MoHealthWINS Portal Review

Developmental Education Components of Five Programs:

East Central College - Transitions

Jefferson College - Jefferson Aspiring Student Scholar Institute

North Central Missouri College - Skills Enrichment

St. Charles Community College - GED Hybrid

St. Louis Community College - Adult Learning Academy

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Five MoHealthWins (MHWs) colleges and the developmental education components of their MHWs portal process are reviewed here. In the development of these components, these colleges each are addressing the need for "contextualized basic skills development" according to the importance placed by employers and professional organizations in Missouri on "good written and oral communication skills, the ability to think critically, and at least some competence with computers"("Modified MoHealthWINs Technical Proposal" p. 10) . The "target population" of students for the grant includes Missouri's Trade Act Assistance (TAA) participants, in addition to low-skilled adults, dislocated workers, and unemployed and underemployed individuals" ("Modified MoHealthWINs Technical Proposal" p. 1). In a MoHealthWINs survey taken as part of the grant application, 100% of participants - including college administrators, academic and student services staff, and workforce development personnel - indicated "Remedial education required of many TAA and other dislocated workers prior to beginning programs" was the most significant factor "negatively impacting the enrollment" of the target population (p. 9). Without an opportunity to meet the "high expectations of academic readiness before training begins" (p. 9), MoHealthWINs applicants face an immediate barrier to success.

Considering the broader context of developmental education, Jefferson College was alone in citing in its overview that 70% of its entering students place into one developmental education class or more. Jefferson College is, as is documented widely, of course not alone: the most recent and often quoted data for the nation reports, "While about 60 percent of community college students enroll in at least one developmental education course, many more are referred but never enroll" ("Community College FAQs"). The target population for the MHWs grant shares many of the demographics of the community college student population, and the percentage of students who need math remediation climbs even higher, often reaching as high as 90% (Ashford, 2011). Yet, of 13 MHWs participating colleges, only these 5 colleges opted to develop or to enhance *formal* "programming to address these

deficiencies" and to report on their success ("Modified MoHealthWINs Technical Proposal" p. 10). At the same time, this "self-paced remediation" was to be designed to align with not only the college-level coursework that lies ahead of the MHWs student but also the other portal experiences: diagnostic assessment, career exploration and coaching, and the construction of a career blueprint and healthcare portfolio ("Modified MoHealthWINs Technical Proposal" p. 16). The five colleges' responses to these important challenges are varied, yet each represents a significant step towards the redesign of developmental education in Missouri.

The programs now in place have been asked to describe the developmental education and career guidance components of their portals and the evolution and nature of the components in order to determine what is working and sustainability. For developmental education (dev ed), the five college reports answered both to a rubric (Fig.1) and a set of more general questions (Fig. 2). This review will first give an overview of each dev ed component. Following, sections based on the parameters of the rubric offer comparisons of the components based on rubric responses and incorporate information from the narrative responses to the general questions. For each parameter, the rubric also asked for the associated methodologies and tools; where helpful this information is included, often in a table format. A small disclaimer needs to be made here: it is entirely possible that a report may have left out information; therefore, when an observation is made in this review, please know that further information might be forthcoming if further investigated.

For clarity, a few notes on format: all developmental education offerings are here referred to as "components," and each has a "portal" which is part of its MHWs "program." Formatting is a self-fashioned APA-lite: in-text citations are simplified and identify whether the source referenced is from the general overview or the rubric responses per component; to locate the sources, please visit the wealth of material available on the MHWs pages of the Missouri Community College Association

website, http://mccatoday.org. Also, the initialisms (ECC, SCC, NCMC, JCC, and STLCC) for the colleges occasionally present at the beginning of sentences simply for the sake of brevity.

Overview of Developmental Education Components by College

Enrolled MHWs students at **East Central College (ECC)** are placed in either the Certified Medication Technician (CMT) / Certified Nursing Assistant (CNA) Transitions Gateway, a three-hour "soft skills and foundation session," or **Credit Transitions** for "basic skills remediation" in a three-week format. The College Board's Accuplacer determines this placement. Basic skills remediation takes place in Credit Transitions and is self-paced with assistance from learning specialists and student tutors. Course content is online and utilizes some Open Education Resources (OERs), publishers' programs, and in-house materials. In ECC's Credit Transitions, one of the five core assignments and the capstone is Foundations for Career Success where students encounter writing assignments and research career-related topics, the first steps towards a Career Blueprint to be completed after successful completion of the component. Two hallmarks of this program are its emphasis on addressing the emotional needs of its students as well as its lessons-learned focus on deliberately building computer skills (ECC Overview and Rubric Responses).

Jefferson College (JCC) described the developmental education piece of its portal as a "prominent component of the MoHealthWINs initiative." **JASSI (Jefferson Aspiring Student Scholars Initiative)** seeks to "to limit or eliminate … developmental education requirements" for its MHWs participants (JASSI Overview). While the program is self-paced, it does work within the 8-week sessions in which credit classes are offered at the college. Placement is through ACT's Compass exam and course content is online and utilizes some OERs, publishers' programs, as well as in-house materials. Students have access to a dedicated MHWs instructor as well as assistance from representatives from the Advising and Retention Center. The articulated emphasis for JASSI is reflected in its process: following

participation, students post Compass and "can and have significantly reduce[d] the number of developmental courses on their college path" (JASSI Overview).

North Central Missouri College (NCMC) has developed its **Skills Enrichment Program** to "prepare adults for a successful college experience designed to train them thoroughly and quickly to re-enter [the] workforce" and for a "new career/profession" (NCMC Overview). Accucess is the placement mechanism, and some OERs, publishers', and in-house materials provide content online; remediation modules are assigned in correlation with the placement exam, and final grade-level placements are made post remediation. While self-paced and online, students also work face to face with a MHWs Recruitment and Advisement Specialist and a Learning Specialist who also monitor student progress. Of the components, the Skills Enrichment component alone of the components describes its assessment as "somewhat" tailored to the career path by carefully defining the math skills students will need.

