[1], [2], [3]

The University of Arizona

CONTENTS

INTRODUCTION

The þeceÖtz þapɆd pþÚÍɆeþatɆÚÖ Ú´ hɆgheþ educatɆÚÖ ɆÖstɆtutɆÚÖs ĚɆth 2¶ í Úþ mÚþe uÖdeþgþaduate 2ɆspaÖɆc studeÖt eÖþÚÍímeÖtz paþtɆcuÍaþÍĜ ɆÖ the JÚuthĚestz cÚupÍed ĚɆth the peþsɆsteÖt gap ɆÖ 2ɆspaÖɆc studeÖt success ɆÖ JT* < µeÍdsz hɆghÍɆghts a ÖatɆÚÖaÍ Öeed ´Úþ buɆÍdɆÖg aÖd stþeÖgtheÖɆÖg capacɆtĜ tÚ betteþ suppÚþt aÍÍ studeÖts at 2ɆspaÖɆc Jeþę́Ög ɜÖstɆtutɆÚÖs ê2Jɜsìî ThɆs þepÚþt seþęes as aÖ eěecutɆęe summaþĜ Ú´ ÌeĜ þecÚmmeÖdatɆÚÖs that emeþged ´þÚm eětеÖsɆęe aÖaÍĜses Ú´ cþɆtɆcaÍ Öeedsz chaÍÍeÖgesz aÖd ÚppÚþtuÖɆtɆes þeÍated tÚ ɆmpþÚęɆÖg JT* < educatɆÚÖ ɆÖ 2Jɜsî ɜÖputs Ěeþe geÖeþated duþɆÖg a 201ą ĚÚþÌɆÖg cÚÖ´eþeÖce cÚÖęeÖedz ɆÖ paþtz tÚ ɆÖ´Úþm the deęeÍÚpmeÖt Ú´ a 2Jɜ pþÚgþam thþÚugh the =atɆÚÖaÍ JcɆeÖce 0ÚuÖdatɆÚÖ ê=J0ìî The cÚÖ´eþeÖce Ěas ɆÖteÖtɆÚÖaÍÍĜ desɆgÖed tÚ maěɆmɆze ÚppÚþtuÖɆtɆes ´Úþ cÚÍÍabÚþatɆÚÖ amÚÖg studeÖtsz ´acuÍtĜz aÖd admɆÖstþatÚþs ´þÚm bÚth 2ÅĜeaþ aÖd 4ÅĜeaþ 2Jɜsî 0uþtheþ detaɆÍs ÚÖ the desɆgÖz ÚþgaÖɆzatɆÚÖz aÖd paþtɆcɆpaÖts Ú´ the cÚÖ´eþeÖce appeaþ ɆÖ the ɆÖ´ÚgþaphɆc beÍÚĚ aÖd ɆÖ AppeÖdě Aî

REPORT STRUCTURE

J‡ě ma‡Úþ themesz eÖcÚmpass‡Ög 13 cþ‡t‡caÍ ´Úcus aþeasz emeþged ´þÚm Úuþ aÖaÍĜsesî Jubseóue Öt sect‡ÚÖs Ú´ the þepÚþt aþe Úþga Ö‡zed bĜ themez beg‡ÖÖ‡Ög Ě‡th aÖ ‡ÖtþÚduct‡ÚÖ tÚ the theme aÖd ´ÚÍÍÚĚed bĜ cþ‡t‡caÍ ´Úcus aþeas Ě‡th‡Ö that themeî *ach cþ‡t‡caÍ ´Úcus aþea ‡ÖcÍudes ÚÖe Úþ mÚþe sets Ú´ þecÚmmeÖdat‡ÚÖs ´Úþ þeę‡eĚ‡Ög aÖd pþ‡Úþ‡t‡z‡Ög gþaÖt pþÚpÚsaÍs ÚÖ a cÚmpet‡t‡ęez meþ‡t bas‡sî Iat‡ÚÖaÍes ´Úþ each Ú´ Úuþ þecÚmmeÖdat‡ÚÖsz deþ‡ęed

‡Ö´Úþm the deęeÍÚpmeÖt Ú´ the =J0 2J3 GþÚgþamz as gu‡ded bĜ tĚÚ p‡eces Ú´ 201ą Íeg‡sÍat‡ÚÖz the ' ÚÖsÚÍ‡dated AppþÚpþ‡at‡ÚÖ Act aÖd the Ameþ‡caÖ 3ÖÖÚęat‡ÚÖ aÖd ' Úmpet‡t‡ęeÖess Act Ú´ 201ą ëIepÚþt tÚ =J0 *2 Iz 201ąìî Th‡s þepÚþt ‡s ÖÚt ‡ÖteÖded as aÖ ěhaust‡ęe cÚÍÍect‡ÚÖ Ú´ þecÚmmeÖdat‡ÚÖsz but as a summaþĜ Ú´ pþedÚm‡ÖaÖt themes ´Úþ þeadeþs tÚ bu‡Íd upÚÖz Ě‡th atteÖt‡ÚÖ tÚ ‡Öst‡tut‡ÚÖaÍ aÖd þeg‡ÚÖaÍ chaþacteþ‡st‡csz þesÚuþcesz aÖd Öeedsî

Summary of Themes and Critical Focus Areas

The ´ÚÍÍÚĚ‡Ög ma‡Úþ themes aÖd cþ‡t‡caÍ ´Úcus aþeas emeþged ´þÚm Úuþ aÖaÍĜsesî

A , , -A

1. Advising and mentoring systems are haphazard in focus and goals, and lack alignment with student needs
2. Non-academic support systems focused on family and community are key for equitable STEM success, yet severely underdeveloped

, A

3.

