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Via Certified Mail

To the State Board of Education:

According to 5 CCR 18533, a person may submit a written statement to the State Board of Education regarding any instructional materials or curriculum framework. I write to raise a set of objections to the Third Field Review (TFR) of the draft California Curriculum Mathematics Framework (CMF), found at (<https://www.cde.ca.gov/ci/ma/cf/>). These objections include the following:

1. That the TFR draft framework contains statements of error.
  - a. While proposing big shifts in student math education, the TFR draft framework (<https://www.cde.ca.gov/ci/ma/cf/>) *cites research papers / support citations which make claims of student benefit unsupported by evidence* (See *The Research Doesn't Add Up* at [savemath.net](http://savemath.net)). Though TFR writers and research authors may believe they are guided by good intentions, good intentions are not necessarily matched by good results. Proposed shifts in math education which might affect up to 6 million California public school children must be based on research evidence that objectively shows student academic benefit. The research papers/support citations unsupported by evidence include:
    - i. Research paper/ support citation: Boaler, Jo, and Megan Staples. 2008. "Creating Mathematical Futures through an Equitable Teaching Approach: The Case of Railside School." *Teachers' College Record*. 110(3): 608-645. (This paper is colloquially known as 'The Railside Study' and we will refer to it as such.)
      1. Claims cited in CMF associated with the research paper/support citation, Boaler, Jo, and Megan Staples. 2008: (Ch. 1 Lines 159-161), (Ch. 2 Lines 790-792, and 818-821), (Ch. 9 Lines 459-462), and (Ch. 12 Lines 244-247, which refers to 'Boaler and Staples 2014', but the content of 'Boaler and Staples 2014', is close to a mirror image of that of Boaler and Staples 2008).
      2. References disputing claims of research paper/support citation, Boaler, Jo, and Megan Staples. 2008: See *The Research Doesn't Add Up*, 'The Railside Study', at [savemath.net](http://savemath.net). See also <https://nonpartisaneducation.org/Review/Articles/v8n1.pdf>.

3. Reasons research/support citation unsupported by evidence: ‘The Railside study’, frequently cited in the CMF TFR to buttress claims related to detracking and student ‘mindset’ about mathematics, has had a careful critique written about it that raised serious questions about its methodology, the differing math achievement levels of the students studied, the grade level of the non-standard test that was used, the use of non-standard, non-normed tests (MARS math tasks), the Study’s evidentiary standards, and its math achievement claims, calling its validity into question (see <https://nonpartisaneducation.org/Review/Articles/v8n1.pdf>). Further, the lead author of ‘The Railside study’, a member of the CMF writing team, has not responded to multiple requests, made over the course of months, to provide underlying study data to permit independent verification of the study’s reported results. In our view, ‘The Railside study’ cannot unequivocally or otherwise support claims of student benefit. Its inclusion in the CMF TFR, to support CMF TFR proposals is in error, and it casts doubt on the CMF TFR’s proposals, and on the standard of research the CMF TFR has chosen to accept, include, and cite.
- ii. Research paper/Citation: Boaler, Jo. 2019. “Prove it To Me!” Mathematics Teaching in the Middle School 24(7): 422–428.  
<https://www.youcubed.org/wp-content/uploads/2019/05/prove-it-to-me-JB.pdf>  
 f) (Ch. 4 Lines 872-875)
1. Claims cited in CMF associated with the research paper/support citation, “Prove it To Me!” Mathematics Teaching in the Middle School 24(7): 422–428. CMF TFR Ch. 4 (Lines 872-875 )
  2. References disputing claims of research paper/support citation, Boaler, Jo. 2019. “Prove it To Me!”: See The Research Doesn’t Add Up, ‘Youcubed Summer Camp’, at savemath.net.
  3. Reasons research/support citation unsupported by evidence: The lead author of this paper did not respond to multiple requests made over months to provide underlying data to verify claims made in the paper. The paper lacks detail on many aspects of the youcubed summer camp, such as the year it occurred and the type of assessment used. By including unsupported claims of student benefit, and citing a research paper of poor caliber, like “Prove it To Me!”, the CMF TFR is in error, and undermines its own claims and proposals, and casts doubt on the standard of research the CMF TFR has chosen to accept, include and cite to underpin its proposals.

iii. Research paper/support citation: Anderson, R. K., Boaler, J., & Dieckmann, J. A. (2018). Achieving elusive teacher change through challenging myths about learning: A blended approach. *Education Sciences*, 8(3), 98.

1. Claims cited in CMF associated with research paper/support citation, “Achieving elusive teacher change...”: CMF TFR (Ch. 10 Line 361-372).
2. References disputing claims of research paper/support citation, “Achieving elusive teacher change...”: See The Research Doesn’t Add Up, ‘5th grade Central Valley’, at savemath.net.
3. Reasons research/support citation unsupported by evidence: In our view, this research article does not support the claim made in the TFR, that teachers using ‘rich, authentic, culturally relevant mathematics tasks’ is a precursor to changing their teaching, nor does the article support the main claim that the article makes. This article’s main claim is of a math gain of 5.2 months (.085 to .1 SD) over the course of a 5th grade year due to ‘mathematics mindset’ teacher professional development. Though the CMF TFR cites this article — as support for this separate (non main) claim, the article cannot support any claims; it cannot withstand scrutiny. “Achieving elusive teacher change...,” has too many methodological flaws to be considered as ‘research evidence’ for the TFR for any claim, flaws which include the lack of a comparison group, among other things. In addition, the main reported claim made in ‘Achieving elusive teacher change...’, of a 0.1 SD gain, according to SimplyPsychology, is simply not a meaningful difference, or result, and thus cannot support a claim of student benefit. This attempt to shoehorn in this flawed article, “Achieving elusive change...” as TFR ‘research evidence’, by citing it as support for a relatively less controversial claim, is faulty, disingenuous, is in error and is incorrect. The article is too flawed to support any claims. The article’s inclusion in the TFR is in error, and casts doubt on the CMF TFR’s proposals, and on the standard of research the CMF TFR has chosen to accept, include, and cite.

