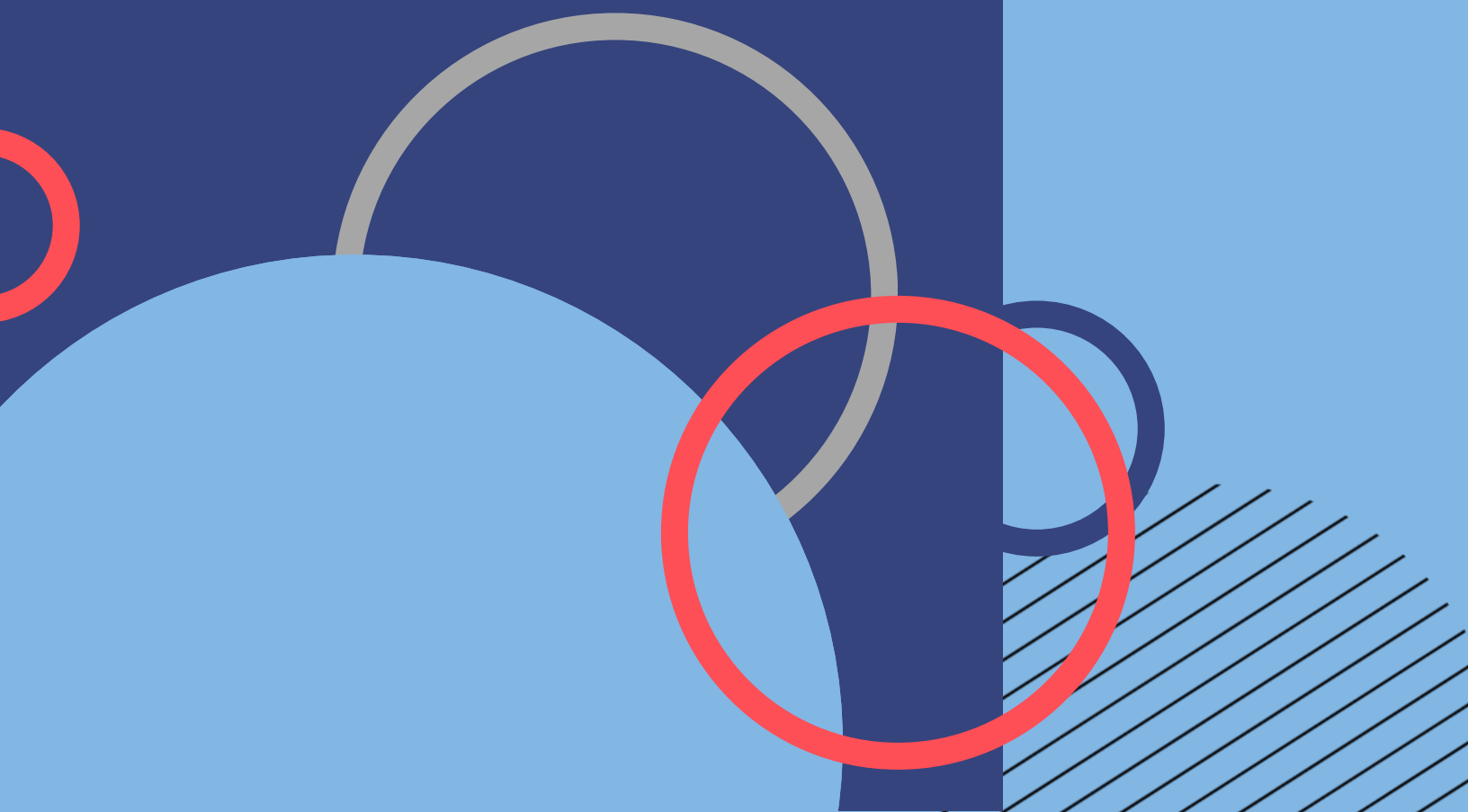
Why we included this: From p. 13 you can find principles that should be considered when looking at designing an assessment plan for a classroom. These principles are designed to provide opportunities for students to engage in meaningful mathematics and demonstrate their thinking, both to provide evidence of their learning and to inform teachers about future instruction.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

RESOURCE SECTION: WRITING TO LEARN MATH

Pages: 15 to 16



Changing assessment practices in science and mathematics

Berenson, S. and Carter, G. (1995)

Usability scale: **medium**

Why we included this: The authors give examples of the five formats, journal writing, open-ended problems, **portfolios**, interviews and performance assessments.

[Click To
View
Article](#)

What's an assignment like you doing in a course like this?:

Writing to learn mathematics

Gopen, G. and Smith, D. (1990)

Usability scale: **medium**

Why we included this: The authors describe how to address writing assignments and giving feedback to writing reports.

Highlights:

- Common Problems with Student Writing in Mathematics in p. 5.
- You can find examples with the instructor's comments and responses to writing mathematics assessments.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Writing, mathematics, and metacognition: Looking for connections through students' work in mathematical problem solving.

Pugalee, D. (2001)

Usability scale: **medium**

[Click For
Web
Article](#)

Why we included this: This study provides an exploratory investigation of writing in mathematics through focusing on the metacognitive aspects found in student texts generated to describe their problem solving processes. I like it because it gives you examples of how to address the writing assessment and giving **feedback**.

