
The Next Steps Work Group (NSWG)

Subgroup on POS Measurement, Accountability and Evaluation: Draft Summary Report and Recommendations

Background

The current Carl D. Perkins Career and Technical Education Act (Perkins IV) provides the following four elements as the minimal requirements for states to develop at least one program of study:

- Incorporate and align secondary and postsecondary education elements,
- Include academic and CTE content in a coordinated, non-duplicative progression of courses,
- Offer the opportunity, where appropriate, for secondary students to acquire postsecondary credits, and
- Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

As a way for developing further guidance, the Office of Vocational Education (OVAE), US Department of Education has developed a career and technical programs of study design framework. This framework has ten components, each of which is further divided into individual guideposts that state must consider when developing programs of study (POS). The ten components are each interdependent on one another, and which ones receive greater priority depends on how the state has laid out its plan for implementing career and technical education. The ten components are:

1. Legislation and Policies
2. Partnerships
3. Professional Development
4. Accountability and Evaluation
5. College and Career Readiness Standards
6. Course Sequences
7. Credit Transfer Agreements
8. Guidance Counseling and Academic Advisement
9. Teaching and Learning Strategies
10. Technical Skills Assessments

The framework and the ten components are described in more detail in Appendix A. The interconnectedness of the 10 components is described in the chart shown in Appendix B. The general expectation was that the schematic in Appendix B would be reframed to suit individual state goals with regard to POS.

A subgroup (membership is listed in Appendix C) of the Next Steps Working Group (NSWG) was formed and their primary charge was to focus on POS measurement, accountability and evaluation. The subcommittee looked forward to future legislation – Perkins, WIA, and ESEA. There was no intent to change what was now occurring under Perkins IV. The overall objective

of the calls was to develop a set of recommendations that would enable legislative and policy discussion to move beyond the four elements in Perkins IV law, and, the ten components of the POS framework. The broad question, and why the subgroup was established in the first place, was to be the following: *How will a state know that its POS implementation strategy is working?*

The Structure of the Calls

A total of six calls were held between April 2010 and September 2010 on the third or fourth Thursdays of the month. The calls started at 2 PM EDT and lasted for one hour. The calls were moderated by the subgroup chair. Notes were taken during the call and were then formalized into written monthly Call Notes.

The April call was to set the agendas for future calls. The April call provided subgroup members an opportunity to highlight those areas that needed covering beyond the four elements in the Perkins IV Law. The starting point of the discussion was the ten POS components, which had been provided earlier by OVAE for use when developing new POS within states. The May, June and July calls discussed various aspects of the POS measurement, accountability and evaluation with each call focusing on the three areas that were identified on the April call (see below). The August call focused specifically on the postsecondary component of the overall POS measurement, accountability and evaluation issues. The September call finalized the recommendations for submission to OVAE.

The context for how the set of recommendations was first discussed, followed by a discussion of the three areas that guided the subgroup discussion on POS measurement, accountability and evaluation, including a particular focus from a postsecondary perspective. This report ends with the subgroup recommendations and they are listed in no order of priority.

The Context for POS Measurement, Accountability and Evaluation

Three major areas of concern were raised by the subgroup members about POS measurement, accountability and evaluation. First, there is the question of whether current Perkins and Tech Prep indicators satisfactorily measure POS “success.” Specifically, do the current Perkins IV indicators assess POS adequately or are new ones needed? More broadly, measuring POS effectiveness hinges on the unit of analysis chosen — the state, the program, or the student, and whether current data systems are capable of providing that information. Nevertheless, there was concern that developing new indicators to determine POS effectiveness beyond what states have struggled to put in place will be too costly.

Second, when viewing POS as a bridge between secondary and postsecondary, new measures may have to be developed to determine if a good job is being done to build such bridges. When viewed as a progression, “measuring the bridge aspects” of a POS can provide additional information over and above the current Perkins accountability indicators. However, there was some concern that viewing POS as a bridge moves away from the original intent of CTE accountability, which was to put in place improvement strategies, particularly for at-risk students. For instance, POS is designed to speed up student progress and this is contrary to the

design of CTE under P-IV. More broadly, a concern was raised as to what the intent of a POS strategy is in reality, and whether why the four elements in the Law, which many states addressed in detail in their CTE five-year plans, are no longer sufficient or relevant.