St. Charles Community College (SCC) opted for a **GED Hybrid Class** and described the need for "a nontraditional study option for nontraditional learners that were adults." The goal is "to prepare learners in each of the areas of high school equivalence as well as workplace/postsecondary readiness" (SCC Overview). The TABE (Test of Adult Basic Education) assessment places students and determines the students' course of study. Some OERs, publishers', and in-house materials provide content online. A distinction belonging to this program is that based on an "hours worked" expectation, the self-paced program emphasizes flexibility in that the primary instructor is available at a number of locations at various times.

In **St. Louis Community College's (STLCC) Adult Learning Academy (ALA),** students are placed in the ALA by their ACT Compass scores, which also align with the credit-side placement. On successful completion they continue further with the MHWs Portal and /or apply for Credit for Prior Learning if they choose to pursue programs other than those offered by MHWs at STLCC. Articulated as "the first step on a pathway to career opportunity and advancement, preparing students to better comprehend

content and meet performance outcomes as they matriculate to the next level of Portal learning

activities and workforce training including college-level coursework" (STLCC Overview), the ALA self-

paced and mastery-based program is a component of an evident and comprehensive pathway approach.

Attendance is five days a week, four hours a day with flexibility for when those hours are fulfilled. This

schedule is intended to be an immersion approach that "imitates the five-day work week" (STLCC Rubric

Responses). Open Education Resources (OERs), publishers', and in-house materials provide content

online. Students work daily with a staff of faculty and Educational Assistants (EAs). STLCC's ALA provides

students with contextualized coursework that aligns with the credit side curriculum/course profiles in

math, reading, and writing, deliberately preparing student for college-level coursework.

Developmental Education Component Rubric Responses by Parameter

Parameter 1: **Assessment of student learning: what methods are you using to assess student learning?**

The table below (Fig. 3) provides an overview of assessment of student learning, the timing and

of the instruments used. In all cases, other and important assessments take place in the portal

environments for, for example, digital literacy, and career interest and readiness; however, the chart

below indicates only assessments used for placement in the dev ed components as well as ongoing

assessment of student learning during basic skills remediation.

A quick scan across the first two rows reveals whether the placement instrument for dev ed

participation is aligned with that on the credit side of the institution. Also notable, WorkKeys is an

integral assessment in all of the components; students take Applied Mathematics, Reading for

Information, and Locating Information and earn a National Career Readiness Certificate. A difference

does lie in when WorkKeys is administered. For example, it functions as a pre and sometimes post

assessment for JCC and STLCC. STLCC's report mentioned that it uses WorkKeys results "to assess

foundational skills in reading and mathematics" and "results are used by the student and pathway coach

to identify and address gaps prior to beginning an occupational program" (STLCC Overview). SCC has

moved WorkKeys to the enrollment portion of its program, having found student resistance to further

testing "after taking and passing some of the equivalency tests" (SCC Overview). ECC and NCMC

students take WorkKeys during remediation. JCC and STLCC offer students the opportunity to raise their

scores post remediation if a student must reach a higher level to meet job requirements. The last type of

assessment, given the narrative responses describing the importance of digital literacy to success in

these programs, is online readiness pre or post dev ed participation assessment.

Figure 3   Assessment: Pre/During/Post Student Participation

	ECC	SCC	NCMC	JCC	STLCC
Pre Enrollment/ Placement	**Accuplacer**: assessment for reading, writing, math **Digital literacy pre test**	**TABE Locator TABE pretest** **Added: WorkKeys/NCRC Certification**	**Accucess**, Edmentum	**ACT Compass Smarter Measure** (online learner readiness) **CPL** – in-house computer proficiency assessment **WorkKeys**	**ACT Compass WorkKeys**
Aligns with Credit Side Assessment	Not indicated	Not indicated	Not indicated	Yes	Yes
During / Formative	**My Foundations Lab** - **Pearson** publishing: correlates with Accuplacer; diagnostic establishes an Individualized Learning Path, and provides ongoing assessment. **Writing sample Nelson Denny**	**McGraw Hill Education's ITTS** interfaces with TABE, is an online component of McGraw Hill's Contemporary Online Suite, and provides ongoing assessment. **WorkKeys**	**PLATO - Edmentum** correlates with Accuplacer and provides ongoing assessment. **WorkKeys**	**My Foundations Lab** - **Pearson** publishing: correlates with Compass; diagnostic establishes an Individualized Learning Path, and provides ongoing assessment.	**McGraw Hill's Connect Reading** with Personalized Learning Plan and ongoing assessment: an adaptive learning system. **Reading Strategies Survey Writing Sample Khan Academy**

	Digital Literacy WorkKeys				+ F2F instruction **rubrics /mastery** in both math and integrated reading and writing. **Classroom Assessment Techniques (CATs)** include unit exit slips.
Post/ Summative	**Accuplacer** Dig Lit essay and PwrPt assessed Possible post test: **Nelson Denny**	**TABE post test**	**Accucess**	**Compass** Student Survey on **Survey Monkey WorkKeys:** NCRC Certificate possible retest	**Compass** **WorkKeys:** NCRC Certificate possible retest

The table indicates a variety of placement instruments; notably, four of the components, ECC, SCC, NCRC, and JCC, have chosen placement instruments that correlate test results with online curriculum content provided by publishers. Programs such as My Foundations Lab, Contemporary/ITTS, and PLATO establish a program of study, or individualized learning path for remediation based on student performance. In STLCC's case, after placement, an in-house math pretest determines a student's starting point in the curriculum that is supported wholly by in-house materials and the OERs, *Khan Academy* and *You Tube* videos. ALA math's is the sole OER-only curriculum among the components. In the integrated reading and writing curriculum, a Connect Reading diagnostic establishes a Personalized Learning Path as the student begins coursework.