iv. Research paper/support citation: Boaler, Jo, and David Foster. 2021. “Raising Expectations and Achievement: The Impact of Two Wide Scale De-Tracking Mathematics Reforms.” Youcubed and Silicon Valley Mathematics Initiative. <https://www.youcubed.org/wp-content/uploads/2017/09/Raising-Expectations-2021.pdf>.

1. Claims cited in CMF TFR associated with research paper/support citation. “Raising Expectations and Achievement..”: CMF TFR (Ch. 9 Line 156-175, and 177-192) Claims are made that:
  - a. a teacher professional development intervention, that helped teachers to detrack and implement heterogeneous math classrooms, led to student academic benefit.
  - b. Detracking math classes in certain middle schools, coupled with using a more ‘conceptual curriculum’ in those classes vs still tracked math classes in other middle schools resulted in recorded math achievement gains after one year for the students in the detracked math classes using the ‘conceptual curriculum’.
2. References disputing claims of research paper/support citation. “Raising Expectations and Achievement..”: See The Research Doesn’t Add Up, ‘Raising Expectations...,’ at savemath.net.
3. Reasons research/support citation unsupported by evidence:
  - a. Study 1: the underlying research, is **an unpublished, non peer reviewed paper**, which has been cited just 5 times, according to Google Scholar. ‘Raising Expectations...’. Study 1, which discusses a detracking and teacher professional development intervention, does not identify any of the 8 districts it studies, nor any of the 25 comparison districts. Nor does it provide any district level results, for either the California Standards Test (CST) or for the MARS math tasks, the outcome metrics mentioned in the paper, but it instead lumps all the data together. As such, in our view, it provides no specific, independently verifiable data on the results of its intervention. Also, MARS Math Tasks are an unsuitable assessment tool, as they are not psychometrically sound. Even the creator of MARS, MAP, says these assessments are prototypes and are in draft form: “**Note:** please bear in mind that these prototype materials need some further trialing before inclusion in a high-stakes test.” (<https://www.map.mathshell.org/tests.php> Accessed June 30, 2023) Study 1 provides sparse detail on its study design, and little detail on the criteria used in the recruitment of the districts eventually chosen to be studied, as well as using an invalid comparison between groups. “Raising

Expectations..." 2021 Study 1 cannot support a claim of student benefit.

- b. Study 2: the underlying research is **an unpublished, non peer reviewed paper**, and has been cited just 5 times, according to Google Scholar. "Raising Expectations...2021", has methodological flaws, provides little information on study design, and does not provide detailed student math achievement results. It cannot be independently verified due to the paucity of information provided. "Raising Expectations..." 2021 **cannot support a claim of student academic benefit, in our view.**

- 4. Including and citing unpublished papers of such poor quality calls into question the level of research quality and evidence that the TFR cites and includes, and on which it proposes to make major shifts in math education for California school children. Including "Raising Expectations..." 2021 in the TFR is in error.

- v. **Research paper/support citation:** Boaler, Jo, Jack A. Dieckmann, Graciela Pérez-Núñez, Kathy Liu Sun, and Cathy Williams. "Changing students' minds and achievement in mathematics: The impact of a free online student course." In *Frontiers in Education*, p. 26. Frontiers, 2018.

- 1. **Claims cited in CMF associated with research paper/support citation.** "Changing students' minds and achievement in mathematics, The impact of a free online student course.": CMF TFR (Ch. 1 Line 355-359)
- 2. **References disputing claims of research paper/support citation.** "Changing students' minds and achievement in mathematics, The impact of a free online student course.": See *The Research Doesn't Add Up, 'Massive Open Online Course'*, at [savemath.net](http://savemath.net).
- 3. **Reasons research/support citation unsupported by evidence:** The CMF TFR cites "Changing students' minds..." as support for a claim that multidimensional math experiences are important for understanding. However, In our view, the article, "Changing students' minds..." cannot support any claim, including the less controversial claim made in the TFR versus the article's own main claim. The article cannot withstand scrutiny. The article's main claim is of a 0.33 SD math gain from an online 'mathematics mindset' course and teacher professional development. However, "Changing students' minds and achievement in mathematics...2018", has too many **methodological flaws** to support any claim of student benefit, or otherwise, flaws which include the **non**

random selection of teachers and students, and the involved teachers knowing which student group was the treatment group and which student group was the control group. These are serious flaws and, in our view, disqualify the paper from offering support to any claims made. The TFR's attempt to shoehorn in this flawed article, "Changing students' minds..." as 'research evidence', by citing it as support for a less controversial claim than its own main claim, is faulty, disingenuous, is in error and is incorrect. Citing and including articles that include unsupported claims of student benefit calls into question the level and quality of research that the TFR cites and includes. The article's inclusion in the TFR is in error.

