**Diagnostic Study Guidelines: Meeting the Perkins IV   
Focused Improvement Accountability Requirements**

Working draft: comments are encouraged.

W. Charles Wiseley, EdD

California Community Colleges

July 2012

# Acknowledgements

Dr. KC Greaney, Director of Institutional Research and Chuck Robbins, Director of Economic and Workforce Development at Santa Rosa Junior College were instrumental in restructuring the original draft of this guide to a more user friendly format. Their considerable efforts were successful in converting the manuscript from a regulatory guidance document to a more friendly “advice from a colleague” while maintaining much of the regulatory guidance. We hope that the increased readability of the document will facilitate broader use.

Special thanks go to Laurie Harrison, of Foothill Associates, who provided review and comment on how analysis of special population groups might be used to provide a more insightful look into the data and strategies for improving student success. She was also able to provide links to resources describing strategies to help students overcome barriers for each of the indicators and special population groups. Her considerable knowledge of Perkins and resources for special populations along with her experience and analysis of Perkins accountability contributed greatly to the substance of the guide.

Nick Kremer, Executive Dean of CITE (Cerritos College Community Industry Technology Education) and Chair of the CCC Chancellor’s Office CTE Research and Accountability Technical Advisory committee, not only facilitated the review and editing of the document by Greaney, Robbins and Harrison, but was a significant contributor to the development of the Accountability Framework on which this guide was founded.

Contents

[Acknowledgements ii](#_Toc330384150)

[Preface iv](#_Toc330384151)

[Diagnostic Study Guidelines 1](#_Toc330384152)

[Introduction 1](#_Toc330384153)

[What the Perkins Act Requires 2](#_Toc330384154)

[The Basic Question and the Answer 3](#_Toc330384155)

[The Diagnostic Study and Improvement Plan 3](#_Toc330384156)

[Components of a Diagnostic Study and Improvement Plan 4](#_Toc330384157)

[Step 1: Document Performance Results 5](#_Toc330384158)

[Step 2: Identify Root Causes 5](#_Toc330384159)

[Step 3: Select Best Possible Solutions 6](#_Toc330384160)

[Step 4: Pilot Test and Evaluate Solutions 7](#_Toc330384161)

[Step 5: Implement Best Solutions 7](#_Toc330384162)

[Additional Timeline and Submission Guidelines 7](#_Toc330384163)

[Diagnostic Study Format for Submission 7](#_Toc330384164)

[Resources 9](#_Toc330384165)

[Organizations/Groups 9](#_Toc330384166)

[References/Resource Documents 10](#_Toc330384167)

[Appendix A: Sample Process Analyzing Core Indicator Data 11](#_Toc330384168)

[Appendix B: Component Descriptions 17](#_Toc330384169)

[Sample Title Page 19](#_Toc330384170)

[Abstract 20](#_Toc330384171)

[Contact Information 21](#_Toc330384172)

# Preface

The Perkins IV legislation requires the state and districts to set performance targets for the Core Indicators identified in the legislation. When districts do not meet those targets there is a performance gap. Districts that don’t come within 90% of their targets are required to take corrective action to address those performance gaps in a Focused Improvement plan.

To meet the legislated accountability requirements for prolonged performance gaps, California has adopted the strategy of having districts perform a Diagnostic Study that addresses those gaps and informs the subsequent Perkins improvement plan. Districts that have performance gaps below 90% of targets must use Perkins funds to take corrective action until performance gaps close. District that do not come within 90% of their targets and then do not improve in the subsequent year MUST do a diagnostic study.

Although the diagnostic study is a requirement for prolonged performance gaps, the process is a method of improving performance and all categories of students and all districts can benefit from such a study. For example, a district may meet overall targets, but when the data for individual special population students are examined it may be revealed that a particular subset of students is underperforming and corrective actions can be taken. A diagnotic study will help to ensure the success for ALL students.

This guide was developed to detail the requirements outlined in the Perkins accountability framework and for the required diagnostic study and report submitted to the chancellor’s office. While this document was published on the chancellor’s office website, it is a draft document and comments from colleges are welcome and encouraged.

# Diagnostic Study Guidelines

# Introduction

The Carl D. Perkins Career Technical Education Improvement Act (Perkins Act) was crafted by the Federal government to address the need for superior Career Technical Education (CTE). The Perkins Act—and the regulations that guide its implementation—supports educators seeking to improve the quality of their CTE instruction. By fostering partnerships among state governments, local schools, and the Federal government, the Act facilitates student success and workforce training.

In California, the path to CTE program improvement is challenging, often impeded by lack of local resources and circumscribed by numerous regulations. Because the use of Perkins funds should result in more focused, effective, and timely CTE instruction, the Perkins Act contains prescriptive, data-based **Core Indicators** and benchmarks to assist in the evaluation of the rate and degree of program improvement.

For practitioners new to Perkins regulations, the sheer volume of data and verbiage related to program improvement can be daunting. In using Perkins funds—and in attempting, with often insufficient resources, to meet the performance requirements of the Act—college staff may find themselves scrambling to understand the implications of data related to their students’ performance; equally important, they may be unsure about what the data tells them or how the data might suggest improvements of specific programs.

To help educators derive the greatest benefit from their Perkins funds, the Chancellor’s Office compiled this handbook as a guide to develop better quality CTE instruction. This guidebook is not a primer about the fundamentals of Perkins implementation on campus. Rather, it contains an overview of the steps needed to evaluate and document program improvement needs once the Perkins funds have been utilized over a period of years and performance targets are not being met.

This guide proposes a systematic approach to using existing resources and sources of information to create program improvement strategies for selected CTE courses that may not be responding to normal improvement processes. In short, this handbook outlines the steps you should take when faced with a CTE program that seems to resist improvement.