In the narrative responses, all colleges emphasized the importance of MHWs team collaboration in communicating and explaining placement and assessment results to the students. The qualitative responses also indicate that this kind of collaborative coaching positively affects retention, especially when the students are brought into the decision-making process for next steps.

Parameter 2: Please provide examples of the types of evidence of student learning that you are collecting.

A hallmark of all of the components is communication with students, and communicating diagnostic assessment results only begins the discussion; the components all emphasize ongoing intrusive coaching, assessment of progress and communication among all players. As JASSI reported, it "explain[s] to students what the assessments are, what they mean, as well as instruction on how to master these learning outcomes" (JASSI Rubric Response).

For math, reading, and writing content, the components use the ongoing diagnostics in the publisher-provided programs but for ALA math and the writing assignments in literacy: ALA math students self-assess through each unit, decide when they are ready for a test, and then the test is graded by an instructor. In literacy, students engage in a mastery-based writing process; writing assignment rubrics are presented at the beginning of the assignment and then used to evaluate.

The online publisher's programs are self-paced and monitor progress. They often provide immediate feedback and offer students further resources for study as they work through the content. Data sets indicating progress are available to both students and faculty, and in some cases finely-tuned data sets are available.

Publishers are responding quickly to the call to redesign dev ed. The newer version of Connect's Integrated Reading and writing program, for example, gauges student confidence and accuracy in predicting a right or wrong answer and adapts its program of study accordingly.

Connect Integrated Reading and Writing is under consideration for use in STLCC's ALA. An adaptive learning system here means that rather than an overall assessment, each module/topic has an assessment, content delivery, and practice section (Tune In, Focus, and Practice, respectively), adapting depth of the content as the student progresses. Instructors are able to view these results in the Learn Smart Achieve Performance Reports, individually and for the group as a whole. A very recent webinar

introduced an assignment option, the Power of Process, which along with the grammar modules in the integrated reading and writing Connect might hold some promise for getting students to success with the Compass sentence and grammar-focused writing exam.

Importantly and again, the components also collaborate often with career coaching/advising by monitoring student progress and sharing and discussing the reports. This then informs discussions regarding academic progress with the students.

The quick paragraphs below indicate where assessment is taking place beyond the publisher-provided content. While this is not a review of curriculum, most of the components demonstrated a set of learning outcomes/objectives; however, it wasn't always possible to determine how assessments aligned with the objectives or how or when they are communicated to students. JASSI is documenting its work on templates developed by the Washington State Colleges and that demonstrate curricular alignment. STLCC's literacy curriculum displays Unit Learning Objectives on Blackboard, the course management system, and students complete an Exit Slip per unit; the exit slip reflects the learning objectives and provides a measure of student comprehension as they "reflect on their learning in that unit." (STLCC Rubric Response).

Two colleges use a writing sample: ECC assigns an essay and a PowerPoint which are used to gauge competence gained in both digital literacy and writing. STLCC uses a pre and post writing sample to measure writing skills and has included sample rubrics for its writing assignments which are mastery-based. NCMC noted the use of JoinMePro to communicate with students during the writing process; however, sample rubrics are not available at this time. ECC lists reflective writing, journal and video reviews, and interpretation of assessment results as assignments that "provide a level of clarity to the student's choices and the implementation of solution focused thinking" (ECC Overview).

Beyond the publishers' diagnostics for reading, ECC uses the Nelson Denny assessment, pre and post participation, and STLCC surveys students for their frequently used reading strategies, pre and post ALA participation. In addition, STLCC tests vocabulary acquisition and identification of common organizational writing patterns prior to ALA graduation.

For math, STLCC students take an in-house pre-test that determines where they begin in the curriculum. They self-assess as they learn and practice skills and determine their readiness to take a pen and paper test. That test is graded by instructors; mastery is set at 75% to move on.

Digital literacy, online readiness, and computer savvy are terms that came up frequently in the rubric responses and overviews; JASSI uses both Smarter Measure, a "tool used to assess several areas related to online learning" and an in-house computer proficiency assessment. Other programs do address digital literacy as a skill to be taught but appeared not to assess before students begin coursework. A Digital Literacy course is offered post ALA to STLCC students. JASSI students earn a CPL Certificate which is applicable to several AAS degrees (JASSI Rubric Response).

Importantly, all components assess post-participation on Compass, Accuplacer, Accucess, and TABE, respectively, and the results determine continuation in the programs and/or placement out of dev ed coursework.

Further questions on assessment and evidence of student learning: data to demonstrate whether the remediation is diminishing or eliminating time spent in developmental education courses on the credit side is a next step; however, the newness of these programs may make it too early to evaluate adequately and fairly. Jefferson College's JASSI program surveys students post participation via Survey Monkey. Students are asked to evaluate what has been least/most beneficial, several questions address convenience of timing, location and duration, to rate the soft skills sessions and instructors and are offered several open-ended opportunities to make suggestions. This is the only use of student voice

data reported; the results are not included. More student voice data is essential to evaluate the components.

In addition, a more detailed look at and comparison of the publisher-provided programs could determine how well they serve in the online environment of the components and whether they are worth the expense. For example, a possible advantage lies in the sophisticated data that can be collected such as Time on Task and not only mastery but also confidence. Importantly, comparison with Open Education Resources would be helpful in determining whether, again, such data is worth the cost. Also and frustratingly, Khan Academy provides tuition for math but not for literacy – yet. Thus far in the components' collective research, OERs for literacy are lacking in sophistication.

Lastly, since WorkKeys has identified levels of academic and teamwork skills essential for success in dozens of healthcare occupations, it would be helpful to know if any of the colleges use this information in explaining the assessment and making clear how the acquisition of ever-stronger academic skills ties into individual students' specific healthcare career goals.

Parameter 3: In what ways does your program meet the needs of individual students?