Third, confusion has arisen because some see POS more as a strategy rather than an outcome that requires measurement. For example, some states are moving Tech Prep into a POS model, combining strategy with (Tech Prep) measurement. Still other states are using POS as a strategy by developing career plans for all students. They see POS as the “map” for preparing for a career. However, problems regarding the participation of the postsecondary community are still a major obstacle to overcome. In general, states continue to have flexibility for measuring the different POS components depending on how the overall state CTE five-year plan is being implemented.

Thus, the initial discussion among subgroup members led to the following three major areas of concern stated in question form:

1. How is a POS to be defined? Is POS to be part of CTE, or is CTE to be part of POS? What is the difference between POS and career pathways?
2. What is meant by POS measurement? What is the place of current Perkins and Tech Prep indicators? How are they positioned in any future measurement of POS, including discussing possible new measures? Viewing POS as a bridge or a link, what is the unit of analysis by which POS is being measured?
3. How are the criteria for POS identified? Do the components, and the sub-bullets under each of them, meet this condition? If POS is a strategy, then what are the appropriate measures which simultaneously fulfill the legislative and non-regulatory requirements for a POS and at the same time say something about POS success?

Providing partial answers to the above questions was where the subgroup felt it could add value to the burgeoning discussion around POS measurement, accountability and evaluation.

POS Definition

A starting point of the arriving at a POS definition was the May 2010 survey undertaken by OVAE regarding the ten POS components. The survey asked which of the ten components are (a) most likely to occur within two years and (b) have the greatest impact. In addition, survey asked to rate individual sub-elements within each component as high or low.

The survey also asked states to define what a rigorous POS might look like. Two key findings from the survey were:

- The components -- *Course Sequence* and *Guidance* -- were most likely to occur in the next two years and would have the greatest impact. A probable reason for this was that most states on the survey indicated they already had a POS definition. However, it was clear from the survey that the definition varied across states, as well as the definition of a POS student.

- The components -- *Accountability and Evaluation* and *Technical Skill Assessments* – were least likely to occur within two years and also have the least impact. The reasons given was the likely impact for immediate implementation of SLDS, administrative and UI records matching, reducing the timeliness of collecting the available data. Nevertheless, the survey results did point towards the possibility of discussing POS measurement, accountability and evaluation in terms of (a) using existing Perkins indicators; (b) developing new and unique POS indicators; or (c) using a combination of both.

The subgroup participant comments on defining a POS can be divided into four broad groupings:

1. Which definition of POS – the four elements in the current Perkins IV law or the ten POS components is more applicable under current POS implementation and practice? A related question that needed to be answered appeared to be whether there exists a hybrid solution when defining POS that lies somewhere in between the four elements described Perkins IV and the ten POS components provided as non-regulatory guidance.
2. The question of whether POS is a process or on outcome, and whether the currently available information within states is sufficient for addressing both, or do the new sets of information need to be created, particularly if the two need to distinguished from each other.
3. Are current Perkins accountability indicators (Basic and Tech Prep) sufficient to indicate whether or not students are successful when enrolling and completing a POS (as compared to those who do not)? Additionally, do these indicators provide the necessary information to deem that a POS (as a process) is being implemented effectively within states?
4. Does the current POS focus only on secondary-postsecondary linkages or do others (adult career pathways, direct high school-university linkages, high school-work linkages) still fit under the current POS definition? If they do not, how should the definition of POS change?

Some subgroup participants indicated that the four-element definition now set within the current Perkins Law provides greatest flexibility; whereas others indicated that having a more precise and concise definition of POS might make defining POS measurement, accountability and evaluation easier. Nevertheless, for many subgroup participants, arriving at a more consistent definition of POS elements, particularly those related to technical skill attainment, college and career readiness, and, accountability and evaluation, raises the possibility of having prescribed regulations.

POS as a Process or Outcome

Subgroup participants are still divided about this issue. Moreover, opinion is divided about whether currently available information can address both. Some indicated that it might be better to view POS as a process because it implies a greater role as a career planning and guidance tool for students; be able to handle transitions across different segments regardless of student type, program specifications, or location requirements; and provides broader and greater flexibility in implementation. Several raised questions regarding the inclusion or exclusion of CTE students and programs because of incomplete segments within a POS, and what that might say about POS success. Also, there has been discussion of whether the context of deciding whether POS is a process or an outcome rests on whether POS is more narrowly focused on CTE success or more broadly within the context of education reform.