The handbook also provides the basic diagnostic study requirements of the Perkins Accountability Framework. It is aimed at those who need to learn more about how to research performance gaps with existing data rather than those who already have a solid base of experience or expertise in the field of research or evaluation. While it builds on firmly established research and evaluation principles, it is designed with the recognition that there is often a lack of resources for the analysis. The handbook provides basic guidance to use commonly available data and reports, a systemic approach to analyzing that data, and a method of analyzing results to improve programs and student success.

The analysis can be used to develop the annual improvement plan for use of Perkins or other funding that addresses identified performance gaps across the district, college, multiple CTE programs or disciplines, or in specific program areas. While not every department that has problems impacting the district performance gap will accept Perkins funds to address the barriers identified in the analysis, districts required to do the diagnostic study must use Perkins funds to address the identified barriers until performance gaps close.

# What the Perkins Act Requires

Simply stated, districts receiving Perkins funds must meet established performance targets. These **Core Indicator** performance targets center on:

1. Technical Skill Attainment (1P1)

2. Credential, Certificate, or Degree (2P1)

3. Persistence or Transfer (3P1)

4. Placement (4P1)

5. Gender Equity:

a. Nontraditional Participation (5P1)

b. Nontraditional Completion (5P2)

Perkins requirements for district performance:

* Districts must meet at least **90 percent of the performance target for each Core Indicator** established annually in negotiations with the Chancellor’s office.
* Those districts failing to meet one or more of their targets must use the data about their students in planning performance improvements, in cooperation with the Chancellor’s office, in the following year plan.
* If a district does not improve in the year after implementing their plan, a diagnostic study is required.

Since the performance targets are established annually, the district has the opportunity to identify early trends that may indicate deteriorating performance. The performance requirements for the 90 percent standard and subsequent actions follow defined steps:

* **Year One:** Assume in the spring of *Year One* the college does not meet the requirement to achieve at least 90 percent of one or more Core Indicators.
* **Year Two:** In preparing its Perkins plan for *Year Two,* following identification of a below-90-percent performance on one or more Core Indicator, the district must add a section to its proposed plan for *Year Two* that specifies the strategies and activities the college will enact to address the declining performance.
* **Year Three:** If there is no improvement in the substandard Core Indicators in the spring of *Year Two* as the district plans for *Year Three*, the district must include in the plan a diagnostic study to identify root causes for the performance gaps.
* **Year Four:** The district must implement improvements in the *Year Four* plan based on the diagnostic study (described in detail in the diagnostic study section of this handbook) **and** submit a copy of a diagnostic study summary report to the chancellor’s office with the local application for Year Four. The “year four” activities must continue until the substandard core indicator shows improvement.

There is one more condition that might occur that involves a diagnostic study. If a district does not meet 90% of a target for three consecutive years, the Chancellor’s office will formally notify the college to begin the process of conducting a diagnostic study and developing a summary report and a specific, written improvement plan that includes a detailed work plan with specific actions to address the findings of the diagnostic study. Because targets are negotiated annually based on a prior history of performance, it is unlikely that a district would fall into the trap of not meeting 90% of a target for three consecutive years.

# The Basic Question and the Answer

Despite the infusion of Federal dollars into its CTE programs, a district may find itself unable to effect substantive improvement in its Core Indicators. **What should the staff do to help improve student performance to reach the district goal of improving student success?**

According to the regulations of the Perkins Act as implemented in California, a district not meeting its performance requirement and then not improving in the following year must:

1. Conduct an annual **diagnostic study.**
2. Submit a **summary report of the study** along with the following year annual Perkins application/plan.The annual application (local plan) must **include proposed improvements and activities that address the findings until improvement occurs.**
3. **The improvements** **must address performance gaps and focus on improvements that reduce those gaps.**
4. Following three years below a negotiated target, submit and implement a **formal** **diagnostic study and** **improvement plan** utilizing the results of the diagnostic study. This formal plan must address deficiencies and focus on improvement.

In practice, this process can be difficult to accomplish with limited resources; nonetheless, the Perkins Act requires the process to be followed to achieve improvements. The data analysis and identification of problems can be helpful in changing factors that may be inhibiting student success.

# The Diagnostic Study and Improvement Plan

When 90% of negotiated performance targets have not been achieved and no improvement occurs in that indicator in the following year, the district is required to complete a diagnostic study to determine root causes. The district would then, working with the Chancellor’s office, propose related effective practice solutions in the following year Perkins local plan for all funded underperforming CTE programs.

The diagnostic study facilitates the district investigation into barriers to student success in CTE programs. The district assesses the differences in programs and students that are unique to their college(s) and that may affect student performance. Following the analysis, the college may then use the study to target areas for more in-depth analysis or data collection. Obviously, this assessment will identify factors that the college might be able to control or change as well as those factors not under the college’s influence. With the study, the college can target Perkins funds to address the barriers identified in the diagnostic study that are under the control of the college.

Since the district must share the diagnostic information with the Chancellor’s office in a summary of the study, the study is a tool that both the Chancellor’s office and the local college will use in partnership to address the performance gaps—again, a process required by the Federal Perkins Act. Although neither the [Accountability Framework](http://www.cccco.edu/Portals/4/EWD/CTE/core_indicator/Accountability_Framework_Perkins_IV-June_2010.doc) nor this guide specifies the exact format of the study, the district must follow, at the least, a standard research or evaluation methodology. Technical assistance for the diagnostic study may be available through the [RPGroup](http://www.rpgroup.org/) or the [Centers of Excellence](http://www.coeccc.net/).