7. Culturally Responsive Practices (CRPs), known to enable and sustain academic interest and access for the students HSIs aim to serve, are inconsistently understood and practiced at HSIs
8. P C , E M -
9. CRPs are commonly viewed as tangential to the core academic mission
10. P P I) HI I H H
11. Resources at Research 1 (R1) HSIs are mostly inward-facing and not purposefully shared among co-located institutions and communities
12. Extramurally funded STEM programs are underutilized by the students HSIs seek to serve
13. Retention, persistence, and success are core charges of HSIs and their faculties, not just student responsibilities

Relevant Terms and Usage

3Ö thÉs sectÉÚÖz Ěe descþÉbe Úuþ usage Ú´ seęeþaÍ teþms ÉÖ thÉs þepÚþtî Te þecÚgÖÉze sÚme Ú´ these teþms maĜ be used dÉ´´eþeÖtÍĜ ëeîgîz mÚþe bþÚadÍĜì ÉÖ Útheþ cÚÖteětsz aÖd that þeadeþs maĜ be ´amÉÍÉaþ ĚÉth aÍteþÖate deµÖÉtÉÚÖsî Te dÚ ÖÚt aÉm tÚ pþecÉseÍĜ deµÖe teþms ÉÖ geÖeþaÍÉtĜ Úþ óuestÉÚÖ aÍteþÖate deµÖÉtÉÚÖsz but tÚ Úpeþat ÉÚÖaÍÍĜ descþÉbe theþ usage ÉÖ the cÚÖteět Ú´ thÉs þepÚþt tÚ stþeamÍÉÖe þeadabÉÍÉtĜî TheÖeęeþ appþÚpþÉatez Ěe ÉÖcÍude mÚþe specÉµc ÖÚtes þegaþdÉÖg cÚmmÚÖ aÖd pþeseÖt usez as ĚeÍÍ as pÚteÖtÉaÍ ÉÖteþsectÉÚÖaÍÉtĜ Ú´ teþmsz as appþÚpþÉateî

Advising, Mentoring, and Non-Academic Support Systems

T h£Íe 2£spaÖ£c aÖd ÖÚÖÅtþad£t£ÚÖaÍ studeÖts þegaþd meÖtÚþsh£p aÖd ÖÚÖÅacadem£c suppÚþt sĜstems as ´uÖdameÖtaÍ cÚmpÚÖeÖts ´Úþ access tÚ a susta£ÖabÍe JT* < educat£ÚÖ aÖd cÚÍÍege success £OÚÍtzz 1aÖÖÚÖ &

1.

IMPROVE TIMELINESS AND FREQUENCY OF MENTORING

3Öput suggests meÖtÚþ£Ög seems tÚ happeÖ tÚÚ Íate Úþ ÖÚt at aÍÍz aÖd Ú´teÖ £Ö´þeóueÖtÍĜ eÖÚugh tÚ pþÚę£de £mpact´uÍ suppÚþtî *´´Úþts shÚuÍd ´Úcus ÚÖ pþÚę£d£Ög £ÖteÖt£ÚÖaÍz þeguÍaþ meÖtÚþsh£p ëÖÚt £ust ade£s£Ögì

suppÚþt at cþ£t£caÍ stages Ú´ studeÖts' cÚÍÍege caþeeþsî ' Úmpet£t£ęe pþÚpÚsaÍs maĜ deęeÍÚpz Úþ ÚtheþĚ£se Íeęeþagez ęeþt£caÍÍĜ £Ötegþated meÖtÚþ aÖd peeþÅ

meÖtÚþsh£p ´Úc£z aÖd Ě£th atteÖt£ÚÖ tÚ ´þeóueÖcĜ Ú´

2. **Non-academic support systems focused on family and community are key for equitable STEM success yet severely underdeveloped.** OppÚþtuÖ£t£es aþe Öeeded tÚ ëAì eëteÖd aÖd d£ęeþs£´Ĝ ÖÚÖÅ academ£c suppÚþt sĜstems that £ÖęÚÍęe paþeÖtsz ´am£ÍĜz aÖd cuÍtuþe ë9£Ĝamaz 2011ìz aÖd ë&ì Íeęeþage studeÖts' cÚmmuÖ£tĜÅÚþ£eÖted £Öteþests tÚĚaþds £Ötegþat£Ög JT* < cÚuþses aÖd degþee pþÚgþams Ě£th ÍÚcaÍ Úþ þeg£ÚÖaÍ Öeedsî

ESTABLISH FAMILY-BASED SUPPORT SYSTEMS

3Öputsz paþt£cuÍaþÍĜ uÖdeþgþaduate 2£spaÖ£c studeÖts' cÚmmeÖtsz suggest paþeÖts aÖd ´am£Í£es peþeas£ęeÍĜ ę£eĚ sÚc£Úcuítuþaí d£meÖs£ÚÖs Ú´ a studeÖt's Í£´e ëeîgîz ´am£ÍĜ Úbí£gat£ÚÖsì as at Íeast eóuaí £Ö £mpÚþtaÖce

peþcept£ÚÖs aÖd þeÍated ÚbÍ£gat£ÚÖsz þÚÚted stþÚÖgÍĜ ÚÖ ÍÚÖgÅstaÖd£Ög cuÍtuþaÍ £deÖt£t£es aÖd cÚmmuÖ£tĜ ęaÍuesz staÖd £Ö cÚÖ·£ct Ě£th the pÚss£b£Í£tĜ Ú´ assum£Ög aÖ Ú´teÖ cuÍtuþeÅ´þee JT* < studeÖt £deÖt£tĜz eęeÖ