- b. The TFR draft framework cites findings inconsistent with the actual findings of cited research. These are statements of error.
  - i. Research paper/support citation: (Burris, Heubert, and Levin, 2006)
    1. Claims cited in CMF associated with research paper/support citation, (Burris, Heubert, and Levin, 2006): CMF TFR (Ch. 8 Line 657-673)
    2. Reasons research/support citation was inconsistent with actual findings:  
 The CMF TFR misrepresents the methodology, purpose, and results of the cited research. These are statements of error. Burris et al 2006 is a study of a rigorous Algebra based math acceleration intervention that took place in a middle school, for all students, which, as part of the intervention, was simultaneously supported by on-site, available, drop in math workshops, in addition to the regularly scheduled Algebra classes. However, the CMF TFR focuses upon the heterogeneity of the math classrooms, as though just one facet of an intervention can stand on its own. But this is in error; just one facet of a multifaceted intervention cannot be extracted separately, implemented and expected to achieve the same results as the entire intervention. Meanwhile the TFR discourages middle school Algebra acceleration (Ch. 8 Lines 638-647, 648-656, 687-689), which ignores and undermines the integral part that Algebra acceleration played in the successful Burris et al intervention. The TFR seems to seek to tout the Burris et al example when it suits its agenda, promoting detracking and heterogeneous classrooms, but then seems to ignore the Burris et al example when it does not suit its agenda, such as in discussions of algebra acceleration, which the TFR discourages. This is an error. The multifaceted Burris et al 2006 intervention does not support the TFR's claims about heterogeneous classrooms, or detracking, given the other facets of the Burris et al multifaceted intervention would be necessary to replicate the Burris, et al success. The TFR's claims about Burris et al 2006 misrepresent its

actual findings and are statements in error. The TFR's claims are unsupported by the actual findings and methodology of the cited research, (Burris, Heubert, and Levin 2006).

- ii. Stanford Mathematics Professor Brian Conrad uncovered many instances in the CMF SFR (Second Field Review) of citing findings inconsistent with the actual findings of the SFR cited research in his public comment (<https://sites.google.com/view/publiccommentsonthecmf/>). The TFR response to Prof. Conrad's public comment on the SFR seems to be to simply repeat the misrepresentations, but just remove the prior, SFR included citations so that no misrepresentations of findings can be alleged, though the erroneous statements remain.. These are statements of error that must be corrected or removed from the TFR.

1. References that show SFR cited findings of research/support citation was inconsistent with actual finding of the research/support citations:

- a. Please see Brian Conrad's report:  
<https://sites.google.com/view/publiccommentsonthecmf/>
- b. Please see this WSJ article about Brian Conrad's report: [WSJ Stanford Prof debunks \(CMF TFR\) Research](#)

- c. The TFR draft framework contains grammatical errors. These are statements of error.
  - i. Error:The TFR announces it plans to make intentional grammatical errors: "Note to reader: The use of the non-binary, singular pronouns they, them, their, theirs, themselves, and themselves in this framework is intentional." (Ch. 2 Line 29-30; They and them are not singular pronouns, but instead are plural pronouns, to be used for more than one person (or thing). They and them cannot be used to refer to a singular person. Using they or them to refer to a singular person, like one student, is a grammatical error.
  - ii. Appendix C (Line 971) The TFR uses the term 'Latinx'. According to (<https://www.google.com/search?q=latinx+meaning&oq=latinx&aqs=chrome.1.69i57j0i433i512j0i512j46i175i199i512j0i512l6.3622j0j4&sourceid=chrome&ie=UTF-8>) 'Latinx' is used as a 'gender neutral or 'non-binary' alternative to the words Latino or Latina - which are gender specific terms in the Spanish language to refer to a male or female respectively. According to evolutionary biologist Colin Wright of 'Reality's Last Stand', there are only two (binary) sexes, male and female, for humans. Attempting to use a 'gender neutral' or 'non-binary' term to refer to a human student or person is grammatically incorrect. The use of Latinx is thus in error and should be removed.
  - iii. Appendix C (Lines 1489-1492, 1506-1507, 1519-1520, 1564-1566, 1609-1610). Referring to a singular student, Santikone, as 'their', rather than using a singular

pronoun to refer to the student is a grammatical error. Furthermore, compelling students or teachers whose own conscience and beliefs may conflict with the gender ideology supposition inherent in this vignette, that a human being can have a gender other than male or female, and can be 'gender neutral', or 'non-binary' may violate those students' and teachers' conscience and religious beliefs as well as the First Amendment to the Constitution, the ruling in 303 Creative by the Supreme Court, and provisions in the CA Constitution. As such, this vignette is in error grammatically and legally. The TFR cannot be recommending vignettes that may lead to a violation of law or the Constitution for Districts, students or teachers.. Please remove this vignette..

1. References disputing CMF TFR error: Grammatically correct English language usage requires the use of singular pronouns when referring to a singular person/thing/idea ([Singular and plural pronoun use](#)), and the use of plural pronouns when referring to more than one person/thing/idea ([Singular and plural pronoun use](#)). Grammatical errors are errors, including the notice in the TFR announcing its intent to commit grammatical language errors in TFR language (Ch. 2 Line 29-30;. As an official government document for public use, the California Math Framework should adhere to correct English language grammatical usage and correct all grammatical errors when uncovered. All English language grammatical errors, as well as the TFR notice stating it intends to make grammatical errors, must be corrected and the TFR revised.
- d. English language grammatical errors have been made in the TFR draft framework. These are statements of error and statements in error.
  - i. Location of TFR grammatical errors: Appendix C (Lines 1489-1492, 1506-1507, 1519-1520, 1564-1566, 1609-1610)
    1. References refuting CMF TFR error: These errors consist of using a plural pronoun to refer to a singular person/thing/idea. This is incorrect usage in the English language and is a grammatical error ([Singular and plural pronoun use](#)). As an official government document, all grammatical errors in the TFR draft framework must be corrected and revised. Instructional materials, according to Ed Code, should be objective
- e. The TFR framework may not recommend or promote items that are in or would cause Districts, students, textbook publishers, governing boards, or teachers to come into conflict with the laws of the State of CA or with provisions of the US or CA Constitution; these would be statements in error. Here are the various state laws and US and similar CA Constitutional provisions that we believe the TFR framework may cause Districts, students, governing boards, textbook publishers, or teachers to come into conflict with via its content and recommendations and cause legal issues for the same:
  - i. The TFR includes discussion of and promotes the tenets of Critical Race Theory (CRT), which is a contested political and legal theory. These core tenets of CRT can be seen in the TFR with terms and concepts used such as: 'systemic racism',