## Components of a Diagnostic Study and Improvement Plan

Keeping in mind that many colleges face diminished resources and insufficient staff, the following outline is intended to provide guidelines to establish a framework for analysis and program improvement. Several approaches are possible, but the one selected by the college should incorporate all elements of program improvement as outlined, for example, in the 2002 U.S. Department of Education publication, *Improving* *Performance: A Five-Step Process (*[*http://cte.ed.gov/downloads/FINAL%20GUIDE.PDF*](http://cte.ed.gov/downloads/FINAL%20GUIDE.PDF)).

The fundamental steps of the diagnostic study and improvement plan are from that generic five-step improvement process:

1. Document performance results
2. Identify root causes of performance gaps
3. Select best possible solutions
4. Pilot test and evaluate solutions
5. Implement best solutions

While the five-step process might conceivably be used as a one-time study, in fact it is actually better adapted for continuous evaluation and improvement. Figure 1 demonstrates such a process.



*Figure 1.* The five step process in the Program Quality Initiative. Graphic from the USDE publication, *Improving* *Performance: A Five-Step Process* (2002)

The program improvement process was detailed further by Ken Meehan and Caroline Sheldon in the 2003 chancellor’s office publication *Instructional Program Improvement Resource Guide (IPIRG).* That publication*,* which also contains a section by Laurie Harrison on special populations, puts the five step process into the California community college context (<http://extranet.cccco.edu/Portals/1/WED/CEP/PerkinsIV/CoreIndicator/pirg-full_doc.pdf>) and adds key performance indicators commonly available on the college campus.

A quick review of either or both of those documents might provide additional insights into how you might proceed with your diagnostic study.

## Step 1: Document Performance Results

Because a diagnostic study is required of districts not improving performance in the year after failing to meet 90% of a performance target, the documentation of performance results begins with the basic Core Indicator data utilized each year in the negotiations between the district and the Chancellor’s office. The Perkins Core Indicators are derived from MIS (Management Information System) data uploaded to the Chancellor’s office by each community college district in the system. The Core Indicators are used to assess whether CTE programs at individual colleges are meeting the established performance targets and are posted on the Chancellor’s office website: <https://misweb.cccco.edu/perkins/main.aspx>

Some of the data used annually in the Core Indicator reports designed for continuous improvement is helpful in taking a first broad look at a problem. However, that data is often merely a summary of students who progress far enough to get into the core indicator reports. Still, it is important to start with the Core Indicator data as that is the source for identifying unmet performance targets. The core indicator reports also can provide key performance indicators for a number of student groups and program areas. **Appendix I** of this Guidebook provides a step-by-step example of Core Indicator data analysis to document performance and identify problem areas.

Beyond Core Indicator data, other data resources might be useful in conducting a diagnostic study. Further research will most likely be required to understand the context of the issues that affect the performance gap. The Chancellor’s office on-line Data Mart allows users to look up detailed information on courses and student outcomes, including course retention and success rates for vocational courses identified by a 2, 4 or 6 digit TOP code, by gender, age and ethnicity. This information may help to pinpoint particular courses that need focused attention. The Data Mart is at: <http://datamart.cccco.edu> and a direct link to the Credit Course Retention/Success Rate Report is: <http://datamart.cccco.edu/Outcomes/Course_Ret_Success.aspx>

In addition, local data might be available within your college or district. For example, are there useful, applicable data included:

* In your program review process?
* In a local data warehouse or data mining tool?
* As a part of the assessment of course- or program-level Student Learning Outcomes?
* From your research office, or IT department?

Lastly, it might prove necessary or useful to collect data that is currently not available (more on this in the following section).

## Step 2: Identify Root Causes

Seemingly simpleproblems in a variety of areasmay cause performance gaps. In this step, the college is attempting to highlight not only the gaps in performance (identified in Step 1) but also the reasons for those gaps—the *root causes*. It is not enough to say a gap exists; it is imperative that the factors creating that gap be assessed, identified, and targeted for change. A useful resource for identifying root causes particularly for nontraditional participation and completion is *Nontraditional Career Preparation: Root Causes and Strategies* available on <http://Stemequitypipeline.org>, <http://cccspecialpopulations.org>, and [www.jspac.org](http://www.jspac.org)

Districts should use further information such as key performance indicators in areas such as:

* Access
* Efficiency
* Resources
* Success/completions
* Non-traditional participation/completion

Statistical analysis of local data and qualitative methods such as focus groups or surveys are helpful to identify the most direct causes of performance gaps. The college might survey students, faculty, or industry representatives. Examples of surveys and focus group protocols used by other California community colleges to assess CTE programs can be found as a part of the Research & Planning (RP) Group’s Inquiry Guide *Improving CTE Programs with Data and Evidence*: <http://www.rpgroup.org/BRIC/InquiryGuide/CTE> or one of the other Research and Planning Group and Education Initiatives such as the [Center for Student Success](http://css.rpgroup.org/) and [Bridging Research Information and Culture](http://www.rpgroup.org/projects/BRIC.html).

The research might encompass a faculty-driven process such as in-class assessment using the Classroom Assessment Techniques (CATs) and classroom research as identified by Cross (1996, 1998), including the “Classroom Research” project cycle. Other possibilities for researcher-driven quantitative or qualitative research can be found in Jonker & Pennick (2010) and Creswell (2002, 2006) among many other research texts.

The Chancellor’s Office Data Mart should be a useful source of information to extract detailed data on access and success/completions. In addition to the Credit Course Retention/Success Rate Report cited above, there is also detailed term-based data on student enrollment status, day/evening status, and unit load by gender, ethnicity and age. Unfortunately the tool does not include other non-traditional groups.

Note that not every root cause for a performance gap is in the control of the college. On the other hand, many causes that appear to be environmental or societal at first glance, may be found to be under the influence of the college once enough information is gathered and strategies for addressing specific problems or aspects of the problems.