aÍîz 2012ìî *´´Úþts shÚuÍd ´Úcus ÚÖ þa£s£Ög £Öst£tut£ÚÖaÍ

academ£c þespÚÖs£b£Í£t£es ´Úþ 2£spaÖ£c JT* < studeÖts aÖd cþeat£Ög þÚbust suppÚþt sĜstems that addþess th£s teÖs£ÚÖ spec£µcaÍÍĜ aÖd success´uÍÍĜî *´´Úþts shÚuÍd aísÚ ´Úcus ÚÖ Íeęeþag£Ög stþÚÖg ´am£Í£aÍćcÚmmuÖ£tĜ t£es tÚ þa£se gþeateþ £Öteþest £Ö JT* <î ' Úmpet£t£ęe pþÚpÚsaÍs maĜ descþ£be stþateg£es ´Úþ eÖabÍ£Ög the deęeÍÚpmeÖt Ú´ JT* < £deÖt£t£es that £Ötegþate Ě£thz þatheþ thaÖ chaÍÍeÖgez studeÖts' sÚc£Úcuítuþaí £deÖt£t£esî *ěampÍes Ú´ cÚmpet£t£ęe pþÚpÚsaÍs maĜ £Öcíude eaþÍĜ JT* < þecþu£tmeÖt e´´Úþts Ú´ the ĚhÚÍe ´am£ÍĜ pþ£Úþ tÚ cÚÍÍege adm£ss£ÚÖz aÖd the deęeÍÚpmeÖt Ú´ £ÖÅpeþsÚÖz ę£þtuaÍz Úþ ę£deÚÅbased paþeÖtsÅ´ÚþÅpaþeÖts cÚmmuÖ£t£es £Ö the eaþÍĜ cÚÍÍege Ĝeaþsî

DEVELOP COMMUNITY-BASED STEM IDENTITIES

JtudeÖt paþt£c£paÖts cÍeaþÍĜ £deÖt£µed the pþÚspect Ú´ g£ę£Ög bacÌ tÚ the£þ cÚmmuÖ£tĜ ëeîgîz tþeat£Ög d£seasesz eÖę£þÚÖmeÖtaÍ cÚÖceþÖsì as a paþt£cuÍaþ d£meÖs£ÚÖ Ú´ the£þ peþsÚÖaÍ £deÖt£tĜ aÖd aÖ £mpÚþtaÖt mÚt£atÚþ

STEM Academic Structure and Related Support Systems

Aþtɛcuíatɛ́ÚÖ agþeemeÖts betĚeeÖ 2Å aÖd 4ÅĜeaþ schÚÚÍs aÖd guɛded pathĚaĜ pþÚgþams ë&aɛ́íeĜz 8aggaþs & 8eÖÌɛÖsz 201¶ì e´´ectɛęeíĜ cÚÖtþɛbute tÚ þeducɛÖg tɛmeÅtÚÅdegþee aÖd ɛÖcþeasɛÖg þeteÖtɛÚÖ aÖd degþee cÚmpíetɛÚÖ þatesî ThÚugh ɛÖcþeasɛÖgíĜ Ěɛdespþeadz such ɛÖɛtɛatɛęes aþe ÖÚt ɛÖ píace eęeþĜĚheþeî T heþe theĜ eěɛstz a dÚmɛÖaÖt ´Úcus ÚÖ aþtɛcuíatɛÚÖ agþeemeÖts aÖd guɛded pathĚaĜs as a sÚíutɛÚÖ ´Úþ stþeamíɛÖɛÖg tþaÖsɛtɛÚÖs aÖd ɛÖcþeasɛÖg þeteÖtɛÚÖ ɛs Íɛmɛtɛ́Ög ɛÖ at Íeast tĚÚ ĚaĜsî 0ɛþstz pathĚaĜ pþÚgþams beÖeµt pþɛmaþɛíĜ ´uíÍÅtɛme studeÖts ĚhÚ caÖ adapt tÚ Ú´teÖ þɛgɛd pþÚgþam stþuctuþesz such as atteÖdɛÖg cÍasses Ú´´eþed aÖd desɛgÖed Ěɛth tþadɛtɛÚÖaí ´uíÍÅ tɛme studeÖts' aęaɛ́labɛ́ɛtĜ ɛÖ mɛÖdî JecÚÖdz bÚth agþeemeÖts aÖd guɛded pathĚaĜs aþe tĜpɛcaÍíĜ bÍɛÖd tÚ the heɛghteÖed cÚgÖɛtɛęe academɛc demaÖds studeÖts eěpeþɛeÖce a´teþ tþaÖs´eþ ëeîgîz gþeateþ þɛgÚþz pþÚbÍem sÚÍęɛÖgz aÖd cÚÖceptuaÍ þeasÚÖɛÖg abɛ́Íɛtɛes eěpectatɛÚÖsìz paþtɛcuÍaþíĜ ɛÖ mathematɛcs aÖd óuaÖtɛtatɛęe JT* < cÚuþsesî AíthÚugh the studeÖts 2J℈s seeÌ tÚ seþęe maĜ haęe geÖuɛÖe aÖd sustaɛÖed ɛÖteþest ɛÖ JT* < duþɛÖg cÚÍíegez chaÍíeÖges assÚcɛated Ěɛth theɛþ abɛ́ÍɛtĜ tÚ pþÚgþessɛęeíĜ succeed ɛÖ theɛþ seóueÖcɛÖg Ú´ math cÚuþses teÖds tÚ þeduce þeteÖtɛÚÖ ĚɛthɛÖ JT* < maɛ́Úþs cÚÖsɛdeþabÍĜî