[Click For
SFSU Box
Article](#)

Effects of writing to learn in pre-calculus mathematics on achievement and affective outcomes for students in a community college setting: A mixed methods approach

Parsons, M. (2011)

Usability scale: varies

Highlights:

You'll find examples of the writing to learn prompts in the appendix.

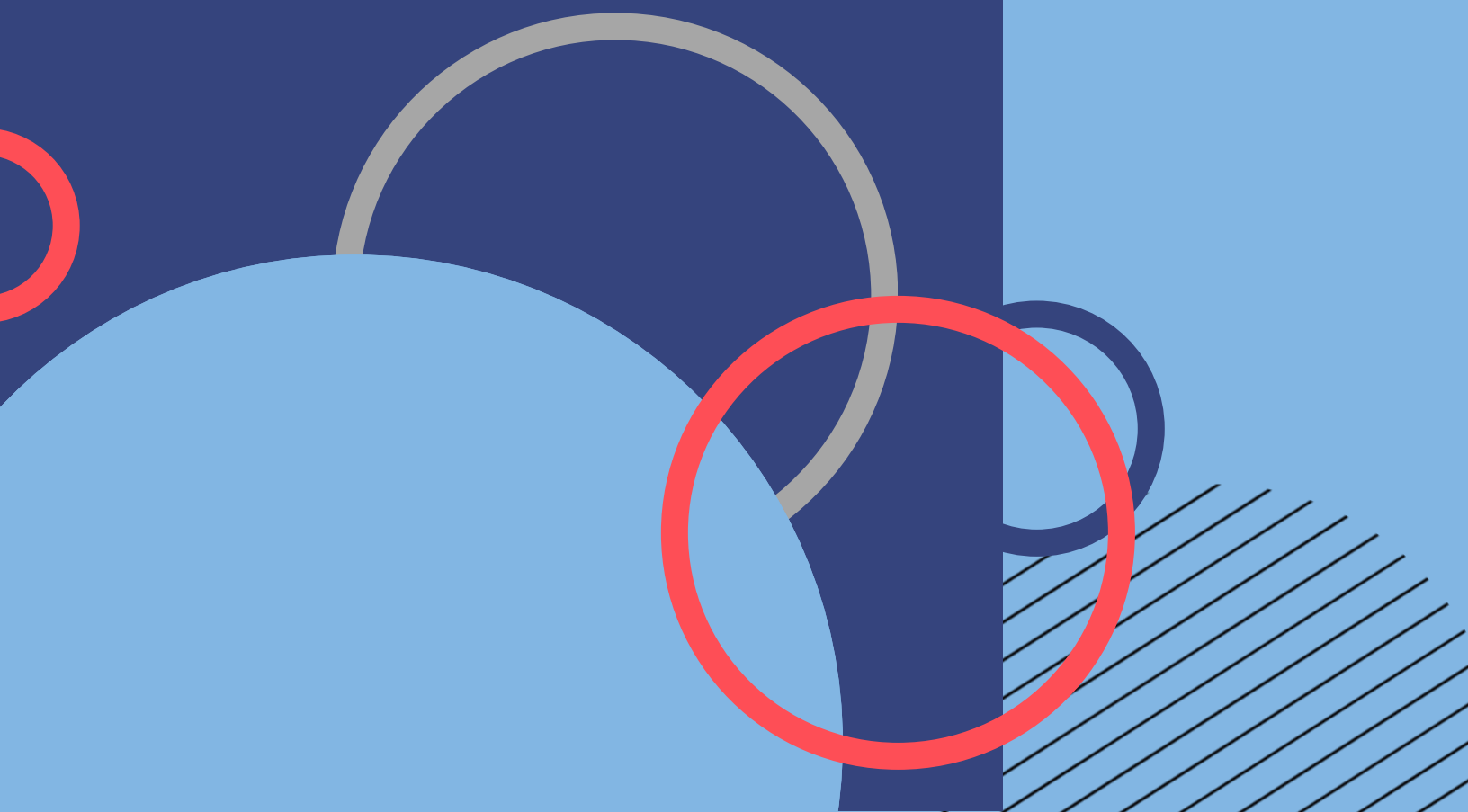
- **grab-and-go** "Learning Biography" prompt
- An example of a "End of term essay" prompt
- An example of a "Threaded Discussion Post" prompt - needs more development
- The "mathematical growth" journal essay - needs more development
- Chapter 2 you can find the connection between writing and learning math and describe how writing can benefit the learning of mathematics.
- p. 46 Types of Writing in Mathematics.
- You can find a description of how they use journalism and **portfolios** on page 70. This procedure can be used as an example.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

RESOURCE SECTION: PEER ASSESSMENT

Page: 18



Peer Assessment

Topping, K. (2009)

Usability scale: **low**

Why we included this: If you want to incorporate peer assessment into your practice, this is a great article! You can find the definition, benefits and feedback, examples, common concerns about implementation, reliability and validity.