## Step 3: Select Best Possible Solutions

In looking at the complexity of problems, “the best” solution may be that which provides the greatest benefit for the most students. Again, the college may not be able to influence all root causes, and college staff may find it difficult to address improvements that cover every situation or account for every outside influence on student success. Keep in mind that the Perkins funds may be used to implement solutions.

Solutions should be specific to the identified performance gap. For example a solution that addresses a performance gap in Skill Attainment (Core Indicator 1) might involve instructional or curricular change, while a gap in the Completion data (Core Indicator 2) might indicate a solution involving more student support. The document *Use Core Indicators to Track the Success of Special Populations in Career Technical Education* lists potential strategies for addressing weaknesses for each of the Core Indicators (available at [cccspecialpopulations.org](http://cccspecialpopulations.org/) and [www.jspac.org](http://www.jspac.org)). If the diagnostic study reveals that the gap is primarily due to the performance of one special population groups, strategies to address issues specific to the special population groups are available in *Make a Difference for Special Population Students,* and *Make a Difference for Limited English Proficient Students* (available at the same two websites).

Districts confronted with root causes that seem to have no solution should consult with their Chancellor’s office monitor, with colleagues at other colleges, or with researchers from other offices in the state. Selecting the best possible solutions for identified root causes is a team effort, requiring consultation, cooperation, and shared knowledge.

## Step 4: Pilot Test and Evaluate Solutions

Piloting, testing, and evaluation are vital to successful improvement. Again, colleges should work with their Chancellor’s office monitor to ensure that pilot programs are properly implemented and that the best solutions are selected. If possible, utilize specific recommendations in the literature of research for the test strategy and ensure that results are documented.

Once the pilot solution has been tested and evaluated—and assuming a positive outcome to that test—the successful solutions may be implemented. If, unhappily, evaluation indicates that the pilot solution did not solve or sufficiently impact the problem, the college will have to continue this five-step cycle to seek other solutions.

## Step 5: Implement Best Solutions

After identifying a successful pilot solution, the college should implement that process throughout the district. Documenting the impact is vital to expand success of all students in the district.

# Additional Timeline and Submission Guidelines

Going through the diagnostic study and implementing solutions may take a significant amount of time. Because the diagnostic study was not required until the second year after not meeting 90% of the performance target and the study is done during the third year, by the time the implementation of a solution is put in place, the outcomes for year three and possibly year four may have occurred.

The diagnostic study summary must be submitted to the Chancellor’s office when the Perkins local application is completed (due May 15) so that the Chancellor’s office can evaluate alignment between the planning within the local application and the diagnostic study. Although the planning and diagnostic study must be aligned, a detailed work plan describing the activities implemented is not required. However, if the district does not meet 90% of a target for three consecutive years, then the district must submit to the Chancellor’s office their diagnostic study and a detailed action plan for implementation of solutions that address the root causes.

## Diagnostic Study Format for Submission

As previously mentioned, there is no required format for the diagnostic study or summary submitted to the chancellor’s office. The components included in the documents submitted will depend on the approach taken for the diagnostic study. The following components must be included in the documents submitted to the chancellor’s office summarizing the study:

1. **Title page** (page i, page number not printed) required
2. **Abstract** (page number printed) required
3. **Table of Contents** (page number printed) ...................... required
4. **Body or Text** .......................................................... required  
   Note: although the sections of the body will be determined by the approach used, the following sections must be included:
   1. Introduction
   2. Design and Methodology Used
   3. Data Analysis, Findings and Presentation
   4. Discussion of solutions
   5. Plans for Implementation of Solutions
5. Appendices optional

Appendix B of this document includes information on each component along with sample pages.

# Resources

A number of resources are available to assist colleges in conducting diagnostic studies and developing improvement plans. While this short list is not exhaustive, it may be a good place to start.

## Organizations/Groups

Chancellor’s Office Career Education Practices Unit (including regional consortia links and specific program areas): <http://extranet.cccco.edu/Divisions/WorkforceandEconDev/CareerEducationPractices.aspx>

contacts:

<http://extranet.cccco.edu/Divisions/WorkforceandEconDev/ContactUs.aspx>

Centers of Excellence: [www.coeccc.net/](http://www.coeccc.net/)  
contact:

Elaine Gaertner, Statewide Director of Centers of Excellence,   
(408) 288-8611   
[elaineg@cccewd.net](mailto:elaineg@cccewd.net)

California Perkins Joint Special Populations Advisory Committee: [www.jspac.org/](http://www.jspac.org/)   
contact:

Tammy Montgomery, Program Coordinator  
530-231-5508  
[tammy.montgomery@gcccd.edu](mailto:tammy.montgomery@gcccd.edu)

Research and planning group for California community colleges: [www.rpgroup.org](http://www.rpgroup.org)  
contact:

Kathy Booth, Executive Director,   
510-527-8500,   
[kbooth@rpgroup.org](mailto:kbooth@rpgroup.org)

## References/Resource Documents

California Community Colleges Chancellor’s Office (CCCCO), (2002). *Instructional Program Improvement Resource Guide.* <http://extranet.cccco.edu/Portals/1/WED/CEP/PerkinsIV/CoreIndicator/pirg-full_doc.pdf>

Cataldo, B., & Karandjeff, K., (2012). *Improving CTE Programs with Data and Evidence*, a Bridging Research, Information and Culture (BRIC) Inquiry Guide, The Research & Planning Group for California Community Colleges. <http://www.rpgroup.org/content/BRIC-inquiry-guides>

Creswell, J. W. (2006). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Sage Publications, Inc.: Thousand Oaks

Creswell, J. W. (2002). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications, Inc.: Thousand Oaks