Too many discussions about developmental education devolve into anecdotal evidence of the life issues which derail student success without offering pragmatic solutions. Each of the MHWs components reveals multiple ways in which it has attempted to meet these challenges head on. Answers to Parameter 3 on the rubric fell into four categories: changing the way in which content is delivered, providing content that addresses college knowledge, addressing the emotional needs of students, and ameliorating the stubbornly persistent digital divide.

Changing the way content is delivered: By providing online content in a self-paced environment, whether the program is three weeks (ECC), work within an eight-week framework (JCC), or open-ended, the components were designed to be flexible for and accessible to their students. As would be expected, the open-ended components have a wide range of completion times. Some students are able

to take advantage of possibilities for acceleration; others require and are allowed more time. According to STLCC's report, "Mastery based and self-paced offers both opportunities for acceleration and greater assistance" (STLCC Rubric Responses)." More specific data here would be helpful in parsing out just what "self-paced" means and how to evaluate its efficacy. For example, when a student "stops out" and returns to pick up where she left off, should her time stopped out affect her completion time? Several programs learned that attendance policies were a challenge. SCC reported, "Students need to be held to a higher standard of expectation regarding hours they actually work in the software and/or meet with their instructor" (SCC Overview), reporting a variance of 3-100 hours worked among its students. But overall, the qualitative responses indicate that a flexible environment that meets students' needs is a challenge worth addressing and results in both higher enrollment and retention.

Content that addresses college knowledge: providing course content for negotiating the college environment successfully is evident. ECC applies its credit-side Foundation for Student Success, offering modules on time management, note-taking skills, test-taking skills communication, critical thinking and honesty; MHWs students earn 2 credit hours on successful completion. SCC's GED Hybrid offers a version of its College 101 course which also includes career exploration. Of note, however, the reading content of College 101 proved to be challenging for MHWs students, and SCC is reconsidering under what guise to continue to offer this content. SCC also offers a unit on "How to Navigate SCC Resources." Other components, such as NCMC's Skills Enrichment and STLCC's ALA, embed aspects of college knowledge in the curriculum, using in-house screen capture videos or PowerPoint of the campus web sites to demonstrate, for example, how to write academic and professional emails. Importantly, all components offer content and communicate via the respective college's course management system, thus familiarizing the MHWs students with a tool integral to the college experience in a low-stakes environment.

Addressing the emotional needs of students: East Central schedules classes whose content directly addresses the emotional needs of its MHWs students: "many of our returning learners feel

deficient in many aspects of life and this deficiency adds a high level of stress … the successful returning learner must be provided a level of emotional management." An introduction to American Student Assistance's website, SALT, provides ECC students with financial information and pragmatic advice.

Ameliorating the digital divide: this issue continued to surface in the component reports, as it will in this review. SCC noted, "With the implementation of technology in so much of daily life, it also became necessary to assess student computer literacy and attempt to fill in those evident gaps in any way possible" (SCC Overview). Frustratingly, moving course content online to make it accessible also means online literacy, which can be taught and is by all of the components. However, many students struggle with consistent access to a computer with reliable Internet access, and up-to-date software.

Parameter 4: In what ways does your course content prepare students for career at the same time that they are gaining academic skills?

The components' responses to Parameter 4 reveal three ways to address career preparation within the dev ed component: career readiness skills are addressed alongside the basic skills remediation, basic skills coursework includes workplace-related assignments with healthcare-related examples, and STLCC's ALA represents a curriculum that has been fully contextualized. Three colleges (ECC, NCMC and STLCC) also provide Career Guidance as a separate but collaborative endeavor. For the Career Guidance opportunities offered by these three MHWs programs, please see Subject Matter Expert Sydney Beeler's Career Guidance Overview.

While formal career guidance components are not part of all five portal programs, there are ways healthcare career awareness is infused into the developmental education curriculum. Several responses noted that the publisher's content used for basic skills remediation in their components has some readings and exercises related to workplace scenarios and/or health-related occupations. SCC reported of its ITTS online modules that "Lessons in content areas [are] presented in 'real world' scenarios"; however, its unclear if these are healthcare related. NCMS noted "Accucess assessments are

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somewhat tailored to skills needed for health careers. Math assessment for the students in the pharmacy tech career, for example, covers fractions and conversions but not geometry" (NCMS Rubric Response). This is reflective of wider developments in dev ed redesign in the growing support for degree math requirements that are tailored better to occupational goal; i.e., social science majors need statistics more than they need calculus. Such a fine tuning of math requirements has been shown to be an effective change for post-secondary education ("Significant Discussions") and offers potential for further development in MHWs.

Other components incorporate workplace-related assignments: ECC assigns a two to three page paper and a 15-minute PowerPoint in its Career Explorations class. It also has students prepare JIST cards, a mini-resume on a 3x5 card. NCRC offers "modules on resumes, cover letters, job interviews, and soft work ready skills." These modules are delivered via PowerPoint presentations, many of which are available for view by readers on the MHWs MCCA web pages. The components also introduce students to health and or career-related online resources such as O*Net, Missouri Economic Research and Information Center (MERIC), mynextmove.org, Bureau of Labor Statistics, and American Health Information Management Association (AHMIA).

Importantly, students also take assessments that help them determine their interest in and appropriateness for the healthcare professions. SCC has students create a jobs.mo.gov account as part of their Career Exploration. JASSI students complete a Choice Planner that provides "career guidance and information." All STLCC MHWs create an e-Portfolio with Optimal Resume; ALA students begin this process by uploading their capstone Public Service Announcement to their e-Portfolio. The components are ensuring that the remediation is part of a scaffolded process including career preparation.

Contextualization has an ever-expanding definition as it is implemented in a variety of teaching environments. In her literature review for the Community College Research Council (CCRC), Dolores Perrin cites no fewer than 15 different labels applied to contextualization strategies by their

practitioners. According to Perrin's survey of 27 studies, contextualization has the "potential to promote short-term academic achievement and longer-term college advancement of low-skilled students" (Perrin, p. 39). Two of the components programs use contextualization: NCMC Skills Enrichment and STLCC's Adult Learning Academy.