4

ÚÖ ₹Öc þeas₹Ög aęa₹Íab₹Í₹tĜ aÖd access tÚ academ₹c
suppÚþt sĜstemsz bÚth Úuts₹de the cÍass þÚÚm ë eîgîz
suppÍemeÖtaÍ ₹Östþuct₹ÚÖz taþgeted tutÚþ₹Ögì aÖd ₹Ös₹de

Evidence Based Pedagogies

A ´astÅgþÚĔ£Ög bÚdĜ Ú´ Í£teþatuþe has shÚĔÖ *ę£deÖce &ased GedagÚg£es ë*&Gsì haęe a s£gÖ£µcaÖt pÚs£t£ęe e´´ect ÚÖ JT*< Íeaþ£Ög aÖd maĜ be paþt£cuÍaþÍĜ Ěeíí su£ted ´Úþ £mpþÚę£Ög eÖgagemeÖtz seÍ´Åe´µcacĜz peþ´Úþmaöcez aÖd degþee atta£ÖmeÖt amÚÖg ethÖ£c m£ÖÚþ£t£es ë*ddĜ & 2ÚgaÖz 2014Ą <uÍÖ£ěz SaÖdegþ£´t & Ia£z 201Ćìî The £mpÍemeÖtat£ÚÖ Ú´ *&Gs £sz hÚĔeęeþz ´a£þÍĜ ÖÚÖÅuÖ£´Úþm acþÚss þeg£ÚÖsz £Öst£tut£ÚÖ tĜpesz aÖd eęeÖ £Öst£tut£ÚÖaÍ uÖ£ts ëJta£Ös et aÍîz 2018ìî 0uþtheþz *&Gs aþe Ú´teÖ pþact£ced Úþ þe£ected based ÚÖ teach£Ög tþad£t£ÚÖz ´acuÍtĜ pþe´eþeÖcez Úþ ´acuÍtĜ þaÖÌz þatheþ thaÖ eę£deÖce Ú´ successî Th£s uÖdeþm£Öes pÚss£b£Í£t£es ´Úþ scaÍ£Ög *&Gs Ě£th£Ö aÖd beĜÚÖd JT*< d£sc£pÍ£Öes aÖd detþacts ´þÚm óuaÍ£tĜ £mpÍemeÖtat£ÚÖz Íead£Ög tÚ cÍassþÚÚm eěpeþ£eÖces that aþe h£ghÍĜ £Öteþact£ęez Ĝet £ÖcÚheþeÖt aÖd £Öe´´ect£ęe ´Úþ studeÖt ÍeaþÖ£ÖgÎ 2J℁s aþe thus uÖ£óueÍĜ pÚs£t£ÚÖed tÚ taÌe a Íeadeþsh£p þÚÍe £Ö £mpþÚę£Ög aÖd scaÍ£Ög the £mpÍemeÖtat£ÚÖ Ú´ *&Gs acþÚss muÍt£pÍe Íeęeísz Ě£th a paþt£cuÍaþ ´Úcus ÚÖ eÖhaÖc£Ög the academ£c eěpeþ£eÖces Ú´ the studeÖts theĜ seeÌ tÚ seþęeî

6. Where diverse EBPs are deployed in good numbers, scalability is behind. OppÚþtuÖ£t£es aþe Öeeded tÚ eÍeęate £Östɛtut£ÚÖaÍ ÌÖÚĚÍedge abÚut eě£st£Ög pþÚ£ects aÖd scaÍe them acþÚss d£sc£pÍ£Öes aÖd Ě£th£Ö academ£c uÖ£tsz £ÖęÚÍę£Ög ´acuÍtĜ Ě£th d£´eþeÖt teach£Ög ph£ÍUsÚph£esz bacÌgþÚuÖdsz aÖd þaÖÌsî

RECOMMENDATIONS

ELEVATE KNOWLEDGE ABOUT LOCALLY AVAILABLE EBP-BASED INITIATIVES AMONG FACULTY AND STUDENTS

At £Östɛtut£ÚÖs Ě£th a s£gÖ£µcaÖt Öumbeþ Ú´ eětþamuþaÍÍĜÅ´uÖded *&G £Ö£t£at£ęes ětĜp£caÍÍĜ 4ÅĜeaþz þatheþ thaÖ 2ÅĜeaþ 2J3sìz pþÚ£ects teÖd tÚ be s£ÍÚed Ě£th£Ö £Öd£ę£duaÍ academ£c uÖ£tsz Íem£t£Ög £Öst£tut£ÚÖaÍ ÌÖÚĚÍedge abÚutz studeÖt access tÚz aÖd ´acuÍtĜ paþt£c£pat£ÚÖ £Ö *&G £Ö£t£at£ęesî *´´Úþts shÚuÍd a£m at ceÖtþaÍ£z£Ög access tÚ aÖd ÌÖÚĚÍedge abÚut *&GÅ based cÚuþses aÖd pþÚgþams ´þÚm ÚÖe Úþ mÚþe ÍÚcaÍ £Öst£tut£ÚÖsî ' Úmpet£t£ęe pþÚpÚsaÍs Ě£ÍÍ tacÌÍe the cþeat£ÚÖ Ú´ £Öst£tut£ÚÖaÍ þesÚuþce hubs Ú´ aęa£ÍabÍe *&G £Ö£t£at£ęesz seaþchabÍe bĜ studeÖts aÖd ´acuÍtĜz Ě£th£Ö aÖd acþÚss schÚÚÍsî *&G þesÚuþce hubs Ě£ÍÍ be Ěeíí £Ötegþated Ě£th JT*< academ£c þeóu£pemeÖts aÖd Ě£ÍÍ ÚutÍ£Öe £ÖceÖt£ęes ´Úþ paþt£c£pat£ÚÖ £Ö *&G Ú´´ep£Ögs ´Úþ bÚth studeÖts aÖd ´acuÍtĜî ' Úmpet£t£ęe pþÚpÚsaÍs that spec£µcaÍÍĜ £ÖceÖt£ęze paþt£c£pat£ÚÖ £Ö *&Gåþ£ch Ú´´ep£Ögs bĜ studeÖt pÚpuÍat£ÚÖs 2J3s seeÌ tÚ seþęe ësee aísÚ 0Úcus Aþeas × aÖd 10 Ú´ th£s þepÚþtìî