‘systemic inequities’, and ‘marginalized groups’ and more. Promoting the tenets of Critical Race Theory in the TFR conflicts with EDC 6044 (a) and (b). CRT itself is derived from Marxism, and some of its core tenets reflect adversely upon people of one skin color. Thus the TFR promoting districts and teachers to teach tenets of CRT and suggesting that instructional materials be developed on the basis of the TFR may conflict with the following: EDC 6044 (a) and (b), EDC 60045 (a) and (b), EDC 60042, EDC 60040, EDC 51501, EDC 51500, EDC 51530, CIV 526(a), EDC 220, 41 USC 1981, GOV 11135, First Amendment and Fourteenth Amendment to the US Constitution, and similar provisions in the CA Constitution, including, but not limited to Prop 209 provisions..

- ii. The TFR includes discussion of and promotes a pedagogical theory called ‘Culturally Relevant Teaching’, which is derived from Marxism, a contested theory, and which also includes core tenets of Critical Race Theory, another contested theory. Culturally Relevant Teaching includes a requirement that students raise a ‘critical consciousness’ (See CDE page on Culturally Relevant Teaching) and focus on and study ‘systemic inequities’ and on ‘overturning the status quo’. The TFR promoting districts and teachers to teach tenets of CRT and Culturally Relevant Teaching and suggesting that instructional materials be developed on the basis of the TFR may conflict with the following: EDC 6044 (a) and (b), EDC 60045 (a) and (b), EDC 60042, EDC 60040, EDC 51501, EDC 51500, EDC 51530, CIV 526(a), EDC 220, 41 USC 1981, and GOV 11135, First Amendment and Fourteenth Amendment to the US Constitution, and similar provisions in the CA Constitution, including, but not limited to Prop 209 provisions..
- iii. The TFR includes reference to ‘non-binary’ person(s). This promotion of gender Ideology and attempts to compel students or teachers to repeat these gender ideology claims conflict with the establishment clause and conscience protections of the First Amendment, as well as equal protection provisions of the Fourteenth Amendment to the US Constitution, and similar provisions in the CA Constitution.
- iv. The CMF TFR proclaims that its goal (Overview, page 1) is to ensure ‘equity’ and excellence in math learning. The TFR’s glossary defines equity as ‘fairness, not sameness’, but does not define what it means by ‘fairness’ or ‘sameness’. It points to (Rochelle) Gutierrez (2012), to explain its use of ‘equity’ using her rubric - the four dimensions of equity in math education found in the following citation, Gutierrez (2012), which refers to her paper, “Context Matters, How should we conceptualize equity in mathematics education?”. In this paper, Ms. Gutierrez outlines the four dimensions, of which at least two of the four dimensions of equity in math education use a Marxist framework. For example, she states on page 20 of “Context Matters...” that “...it is not enough to call it equity if mathematics as a field and/or our relationships on this planet do not change. As such, a final piece of equity involves power. The Power dimension

takes up issues of social transformation at many levels. ” According to the CDE, the purpose of curriculum frameworks is to implement the state standards. Incorporating a marxist framework into a math curriculum framework that districts may adopt and teachers may use to teach and textbook publishers may use to provide content is in conflict with EDC 51530, as well as EDC 6044 (a) and (b), EDC 60045 (a) and (b), EDC 60042, EDC 60040, EDC 51501, EDC 51500, EDC 51530, CIV 526(a), EDC 220, 41 USC 1981, and GOV 11135, First Amendment and Fourteenth Amendment to the US Constitution, and similar provisions in the CA Constitution, including, but not limited to Prop 209 provisions.

- v. ‘Teaching toward Social Justice’, a section within the TFR, may also similarly be in conflict with: EDC 6044 (a) and (b), EDC 60045 (a) and (b), EDC 60042, EDC 60040, EDC 51501, EDC 51500, EDC 51530, CIV 526(a), EDC 220, 41 USC 1981, and GOV 11135, First Amendment and Fourteenth Amendment to the US Constitution, and similar provisions in the CA Constitution, including, but not limited to Prop 209 provisions.
- vi. The TFR recommends curricular guidance that may lead Districts and Governing Boards and teachers to violate CA Ed Code laws, including, but not limited to EDC 51224.7, EDC 51228.2, and EDC 51224.5. These TFR recommendations that would bring districts into conflict with existing law or Constitutional provisions should be removed.
- vii. All TFR recommendations that may lead to conflict for Districts, Governing Boards, teachers, students and/or textbook publishers with existing law and Constitutional provisions should be removed.