NCMC's Skills Enrichment program documented the use of resume and cover letter examples from the nursing field. In addition, videos used for critical thinking exercises are derived from nursing scenarios.

STLCC's Portal overview described a robust contextualization of course content in two "distinct ways," one of which extends beyond the dev ed component but merits attention and further reading (see STLCC Overview, p. 7). For the dev ed ALA, "content from health-related open education resources is used to contextualize basic skills … students can develop their skills while interacting with some of the exact subject matter content they will later encounter more independently" (STLCC Overview). The 'more independent' learning takes place within the Portal and immediately after the ALA in the Digital Literacy and Culture of Healthcare courses. The ALA review spoke to its math and integrated reading and writing (literacy) coursework separately (STLCC Rubric Responses). The eight math units each have a "Healthcare Applications" module. The example provided for pre-Algebra, Unit 1, has students utilize math skills to record data generated in a hospital scenario. In literacy, students complete integrated reading and writing assignments on healthcare-related topics generated from content from Culture of Healthcare, again, an online course offered later in the STLCC Portal: electronic health records/patient privacy, public health and epidemiology, and healthcare systems. Further, an interview assignment takes them into the medical field, and a capstone project has the students construct a PSA video (public service announcement) on a public health topic; students consider audience and purpose in order to communicate with the wider public.

Teaching the skills employers want should include the soft skills applicable to any work environment. MHWs students also need to communicate their skills to potential employers through

well-constructed cover letters, resumes, and e-portfolios; collaboration and negotiating the workplace thoughtfully and successfully are important skills. What healthcare employers also articulate that they need, however, are skilled workers who can accurately perform healthcare tasks: measure, read instructions, and record/communicate information. Focusing career preparation carefully on the skills needed for the healthcare setting can only better ensure that students take these appropriate skills with them.

Parameter 5: In what ways does your program utilize technology?

Responses to this question on the rubric reveal again that the digital divide persists for students who engage in online learning. Crucially, the components are each using technology in such a way that students are gaining necessary tech skills through participation. By negotiating course management systems and online resources for learning and research, producing assignments via the Microsoft Office Suite and online video software, utilizing email communication and cloud storage, MHWs students *are* learning computer skills that are requisite in academia and the workplace. The table below breaks down the ways in which technology is being used and the names of online resources that facilitate the process. Some of the table content is a review since assessment almost always means an online tool. Also, it should be noted that some of the components teach digital literacy post the dev ed component and use valuable resources not covered here.

Figure 4 Use of Technology by Purpose and Component

	ECC	SCC	NCMC	JCC	STLCC
Assessment /Placement					
	Accuplacer	TABE Locator	Accucess	ACT Compass Smarter Measure	ACT Compass
Content Delivery					
Publisher's Resources (an *	My Foundations Lab – Pearson*	Contemporary / ITTS – McGraw-Hill*	PLATO – Edmentum*	My Foundations Lab – Pearson*	Connect Reading – McGraw Hill

indicates direct correlation w/placement tool)					
In-house Content Development	MW PowerPoint Moodle		MW PowerPoint	MW PowerPoint Survey Monkey	Jing Screencast MWPowerPoint Google Docs: Survey
OERs Free Online Software	www.gcflearnfree.org Khan Academy www.learningstyles.com www.vark.learn.com www.pbclibrary.org/mousing/mousercise.htm www.sense-lang.org www.saltmoney.org www.typingtest.com)	www.jobs.mo.gov			Khan Academy You Tube Purdue Online Writing Lab Animoto

However, despite these multiple uses of technology, the portal review rubric responses and lessons-learned reflections reveal that unequal access to a computer with reliable Internet access, ready tech assistance, and/or up-to-date software continue to be barriers to successful participation for some MHWs students.

Parameter 6: What are your course policies and how do they address the rather different needs of this teaching environment?

While providing the bulk of their course content online, the components also recognized the need for face-to-face interaction. In some cases, attendance policies evolved as experience working in this more flexible environment demanded.

Figure 5   Course Policies and Communication to Students

ECC	• Three-week session offered two or three times a semester • Mon-Fri, 8-3. Allows those who cannot attend every day to do make up assignments and substitute extra credit for time missed.

SCC	• Initial enrollment: application and email contact
	• Official enrollment: Three hours for pretesting, form completion, and orientation
	    - Five Time on Task hours in ITTS online units
	    - Digital Literacy
	• Continued Enrollment: online units – minimum 12 hrs a month / four to five hours a week
	
	Explained in standard registration form. "Enrolled students are automatically eligible to continue their Hybrid class studies in each monthly class session following sufficient and consistent Time on Task hours in the previous month."

NCMC	• Accucess – Tracking mechanism shows time worked. "Staff contact students who are not making progress."
JCC	• Two evenings per week with the expectation students will work an additional six hours outside of the course meetings. "Students are required to attend, showing progress moving through the respective modules."
STLCC	• Four hours a day, five days a week for either math or literacy "This immersion approach imitates the five-day work week that many students will encounter on the job and gives them an opportunity to problem solve barriers to regular attendance." • Stop out option – students can stop and on return, pick up where they left off. "Students who cannot attend class for a day or two are required to notify their coaches and/or instructors in a professional manner, as they would do on a job." The MoHealthWINs Portal operates on a semester-less calendar; if the College is open, the MoHealthWINs Portal is operating. New cohorts begin every two weeks with a rolling admission policy that allows students to begin almost immediately upon completing the MoHealthWINs intake process.

Parameter 7: How do the participants of your program communicate and collaborate?

This question highlights the importance of establishing communication and how the components are meeting the challenge of online access among all participants. The tools being used also highlight the need for technology when institutional partners collaborate.