Cross, K.P., (1998). Classroom research: Implementing the scholarship of teaching, *New Directions for Teaching and Learning, 75*, 5-12. (<http://www.fctl.ucf.edu/events/summerconference/2005/presentations/SoTL_Roundtable/SoTLPatCross.pdf>)

Cross, K.P., (1996). Classroom research: Implementing the scholarship of teaching, *American Journal of Pharmaceutical Education*, *60*, 402-407. (<http://archive.ajpe.org/legacy/pdfs/aj6004402.pdf>)

Grubb, W. N., & Badway, N. (2005). *From Compliance to Improvement: Accountability and Assessment in California Community Colleges*. California Community Colleges Chancellor’s Office, Sacramento. <http://extranet.cccco.edu/Portals/1/WED/CEP/PerkinsIV/CoreIndicator/Compliance_to_Improvement.pdf>

Grubb, W. N., & Badway, N. (1999). *Performance Measures for Improving California Community Colleges: Issues and Options,* Community College Cooperative and National Center for Research in Vocational Education, School of Education, University of California, Berkeley*.* [*http://extranet.cccco.edu/Portals/1/WED/CEP/PerkinsIV/CoreIndicator/Grubb\_Badway\_VTEA\_performance-improvement.pdf*](http://extranet.cccco.edu/Portals/1/WED/CEP/PerkinsIV/CoreIndicator/Grubb_Badway_VTEA_performance-improvement.pdf)

Jonker, J., & Pennink, B. J. W. (2010). *The Essence of Research Methodology: A Concise Guide for Master and PhD Students in Management Science*. Springer: London.

US Department of Education, Division of Vocational and Technical Education. (2002). *Improving Performance: A Five-Step Process.* [*http://cte.ed.gov/downloads/FINAL%20GUIDE.PDF*](http://cte.ed.gov/downloads/FINAL%20GUIDE.PDF)

# Appendix A: Sample Process Analyzing Core Indicator Data

Documenting performance should lead naturally to understanding of the causes of gaps between the negotiated targets and actual performance. It is critical to start with the Core Indicator data, especially since that is the data used for accountability in assessing performance. While it is obviously necessary to look at the Core Indicators that are below the 90% threshold of negotiated targets, other performance indicators for a variety of student groups or program areas may shed light on performance over time and help staff to a better understanding of root causes.

Comparing performance across time, colleges, and population or program groups can provide a key starting point. For example, examining progress of economically disadvantaged, ESL, nontraditional, or single parent students through individual programs may help identify where students are performing higher or lower than other students. It is possible that one subset of students is the primary reason for not reaching the target and can be the focus of improvement plans.

All Perkins Core Indicator data is publicly available from the Chancellor’s Office website: <https://misweb.cccco.edu/perkins/main.aspx>. The Perkins core indicator reports consist of:

1. Negotiation reports - used for negotiating performance targets and analyzing district and college performance over time.
2. Forms-used in the planning and application process for districts, colleges, and funded programs.
3. Trend reports - used to examine performance over time at the discipline, sub discipline, and program area level.
4. Special population reports – provides performance information by special population group for districts and colleges by discipline, sub-disciplines, and program area level.
5. Summary reports – provides performance information for districts and colleges by discipline, sub-disciplines, and program area level.

Typically, districts begin with an analysis of the Perkins summary reports such as “Core Indicators by TOP Code – Summary by College” (# 5 above). For this example, let’s assume a college has a problem with gender equity in student participation and completion, specifically in the core indicators of Non-Traditional Participation (5P1) and Completion (5P2).

Table 1 below is an example of *Gender Equity Indicators* by two-digit TOP Code. The table, Non-traditional completions are lower than Non-traditional participation in every TOP code except Information Technology. The areas in the spreadsheet shaded in blue are quite low; in fact, the blue highlighting indicates they are below the district negotiated targets (which in this case are 14.02% Participation & 9.42% Completion). Information Technology and Public and Protective Services are above the district target (not shaded blue), but even then, Public and Protective Services has a completion rate of less than half the participation rate.

Generally, having completion rates below participation rates in non-traditional students is an indication that barriers are keeping students from completing the programs—often the college can address some of these issues.

Table 1.

Sample Gender Equity Indicators by Two-Digit TOP Code



*Note: Although all indicators are in the summary report, only gender equity measures are shown.*

*Source: Chancellor’s Office Perkins Core Indicator Reports. To find this data for your college, go to* <https://misweb.cccco.edu/perkins/main.aspx> *and make the following selections: Core Indicator Reports >* [*PERKINS IV*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV)*>*[*2012-2013 Fiscal Year Planning*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV%2f2012-2013+Fiscal+Year+Planning)*>*[*Summary Core Indicators by TOP Code*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV%2f2012-2013+Fiscal+Year+Planning%2fSummary+Core+Indicators+by+TOP+Code)*> 2012-2013 Core Indicators by TOP Code - Summary by College*

Note that the Completion numbers in Table 1 for Information Technology (55.60) and Public and Protective Services (14.20) are in ***blue italics***. This indicates that there were **fewer than ten students** used to compute the ratios. This may suggest that far too few students are completing these programs to determine gender equity rates with any reliability. Also note that disciplines without rates have no programs identified as nontraditional. Programs are nontraditional when occupations that the programs prepare students for have at least 75% of the workers in one gender (see <http://www.jspac.org/attachments/article/57/TOP_11-2009%20(Resized).pdf)> for a complete list.

As college staff study the data, they would note the small number of students completing these programs and would then focus on additional sources of data. For instance, it would be useful to have a historical snapshot of college performance by looking at **trend reports** shown in the next two tables. Table 2 below tracks **Non-traditional completion** specifically for TOP Code

Table 2.