## 2. Objection to specific items of content:

- a. Objection to statements that are made in the TFR as though they are accepted fact, when they are not accepted fact, and without the TFR providing any factual or supporting evidence for the statements made. Such statements in the TFR, without such supporting evidence, must be considered statements of opinion, and should be removed. It appears that in many cases, the TFR is proposing a math curriculum on the basis of guidance via unsupported statements of opinion. All statements, made without support or evidence, should be removed from the TFR. Some examples of these types of unsupported statements are:
  - i. Ch. 1 ( Lines 203-205 and Lines 207-209). In these lines, the TFR claims that US relative underperformance to other countries in the PISA test is due to a number of factors, but provides no actual support for the statements made, or provides any causality or correlation in the statements; instead, the TFR seems rather to promote a preferred agenda, one of equally funded school ‘systems’, and heterogeneously grouped classrooms within those ‘systems’, without providing any linked evidence of student benefit for these assertions, and without addressing any countervailing evidence. Of note, as one example, the TFR does not provide any data on the relative country expenditures on

education, which might raise questions about the TFR's preferred agenda and the reasons for US PISA underperformance.

- ii. Ch. 1 (Lines 258-259) implies that there are 'structural barriers' to mathematics success for (certain) student groups, without providing any evidence as such of these 'structural barriers.'
- iii. Ch. 1 (Lines 255-256) implies that educators do not recognize and believe that all student groups are 'capable of achieving mathematical excellence', without providing any evidence of such. These are statements unsupported by fact or evidence in the TFR content in the identified chapter and lines.
- iv. Ch. 1 (Lines 265-266) states: "Access to an engaging and humanizing education — a socio-cultural human endeavor — is a universal right," without providing any definition or explanation of the terms involved, or what is meant by 'access', or 'humanizing' or 'universal right.' No explanation or any evidence is provided that 'access' to a certain type of education, or to any type or level of education, is a 'universal right', whatever that may mean, or how or by whom this 'universal right' is to be provided, at what cost, where, and in what way. These statements have no supporting evidence, and should be considered statements of opinion, which should be removed from the TFR.
- v. Ch 9 (Lines 206-214) states: "In keeping with these approaches....the National Council of Teachers of Mathematics (NCTM) strongly advocates for creating a system of middle school mathematics courses that will 'dismantle inequitable structures,' including the 'practice of ability grouping and tracking students into qualitatively different courses' (NCTM 2020). NCTM has argued that if the US is to regain its lost ground in mathematics, districts and schools must confront the structural inequities of tracking and ability grouping that restrict most students from accessing higher level mathematics and strengthen efforts to support all students in learning a common, rigorous curriculum." The TFR provides no evidence or support for these assertions of the NCTM, which it repeats, seemingly endorsing them. The NCTM's assertion that tracking and ability grouping represent 'structural inequities' is unexplained and undefined and unsupported by either the NCTM or the TFR in the TFR, but seems to be proffered as accepted fact, when it is not accepted fact. The TFR does not define what is meant by 'structural inequities', and does not explain how detracking and ability grouping would qualify as a 'structural inequity, or provide any support for this assertion.' These unsupported statements should be removed from the TFR.
- vi. Ch. 4 (Lines 159-159, 164-169) states: "The ability to reason is also a foundational skill for understanding the impact of stereotypes."..... "There are, however, many situations in which humans are poorly served by such generalizations, especially those that lead to inequities or the unjust treatment of people based on characteristics that call forth internalized stories about expected capacities, motivation, behavior, or background. Such stories are often

emotional, based on little evidence, and socially buttressed. Action based on these stories do great harm to school communities and individual students.” The TFR does not explain what these ‘generalizations’ are that lead to inequities, or what ‘inequities’ are or what the TFR is referring to; what the TFR means by ‘unjust’, and the TFR does not provide any support for this rather sweeping statement that discourages ‘generalizations’ or ‘generalizing’, which the TFR links to both stereotypes and using ‘the ability to reason.’ These unsupported statements in the TFR should be removed, as without support, they are no more than opinion.

- vii. The above are only a small sample of the many, many unsupported statements made in the TFR. These unsupported statements give the TFR the semblance of a political, ideological tract rather than that of the math curriculum framework document it is supposed to be. All unsupported statements should be removed from the TFR.
- b. Object to the TFR injecting political, ideological, and faith based belief system content into a state math curriculum framework (See It injects Politics into the Math Curriculum at savemath.net). As a California State government document meant to guide government run public schools, this may violate a number of existing CA state laws and CA and US Constitutional provisions as discussed above.
  - i. Faith based belief system content: The TFR announces the following, “Note to reader: The use of the non-binary, singular pronouns they, them, their, theirs, themselves, and themselves in this framework is intentional.” (Ch. 1 Lines 29-30) In addition to this notice, the TFR incorporates reference to the ‘non-binary’ gender identification by making incorrect grammatical usage of plural pronouns in referring to singular persons at the following locations in the TFR:
    - 1. Refutation: A belief that a person/student can identify as gender ‘non-binary,’ rather than as identifying as one of the two existing biological sexes, and identifying separately from that of the person’s own biological sex, is a subjective, faith based belief, rather than a belief or a conclusion based on objective fact, science, or biology. As a subjective, faith based belief about gender, may be in conflict with the faith based beliefs about gender and biological sex of other faiths that are held by other public school students and their families. The TFR draft framework seeks to normalize and propagate the gender ‘non-binary,’ subjective, faith based belief, in a State math curriculum framework, by using grammatically incorrect pronouns in the TFR, and in CMF TFR vignettes, referring to a singular person by a plural pronoun. This occurs at these locations in the TFR: {Appendix C (Lines 1489-1492, 1506-1507, 1519-1520, 1564-1566, 1609-1610)}.
    - 2. In normalizing and propagating this faith based belief, the CA State CMF TFR draft framework seeks to have students participate in and conform to a state-mandated belief system/ ideology, consisting of subjective,

faith based beliefs that may be different than those of the students' own, their families' beliefs, or that of the teachers.. This may violate the establishment clause and free speech and religion provisions of the First Amendment to the US Constitution and similar provisions in the CA Constitution. All incorrect English language grammatical usage within the TFR draft framework should be corrected and revised and all gender ideology references should be removed. Propagating propaganda is also prohibited in CA Ed Code (EDC 6044 (b))