To understand better the notion of a POS as a process and structure, Dr. Corinne Alfeld from AED presented a NRCCTE–led research on “mature” programs of study, where the term “mature” indicates the existence of well-established secondary-postsecondary CTE collaborations even before Perkins IV was enacted. Dr. Alfeld shared two documents, an article she had written earlier this year for *Techniques* magazine and a handout that related her study to the ten POS components, as are presented as Appendix C. The two documents summarize quite well the gist of her presentation. However, several additional points from her study and presentation, as well as from follow-up questions and comments, were also brought up:

- The continuing relationship of Tech Prep (as a structure and process) to the current structure and process for implementing POS within a state is not yet clear. It was pointed out that the original intent of Tech Prep was to be like what is now expected of POS implementation, but as previous research, has shown the evidence on Tech Prep is mixed.
- While the Community College Transitions Initiative (CCTI) template has been used for laying out the course sequencing (one of the ten components), the connection between CCTI and the current Perkins IV POS effort has been limited.
- The difficulty in flagging POS within current state Perkins accountability systems is difficult, if not impossible. Despite this, there is value in following students from secondary to postsecondary within a POS. As stated in the last call notes, some of the current Tech Prep measures might be useful indicators.

Some of the recommendations made by Dr. Alfeld included (a) involving local businesses; (b) connect academic and technical curricula; (c) formally transcript college credit from dual-enrolled courses within a POS; and (d) provide professional development, particularly for those outside of CTE. The bottom line for POS success, Dr. Alfeld concluded, was building effective secondary/postsecondary partnerships, addressing another of the ten POS components, *Partnerships*.

The basic question about POS structure and process continues to be the following: *how does a state know that POS implementation is actually working?* Additionally, is there need to evaluate the structure and process of a POS over and beyond knowing the following: *How well are students performing within a POS?* In other words, is there need conduct separate evaluations, one for student performance within a POS, and the other, for viewing POS as a structure and process? The notion of having a checklist, composed of some or all of the ten POS components, was posed by the subgroup chair. In response, there seemed to be general agreement among

subgroup participants that such a checklist was not necessary and may even be counterproductive. It would be better to establish some “best practices” principles and set out a framework for comparing established structure and process.

Nevertheless, the larger question of whether a POS structure and process is a mechanism for validating broad-base secondary-postsecondary collaboration, or is it a mechanism for reformulating secondary CTE still remains unanswered. There is still disagreement among subgroup participants with regard to this. Tentatively though, it appeared that the general consensus that seemed to be emerging is that when evaluating a state’s POS structure and process, it should be much more inquiry-based and much less a prescriptive checklist.

The Sufficiency of Current Perkins and Tech Prep Accountability Indicators

Here again opinion is divided on whether the current set of accountability measures (Perkins and Tech Prep) can provide value-added information regarding POS performance (programs as whole or students within them). Some argued that it might be simply be a matter of counting students from one (lower) to another (higher) segment of the POS course sequence; others wanted the movement within a POS to be more narrowly defined (say within a specific pathway). In addition, while there appeared some interest in using Tech Prep indicators as a measure of a POS student’s success, there was also reluctance since doing so would require equating POS to Tech Prep, a notion that is still under a debate. What seemed to be emerging from the discussion is that there is need for a closer examination of individual Perkins and Tech accountability indicators, which would then allow placing some of them as a POS outcome measure and others as a POS process measure.

Focusing only on the sufficiency of current Perkins and Tech Prep accountability indicators, subgroup participants felt that the current Perkins and Tech Prep measures are adequate to measure POS student outcomes. With this premise as the starting point, the question of what other measures would be appropriate for inclusion in measuring POS student outcomes in enrolling and completing a POS, keeping in mind that these measures should be related back to the ten POS components. The following suggestions were offered by the subgroup participants:

- A. College Remediation: The first additional measure that was put forward for discussion was a measure of the extent of remediation POS students are required to undertake when they enter the postsecondary phase of a POS. The goal would be to determine to the level and extent of remediation and use that measure to undertake continuous improvement to ensure that POS students have successful outcomes while they are in the secondary phase of a POS. Also, the measure would enable reaching into the early stages of the secondary phase of the POS to set up intervention strategies to ensure that POS students enter the postsecondary phase with little or no remediation. Additional points were made regarding this measure. One, it was thought that the Tech Prep Measure 1STP5 could serve as a candidate for this remediation measure. Two, this measure may better represent secondary success within a POS than the current Perkins readiness measures of 1S1 and 1S2. Three, it was suggested that rather than use the word *remediation* it may be better to use *college readiness*, which is one of the ten POS components. Four, as the current Perkins legislation stands, the use of funds for reducing remediation levels is not

permitted. Therefore, in discussions about Perkins reauthorization, the linkages between college remediation and use of funds for CTE must be explored.