Highlights:

- How to organize peer assessment: There are 11 tips for organizing peer assessment on p. 25.
- **Instructions not included:** In p. 21 you can find an example of peer assessment in action with a written analysis of a piece of Shakespeare. The example works to adapt it to a math class.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

The Assessment Cycle: A Model For Learning Through Peer Assessment

Reinholz, D. (2016)

Usability scale: **medium**

Why we included this: The Assessment Cycle is a model that connects peer and self assessment, highlighting how peer assessment supports self-assessment.

The author explains how the assessment can be used to evaluate student outcomes and to support student learning as well, for example, the explanation and collaboration are learning mechanisms that also support content understanding (peer assessment → self assessment).

Highlights:

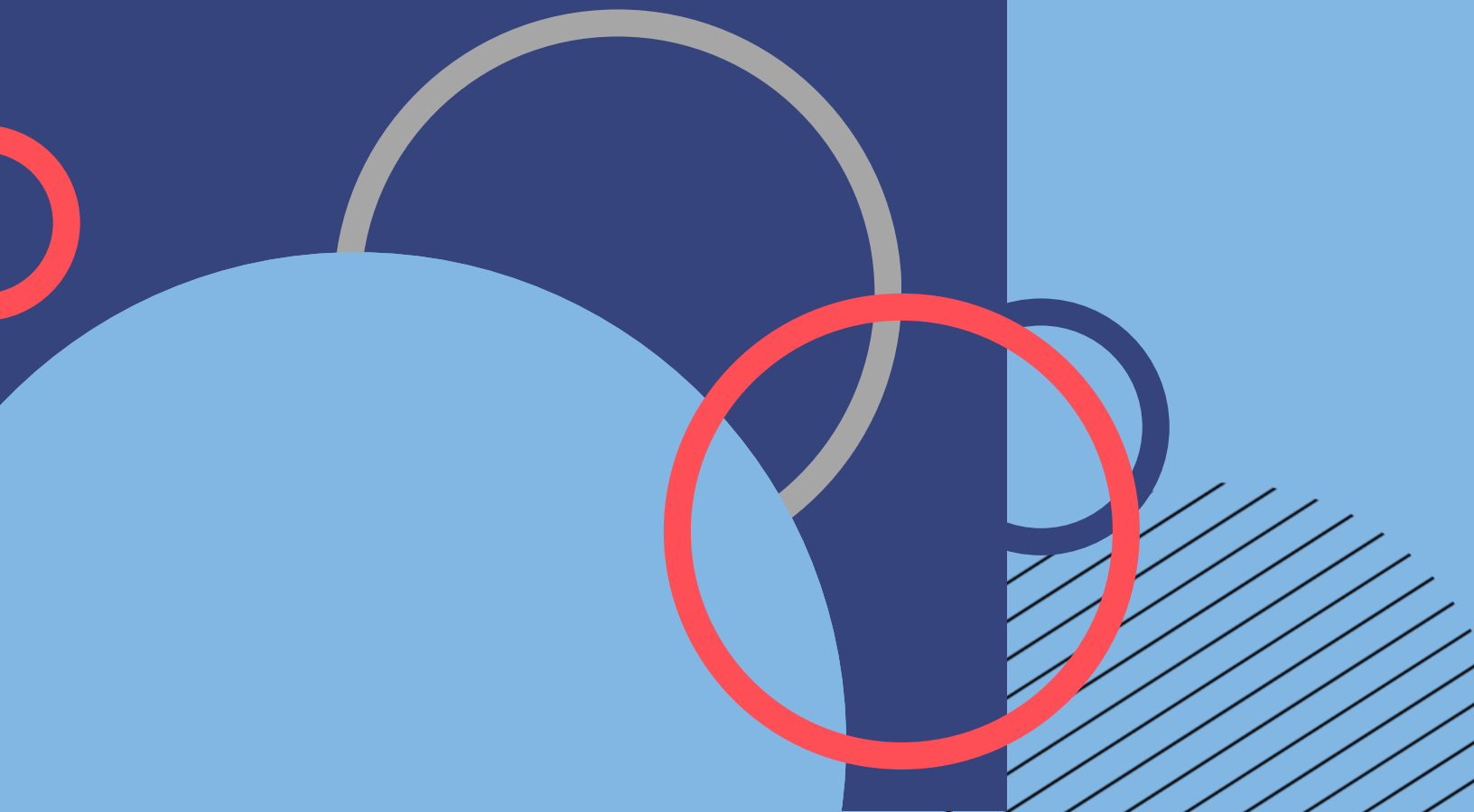
- In p. 4 you can find the six components of the Assessment Cycle, each describing a different aspect of peer assessment with different learning potential.
- Find Table 1: Key aspects of peer assessment in p. 8.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

RESOURCE SECTION: FEEDBACK

Pages: 20 to 21



A Framework for Automated Formative Assessment in Mathematics Courses

Moreno, J. and Pineda, A. (2020)

Usability scale: **low**

Why we included this: This article is a good example of continuous automatic feedback. Their framework, Nigma, helps teachers to implement formative assessment in math courses. Nigma is embedded into a learning management system called TICademia, so all data about the students' interaction with the assessment items can be collected and analyzed, not only for the sake of the students themselves but also for the teacher.