Sample Non-Traditional Completions Trend Report for TOP Code 21



*Note: Although all special populations are in the trend report, only programs and gender are shown.*

*Source: Chancellor’s Office Perkins Core Indicator Reports. To find this data for your college, go to* <https://misweb.cccco.edu/perkins/main.aspx> *and make the following selections: Core Indicator Reports >* [*PERKINS IV*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV)*>*[*2012-2013 Fiscal Year Planning*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV%2f2012-2013+Fiscal+Year+Planning)*>*[*2. Trend Reports by Core Indicator*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV%2f2012-2013+Fiscal+Year+Planning%2f2.+Trend+Reports+by+Core+Indicator)*> 2012-2013 Core 5b - Non-Traditional Completion - Performance Trend Report by College*

21 over several years. In public and protective services, females are the nontraditional gender. This chart indicates that, although females have increased completions over the years as shown by the increasing percentages, the total number of students earning awards (total columns) has decreased significantly since 2007 – 2008 going from 47 completions to only seven completions. The percentages are influenced by these changes in the number of students (the rate compares the “Count” of Non-traditional completions with the “Total” completions). With only one female earning an award in the two more recent years, the college staff would have difficulty identifying reasons for lack of female completions. A next step might be an analysis of **Non-traditional participation** rates in TOP Code 21 as shown in Table 3.

Table 3.   
Sample Non-Traditional Participation Trend Report for TOP Code 21.



*Note: Although all special populations are in the trend report, only program and gender are shown.*

*Source: Chancellor’s Office Perkins Core Indicator Reports. To find this data for your college, go to* <https://misweb.cccco.edu/perkins/main.aspx> *and make the following selections: Core Indicator Reports >* [*PERKINS IV*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV)*>*[*2012-2013 Fiscal Year Planning*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV%2f2012-2013+Fiscal+Year+Planning)*>*[*2. Trend Reports by Core Indicator*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV%2f2012-2013+Fiscal+Year+Planning%2f2.+Trend+Reports+by+Core+Indicator)*>2012-2013 Core 5a - Non-Traditional Participation - Performance Trend Report by College*

In Table 3 we see that women have increased their participation from 15 to 27 at a time when total (male and female) participation is declining from 137 to 75. Given our concerns at the district level in this example about not meeting the nontraditional completion targets, we would want to look in areas where there are larger numbers of students to see if the lack of awards is concentrated in one discipline or another. Once we identify if the gender inequity is concentrated in a few large discipline areas, we can begin to focus our attention on those specific areas. The question that cannot be answered with this data, no matter how large differences are, is *why* women are failing to complete. Here, the college might utilize surveys or focus groups of faculty and students to dig more deeply into the issues.

A next step to identify large enrollment areas would be to gather data from multiple available sources. Using multiple sources would help us compile information to help us understand student progression through the disciplines and program areas. Table 4, below, includes data from multiple available sources (see the text following the table for more detailed information on the source of the data).

In our example thus far, we have been examining gender equity in various 2-digit TOP coded programs for 2009-2010. If the problem we are addressing is not meeting targets in nontraditional completions, we may want to look at the ratios of gender in enrollments, concentrators (as identified in the Perkins core indicators), and completions to get an idea of where improvements might be targeted that would impact the most students.

To understand how we might think about student progression, given Table 4, we can first look at the Environmental Sciences and Technologies discipline. In the single academic year of 2009-2010, there were 987 enrollments and 100% of the students passed the course with a grade of A-C. In the same academic year, 883 of those enrollments were above the introductory level and those enrollments were taken by 377 students. Given the numbers of students taking courses above the introductory level in environmental sciences, we can see that students are taking more than one course in the 2009-10 academic year. With an average of six units in 2009-2010, we might expect more students to reach the 12 unit threshold in three years but only 40 showed up in the 2009-10 core indicator cohort.

Table 4.

Course Enrollments, Retention, and Success with 2009-2010 Cohort Gender Equity Indicators by Discipline (2-Digit TOP Code).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | |  |  | |  | 2009-10 Cohort | | |
|  |  | 2009-10 Data | | | | | | Total Cohort**3** | Nontraditional / Gender Equity**4** | |
|  |  | Enrollments**1** | | Enrolled Above Intro**2** | | | | Participation | Completion |
|  |  | Enroll-ments | % Success | Enroll-ments | | Head-count | | % NonTrad | % NonTrad |
| 03 | Environmental Sciences and Technologies | 987 | 100.0% | 883 | | 377 | | 40 | 10.00% | 8.43% |
| 05 | Business and Management | 1,477 | 59.5% | 1,043 | | 464 | | 189 | 11.23% | 4.35% |
| 07 | Information Technology | 691 | 71.8% | 437 | | 376 | | 10 | 50.50% | 55.60% |
| 09 | Engineering and Industrial Technologies | 677 | 80.1% | 513 | | 177 | | 86 | 9.58% | 4.10% |
| 12 | Health | 506 | 82.2% | 482 | | 250 | | 81 | 9.88% | 5.11% |
| 13 | Family and Consumer Sciences | 347 | 80.7% | 307 | | 132 | | 53 | 3.70% | 3.30% |
| 21 | Public and Protective Services | 3,981 | 91.5% | 3,878 | | 2,185 | | 161 | 37.00% | 14.20% |