- B. Articulated and Transcribed Credits: The current Perkins legislation requires that articulated and transcribed credits be seen as devices to strengthen secondary and postsecondary relationships within a POS. The current Tech Prep measure 1STP4 can serve as the indicator that might best reflect the extent of articulated and transcribed credits. Such a measure would adequately address another of the ten POS components, *credit transfer agreement*.
- C. Other Measurement Issues: Besides the two specific measures discussed above, broader issues were also raised by subgroup participants. These included:
 - a. The use of CTE as an engagement device to help struggling students complete an high school education and move on to postsecondary and making sure that POS are not used as a device for “creaming” the best students;
 - b. The similarities and differences between Tech Prep and POS; and
 - c. POS as a strategy to put secondary CTE on a more positive footing, with some arguing that future of secondary CTE, and thereby all of CTE, rests on being able to categorically determine what POS success might be.

To address all three issues, basic questions must still be answered when it comes to POS measurement. Is there an appropriate division of labor within a POS between secondary and postsecondary, wherein secondary is responsible for the foundational and academic, with postsecondary being responsible for the technical? The success of POS, both as a strategy, as well as a being able to measure the outcomes of students engaged in a POS, rests on obtaining a precise answer to the question.

Addressing the POS Postsecondary Component

On many of the subgroup calls discussing POS measurement, accountability and evaluation, as well as on the broader monthly NSWG calls, continuing concern has been voiced about discussing specific postsecondary issues that relate more narrowly to POS measurement, accountability and evaluation, and more generally, Perkins accountability and evaluation. Since much of CTE occurs within community colleges, and, they are the major recipients of postsecondary Perkins funds within states, implementing the postsecondary components (based on the ten POS components) have raised special concerns, issues and problems.

There are three factors that characterize community college operations that have implications for setting up a POS measurement, accountability and evaluation system, if at all there is need for a separate one over and above the current Perkins accountability system. First, community colleges are typically open access institutions, even though specific programs may impose entry requirements. In particular, open access has facilitated the entry of a number of adult students, usually part-timers.” The connection to high school for these adult students has generally been distant, varied and uncertain. Second, community colleges have a high prevalence of

developmental (remedial) education, which adds to the complexity of advising and counseling, choice of majors and course sequencing, and, the eventual determination of successful program completion. Third, typical community college enrollments have a high proportion of at-risk students. Serving these at-risk students has been the hallmark of community colleges, particularly through innovative use of available postsecondary Perkins funds. The emphasis (and some might say over-emphasis) on making POS as the primary vehicle for delivering CTE could potentially lead to “creaming” thereby abandoning *access and opportunity* as the primary mission of a community college. In essence, these three factors brings the discussion right back to a recurring theme mentioned by subgroup participants viz. *what is the true nature of the relationship of POS to CTE: is POS a subset of CTE, are they the same, or is CTE a subset of POS?* While these questions are relevant at both the secondary and postsecondary levels, the interactivity at the postsecondary level between CTE, workforce development, and remedial education, requires the addressing of these questions separately and differently from the secondary level.

The subgroup moderator posed three interrelated questions:

1. Given the high prevalence of adult part-time students operating within the context of generalized open access and enrollment at community colleges, what changes, if any, would have to be made specifically to any of the established or proposed system of POS accountability and evaluation?
2. To what extent do any or all of the ten POS components, including adding new measures, needed to be modified to reflect the current reality of community college postsecondary CTE, remedial, and workforce development?
3. Given that the long-held traditional mission of Perkins has been serving at-risk students, how will moving towards making POS wholly, or at least substantially, representative of CTE affect this mission and what impact will this movement have on measuring CTE student success, particularly for at-risk students?

It should be pointed out that while the above three questions have general applicability within secondary CTE education as well, but the discussion that follows relate to the impact on the postsecondary components of a POS.