3. Purpose of a curriculum framework according to the California Dept. of Education (CDE): According to the CDE, curriculum frameworks are meant to: "...provide guidance for implementing the standards adopted by the State Board of Education."  
(<https://www.cde.ca.gov/ci/cr/cf/allfwks.asp>) Curriculum frameworks are not meant to instill and indoctrinate political agendas, political ideologies, propaganda, and/or religious, faith based beliefs. They are not meant to encourage student political activism for favored political agendas. They are meant to "...provide guidance for implementing the standards adopted by the State Board of Education." Do California Common Core State Math Standards include reference to faith based beliefs about gender 'non-binary' identification and gender ideology, or other faith based or politically tinged beliefs? No they do not. Please remove all reference to and promotion of faith based beliefs and gender and political ideology/propaganda in the TFR draft framework.

- c. Objection to the inclusion and promotion of 'Complex Instruction' (CI) in the CMF TFR draft framework (Ch. 12 Line 247-270).
  - i. Explanation of CI: "Complex Instruction is a pedagogical approach that centers upon three principles for creating equity in heterogeneous classrooms through group work," according to "The derailing impact of content standards —an equity focused district held back by narrow mathematics," LaMar, Leshin, Boaler, 2020 (pg. 3). Complex Instruction is also based on a Marxist framework with an ill defined 'equity' goal. The three principles of CI include:
    1. students serving as academic and linguistic resources for one another
    2. working together to complete tasks
    3. the implementation of multi-dimensional, 'group worthy' tasks ("The derailing impact.." pg.3).
  - ii. CI: Group work favored over Individual work: CI favors group work over individual student work, as CI purports to be 'creating equity in heterogeneous classrooms through group work.' ("The derailing impact..."(pg.3). *One CI group work norm is described as 'no one is finished until everyone (in the group) is finished'* (pg.7 of "The derailing impact"); "...this group work norm was enforced through the use of 'checkpoints' – a particular place in the mathematics

problems when students were meant to call the teacher over to check on their work. *If any group member had not completed all of the work leading up to the checkpoint or not reached the same answers, the group would not be approved to move on until the group had helped all students reach the same place.*” (pg.7 of “The derailing impact”). CI’s insistence on group work being favored over individual students may violate district/state grading or credit policy, and state laws and/or district policies that apply to individual students receiving credit for their own work rather than being dependent upon the work for credit or grading of students other than themselves.

- iii. Complex Instruction (CI) holds students back: In the above description of CI, CI *implementation* in the math classroom means *holding students back*, limiting their advancement based upon other students’ performance, while also placing a responsibility upon students for their peers, rather than placing that responsibility upon teachers, who are ostensibly compensated to perform these tasks. Complex Instruction implementation seems clearly at odds with individual student math achievement and advancement. The goal of CI, ‘creating equity,’ should not come at the expense of individual student math achievement and advancement.
- iv. CI’s poor results: The results of CI implementation in SFUSD’s math program: Since implementation of SFUSD’s math program (Aug. 2014), which utilizes Complex Instruction as a pedagogical approach. (SFUSD use of CI), grade 11 SFUSD student math achievement levels declined 5% from 2016-17 to 2018-19. (See The Research Doesn’t Add Up, ‘SFUSD Math Program’, at savemath.net) (Also, see SFUSD CAASPP grade 11 results, from 2016-17 to 2018-19 at <https://caaspp-elpac.cde.ca.gov/caaspp/>). Grade 11 SFUSD Asian student math achievement declined 2% from 2016-17 to 2018-19; as did that of Whites, Latinos, ELLs, and Economically disadvantaged students, by 7%, 3%, 11%, and 8% respectively. Only black students had a slight gain of 2.5% from 2016-17 to 2018-19 (Source: <https://caaspp-elpac.cde.ca.gov/caaspp/>). SFUSD’s math program mirrors the CMF TFR’s proposals (See The Research Doesn’t Add Up, ‘SFUSD Math Program’, at savemath.net). There is little evidence that CI produces any student academic benefit; in fact, there is more clear evidence (SFUSD) that CI actually decreases student academic achievement.
- v. Purpose of a curriculum framework according to the California Dept. of Education (CDE): According to the CDE, curriculum frameworks are meant to: “...provide guidance for implementing the standards adopted by the State Board of Education.” (<https://www.cde.ca.gov/ci/cr/cf/allfwks.asp>) According to the CDE’s definition, curriculum frameworks are not meant to instill and indoctrinate political agendas, create ‘equity’, or favor group work over individual student math achievement and advancement. Please remove all reference to and promotion of Complex Instruction in the TFR draft framework.