*Note: Data in this table are combined from multiple sources.*

1. *Source: Chancellor’s Office Data Mart. To find this data for your college, go to* <http://datamart.cccco.edu/> *and make the following selections: Queries > Outcomes > Retention/Success Rate. Note that to get annual numbers, you must select the three semesters of the academic year (summer, fall, spring) and sum. Also note that in the “Report Form Selection Area” in the space beneath the table, you need to select Gender, Program Type: 2-digits TOP, and Vocational (while un-selecting the other options).*
2. Source: Chancellor’s Office Perkins Core Indicator Reports. *To find this data for your college, go to* <https://misweb.cccco.edu/perkins/main.aspx> *and make the following selections:*[*PERKINS IV*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV)*>*[*2012-2013 Fiscal Year Planning*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV%2f2012-2013+Fiscal+Year+Planning)*>*[*1. Forms*](http://reports.cccco.edu/Reports/Pages/Folder.aspx?ItemPath=%2fPERKINS+IV%2f2012-2013+Fiscal+Year+Planning%2f1.+Forms)*> 2012-2013 Form 1 Part F by 2 Digit TOP Code – College. Note the numbers are in red, just above the table on the website.*
3. *Source: Chancellor’s Office Perkins Core Indicator Reports. Follow directions for #2 above, and scroll down to the first line in the table to get the total for the CTE cohort.*
4. *Source: Chancellor’s Office Perkins Core Indicator Reports. Follow directions for #2 above, but scroll down in the table to Core Indicator 5a (Nontraditional Participation) to get the college performance rate for participation for nontraditional students, and to Core Indicator 5b (Nontraditional Completions) to get the college performance rate for completions for nontraditional students.*

In other words, in the 2009-10 academic year, only 40 students (Total Cohort) had met the Perkins enrollment threshold of at least 12 units in the discipline (with at least one course above the introductory level) from 2007-2008 through 2009-2010 to get into the core indicator cohort. This is actually quite surprising given the high enrollments in 2009-10.

The program in Environmental Technology is nontraditional for females so we can deduce (due to the participation rate of 10%) that there were only four females who participated in the program. The low nontraditional participation rates coupled with the small gap between participation rates and completions rates might warrant deeper exploration. Another example is Business and Management, which posts low student successful course completion rates (59.5%), which might be cause for further exploration as such low pass rates obviously negatively impact completion rates. Additionally, if there is gender bias in the course completion, the large number of enrollments would suggest a good target for gender equity activities. On the other hand, Information Technology with only 10 students in the cohort and good gender equity in completions need not be a target for gender equity activities.

While there are a number of other questions about student progress to unit accumulation that come to mind, the most overwhelming is, of the completions in nontraditional programs, why are so few of the nontraditional gender? Further research at the local level may elicit possible explanations, such as short term certificates are simply not recorded and completion rates would be closer to participation rates than appear in the state data.

For the very large programs, one can dig in a little deeper in the Data Mart. Table 5 shows enrollments and course outcomes at the 6-digit TOP code level by distance education status and gender for TOP 21 from the data mart. In the table, the percent success column tells us the percentage that completed the course with a grade of C or better. We can see that females are as successful as their male counterparts in the courses within the discipline except for the distance education modalities (text one-way and two-way interactive).

Females and that non distance education courses had success rates that either surpassed the males, such as in the administration of justice program areas (90.2% vs. 88.9% respectively), or matched them. Since the Alcohol and Controlled Substances program (TOP 2104.40) is not nontraditional for either gender we will not include it in the example here. Both administration of justice and fire technology, however, had fewer females than males enrolling. With over 2,500 enrollments in fire technology, that program might be a good target for gender equity activities given that only 8% of the enrollments were female. And, of the few awards issued in Administration of Justice and Fire Technology (seven in 2009-2010) that we saw in the summary and trend reports, only one went to a female so increasing female participation and completions would make a big difference in providing women opportunities for good jobs and would help in the nontraditional completions reports.

While the trend report data showed that there were nearly 50 awards in 2007-2008, even then only five went to females. This might be an area the college could explore further with other local data analysis (see steps 1 and 2 in the “Components of a Diagnostic Study and Improvement Plan” earlier in this handbook). Targeting Perkins funds on strategies to improve participation and completion for women in these areas might be one of the solutions identified in the five step process.

Table 5.

Enrollments, retention, and success by program area and gender for Public and Protective Services (TOP 21).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | Enrollments | % Female Enrollments | % Retained | % Success |
| College Total for TOP 21 | | | | 3,981 |  | 95.5% | 91.5% |
|  | Non Distance Education Total | | | 3,117 |  | 99.6% |  |
|  |  | Administration of Justice-210500 Total | | 312 |  |  | 89.4% |
|  |  |  | Female | 122 | 39% | 94.3% | 90.2% |
|  |  |  | Male | 190 |  | 97.4% | 88.9% |
|  |  | Alcohol and Controlled Substances-210440 Total | | 18 |  |  | 100.0% |
|  |  |  | Female | 13 | 72% | 100.0% | 100.0% |
|  |  |  | Male | 5 |  | 100.0% | 100.0% |
|  |  | Fire Technology-213300 Total | | 2,787 |  |  | 100.0% |
|  |  |  | Female | 221 | 8% | 100.0% | 100.0% |
|  |  |  | Male | 2,563 |  | 100.0% | 100.0% |
|  |  |  | Unknown | 3 |  | 100.0% | 100.0% |
|  | Text one-way (e.g. newspaper, correspondence, etc.) Total | | | 842 |  | 80.5% |  |
|  |  | Alcohol and Controlled Substances-210440 Total | | 842 |  |  | 64.4% |
|  |  |  | Female | 191 | 23% | 78.5% | 55.0% |
|  |  |  | Male | 647 |  | 81.1% | 67.1% |
|  |  |  | Unknown | 4 |  | 75.0% | 75.0% |
|  | Two-way interactive video and audio Total | | | 22 |  | 90.9% |  |
|  |  | Administration of Justice-210500 Total | | 22 |  |  | 72.7% |
|  |  |  | Female | 8 | 36% | 75.0% | 62.5% |
|  |  |  | Male | 14 |  | 100.0% | 78.6% |

*Source: Chancellor’s Office Data Mart. To find this data for your college, go to* <http://datamart.cccco.edu/> *and make the following selections: Queries > Outcomes > Retention/Success Rate. Note that to get annual numbers, you must select the three semesters of the academic year (summer, fall, spring) and sum. Also note that in the “Report Form Selection Area” in the space beneath the table, you need to select Gender, Program Type: 2-digits TOP & 6-digits TOP, and Vocational (while un-selecting the other options). Also note that college staff will need to calculate the Percentage of female enrollment based on the numbers provided in Data Mart.*

In summary, with diligence and thoughtful analysis, the data readily available from Perkins Core Indicator reports and the Chancellor’s Office Data Mart can provide a great deal of information for identifying performance gaps and pinpoint more detailed areas in need of improvement.