Figure 6 Communications and Collaboration

Communication					
	ECC	**SCC**	**NCMC**	**JCC**	**STLCC**
Student to Student Faculty to Student	College Website: email, course management system (Blackboard) Dropbox	College Website: email, course management system	College Website email, course management system (Blackboard/Tegrity) JoinMePro – allows screen sharing for online tutoring	College Website: email, course management system	College Website: email, course management system (Blackboard) Dropbox
Collaboration					
Faculty Component to Program				RightTrac – used for "case-noting individual's registration information."	Wiggio Dropbox

Several of the components also offered an overview of institutional partners with whom they collaborate and communicate. The table below includes the components' description and demonstrates not only a wide variety of titles for similar positions per institution but also gives some sense of a framework for collaboration. In some instances, workforce development and the academic sides of the house are working together if not for the first time, more thoroughly.

Fig. 7 Institutional Collaboration by Position

ECC	Recruitment team: Transitions Coordinator (works also with Missouri Career Center, Student Services, and GED/HiSet Coordinator, High School Admissions Coordinator, Admissions, and MWA and WIA program coordinators), Career Navigator, Manufacturing Outreach coordinator, Health Careers coordinator Once Transitions is completed, students are assigned to a program advisor Transitions is also supported by the Public Resources office) Grant team meets every other week
SCC	The instructor for the GED Hybrid class is involved with the AEL (Adult Education and Literacy) staff at SCC on a daily basis. She shares her experiences and participates in brainstorming how the Hybrid program can positively affect the day-to-day operations of the main program funded through DESE. Students from the AEL orientation and classrooms are often shared with the Hybrid program.

NCMC	MHWs Recruitment and Advisement Specialist + Learning Specialist work directly with students Grant Administrator Dean of Allied Health (oversight) Report to Vice-president of Instruction and Student Services and College President
JCC	JC MHWs Taskforce includes: CTE Dean, Registrar, Directors of Financial Aid and Advising, Institutional Research, Faculty from RAD and CIS, WIB liaison, Public Relations Director. Direct supervisor: Director of Testing Center, MHW Retention Specialist, MHW Employment Specialist Representatives from the ARC (Advising and Retention Center) – study skill instruction, course registration, etc.)
STLCC	Educational Assistants (EAs) onboard students to the MoHealthWINs Portal and help the students navigate assessment and schedule the first meeting with a coach. Coaches are assigned based on the student's pathway. Prior to orientation for each of the Portal courses, students work one-on-one with an EA to verify and become familiar with using their email and Blackboard log-in credentials. Weekly progress reports go to: career coaches, all Portal faculty members, EAs and the MHWs Academic Lead. The academic lead and the Associate Vice-Chancellor for Workforce Solutions meet regularly with the executive leadership team members responsible for oversight; Vice-Chancellor for Academic Affairs, Vice-Chancellor Workforce Solutions and Economic Development, President Forest Park Campus.

Parameter 8: Is your program credit or non-credit? If not yet a credit program, is this a goal and what steps are being taking toward it?

Developmental education is undergoing much-needed investigation and much-needed reform. The percentages of students who are placed by - potentially inadequate - assessment into developmental courses vary by subject matter and assessment tools. What does not vary is that the percentages are high and unlikely to diminish for some time, redesign, reform, and college completion agendas notwithstanding. Also deeply problematic is the use of financial support on what are technically non-credit courses. This circumstance demands raising the question of whether programs developed for the grant as non-credit, will be adopted/adapted for the "credit" side of the institution.

The components' reports do reveal both credits they are able to award currently and the potential for sustainability. It is important to remember also that in re-testing lies the potential to place out of dev ed courses on the credit side, continuing along a career pathway far more effectively,

equipped with not only the math, reading , and writing skills needed to be successful but also career

readiness.

Figure 8 Potential Credit and Alignment per College

	ECC	SCC	NCMC	JCC	STLCC
Credits Earned	**Two credit hours** for Freshman Foundations **One credit hour** for Basic Computer Skills	**One credit hour** for College 101/Smart Start.	**Under consideration:** credit for low-skilled students who test out of dev ed and into college-level. Also: 1 credit hour as an alternative to Employment Strategies	**Computer Proficiency** (Meets AAS requirements for several career and technical programs.)	**Certificate of Completion:** MoHealthWINs Portal **Credit for Prior Learning** **Three credit hours**: CPDV:701 Career Assessment, Planning and Readiness **Three credit hours:** CPDV:711 Adult Learning Academy: Pre-Algebra **Six credit hours**: CPDV:712 Adult Learning Academy: Literacy **Five credit hours:** CPDV:709 Digital Literacy: Healthcare **Three credit hours:** CPDV:710 Culture of Healthcare
Articulated Alignment in Response		Smart Start aligns with SCC's College 101 class.		**Yes**	**Yes**

The above table illustrates perhaps most clearly the difference among the components and their

goals in the degree to which they intend students to be college ready upon completion. It can be argued

that the components represent a continuum beginning at Adult Basic Education and ending at academic

programs which deliberately seek to get students to college-ready.

Summary

Importantly, each component has plans to continue to develop and sustain progress made so far. This summary looks at best practices that have clearly surfaced as well as challenges. First are the ways in which the components stand apart. Following are the best practices and challenges that they share. Always in mind is the need for data to continue the evaluation and from which to formulate next steps.

East Central College's Transitions program aligns with the core beliefs of the college: Ethic/Social responsibility, Communication, and Creative/Critical Thinking, and thus will continue to "provide the returning learner with the foundational skills needed for school success and the basic computer competency for college level achievement." Its goal is to offer the program twice in the spring and fall semesters and at least two sessions over the summer. The challenges it faces, per its report, are those students who require remediation beyond Credit Transitions 3-week curriculum. But in meeting this challenge also lies a best practice: an "action plan" has been developed to work with these students and/or to advise them regarding "alternate pathways that they can continue to make progress toward their final goals." Its best practices derive from its heightened awareness of "returning learners [who] come to East Central College with a specific set of needs that must be addressed to guarantee success on the college level" (ECC Overview): those practices are addressing the emotional needs of its students and the lessons-learned focus on computer skills.