SCALE EBPs ACROSS AND WITHIN DISCIPLINES

*´´Úþts shÚuÍd a£m tÚ scaÍe pþÚm£s£Ög *&G £Ö£t£at£ęes hÚþ£zÚÖtaÍÍĜ acþÚss d£sc£pÍ£Öes aÖdćÚþ ęeþt£caÍÍĜ acþÚss d£ęeþse ´acuÍtĜ þaÖÌs aÖd bacÌgþÚuÖdsî ' Úmpet£t£ęe scaÍab£Í£tĜ Ú´ the pþÚ£ect aÖd addþess hÚĚ the pþÚ£ect Ě£ÍÍ bþÚadeÖ ´acuÍtĜ paþt£c£pat£ÚÖ beĜÚÖd gþÚups ĚhÚ aþe aÍþeadĜ stþÚÖg adęÚcates Ú´ *&Gsî

DEEPEN KNOWLEDGE ABOUT SYSTEMIC IMPACT OF EBPs AT HSIs

*´´Úþts shÚuÍd a£m tÚ deepeÖ £Öst£tut£ÚÖaÍ ÌÖÚĚÍedge Ú´ the cÚÍÍect£ęe success Ú´ *&GÅbased pþÚ£ects £Ö seþę£Ög 2£spaÖ£c studeÖtsz Útheþ UI< studeÖtsz aÖd ÖÚÖÅtþad£t£ÚÖaÍ studeÖts spec£µcaÍÍĜ Ě£th£Ö the Íaþgeþ studeÖt bÚdĜî ' Úmpet£t£ęe pþÚpÚsaÍs maĜ uÖdeþtaÌe e´µcacĜ aÖd e´´ect£ęeÖess þeseaþch that caÖ chaþacteþ£ze Ěhat £t meaÖs tÚ Íeęeþage *&Gs tÚ betteþ seþęe 2£spaÖ£c studeÖts Ě£th£Ö the Íaþgeþ studeÖt pÚpuÍat£ÚÖ ë*aþÍe et aÍîz 2013Ą JtaÖs & S£cÌþeĜz 201ąìî 0Úþ eěampÍez pþÚ£ects maĜ addþess hÚĚ the scÚpe Ú´ the þeseaþch þepþeseÖts £Öst£tut£ÚÖaÍÅÍeęeÍ þeaÍ£t£esz hÚĚ data aþe tÚ be made aęa£ÍabÍe ´Úþ ´uþtheþ þecÚmmeÖdat£ÚÖs ÚÖ þÚbust *&Gs that cÚÖcÍus£ęeÍĜ seþęe 2£spaÖ£c studeÖtsî

Equity, Diversity, and Culturally Responsive Practices

The ĚÚþds øseþę£Ögù aÖd ø2£spaÖ£cù ceÖtþaÍÍĜ chaþacteþ£ze the teþm ø2£spaÖ£cÅJeþę£Ög ȝÖst£tut£ÚÖ ë2Jȝìùz Ĝet cuÍtuþe £s Ú´teÖ Úęeþ͡ÍÚÚÌed ë£îeîz JT* < £s þegaþded as cuÍtuþeÅ£ÖdepeÖdeÖtì aÖd ' uÍtuþaÍÍĜ IespÚÖs£ęe Gþact£ces ë ' IGsì aþe Ú´teÖ m£suÖdeþstÚÚd ëeîgîz theĜ aþe ę£eĚed £Ö teþms Ú´ cuÍtuþaÍ aþt£´actsz þatheþ thaÖ ęaÍues aÖd £deÖt£tĜì £Ö JT* < pþact£t£ÚÖeþs' d£scÚuþse at 2Jȝs ë1aþc£az 201ąaìî Gaþt£c£paÖt cÚmmeÖts suggest the ÍacÌ Ú´ sĜstem£c uÖdeþstaÖd£Ög abÚutz aÖd d£spÚs£t£ÚÖ tÚĚaþds ' IGsz £s deep aÖd peþęas£ęez aÖd that aÖ eóu£tĜ ÍeÖs maĜ be use´uÍ ´Úþ bþÚadeÖ£Ög £Öst£tut£ÚÖaÍ aÖd d£sc£pÍ£ÖeÅspec£µc cÚmpþeheÖs£ÚÖ Ú´ Ěhat £t meaÖs tÚ seþęez aÖd tÚ seþęe 2£spaÖ£c studeÖtsz at 2Jȝsî ' Úm£Ög tÚ such uÖdeþstaÖd£Ög þeóu£þes d£ęeþse aÖd d£ęeþs£tĜÅm£Öded ´acuÍtĜz meÖtÚþsz aÖd £Öst£tut£ÚÖaÍ Íeadeþsh£pî Oęeþaͭz cÚÖ´ÚuÖd£Ög eóu£tĜ Ě£th eóuaÍ£tĜ aÖd aęÚ£d£Ög £ÖteÖt£ÚÖaÍ £Ötegþat£ÚÖ Ú´

this spectþumî *ëampíes Ú´ cÚmpetŧtŧęe ŧÖŧtŧatŧęes maĜ ŧÖcíude cuítuþaí cÚÖteětuaíŧzatŧÚÖ Ú´ JT* <Åspecŧµc cÚuþse cÚÖteÖt aÖdćÚþ pedagÚgŧes aÖd cþÚssÅ dŧscŧpíŧÖaþĜ ´acuítĜ cÚÍíabÚþatŧÚÖs tÚ ŧÖtegþate cuítuþaí aÖd academŧc suppÚþt sĜstems specµcaíÍĜ ´Úþ JT* <