The Adult Part-time Student within a POS

Among the different issues raised by subgroup participants, the following pertained directly to the adult student and appeared to be a recurring theme. They included:

- The presence of open access and enrollment makes it difficult to set global policies and procedures regarding the entry of an adult student into a POS at the postsecondary level making generalized accountability and evaluation difficult. Connections of these adult students to the high school are rather distant, uncertain, and varied. In such situations, enrolling only in the postsecondary portion of a POS then begs the following question: is the student enrolling in a POS or in a non-POS CTE program and on which side of the

ledger will the adult student's entry, progress and success be counted: POS vs. non-POS CTE?

- Governance often is managed at the local level leading to heterogeneous policies and procedures across different types of students, programs, college, and systems, within a state, let alone across states. A case in point is the establishment of localized assessment cut scores, which dictates whether or not a CTE student will continue on to the postsecondary portion of a POS, or is “side-tracked” into remediation. More importantly, enrollment in remediation courses leads to a loosening of the now tight and continuous secondary-postsecondary course sequencing required under a POS.
- The current and stated practice under Perkins IV is not to allow the use of funds solely on remediation activities, and for the most part, students involved in such activities are excluded from Perkins accountability measures. This is because most states equate remediation as being “not ready for CTE.” However, it less clear when it comes to using Perkins funds for developmental education, particularly if the funds are focused towards improving CTE programs, and by implication, improving CTE student success. Not having a clear picture about the CTE/development/remedial education linkages makes it difficult to determine what student success within POS really means.

A broad implication that could be drawn from the above discussion regarding POS measurement, accountability, and evaluation at the postsecondary level may be that it would only be restricted to students that come directly into the postsecondary component of a POS program without the need for remediation.

Adding New Postsecondary POS Student Success Measures

Like at the secondary level, there seemed to be agreement no new measures needed to be added over and above those currently listed under Perkins IV postsecondary accountability measures. The following suggestions were made:

- One suggestion could be to revisit the sub-component measure that is currently used for adult students. While states have used this measure separately (for noncredit, for “older” students), there might be room for arguing that this sub-component, if used as such, could properly reflect the adult student's entry, progress, and success in a POS. Additionally, within the current Perkins postsecondary accountability measure, an age category sub-group could be added.
- There seemed to be agreement among subgroup participants that at the postsecondary level at least there needs to be a distinction made between students who are able to move continuously and sequentially between secondary and postsecondary CTE programs and those students that do not. The former set of students can be listed as POS students with the latter as non-POS CTE students.

In both of the above cases, the current Perkins IV postsecondary accountability measures can be used to judge relative success. Also, the comparisons would provide a more global view about the relative efficacy of POS as a strategy.

CTE-POS Equivalence and At-Risk Students

While still remaining as an unresolved issue among subgroup participants, once again though, participants reiterated how the recurring theme of equating CTE with POS posed difficulties in ultimately coming up with a single way of measuring POS student success. Leaving at-risk students out of a POS measurement, accountability and evaluation system, because they do not “fit the mold of CTE-POS equivalence” poses some real dangers about truly measuring POS as an effective strategy for CTE student engagement, achievement, and transition.

Unresolved Issues

Three issues still remain unresolved and need to be addressed in more detail in the future. First, an issue that needs to be tackled is whether the emphasis (and some might even say over-emphasis) on POS within Perkins IV is mainly a primary vehicle for enhancing secondary CTE. Second, there needs to be a full assessment of whether leaving those students, particularly “at-risk” ones, out of a POS measurement, accountability and evaluation system reduces the effectiveness of using POS as a strategy for improving secondary and postsecondary student performance. Third, if POS is to be seen as the need to have students, regardless of where they are coming from (secondary education, adult basic education, and the workforce development system), to engage, achieve and transition into postsecondary, then efforts must be made to bring corresponding legislation in line with another so full advantage can be taken from POS implementation within individual states.

Summary and Possible Tentative Recommendations

Between April 2010 and October 2010, a subgroup of the Next Steps Working Group (NSWG) was formed to discuss POS measurement, accountability and evaluation. The broad question the subgroup set out to answer was the following: ***How will a state know that its POS implementation strategy is working?*** As context for setting out the recommendations, the following three areas were discussed over several one hour phone calls. The three areas centered on: (a) POS definition; (b) POS as a process or outcome; and (c) the sufficiency of current Perkins and Tech Prep accountability indicators. Each was discussed separately on the calls but these three areas became increasingly co-mingled on all six calls. The sixth call in September 2010 was used to present the recommendations to the subgroup. The recommendations were then presented to the full NSWG in October 2010. The recommendations and the associated comments are those heard on the subgroup call in September 2010 as well as on the October 2010 NSWG call.