Highlights:

- In Section II you can find a description of the framework in detail.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Formative assessment and self-regulated learning: A model and seven principles of good feedback practice

Nicol, D. J., and Macfarlane-Dick, D. (2006)

Usability scale: **medium**

Highlights:

9.205 you can find seven principles of good feedback practice facilitating self-regulation.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

The Power of Feedback. Review of Educational Research Hattie, J., and Timperley, H. (2007)

Usability scale: **medium**

Why we included this: The authors propose a model of feedback that is used to identify the circumstances under which feedback has the greatest impact.

The ways students deal with feedback are described and the relationship between assessment and feedback is provided.

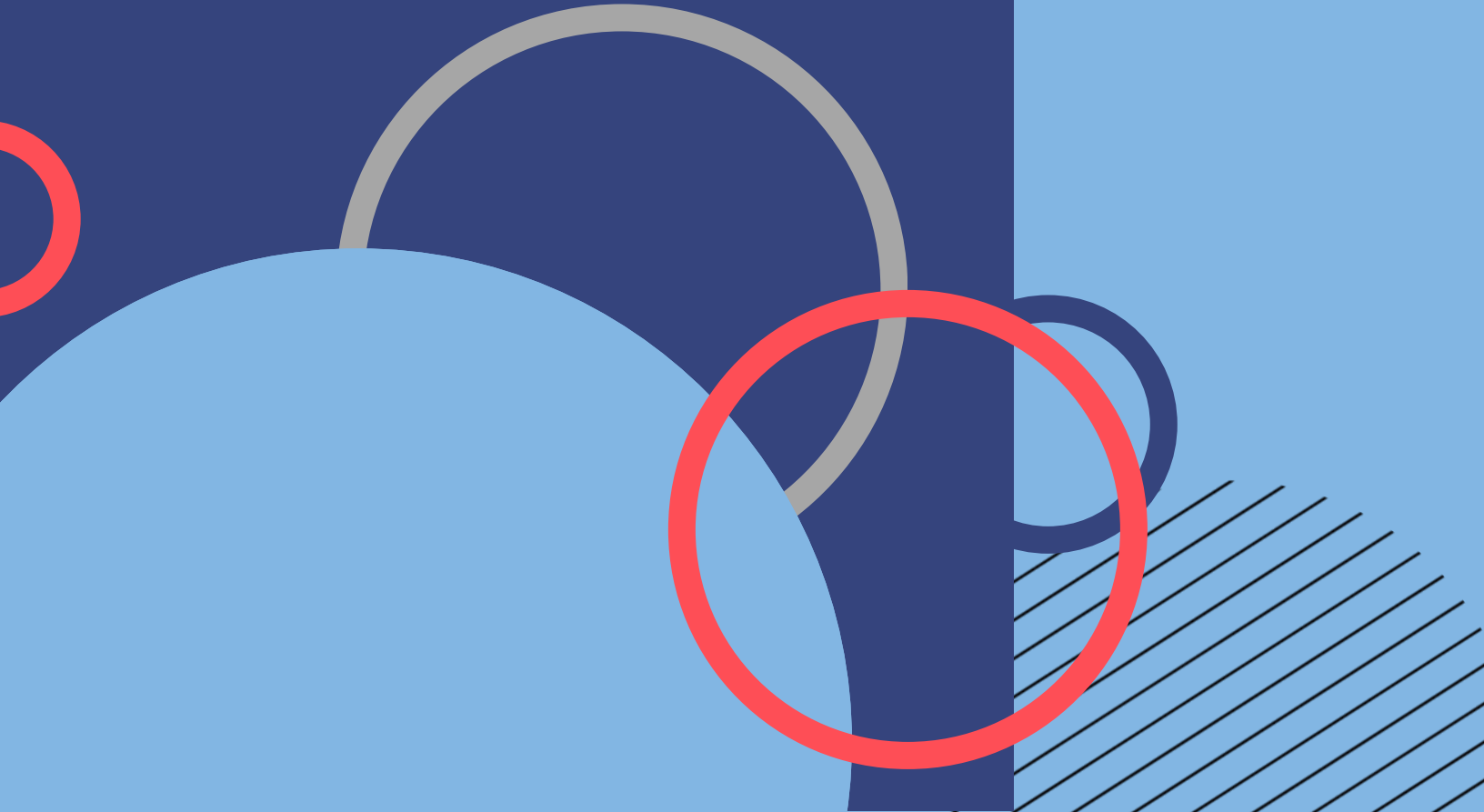
Highlights:

- In p. 86, Figure 1, A model of feedback to enhance learning.
- **grab-and-go:** p. 88 Addressing the Three Feedback Questions: Where am I going? How am I going? and Where to go next?
- p. 90 The Focus of Feedback: The Four Levels.
 1. Feedback About the Task, p. 91.
 2. Feedback About the Processing of the Task, p. 93.
 3. Feedback About Self-Regulation, p. 93.
 4. Feedback About the Self as a Person, p. 96.
- **grab-and-go:** How to address four common issues about feedback: **timing**, effects of **positive** and **negative feedback**, optimal **classroom use** of feedback and the role of **assessment in feedback** in p. 98.

[Click To
View
Article](#)

RESOURCE SECTION: ORAL

Page: 23



A short guide to oral assessment

Joughin, G. (2010)

Usability scale: **low**

Why we included this: This is a great guide that gives you all the elements of oral assessment. You will find step by step guides, suggestions, benefits and more.