- vi. CI may bring Districts into conflict with existing state law and US and CA Constitutional provisions as outlined above. All reference to Complex Instruction in the TFR should be removed.
- d. Objection to the inclusion and promotion of Culturally Relevant Pedagogy in the CMF TFR:
  - i. Culturally Relevant Pedagogy (CRP) is also known as Culturally Responsive Teaching (CRT), and Culturally Relevant Teaching and Culturally Relevant Education (CRE). Culturally Sustaining Pedagogy is another related strand of thought.
  - ii. What is Culturally Relevant Teaching/Pedagogy/Education?
    - 1. Aronson and Laughter explain that “...two primary strands of Culturally Relevant Education emerged in educational research: one focused on teacher practice, Culturally Responsive (Relevant) Teaching, as embodied in the work of Geneva Gay, and the second, focused on teacher posture and paradigm, as expressed in the work of Gloria Ladson-Billings on Culturally Relevant Pedagogy”. (Aronson and Laughter, “The Theory and Practice of Culturally Relevant Education: A Synthesis of Research Across Content Areas. 2016. Page 163)
    - 2. According to Aronson and Laughter, the ultimate goal of Culturally Relevant Education is to combat oppression by enabling all groups to have an equitable portion of society’s resources (Bell, 2007; Dover, 2013) (Aronson and Laughter, “The Theory and Practice of Culturally Relevant Education: A Synthesis of research Across Content Areas. 2016. Page 167). Another term for all groups that have an equitable portion of society’s resources is socialism, which stems from Marxism.
    - 3. Gloria Ladson-Billings explained that Culturally Relevant Pedagogy is a “pedagogy of opposition not unlike **critical pedagogy** but specifically committed to collective, not merely individual, empowerment.” (pg.160 Aronson & Laughter referencing “But that’s just good teaching, the case for culturally relevant pedagogy” Ladson-Billings (1995))
    - 4. **Critical pedagogy**, which according to Gloria Ladson-Billings Culturally Relevant Pedagogy is not unlike (See point 3. above), “is a philosophy of education and social movement that developed and applied concepts from critical theory and related traditions to the field of education and the study of culture.<sup>[1]</sup>” (See Critical theory: Marxist-inspired movement in social and political philosophy originally associated with the work of the Frankfurt School. <https://www.britannica.com/topic/critical-theory>) “It insists that issues of social justice and democracy are not distinct from acts of teaching and learning. The goal of **critical pedagogy** is emancipation from oppression through an awakening of the critical consciousness, based on the Portuguese term *conscientização*. “(See [https://en.wikipedia.org/wiki/Critical\\_pedagogy](https://en.wikipedia.org/wiki/Critical_pedagogy))

5. According to James Lindsay, “Fancy buzzwords proliferate around the fight in education, especially now that Critical Race Theory has been exposed so thoroughly (as Race Marxism).” Culturally relevant teaching (CRT) is one of these, pioneered first in 1995 by Marxist and Critical-Race education activist Gloria Ladson-Billings. In that year, Ladson-Billings wrote both “Toward a Critical Race Theory of Education” and “Toward a Theory of Culturally Relevant Pedagogy.” (New Discourses, Critical Education: What is Culturally Relevant Pedagogy? James Lindsay <https://newdiscourses.com/2022/02/critical-education-what-is-culturally-relevant-pedagogy/>)
- iii. Evidence of Student academic benefit: Culturally Relevant Education:
  1. According to Aronson and Laughter’s literature review of Culturally Relevant Education studies and articles, and a review of the articles and studies cited in Aronson and Laughter literature review, **there is little evidence of direct student academic outcome benefit** from Culturally Relevant Pedagogy. (Aronson and Laughter, “The Theory and Practice of Culturally Relevant Education: A Synthesis of Research Across Content Areas. 2016.)
- iv. Culturally Relevant Pedagogy in the CMF TFR:
  1. According to the SFR, the glossary of the SFR, Culturally Relevant Pedagogy rests on three criteria, or components: (a) students must experience academic success, (b) students must develop and/or maintain cultural competence, and (c) **students must develop a critical consciousness through which they challenge the status quo of the current social order** (Ladson-Billings, 1995b). (Ch. 14 SFR Line 105-109)
- v. Culturally Relevant Pedagogy at the California Dept. of Education:
  1. According to the California Dept. of Education, which has a page on its website devoted to Culturally Relevant Pedagogy, **all three components (of Culturally Relevant Pedagogy), which includes students developing a critical consciousness, need to be utilized.** <https://www.cde.ca.gov/pd/ee/culturalrelevantpedagogy.asp>
- vi. What is a critical consciousness? Why must public school ‘students develop a critical consciousness through which they challenge the status quo of the current social order’? (SFR Ch. 14 Line 105-109)
  1. **Critical consciousness, conscientization, or *conscientização*** in Portuguese, is a popular education and social concept developed by Brazilian pedagogue and educational theorist **Paulo Freire**, grounded in **post-Marxist critical theory** (Critical theory: Marxist-inspired movement in social and political philosophy originally associated with the work of the Frankfurt School. <https://www.britannica.com/topic/critical-theory>).