ESTABLISH NON-ACADEMIC CRP-BASED SUPPORT SYSTEMS FOR STEM STUDENTS

GaþtŧcŧpaÖt cÚmmeÖts suggest JT* < ´acuítĜ aÖd eóuŧtĜ dŧmeÖsŧÚÖs ŧÖ teachŧÖg aÖd íeaþÖŧÖgî 3ssues maĜ ŧÖcíude íacÌ Ú´ ´ÚþmaÍ ' IGs ŧÖ the cíassþÚÚm Úþ ŧÖteþdŧscŧpíŧÖaþĜ e´´Úþts tÚ ŧÖtegþate cuítuþe aÖd academŧcsz as Ěeíí as íacÌ Ú´ peþspectŧęe ÚÖ ÖÚþmsz dŧspÚsŧtŧÚÖsz aÖd ÖÚÖÅacademŧc ŧÖŧtŧatŧęes that heíp bþŧdge cuítuþećeóuŧtĜ gaps Úutsŧde the cíassþÚÚmî *´´Úþts shÚuíd ´Úcus ÚÖ ŧÖcþeasŧÖg JT* < ´acuítĜ paþtŧcŧpatŧÚÖ ŧÖ ÖÚÖÅacademŧc suppÚþt sĜstems ´Úþ 2ŧspaÖŧc studeÖts aÖd ÚtheþĚŧse eěteÖdŧÖg the ŧÖstŧtutŧÚÖaí suppÚþt mŧssŧÚÖ ´Úþ JT* < studeÖts beĜÚÖd ´ÚþmaÍ aÖd ŧÖ´ÚþmaÍ academŧc tþaŧÖŧÖgî ' Úmpetŧtŧęe ŧÖŧtŧatŧęes cÚuíd cÚÖsŧdeþ ' IGs ´Úcused ÚÖ stþeÖgtheÖŧÖg cÚmmuÖŧtĜ aÖd ´amŧÍĜ suppÚþt sĜstems ´Úþ JT* < studeÖtsz ŧÖcíudŧÖg usŧÖg eěŧstŧÖg ´þameĚÚþÌs such as ´uÖds Ú´ ÌÖÚĚíedge ´þÚm 2ŧspaÖŧc cÚmmuÖŧtęes ė9Ĝamaz 2011ìî *ëampíes Ú´ cÚmpetŧtŧęe ŧÖŧtŧatŧęes maĜ ŧÖcíude ŧÖÅpeþsÚÖ aÖd ęþtuaí UI <ć 2ŧspaÖŧc JT* < paþeÖt cÚmmuÖŧtęes aÖd JT* <Åpaþe Öt íŧsteÖŧÖg sessŧÚÖs ´Úþ JT* < ´acuítĜî ėJee aísÚ 0Úcus

9. CRPs are commonly viewed as tangential to the core academic mission. OppÚþtuÖŧtęes aþe Öeeded tÚ ´ÚþmaÍÍĜ þecÚgÖŧze ' IGÅbased ŧÖŧtŧatŧęes as paþt Ú´ the ŧÖstŧtutŧÚÖaí academŧc mŧssŧÚÖ at 2J3s aÖd estabÍŧsh mechaÖŧsms ´Úþ theþ gþÚĚth aÖd scaíabŧÍŧtĜî

RECOMMENDATIONS

LINK CRPs TO CORE ACADEMIC MISSIONS

3Ö the abseÖce Ú´ ŧÖstŧtutŧÚÖaí ęaíues ceÖteþed ÚÖ dŧęeþsŧtĜÅ aÖd eóuŧtĜÅmŧÖded ethÚs at 2J3sz ' IGs Ěŧ͡Í mÚst Íŧ͡ÌeíĜ stþuggíe tÚ thþŧęez be admÚÖŧshed bĜ ÖÚÖÅbeíŧeęeþsz aÖd be peþceŧęed as actŧęŧtes that aþe taÖgeÖŧtaí tÚ the academŧc mŧssŧÚÖî :ŧ͡ÌeĚŧsez ´acuítĜ ĚhÚ aþe eÖgaged ŧÖ ' IGs uÖdeþ these cŧþcumstaÖces aþe Ú´teÖ susceptŧbíe tÚ beŧÖg mŧsuÖdeþstÚÚd bĜ theŧþ ÚĚÖ depaþtmeÖts aÖd ŧÖsu´µcŧeÖtíĜ ęaíued ´Úþ theŧþ teachŧÖg Úþ þeseaþch ÚÖ ' IGsî 3ÖstŧtutŧÚÖaí ęaíues ´Úþ tħs ĚÚþÌ must theþe´Úþe be cíeaþ aÖd ěpíćtíĜ þe·ected ŧÖ aÖd aíŧgÖed Ěŧth bÚth ŧÖstŧtutŧÚÖaí íeadeþshŧp aÖd uÖŧęeþsŧtĜÅĚŧde pþÚgþammatŧc e´´ÚptsîÚ *´´Úþts shÚuíd ´Úcus ÚÖ ´ÚþmaÍÍĜ þecÚgÖŧzŧÖg ' IGÅ based ŧÖŧtŧatŧęes as paþt Ú´ the ŧÖstŧtutŧÚÖaí academŧc mŧssŧÚÖ at 2J3sî ' Úmpetŧtŧęe ŧÖŧtŧatŧęes cÚuíd cÚÖsŧdeþ mechaÖŧsms ´Úþ ·aggŧÖg ' IGs amÚÖg cÚuþse Ú´´eþŧÖgsz thus pþeseÖtŧÖg these ÚppÚþtuÖŧtŧes tÚ aÍÍ studeÖtsz aÖd íeęeþagŧÖg ' IG ´þameĚÚþÌs that hÚÖÚþ 2ŧspaÖŧc studeÖtsý cÚmmuÖaí tŧes aÖd ÚtheþĚŧse aĚaÌeÖ dŧęeþse JT* < ŧdeÖtŧtŧesî