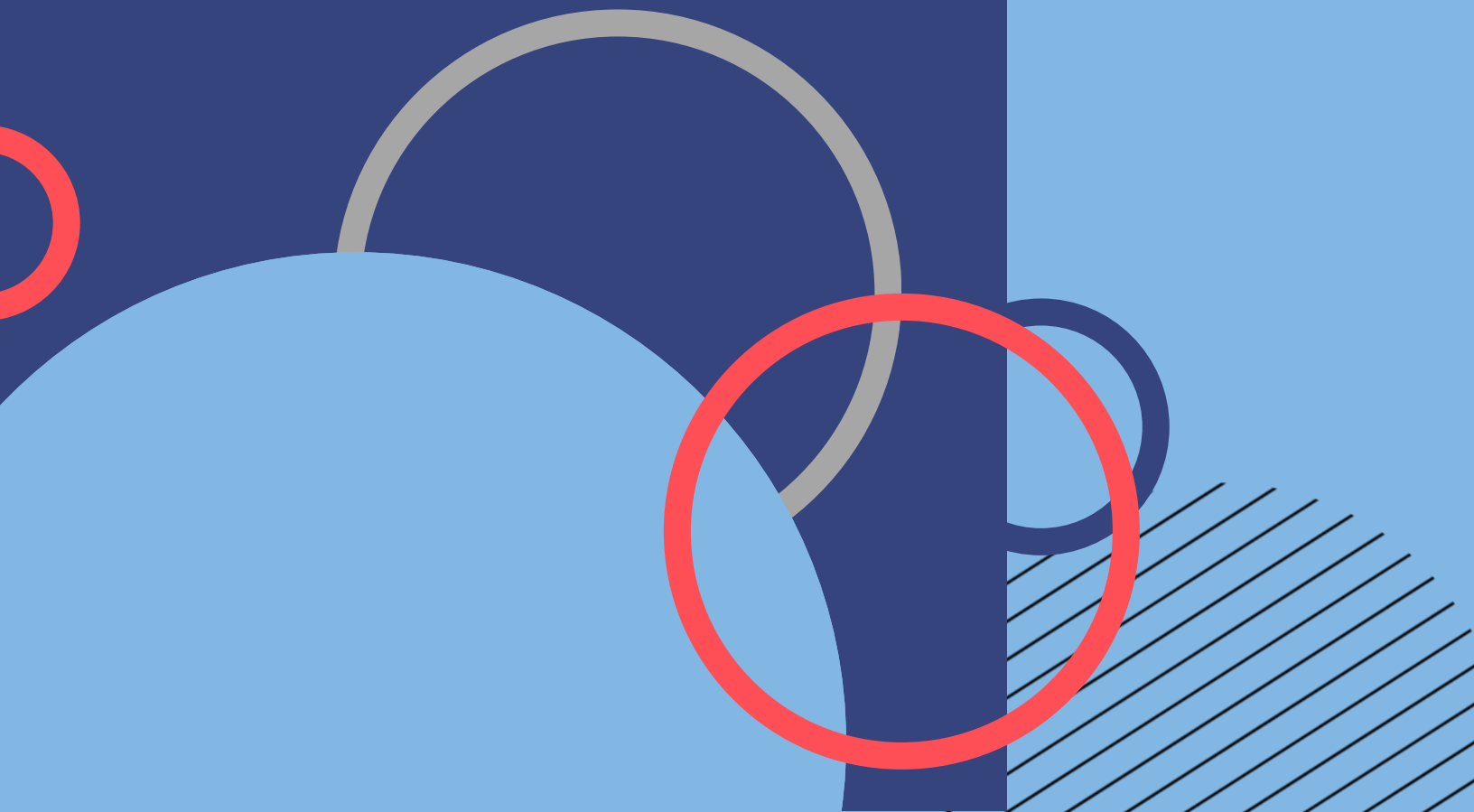
Highlights:

- p. 10 you can find six dimensions of oral assessment that can be used to guide the planning of new assessment tasks.
- p. 13 six aspects of validity in oral assessment that can help you know how well the assessment has been designed to test what it needs to test
- p. 14 you can find six steps that can be taken to increase the reliability of oral assessments.
- p. 16 six benefits of the use of rubrics in oral assessment.
- p. 17 suggestions for preparing students for oral assessment.

[Click To
View
Article](#)

RESOURCE SECTION: POSTERS

Page: 25



Using Posters as a Means of Communication and Assessment Berry, J. and Houston, K. Students (1995)

Usability scale: **low**

Why we included this: The authors describe the experiences of the students, advantages, possibilities and gains of using posters.

Finally, you can find the criteria they made together to use in the assessment of student posters.

