

Literature Scan Summary

Culturally Relevant Teacher behaviors/practices	Source
<ul style="list-style-type: none"> • Teachers create/maintain environment conducive to student math development (fine line between spoon feeding and lost at sea) • Teacher solicits student thinking, responds to ideas “meets students where they are” • Teacher classroom invites all students to engage • Students have opportunities to: <ul style="list-style-type: none"> ○ explain, ○ build on another’s ideas, ○ make arguments to contribute to their own development • Students have opportunities to learn and to develop productive mathematical habits of mind. 	(Schoenfeld, 2014)
<ul style="list-style-type: none"> • Teacher values components of the Educultural Wheel <ul style="list-style-type: none"> ○ Relationships ○ Self determination ○ Ethos of care ○ Unity and bonding ○ Beating heart • Teacher values bilingual approach • Teacher creates culturally safe schools: <ul style="list-style-type: none"> ○ Relationship-based classrooms ○ Restorative practices ○ Culture of care 	(A. Macfarlane, Glynn, T., Cavanaugh, T., Bateman, S., 2007)
<ul style="list-style-type: none"> • Create culturally inclusive teaching and assessment programs • Use of holistic and thematic approach to education • Identifying what is meaningful and relevant to students • Use of effective and supportive feedback • Providing opportunities for students to revisit their work • Use of portfolios for assessment • Use of interviewing as a valid form of assessment • Affirmation and validation of ethnic identity • Curricular content emphasis on students cultural heritage 	(Mahuika, 2011)

Original: Standards-based Curricular Renewal Math Cadre members, Kamehameha Schools, 2.19.15
 Expanded by Ho`olaukoa Educational Systems and Strategies, Kamehameha Schools, 4.20.18

<ul style="list-style-type: none"> Teachers set student outcomes based on <ul style="list-style-type: none"> Who they are (personal identity) What they know (knowledge) What they can do (skills) 5 competencies <ul style="list-style-type: none"> Thinking about thinking (various ways, context) Making meaning Relating to others Managing self Participating and contributing Connecting home → school → language Exemplified skills around cosmology, geography, industry and navigation 	(A. H. Macfarlane, Glynn, Grace, Penetito, & Bateman, 2008)
<ul style="list-style-type: none"> Joint productive activity Connect lessons to students lives Engage students with challenging tasks Dialogue over lecture Learn through observation Encourage student decision making 	(Demmert, 2011)
<ul style="list-style-type: none"> Involvement of family and community: <ul style="list-style-type: none"> Collect suggestions on how to support the child/student Integrate family and community in learning experiences Culturally relevant and purposeful, focus on: <ul style="list-style-type: none"> How to give back or help community (kōkua kaiāulu) Care for land (mālama 'āina) Living a balanced life (ola pono) Assessment of knowledge and skill in culturally meaningful ways: <ul style="list-style-type: none"> Hō'ike: demonstrate what was learned as a group or solo performance Create something new/personalized to show learning 	(S. Kana'iaupuni, Ledward, B., 2013)
<ul style="list-style-type: none"> Integrate traditional knowledge with modern disciplines throughout the curriculum Use culture-based materials to enrich the curriculum (Hawn/ stories to teach math) Use traditional/culturally appropriate teaching strategies (project based learning, small group work) Honor and incorporate indigenous "talk story" type sessions Approach teacher as facilitator 	(S. Kana'iaupuni, Kawai'ae'a, K., 2008)

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<ul style="list-style-type: none"> • Provide culturally mediated instruction (curriculum integrated w/ knowledge, language, culture) • Opportunities to observe, practice, and demonstrate skills 	
<ul style="list-style-type: none"> • Utilize students' culture as a vehicle for learning; bridge cultural elements, e.g. music, poetry, to school learning • Engage families as craftsperson-in-residence to serve as sources of learning and to affirm cultural knowledge • Encourage the use of the home language while seeking to build proficiency in "standard" English discourse • Engage the world and others critically; e.g. encouraging the critique of the system of inequitable funding for textbooks 	(Ladson-Billings, 2002)
<ul style="list-style-type: none"> • Culturally responsive teachers are <i>socially and academically empowering</i> by setting high expectations for students with a commitment to every student's success; • Culturally responsive teachers are <i>multidimensional</i> because they engage cultural knowledge, experiences, contributions, and perspectives; • Culturally responsive teachers <i>validate every student's culture</i>, bridging gaps between school and home through diversified instructional strategies and multicultural curricula; • Culturally responsive teachers are <i>socially, emotionally, and politically comprehensive</i> as they seek to educate the whole child; • Culturally responsive teachers are <i>transformative of schools and societies</i> by using students' existing strengths to drive instruction, assessment, and curriculum design; • Culturally responsive teachers are <i>emancipatory and liberating from oppressive educational practices and ideologies</i> as they lift "the veil of presumed absolute authority from conceptions of scholarly truth typically taught in schools." 	(Gay, 2010)
<ul style="list-style-type: none"> • Structure math lessons relating to themes in the students' lives, such as teen pregnancy, perinatal HIV, teen smoking, football and soccer, and saving money 	(Aronson & Laughter, 2016)
<ul style="list-style-type: none"> • Promote more equitable classrooms by helping students explicitly and consciously use mathematics itself as a tool to understand and analyze the injustices in society 	(Gutstein, 2003)
<ul style="list-style-type: none"> • Legitimize students' culture and everyday lives; include students' out-of-school problems in classroom lessons 	(Ensign, 2003)
<ul style="list-style-type: none"> • "Teacher who are sensitive to the cultures of their students pay particular attention to Component 1b (Demonstrating Knowledge of Students). In learning about students' backgrounds, these teachers ensure that they are aware of relevant information about cultural traditions, religious practices, and patterns of interaction that may affect a student's classroom participation. In addition, the teachers ensure that the materials they use (Components 1e and 3c) and the examples they employ (Components 3a and 3c) do not refer to items or traditions unfamiliar to students, or that they explain such materials and examples fully. And they take particular care that in their communication with families (Component 4c), they demonstrate cultural respect." 	(Danielson, 2007)

<ul style="list-style-type: none"> • “Creating, supporting, and sustaining a culture of access and equity require being responsive to students' backgrounds, experiences, cultural perspectives, traditions, and knowledge when designing and implementing a mathematics program and assessing its effectiveness. Acknowledging and addressing factors that contribute to differential outcomes among groups of students are critical to ensuring that all students routinely have opportunities to experience high-quality mathematics instruction, learn challenging mathematics content, and receive the support necessary to be successful. Addressing equity and access includes both ensuring that all students attain mathematics proficiency and increasing the numbers of students from all racial, ethnic, linguistic, gender, and socioeconomic groups who attain the highest levels of mathematics achievement.” 	(NCTM, 2008)
<ul style="list-style-type: none"> • Find relevance in real-world applications through physical, environmental, spiritual and cultural capacities • Celebrate cultural heritage and diversity, honour common values, foster a community of students and educators, encourage global sustainability and catalyze positive change 	(Furuto, 2014)

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