SCALE CRPs WITHIN AND ACROSS INSTITUTIONS

3mpíemeÖtatŧÚÖ Ú´ ' IGs shÚuíd ŧÖcíude þÚbust uÖdeþstaÖdŧÖg Ú´ theŧþ ŧmpact ÚÖ 2ŧspaÖŧc studeÖt success aÖd Útheþ studeÖts at 2J3sî *ęŧdeÖce caÖ theÖ be used tÚ ŧdeÖtŧ´Ĝ ÚppÚþtuÖŧtŧes ´Úþ scaŧÖg such e´´Úptsz bÚth ĚŧthÖ aÖd acþÚss ŧÖstŧtutŧÚÖsî 2J3s shÚuíd aísÚ cÚÖsŧdeþ eÖgagŧÖg ŧÖ þeguÍaþÍĜ scheduÍedz uÖŧęeþsŧtĜÅĚŧde e´´Úpts tÚ assess Úęeþaíí campus cíŧmate as Ěeíí as ŧÖdŧęŧduaí depaþtmeÖtaí cíŧmateî aÖd cÚÍíeges that maĜ be mÚþe ameÖabíe tÚĚaþds adÚptŧÖg ' IGs aÖd heíp ŧdeÖtŧ´Ĝ aþeas that aþe þeadĜ ´Úþ scaŧÖgî ' Úmpetŧtŧęe ŧÖŧtŧatŧęes Ěŧ͡Íí cÚÖsŧdeþ ĚeíÍÅ dÚcumeÖted eÖęŧÚÖmeÖtaí scaÖs Ú´ aÖ ŧÖstŧtutŧÚÖ tÚ ŧdeÖtŧ´Ĝ the cÚÖdŧtŧÚÖs Öeeded ´Úþ scaŧÖgz ŧÖcíudŧÖg the íeadeþshŧp mÖdset tÚĚaþds ' IGsî

10.

Serving Hispanic Students at HSIs

T£th the gþÚĚ£Ög Öumbeþ Ú´ 2J℠s aÖd ded£cated eětþamuþaÍ´uÖd£Ög tÚ suppÚþt themz cÚmpet£t£ęeÖess £Ö secuþ£Ög aĚaþds m£ght be pþÚgþess£ęeÍĜ t£ed tÚ aÖ £Öst£tut£ÚÖ's cÚmm£tmeÖt tÚ tþuÍĜ seþę£Ög 2£spaÖ£c studeÖts beĜ£ĶĢd adm£tt£Ög them £Ö su´µc£eÖtÍĜ h£gh Öumbeþ)

12.

12

13

&a£íeĜz Tî Iîz 8aggaþsz Jî & 8eÖÌ£Ösz Gî)î ë201¶ìî That Te 9ÖÚĚ AbÚut 1u£ded GathĚaĜsî 'ÚÍumb£a UÖ£ęeþs£tĜ Academ£c 'ÚmmÚÖsz Teacheþs 'ÚÍÍegeî

&aÌeþz Sî :î & 1þ£´µÖz 9î Aî ë2010ìî &eĜÚÖd meÖtÚþ£Ög aÖd adę£s£Ögy TÚĚaþd uÖdeþstaÖd£Ög the þÚÍe Ú´ ´acuÍtĜ ødeęeÍÚpeþsù £Ö studeÖt successî AbÚut 'ampusz 14ëĆìz 2Å8î

'þ£spz 1î & 'þuzz 3î ë200×ìî <eÖtÚþ£Ög cÚÍÍege studeÖtsy A cþ£t£caÍ þeę£eĚ Ú´ the Í£teþatuþe betĚeeÖ 1××0 aÖd 200ąî Ieseaþch £Ö 2£gheþ *ducat£ÚÖz ¶0ëĆìz ¶2¶Å¶4¶î

*aþÍez 8îz <aĜÖaþdz Iîz =e£Ídz Iî 'îz *astÚÖz 8î Hîz 0eþþ£Ö£Å<uÖdĜz 8îz AÍbþÚz *î & T£Öteþz Jî ë2013ìî 'ÚmmÚÖ gu£deÍ£Öes ´Úþ educat£ÚÖ þeseaþch aÖd deęeÍÚpmeÖtî Tash£ÖgtÚÖz) 'y ȝ*Jz) O*z aÖd =JƠî

*ddĜz Jî :î & 2ÚgaÖz 9î Aî ë2014ìî 1ett£Ög uÖdeþ the hÚÚdy 2ÚĚ aÖd ´Úþ ĚhÚm dÚes £Öcþeas£Ög cÚuþse stþuctuþe ĚÚþÌô 'eÍÍ &£ÚÍÚgĜM يم ﺞ ﺯ Mc ﺳ

The Southwest Conference on Transforming STEM Education in Hispanic Serving Institutions