2. **Paulo Freire** defines critical consciousness as the ability to intervene in reality in order to change it. **Freire's notion of critical consciousness is, in part, a type of political consciousness.**
  3. "In that sense, a critical consciousness, sometimes referred to as "critical literacy" or "social justice literacy" now (see examples below), refers essentially to assuming that society is constructed by systems of power that manifest dominance and oppression mostly in terms of "intersecting" demographic group identities. The slang term for this specific type of critical consciousness, arising since the Black Lives Matter movement propelled it to a widespread meme, is "wokeness." (<https://newdiscourses.com/tftw-critical-consciousness/> James Lindsay)
  4. Why must students "...develop a critical consciousness through which they challenge the status quo of the current social order," (SFR Ch. 14 Line 105-109) according to Culturally Relevant Pedagogy? **The purpose seems to be to guide public school students to become 'woke' political activists.**
  5. Culturally Relevant Teaching (and its similarly situated brethren, Culturally Responsive Teaching, etc.) may bring Districts and teachers and students into conflict with existing law and US and CA Constitutional provisions. All reference to Culturally Relevant Teaching should be removed from the TFR.
- vii. Objection to the inclusion of fair wage - Appendix C (Lines 1795-1800) - this vignette can be characterized as only presenting one point of view, which can be termed as propaganda - and is prohibited by EDC 6044 (b). Please remove it.
- viii. Note to the State Board of Education regarding Culturally Relevant Pedagogy in the CMF TFR:
1. Ed Code 51530: Advocacy or Teaching of Communism
    - a. EDC 51530 says: 'No teacher giving instruction in any school..shall advocate or teach communism with the intent to indoctrinate or to inculcate in the mind of any pupil a preference for communism.' It says: 'Rather, the Legislature intends to prevent the advocacy of, or inculcation and indoctrination into, communism as is hereinafter defined, for the purpose of undermining patriotism for, and the belief in, the government of the United States and of this state.' And it says: 'For the purposes of this section, communism is a political theory that the presently existing form of government of the United States or of this state should be changed, by force, violence, or other unconstitutional means, to a totalitarian dictatorship which is based on the principles of communism as expounded by Marx, Lenin, and Stalin.

2. The establishment clause of the US Constitution - on the establishment of faith based belief systems in public schools:
  - a. The First Amendment's Establishment Clause prohibits the government from making any law "respecting an establishment of religion."
- ix. Purpose of a curriculum framework according to the California Dept. of Education (CDE): According to the CDE, curriculum frameworks are meant to: "...provide guidance for implementing the standards adopted by the State Board of Education." (<https://www.cde.ca.gov/ci/cr/cf/allfwks.asp>) According to the CDE's definition, curriculum frameworks are not meant to instill and/or indoctrinate political agendas, such as 'challenging the status quo of the current social order', 'create equity', 'teach for social justice,' or incorporate pedagogies that suggest a student must develop a politically charged 'critical consciousness.' Please remove all reference to and promotion of Culturally Relevant/Responsive Teaching, Culturally Relevant Pedagogy, and Culturally Relevant Education and Culturally Sustaining Pedagogy from the TFR draft framework.
3. Comments relating to any other factor of which the SBE should be aware before making a decision to accept the recommendation of the Commission.
  - a. The SFUSD math program, which math program components mirror the CMF TFR proposals, has had declining student math achievement: The SFUSD math program model (implemented Aug. 2014) (<https://www.sfusdmath.org/>) mirrors the CMF TFR's proposals; it *detracks* math classes (K through 10th grade), it *delays* Algebra 1 to grade 9 for all students, and it *decelerates*, by delaying Alg. 1 to grade 9 for all students and by discouraging calculus completion in high school through obstacles placed in that path. SFUSD also employs the group work based teaching approach called 'Complex instruction', ([SFUSD use of CI](#)), which the CMF TFR suggests and promotes, as discussed above.
    - i. Results of the SFUSD Math program - declining student math achievement: Since implementation of the SFUSD math program in Aug. 2014, grade 11 SFUSD student math achievement has declined by 5%. (See The Research Doesn't Add Up, 'SFUSD Math Program', at [savemath.net](http://savemath.net)) (Also, see SFUSD CAASPP grade 11 results, from 2016-17 to 2018-19 at <https://caaspp-elpac.cde.ca.gov/caaspp/>). To break the data down further, grade 11 SFUSD Asian student math achievement declined 2% from 2016-17 to 2018-19; as did that of Whites, Latinos, ELLs, and Economically disadvantaged students, by 7%, 3%, 11%, and 8% respectively. Only black students had a slight gain of 2.5% from 2016-17 to 2018-19 (Source: <https://caaspp-elpac.cde.ca.gov/caaspp/>) (See The Research Doesn't Add Up, 'SFUSD Math Program', at [savemath.net](http://savemath.net)) . While those implementing the SFUSD math program, and those writing the CMF TFR, may have had good intentions, good results do not necessarily follow. Big shifts in California math education are being proposed based upon CMF TFR proposals,

which at SFUSD have led to declining student math achievement. Please reject the CMF TFR and retain the 2013 California Math Framework.

4. A general objection to the adoption of the TFR draft math curriculum framework. The TFR draft framework seems at times more a political tract (See It injects Politics into the Math Curriculum at savemath.net) than a document designed to serve its stated purpose as an evidence based guidepost to assist teachers and publishers to implement the State adopted math content standards (<https://www.cde.ca.gov/ci/ma/cf/>). Available evidence shows that TFR proposals, which were implemented in the SFUSD math program, have led to declining student math achievement and increased inequity (see The Research Doesn't Add Up, 'SFUSD Math Program', at savemath.net). According to SFUSD families, implementation of the SFUSD math program has also introduced new inequities for SFUSD students, as inconvenient and sometimes costly workarounds are required to reach and complete calculus in grade 12 at SFUSD (See (<https://www.familiesforsanfrancisco.com/updates/inequity-in-numbers>) and (<https://www.mathpathsf.com/>)). Based on all of these factors listed above, the TFR draft framework should be rejected and the 2013 Math curriculum framework retained.

Sincerely,

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Please direct any response to the email address above.