St. Charles Community College makes it clear that its **GED Hybrid** program will remain limited to "assisting students to pass the high school equivalency exam" and will become part-time with a part-time instructor. SCC will ask the college to cover the salary of the instructor for its Smart Start class as well as tuition waivers for the MHWs students who also will receive one hour of college credit. These self-imposed/proposed limits may represent its most significant challenges: a best practice has been meeting student needs via a variety of locations, flexible timing, and online content. The proposal to

duplicate "the hybrid model of approach … at a less intense level" where students are "hand-picked and would meet all the requirements of the study program" could well diminish the number of students from the MHWs target population that its scaled-back component might serve.

The JASSI report identifies the "portal/development piece" as a "prominent component" of the MHWs initiative (JASSI Overview). **Jefferson College's Jefferson Aspiring Student Scholar Institute's** stated goal is to "improve [participants'] Compass placement scores; thus saving time and money by decreasing developmental coursework," a demonstrated and documented national best practice. JASSI demonstrates its commitment to this goal by having students retest after remediation and clearly identifying "potential credit benefits" such as the computer proficiency requirement. JASSI will be offered in "2-3 different variations" in summer of 2014. Its acknowledged challenges lie in developing a more flexible but workable timeframe which is less dependent on the academic calendar, a challenge to be considered by all programs attempting to wed academic preparation with workforce development.

North Central Missouri College's Skills Enrichment is still in the "discussion stage" as it explores how the combination of Accuplacer assessment and the correlated curriculum of My Foundations Lab might be used as a dev ed strategy, "depending on each student's academic path." It mentions student response from "Skills Enrichment completers who are in the associate degree in nursing program [who] have said they wished they had taken Skills Enrichment and learned how to study *before* taking their for-credit pre-requisites for the nursing program" *(original emphasis).* Best practices at NCMC include its in-house development of online course content for career readiness and successful college-level participation. A self-reported challenge lies in some student resistance to remediation. While Skills Enrichment completers voice appreciation for the skills they garner, NCMC's report observed that "students often think they have the skills for college until they experience a college-level class and realize they need the help" (NCMC Overview). One dev ed best practice that could work here is the embedded contextualization, providing additional support alongside the college-level classes.

St. Louis Community College is committed to redesigning developmental education: "scaling

and sustaining successful innovations of MoHealthWINs program were College goals from the inception"

(STLCC Rubric Response). STLCC faculty are working to replicate a version of the **Adult Learning**

Academy on the credit side. For math, the articulated "questions and challenges" in moving the

curriculum to move to a "semester-based, credit-based environment" include measuring self-paced

credit, addressing financial aid, procuring physical space, including the requisite technology, i.e.

computer labs/classrooms. For literacy, a summer work group with representatives from across the

four-campus district will develop a 2-section pilot for Fall 2014 that would, "like the current ALA:

Literacy, collapse and integrate traditional developmental reading and writing courses into one

contextualized, competency-based literacy course." Lessons learned and data from the current ALA will

be deployed in the development. Proven best practices include robust contextualization, not only use of

but also creation of genuinely open education resources, integration of reading and writing, and the

collapse of dev ed course sequences.

Common to all of the components are these reported best practices, albeit practiced to

different degrees, and which all are not only accepted best practices of pedagogy but also andragogy.

The starred best practices simply single out resources that might be helpful to all:

- Assessment: includes results from academic placement, career readiness, and digital literacy
  ☆ *Starred best practice: Jefferson College's test for online/digital readiness prior to the start of the dev ed component*

- Communication with students: includes discussion of academic assessment results, career interest and readiness assessment results
  ☆ *Starred best practice: North Central Missouri College's use of JoinMePro for faculty to student communication and screen share tutoring*

- Communication between faculty/staff, advising/counseling, and community partners = intrusive advising and ongoing monitoring of student progress
  ☆ *Starred best practice: Jefferson Community College's use of RightTrac for case notes*

- Identification of online resources, including publisher content that aligns with placement tools, but most importantly Open Education Resources

☆ *Starred best practice: St. Louis Community College's math program's use of Khan Academy and ECC's use of SALT.com for financial literacy*

- Meeting students where they are: offering self-paced curricula, and attempting flexible locations and times

☆ *All components are attempting this; however, this best practice also has it challenges and needs/deserves further study. SCC's offering of a variety of locations literally meets students where they are.*

- Introduction of students to online college resources, including course management systems, email, and college website

☆ *Again, all components are effectively introducing students to college knowledge in this way.*

- Elimination or lessening of time spent in developmental education coursework

☆ *Jefferson College and St. Louis Community College offer students the opportunity to earn credit for or place out of dev ed coursework.*

- Integrated remediation and career preparation.

☆ *All components offer WorkKeys assessment and students earn NCRC certification. Integrated remediation that demonstrates purpose to students is/should be a sought-after best practice (Bailey, 2014).*

Common to all of the components are these key challenges:

- A key challenge is student attendance: even in primarily online and flexible environments how to ensure steady and effective participation while helping students meet all of the life challenges that can prevent success?

- Students require access to: a computer with reliable Internet access, up-to-date software and ready technical help.

- Colleges need to be ready to invest in the necessary technology: computer labs, up=to-date software, tech help for trouble-shooting.

- Identification of (if available) more Open Education Resources, especially for literacy.

- Only remediation that teaches well beyond the test, especially for writing assessment that measures sentence-level skills but not the construction of an argument, will adequately prepare students for both the workplace and success at the college level.

- Professional development for faculty and staff. Dev ed reform coupled with workforce development weds two fast-changing fields and developers who represent this couple have a mandate to change the face of education. They need support.