# Appendix B: Component Descriptions

Each of the components of the diagnostic study report is described in this appendix. Sample pages are included after the component descriptions. The components described herein are:

1. **Title page** (page i, page number not printed) required
2. **Abstract** (page number printed) required
3. **Table of Contents** (page number printed) ...................... required
4. **Body or Text** (page 1, page number printed) required  
   Note: although the sections of the body will be determined by the approach used, the following sections must be included:
   1. Introduction
   2. Design and Methodology Used
   3. Data Analysis, Findings and Presentation
   4. Discussion of solutions
   5. Plans for Implementation of Solutions
5. Appendices optional

#### Title Page

The title page identifies the document as a “Diagnostic Study Summary”, the district, preparer, and date prepared. The title page should follow the suggested format

* The title page should have all text until the author(s) name at least triple-spaced (two blank lines between each entry) and centered with the first line approximately 2 inches from the top.
* The first non-blank line includes the phrase “Diagnostic Study Summary” on a line by itself. The next non-blank line contains the full district name. The next non-blank line should be the phrase “Prepared by”. On the lines following two blank lines place the name of the primary author(s), followed by a line with the author’s official title followed their contact information and then by a blank line. Do this for each author.
* The last line should be the date of the report.

For an example, see the sample pages following the component descriptions.

#### Abstract

The abstract should be on a page by itself and is limited to 500 words or less. Include in the abstract a summary of reasons for the study, the data and methods used to complete the study, a brief summary of the analysis and findings, and the strategies planned for implementation. Discuss whether a pilot has been implemented and the timeline for piloting any other solutions or larger implementations

#### Table of Contents

The table of contents should include all of the section headings listed in the component listing and the associated page numbers.

#### Body or Text

The main body of the document summarizes the reasons for the study and the diagnostic study conducted by the district. Details should be limited to important aspects of the study that lead to the solutions and implementation. The sections of the body should also be included in a table of contents.

Introduction

Describe the reason for the study in the introduction. The description should include: a) why the diagnostic study was required, b) the problematic and related indicators, c) a summary of the challenges of looking at the indicators at the district level, and d) an environmental context for the problem indicators such as across programs in a college or across districts with multiple campuses when applicable.

Design and Methodology Used

This section summarizes the approach taken by the district. Describe the different data sources used to document results. Describe any methods used that directly affect the data analysis and findings.

Data Analysis, Findings and Presentation

Include in the data analysis section a discussion of the analysis highlights including samples of important data that were used to identify root causes of performance gaps. Only data relating to the specific solution identified in the next section needs to be presented.

Discussion of solutions

Describe how the specific strategy or solution was selected and the source of the strategy or solution.

Plans for Implementation of Solutions

In this section, include whether the solution has been piloted, will be piloted in the current academic year, or will be piloted in the subsequent academic year. Indicate the scope of the implementation or pilot (e.g., workshops for faculty in a department or across departments). Describe how the implementation will relate to the Perkins local application due in the chancellor’s office in May for the subsequent program year.

### Sample Title Page

The first non-blank line includes the phrase “Diagnostic Study” on a line by itself. The next line contains the full district name. The next line should be the phrase “Prepared by”. On the next lines place the name of the primary author(s), their titles, and contact information, followed by a line with the date of the report.

*2 inches from top*→ Diagnostic Study Summary

*At least 2 blank lines*

Sample Community College District

*At least 2 blank lines*

Prepared by

*2 blank lines*

Jennifer Q. Administrator

Consultant

jadmin@myhost.edu

*1 blank line*

John Q. Faculty

Business Department Chair

John.faculty@mycollege.edu

*1 blank line*

May 5, 2012

### Abstract

The abstract should be on a page by itself and is limited to 500 words or less. The first nonblank line includes the phrase “Diagnostic Study” followed by the district name on a line by itself.

Include in the abstract a summary of reasons for the study, the data and methods used to complete the study, a brief summary of the analysis and findings, and the strategies planned for implementation. Discuss whether a pilot has been implemented and the timeline for piloting any other solutions or larger implementations.

*1.25 inches from top*→ Diagnostic Study Summary

*single-spaced,* Sample Community College District

*2 blank lines*

Abstract

*2 blank lines*

*Single-spaced* The abstract is a short description with sufficient detail to permit the reader to understand the contents of the study summary. Although it should not contain great detail, the abstract should include an indication of the problem, important methodology, and conclusions. The abstract can be more than one page, but must be under 500 words (counting everything).

*(page number is counted and printed on this page: centered lower-case Roman numerals)*

*page number (lower case Roman) here* → ii

*(numbering is next in preliminary page sequence)*

# Contact Information

For more information, contact your project monitor at the California Community Colleges Chancellor’s Office. Monitor contact information is available on the Workforce and Economic Development web at: <http://extranet.cccco.edu/Divisions/WorkforceandEconDev/ContactUs.aspx>.

You can also contact the author directly at:

W. Charles Wiseley, EdD,

[cwiseley@cccco.edu](mailto:cwiseley@cccco.edu)

(916) 327-5895