Highlights:

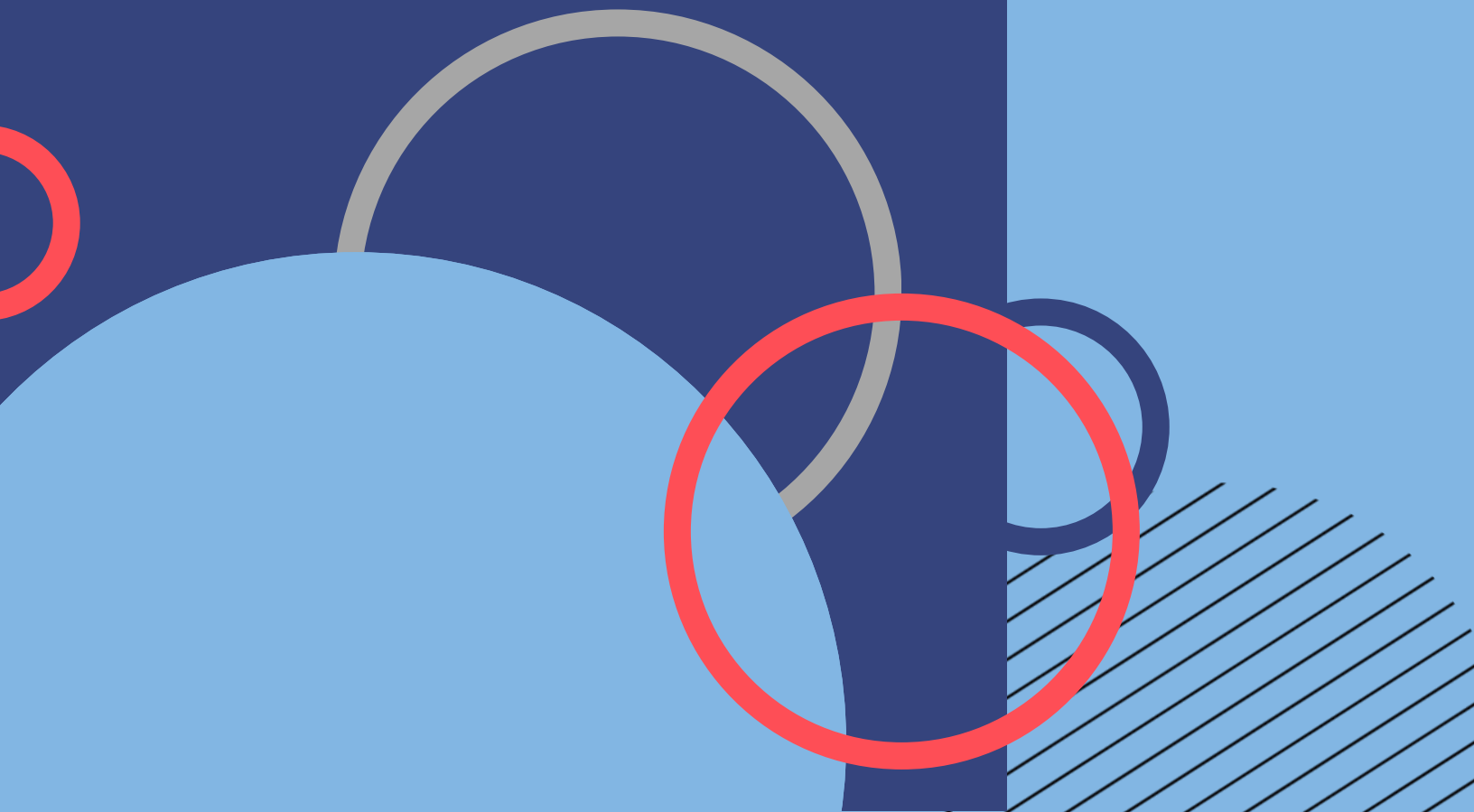
- In p. 25 you can find the criteria made by the students and the instructor for assessing posters.

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

RESOURCE SECTION: LESSON DESIGN

Page: 27



The effects of formative assessment on students' zone of proximal development in introductory calculus

Dibbs, R. A. (2014)

Usability scale: **medium**

Why we included this: There are course syllabi, various formative assessment student homework examples, class labs that correspond to the formative assessment questions, post-lab write-up questions that correlated with the posted labs.

Highlights:

- Syllabus Example included
- Total of seven (7) in-class labs for Calc I
- Post lab assessment questions for each of the in-class labs
- Six (6) examples of formative assessment homework assignments

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Lesson design for formative assessment

Swan, M., & Burkhardt, H. (2014)

Usability scale: **high**

Why we included this: There's a detailed description of an example math activity and how the instructor can track in a table what the "common issues" students experienced. After the "common issues" were found the rest of the table is filled out with follow-up questions the instructor could potentially ask of their students.

Highlights:

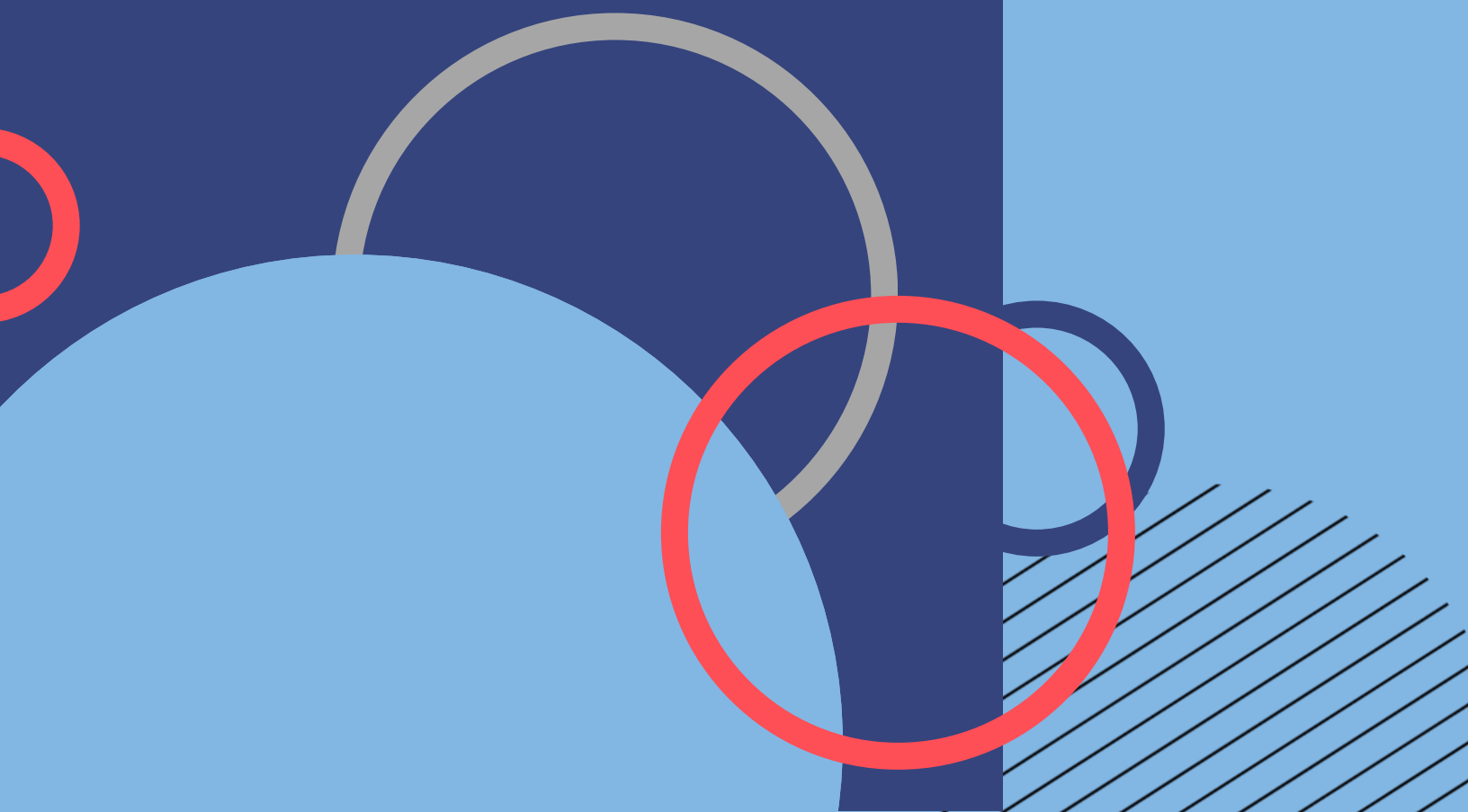
- There's a in-depth lesson plan for an example activity.
- Pre-assessment of match activity outlined in table form with "Common Issues" and "Follow-up Questions"

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

RESOURCE SECTION: QUIZ COMPANION

Pages: 29 to 30



Using formative assessment and metacognition to improve student achievement

Hudesman, J., Crosby, S., Flugman, B., Issac, S., Everson, H., & Clay, D. B. (2013)

Usability scale: **medium**

Why we included this: In the appendix there's a math quiz and "quiz-redo" self-reflection form. Can be useful and adapted to any set of math quiz questions.

Highlights:

- Enhanced formative assessment program (EFAP) Math Quiz with three columns:
 - student evaluates confidence before they solve
 - student solves the problem
 - student evaluated confidence after they solve
- **grab-and-go:** EFAP Quiz Revision Form

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Facilitation of Student-centered Formative Assessment using Reflective Quiz Self-corrections in a Calculus Physics Course

Guo, W., & Shekoyan, V. (2014, June)

Usability scale: **low**

Why we included this: It describes a practice of quiz corrections and describes in detail the type of prompts used: "To receive credits for their reflective self-corrections, they need to finish the following three steps for each problem. A. Diagnosis step to identify where the mistakes are; B. Generalization step to learn from their mistakes by generalizing beyond the specific problem C. Production step to generate a new solution using the problem-solving strategy provided (Read→ Draw→Label → Identify → Equations → Solve→Substitute→ Check) " Students were also asked to categorize their mistakes table example given in research paper.