- Collection of data – this report is wholly qualitative; more qualitative and quantitative data is needed to make informed progress. *Caveat: Addressing life challenges is a goal, but the data needs to be sophisticated enough to acknowledge success plus addressing those challenges*

Conclusion

Further questions not within the scope of this review include asking to what degree MoHealthWINs programs are fully meeting the mandate to wed community colleges and career preparation. Adult Basic Education and preparing students to be truly college ready are goals on a wide-spread spectrum upon which these components' efforts lie, and they are to be applauded for being on the spectrum. Not all of the MoHealthWINs participants address remediation. However, acquiring a GED is some distance away from earning actual Credit for Prior Learning. Debra Bragg has described the potential for "unequal preparation in adult education where the standards are low." She has tackled the "assumption that we can pull them [adult learners] in, ramp up their skills, and put them in exactly the right place in the labor market" and has claimed that current literature actually casts doubt on the likelihood of success (Bragg).

A compelling example of how we need to look more carefully at what "college ready" means lies in writing instruction. While Jefferson College explicitly and admirably strives to remediate so that students can place out of dev ed coursework, the placement mechanism students must negotiate successfully does not include a writing sample. Nor do any of the placement exams these components use. Is it enough to pass an exam that tests sentence-level skills? Does doing so mean these students are college ready? St. Louis Community College's Adult Learning Academy has ensured that students who successfully complete remediation will not have to retake Compass and will place out of developmental education classes through a Credit for Prior Learning agreement. This formal agreement is possible due to a deliberate inclusion by the Academic Lead of credit-side, full-time and part-time, faculty developers who carefully aligned the ALA curriculum with the credit-side course profiles.

Not least, what of professional development opportunities for MHWs participant colleges and their courageous and hard-working staff and faculty? Developers need the opportunity to study proven programs such as IBEST in the state of Washington, initiatives such as Breaking Through, Shifting Gears, and the accelerated programs at, for example, the Community College of Baltimore County and Chabot College. A recent article in the American Association of Community Colleges' Community College Daily highlights the WorkReady U program in Louisiana: all of the above and more - in addition to Missouri's pioneering efforts - are available. To return to the promises of the MoHealthWINs Technical Grant Proposal, "to accomplish this, current college faculty and staff will engage in significant program training and development, thus ensuring a solid and supportive human capital base" (p. 18).

Importantly, formative assessment must inform pedagogy: data, both qualitative and quantitative, including student voices, is necessary to assist the developers the MHWs developmental education components are making.

Within the priorities established by MoHealthWINS, these developmental education components are implementing the strategies established, indeed promised, by the MoHealthWINs Technical Proposal that garnered the Consortium its initial grant. Table 6: Priorities, Strategies, and Research-based Design in the Consortium Grant Application ("Modified MoHealthWINs Technical Proposal" p. 11) articulates a clear mandate for remediation.

The ground-breaking work and institutional collaboration accomplished in these five colleges represents significant efforts to redesign developmental education in the service of workforce development for MoHealthWINs and for the state of Missouri. That these components have the potential to change the face of developmental education in Missouri demands our support. Further, they have the potential to serve as models for not only health-related career pathways but also a wider variety of sustainable career pathways on which students enter and participate in the Missouri workforce as confident and competent participants.

Figure 1

MoHealthWINs Portal Review
Rubric for Developmental Education Component

Parameter	Possible Demonstration: Methodology	Possible Demonstration: Tools
Assessment of student learning: what methods are you using to assess student learning?	How were these methods chosen /developed? How and when assessment methods/tools are used in the context of your program? Are they communicated to students?	Placement exams, program outcomes, course and assignment-level objectives.
Please provide examples of the types of evidence of student learning that you are collecting.	Surveys, CATs, pre/post exams, online program data collection.	Rather than send *many* examples, please send examples that represent the breadth of the collection methods you are using.
In what ways does your program meet the needs of individual students?	Please describe methods. How were they chosen /developed? How and when are they used in the context of your program?	Examples of assignments which demonstrate a variety of learning styles. Discuss the degree to which coursework is self-paced.
In what ways does your course content prepare students for a career at the same time that they are gaining academic skills?	Examples of contextualization and/or integration, development of tech skills related to their career	Represent scaffolding, sequencing in curriculum and/or alignment with other components of the portal.
In what ways does your curriculum utilize technology?	Content delivery	Open Education Resources (OERs) Online content provided by a publisher Course management systems
What are your course policies and how do they address the rather different needs of this teaching environment?	Attendance, rolling admission, grades, mastery	Syllabi, contracts, etc.
How do the participants of your program communicate and collaborate?	Faculty to student; among faculty , and faculty with other components of the portal.	Use of collaborative online tools (Wiggio, Dropbox, etc.), course management system,

Is your program credit or non-credit? If not yet a credit program, is this a goal and what steps are you taking toward it ?	Demonstrations of sustainability and replicability	Curricular alignment, examples of replication.

Figure 2: Questions Posed for General Overview

The document should address:

(1) How and why the college opted to invest in the support service/s and how it designed and implemented them. A loose evolutionary timeline of this development that captures the process (not the actual dates) would be very helpful;

(2) The goals for the support service and if they have evolved, how they have evolved;

(3) The organizational structure and, generally and briefly, how personnel interface with the institution as a whole;

(4) Whether the services are being replicated in or expanded to non-grant credit and/or non-credit enrollment processes across the institution;

(5) Some general budget detail (personnel, facility, equipment and/or material costs) to provide an understanding of what the service costs. (We discussed how often the cost of an effective student support service can block implementation if it isn't considered at the outset of planning.)

(6) Lessons learned and plans for the future - especially pertaining to sustainability.

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Please note that documents submitted for review by the colleges (overviews, responses to

rubric parameters, and examples of methodologies and tools) are available at

http://mowins.weebly.com/

Online Path: MCCA/MoWINs/Technical Assistance/Curriculum