T£th suppÚþt ´þÚm the =at£ÚÖaí Jc£eÖce 0ÚuÖdat£ÚÖz the UÖ£ęeþs£tĜ Ú´ Aþ£zÚÖa ë UAì ÚþgaÖ£zed a thþeeÅdaĜ ĚÚþÌ£Ög cÚÖ´eþeÖce £Ö TucsÚÖz AZz ÚÖ =Úęembeþ 18Å20z 201ąî The cÚÖ´eþeÖce bþÚught tÚgetheþ JT* < educat£ÚÖ staÌehÚÍdeþsz £ÖcÍud£Ög ´acuÍtĜz studeÖtsz aÖd adm£Ö£stþatÚþs ´þÚm mÚþe thaÖ 40 2J℠s acþÚss µęe states aÖd thþee ´edeþaÍćstate ÚþgaÖ£zat£ÚÖsî The cÚÖ´eþeÖce Ěas stþuctuþed £ÖtÚ µęe tþacÌsy

1, *ÖabÍ£Ög tþaÖs£t£ÚÖs ´þÚm 2Å tÚ 4ÅĜeaþ

Conference Chair:

The ´ÚÍÍÚĚ£Ög paþt£c£paÖts cÚÖtþ£buted tÚ deęeÍÚp£Ög pþeÍ£m£ÖaþĜ summaþ£es Ú´ d£scuss£ÚÖs ´þÚm the cÚÖ´eþeÖce tþacÌsî AmÚÖg thesez paþt£c£paÖts maþÌed ë*ì seþęed as þeę£eĚeþs ´Úþ th£s 0£ÖaÍ IepÚþtî

z &£ÚÍÚgĜ 0acuÍtĜ aÖd JT*< 'ÚÚþd£ÖatÚþz 'eÖtþaÍ =eĚ <ě£cÚ 'ÚmmuÖ£tĜ 'ÚÍÍege

z AssÚc£ate)eaÖ ´Úþ JtudeÖt Juccess £Ö the 'ÚÍÍege Ú´ Jc£eÖcesz AssÚc£ate GþÚ´essÚþ Ú´ <athemat£csz UÖ£ęeþs£tĜ Ú´ Teěas I£Ú 1þaÖde SaÍÍeĜ

*Guada Lozano*z AssÚc£ate Ieseaþch GþÚ´essÚþ Ú´ <athemat£cs aÖd)£ectÚþ Ú´ *ěteþÖaÍ IeÍat£ÚÖs & *ęaÍuat£ÚÖz JchÚÚÍ Ú´ <athemat£caÍ Jc£eÖcesz UÖ£ęeþs£tĜ Ú´ Aþ£zÚÖa

z AssÚc£ate)eaÖ ´Úþ Ieseaþch £Ö the 'ÚÍÍege Ú´ JÚc£aÍ aÖd &ehaę£Úþ aÍ Jc£eÖces aÖd AssÚc£ate GþÚ´essÚþ Ú´ JÚc£ÚÍÚgĜz UÖ£ęeþs£tĜ Ú´ Aþ£zÚÖa

*Kimberly Sierra-Cajas*z)£ectÚþ Ú´ UÖdeþgþaduate Ieseaþchz 'ÚÍÍege Ú´ Jc£eÖcez UÖ£ęeþs£tĜ Ú´ Aþ£zÚÖa

z Ass£staÖt GþÚ´essÚþz)epaþtmeÖt Ú´ &£Úmed£caÍ *Ög£Öeeþ£Ög aÖd the)epaþtmeÖt Ú´ JĜstems aÖd 3Ödustþ£aÍ *Ög£Öeeþ£Ögz UÖ£ęeþs£tĜ Ú´ Aþ£zÚÖa

*Cindy Wyels**z GþÚ´essÚþ Ú´ <athemat£csz 'aÍ£´Úþ Ö£a Jtate UÖ£ęeþs£tĜ 'haÖÖeÍ 3sÍaÖds

*Gary Smith**z Ass£staÖt)eaÖ ´Úþ 0acuÍtĜ)eęeÍÚpmeÖt £Ö *ducat£ÚÖz JchÚÚÍ Ú´ <ed£cÖez UÖ£ęeþs£tĜ Ú´ =eĚ <ě£cÚ

*Sara Kobilka*z JeÖ£Úþ O´µce Jpec£aÍ£stz JT*< :eaþÖ£Ög 'eÖteþz UÖ£ęeþs£tĜ Ú´ Aþ£zÚÖa

*Amelito Enriquez*z GþÚ´essÚþ Ú´ *Ög£Öeeþ£Ög aÖd <athemat£csz 'aØada 'ÚÍÍege

*Rudy McCormick*z)£ectÚþ Ú´ *aþÍĜ Academ£c Outþeachz UÖ£ęeþs£tĜ Ú´ Aþ£zÚÖa

I z)£ectÚþ Ú´ AssessmeÖt & Ieseaþchz O´µce Ú´ the JeÖ£Úþ S£ce Gþes£deÖt ´Úþ JtudeÖt A´´a£þsz *ÖþÚÍÍmeÖt <aÖagemeÖtz Academ£c 3Ö£t£at£ęes & JtudeÖt Juccessz UÖ£ęeþs£tĜ Ú´ Aþ£zÚÖa

*Caroline VanIngen-Dunn*z)£ectÚþ Ú´ 'ÚmmuÖ£tĜ 'ÚÍÍege JT*< GathĚaĜsz Jc£eÖce 0ÚuÖdat£ÚÖ Aþ£zÚÖa

z GþÚ´essÚþ *meþ£tusz <athemat£csz UÖ£ęeþs£tĜ Ú´ Aþ£zÚÖa

*Anna O'Leary*z AssÚc£ate GþÚ´essÚþ aÖd)epaþtmeÖt 2eadz)epaþtmeÖt Ú´ <ě£caÖÅAmeþ£caÖ Jtud£esz UÖ£ęeþs£tĜ