Highlights:

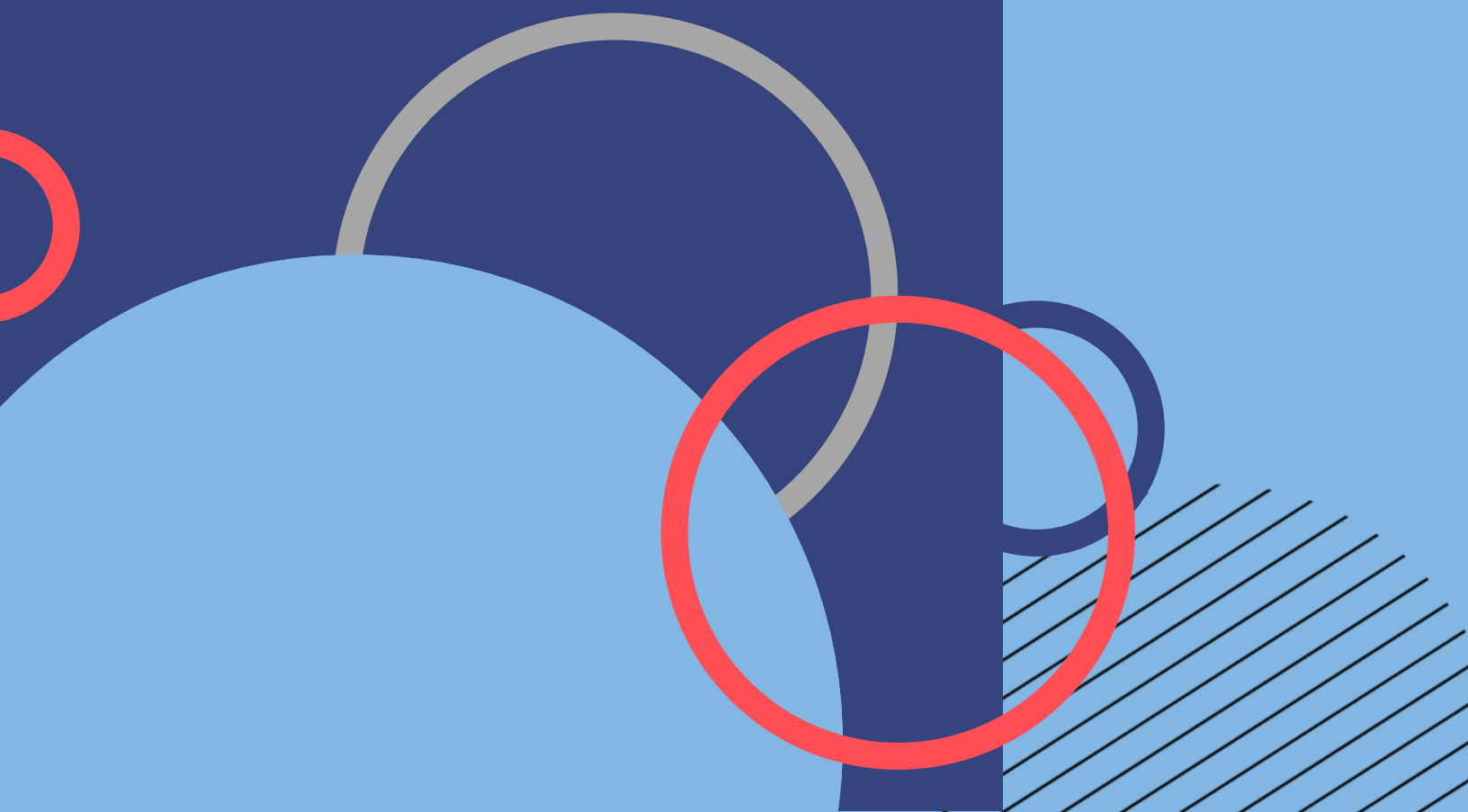
- Example quiz question used by researcher
- Filled out student example table with quiz mistake categorization
 - Mistake category name
 - Description of mistake category
 - Quiz problem numbers that fell into the mistake category

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

OTHER ARTICLES OF INTEREST

Pages: 32 to 34



Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability*, 21(1), 5–31.

Black, P. and Wiliam, D. (2009)

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

The Concept of Formative Assessment. *Practical Assessment, Research, and Evaluation: Vol. 8 , Article 9.*

Boston, C. (2002)

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Peer conferences in calculus: The impact of systematic training. *Assessment & Evaluation in Higher Education*, 42(1), 1–17.

Reinholz, D. (2017)

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Assessing Self- and Peer-assessment: The students' views, Higher Education Research & Development, 20:1, 53-70.

Stephanie, J. , Hanrahan and Geoff, I. (2001)

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

The effectiveness and features of formative assessment in US K-12 education: A systematic review. Applied Measurement in Education, 33(2), 124-140.

Lee, H., Chung, H. Q., Zhang, Y., Abedi, J., & Warschauer, M. (2020).

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

Differential improvement in student understanding of mathematical principles following formative assessment intervention. The Journal of Educational Research, 104(5), 330-339.

Phelan, J., Choi, K., Vendlinski, T., Baker, E., & Herman, J. (2011)

[Click For
Web
Article](#)

[Click For
SFSU Box
Article](#)

In-Class Formative Assessment in an Introductory Calculus Class. *Journal of Management Education*, 13(1). Chicago

Aka, M., Akveld, M., Caspar, A., Kortemeyer, G., & Valkering-Sijsling, M. (2020)

[Click For
Web
Article](#)

[Click For
Web
Article](#)

Enabling and integrating online formative assessment in a flipped calculus course. *Primus*, 26(6), 585-602.

Schroeder, L. B., & Dorn, B. (2016).

[Click To
View
Article](#)

Cognitively based assessment and the integration of summative and formative assessments. *Measurement*, 8(4), 180-184.

Embretson, S. (2010)

[Click To
View
Article](#)