Four broad recommendations were made by the subgroup on POS measurement, accountability and evaluation and they were:

- 1. A POS measurement, accountability and evaluation system should be less prescriptive and guided more by the framework elements such as the ten POS components put forward by OVAE.**

There was general agreement with this recommendation. As states begin to work out their own specific POS implementation strategy, but within the POS design framework and the ten POS components, the overall view of the group seemed to be that flexibility was needed to “get POS right” within their own states. However, there was still some disagreement as to whether POS implementation was following the 10 POS components or the four requirements initially laid out in the Perkins IV law.

- 2. The current Perkins and Tech Prep accountability system has in it all the necessary elements needed to measure POS participation, progress, and success. Some additional secondary and postsecondary measures to fill in the gaps in the current Perkins accountability system should be considered, particularly those that provide additional information regarding POS participation, progress, and success. However, all effort should be made to create these additional measures within the existing Perkins accountability and evaluation system.**

While there was general agreement with is recommendation, there was concern about a state’s ability to develop new measures. Requiring states to develop new measures might be burdensome for the state because of limited financial resources and limited technical expertise. Moreover, with many states having combined Tech Prep and the Basic Grants into one, having to return to collecting “Tech Prep like” data once again to meet POS measurement, accountability and evaluation requirements might also be burdensome.

- 3. View POS more as a strategy for helping CTE students, particularly at-risk students, engage, achieve and transition into, at, and from one education level to the next, whether it be sequential or non-sequential. Less attention should be paid to actual measurement of success within a POS, which in any case can be deduced from the current Perkins accountability system.**

Even as the subgroup as a whole thought viewing POS more as a strategy might work better for all students, not just CTE, there was concern among some that over-emphasizing POS as a continuous flow from secondary to postsecondary might be detrimental for CTE in the long run. Some felt this strategy would lead to (a) an abandonment of the original intent of the Perkins Law viz. to provide support and services to at-risk students; and (b) the phenomenon of “creaming” in order to meet POS measurement, accountability and evaluation requirements. On the other hand, there were others who thought that POS as a strategy might be the only recourse secondary CTE has to make itself a more integrated part of the high school reform movement.

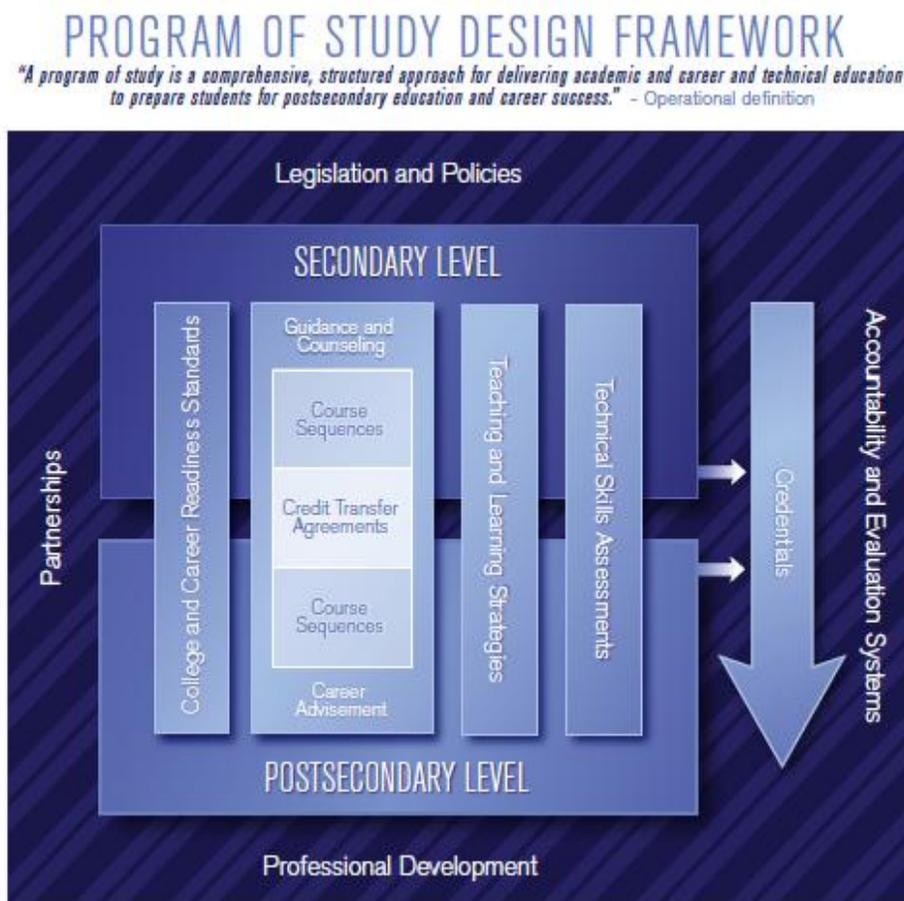
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- 4. It is important to maintain the distinction between a POS student and a non-POS CTE student, particularly at the postsecondary level, since both measurement and strategy are often dependent on local conditions and control.**

The discussion around this recommendation was closely tied to the one subgroup members had with regard to the previous recommendation. The main thrust of the discussion was whether maintaining the distinction between a POS and a non-POS student was useful because many CTE students do not necessarily follow a continuous path to higher education from high school. By so doing, POS measurement, accountability and evaluation becomes a subset of the overall Perkins accountability requirements, making comparison between the two groups possible. In other words, a “natural experiment” emerges to test the effectiveness of POS as an implementation strategy for the engagement, achievement, and transition of all students. Nevertheless, some among the group felt that by making the distinction between a POS and a non-POS student explicit, it weakens the ability of CTE for not only being seen as a premier strategy for not high school reform, but becoming central to efforts that align education with workforce development, particularly at the postsecondary level. In short, the debate of whether POS is part of CTE, or, is POS the new CTE, continues.

Next Steps

As indicated above, unresolved issues were left on the table during the subgroup discussion on POS measurement, accountability and evaluation. A question was raised regarding the need to continue discussing these unresolved issues but the matter was tabled. In the meantime, the subgroup chair, who is also the Deputy Director, National Research Center for Career and Technical Education (NRCCTE), called upon a few subgroup members to comment on the recommendations through a series of podcasts, the first of which is now available from the NRCCTE website www.nrccte.org. NRCCTE anticipates continuing the dialogue with other subgroup members in the future.

Appendix A



1. LEGISLATION AND POLICIES

Federal, state, and local legislation or administrative policies promote POS development and implementation.

Effective legislation and policies should:

- Provide for state and/or local funding and other resources, such as professional development and dedicated staff time, for POS development.
- Establish formal procedures for the design, implementation, and continuous improvement of POS.
- Ensure opportunities for any secondary student to participate in a POS.
- Require secondary students to develop an individual graduation or career plan.
- Provide resources for long term sustainability of POS.

2. PARTNERSHIPS

Ongoing relationships among education, business, and other community stakeholders are central to POS design, implementation, and maintenance.

Collaborative partnerships should:

- Create written memoranda of understanding that elaborate the roles and responsibilities of partnership members.
- Conduct ongoing analyses of economic and workforce trends to identify statewide (or regional) POS to be created, expanded, or discontinued.
- Link into existing initiatives that promote workforce and economic development, such as sector strategies and other activities supported by the Workforce Investment Act.
- Identify, validate, and keep current the technical and workforce readiness skills that should be taught within a POS.

3. PROFESSIONAL DEVELOPMENT

Sustained, intensive, and focused opportunities for administrators, teachers, and faculty foster POS design, implementation, and maintenance.

Effective professional development should:

- Support the alignment of curriculum from grade to grade (9-12) and from secondary to postsecondary education (vertical curriculum alignment).
- Support the development of integrated academic and career and technical curriculum and instruction (horizontal curriculum alignment).
- Ensure that teachers and faculty have the content knowledge to align and integrate curriculum and instruction.
- Foster innovative teaching and learning strategies (see #9 below).

4. ACCOUNTABILITY AND EVALUATION SYSTEMS

Systems and strategies to gather quantitative and qualitative data on both POS components and student outcomes are crucial for ongoing efforts to development and implement POS.

Well-designed accountability and evaluation systems should:

- Include the “10 Essential Elements of A State Longitudinal Data System” identified by the Data Quality Campaign.¹

¹ The 10 elements are: (1) statewide student identifier; (2) student-level enrollment data; (3) student-level test data; (4) information on untested students; (5) statewide teacher identifier with a teacher-student match; (6) student-level course completion (transcript) data; (7) student-level SAT, ACT, and Advanced Placement exam data; (8) student-level graduation and dropout data; (9) ability to match student-level P-12 and higher education data; and (10) a state data audit system.

- Provide for administrative record matching of student education and employment data (i.e., Unemployment Insurance (UI) wage records).
- Yield valid and reliable data on key student outcomes (indicators) referenced in Perkins and other relevant federal and state legislation.
- Provide timely data to evaluate and improve the effectiveness of POS.

5. COLLEGE AND CAREER READINESS STANDARDS

Content standards that define what students are expected to know and be able to do to enter and advance in college and/or their careers comprise the foundation of a POS.

Rigorous college and career readiness standards should:

- Be developed and continually validated in collaboration with secondary, postsecondary, and industry partners.
- Incorporate essential knowledge and skills (i.e., academic skills, communication, and problem-solving), which students must master regardless of their chosen career area or POS.
- Provide the same rigorous knowledge and skills in English and mathematics that employers and colleges expect of high school graduates.
- Incorporate industry-recognized technical standards that are valued in the workplace.
- To the extent practicable, be internationally benchmarked so that all students are prepared to succeed in a global economy.

6. COURSE SEQUENCES

Non-duplicative sequences of secondary and postsecondary courses within a POS ensure that students transition to postsecondary education without duplicating classes or requiring remedial coursework.

Well-developed course sequences should:

- Map out the recommended academic and career and technical courses in each POS.
- Begin with introductory courses at the secondary level that teach broad foundational knowledge and skills that are common across all POS.
- Progress to more occupationally-specific courses at the postsecondary level that provide knowledge and skills required for entry into and advancement in a chosen POS.
- Offer opportunities for students to earn postsecondary credit for coursework taken during high school.

7. CREDIT TRANSFER AGREEMENTS

Credit transfer agreements provide opportunities for secondary students to be awarded transcribed postsecondary credit, supported with formal agreements among secondary and postsecondary education systems.

Well-development agreements:

- Provide a systematic, seamless process for students to earn college credit for postsecondary courses taken in high school, transfer high school credit to any two- and four-year institution in the state that offers the POS, and transfer credit earned at a two-year college to any other two- or four-year institution in the state that offers the POS.
- College credit should be automatically transcribed at the college for high school students so that they can transfer seamlessly into the postsecondary portion of a POS without the need for additional paperwork or petitioning for credit.
- Describe the expectations and requirements for, at a minimum, teacher and faculty qualifications, course prerequisites, postsecondary entry requirements, location of courses, tuition reimbursement, and credit transfer process.

8. GUIDANCE COUNSELING AND ACADEMIC ADVISEMENT

Guidance counseling and academic advisement help students to make informed decisions about which POS to pursue.

Comprehensive guidance counseling and academic advisement systems:

- Are based on state and/or local guidance and counseling standards, such as the National Career Development Guidelines.²
- Ensure that guidance, counseling, and advisement professionals have access to up-to-date information about POS offerings to aid students in their decision making.
- Offer information and tools to help students learn about postsecondary education and career options, including prerequisites for particular POS.
- Offer resources for students to identify their career interests and aptitudes and to select appropriate POS.
- Provide information and resources for parents to help their children prepare for college and careers, including workshops on college and financial aid applications.
- Offer Web-based resources and tools for obtaining student financial assistance.

9. TEACHING AND LEARNING STRATEGIES

Innovative and creative instructional approaches enable teachers to integrate academic and technical instruction and students to apply academic and technical learning in their POS coursework.

Effective teaching and learning strategies should:

- Be jointly led by interdisciplinary teaching teams of academic and career and technical teachers or faculty.
- Employ contextualized work-based, project-based, and problem-based learning approaches.
- Incorporate team-building, critical thinking, problem-solving, communication skills, such as through the use of career and technical student organization (CTSO) activities.

² See http://cte.ed.gov/acrn/ncdg/ncdg_what.htm.

10. TECHNICAL SKILLS ASSESSMENTS

National, state, and/or local assessments provide ongoing information on the extent to which students are attaining the necessary knowledge and skills for entry into and advancement in postsecondary education and careers in their chosen POS.

Well-developed technical skills assessments:

- Measure student attainment of technical skill proficiencies at multiple points during a POS.
- Employ industry-approved technical skill assessments based on industry standards, where available and appropriate.
- Employ State-developed and/or approved assessments where industry-approved assessments do not exist.
- Incorporate performance-based assessment items, to the greatest extent possible, where students must demonstrate the application of their knowledge and skills.

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