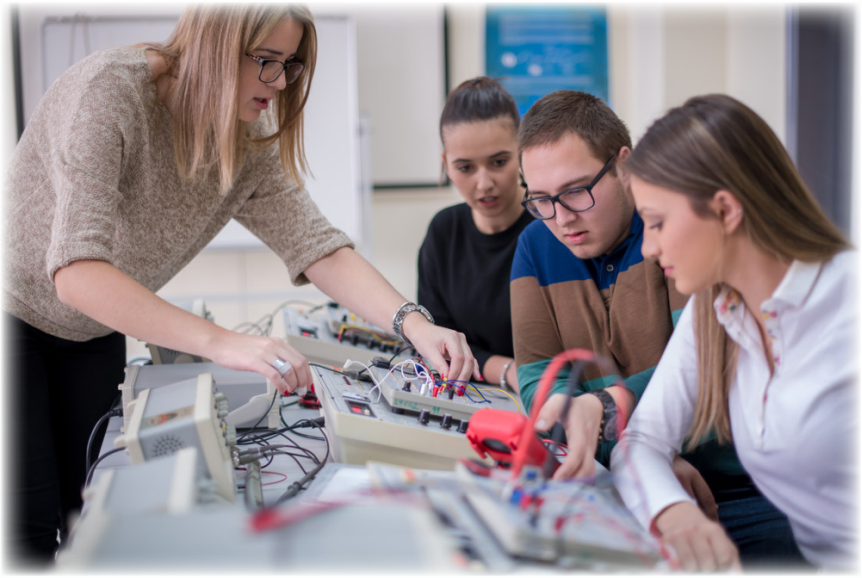
NEPC Review: Creating Strong Building Blocks for Every Student: How Middle Schools Can Lay the Foundation for Rigorous High School Pathways (Center for American Progress, August 2020)



Shutterstock.com

Reviewed by:

Marisa Saunders and Cynthia Estrada
University of California, Los Angeles

December 2020

National Education Policy Center

School of Education
University of Colorado Boulder
nepc.colorado.edu

Acknowledgements

NEPC Staff

Kevin Welner
NEPC Director

William Mathis
Managing Director

Francesca Lopez
Academic Editor

Alex Molnar
Publications Director

Suggested Citation: Saunders, M., & Estrada, C. (2020). *NEPC Review: "Creating Strong Building Blocks for Every Student: How Middle Schools Can Lay the Foundation for Rigorous High School Pathways."* Boulder, CO: National Education Policy Center. Retrieved [date] from http://nepc.colorado.edu/thinktank/cte-pathways

Funding: This review was made possible in part by funding from the Great Lakes Center for Educational Research and Practice.

NEPC
NATIONAL EDUCATION POLICY CENTER

NEPC Review: Creating Strong Building Blocks for Every Student: How Middle Schools Can Lay the Foundation for Rigorous High School Pathways (Center for American Progress, August 2020)

Reviewed by:

Marisa Saunders and Cynthia Estrada
University of California, Los Angeles

December 2020

Executive Summary

In the wake of the 2018 reauthorization of the Perkins Career and Technical Education Act, the Center for American Progress recently published a report articulating ideal components of middle school career and technical education (CTE) programs. Titled *Creating Strong Building Blocks for Every Student*, the report documents inequitable access to high-quality pathways that integrate challenging academics and CTE. Many students, particularly those from low-income backgrounds and minoritized populations, have not been provided the academic preparation needed to access pathways that prepare students for postsecondary education and career. The report contends, however, that well-designed middle school CTE programs that support college and career exploration and guidance can prepare students for high-quality pathways and address current patterns of differential access. It offers recommendations for states and districts as they move to implement middle school CTE. While these included recommendations are appealing, they come up short in addressing the key challenge. The report's landscape analysis focuses on college and career exploration standards that emphasize career development but not academics. Middle school CTE programs following the report's suggestions may therefore fail to prepare students with the academics or the knowledge they need to access high-quality pathways. Beyond improved academic preparation, middle school CTE programs must provide the necessary student supports and resources that can ensure all students succeed in these programs. Accordingly, the report is helpful but incomplete and could lead states, districts, and schools to implementation strategies and practices that fall into familiar routines that maintain the harmful status quo for students from marginalized backgrounds.

NEPC
NATIONAL EDUCATION POLICY CENTER

NEPC Review: Creating Strong Building Blocks for Every Student: How Middle Schools Can Lay the Foundation for Rigorous High School Pathways (Center for American Progress, August 2020)

Reviewed by:

Marisa Saunders and Cynthia Estrada
University of California, Los Angeles

December 2020

I. Introduction

The passage of the *Strengthening Career and Technical Education for the 21st Century A*ct (known as Perkins V) in 2018 bolstered the nation's commitment to career and technical education (CTE).[1] Its passage marks significant changes intended to encourage innovation across states to develop, implement, and expand strategies that can assist *all* students graduate ready for college and career.[2] Among these changes, Perkins V allows states and districts to use funds as early as fifth grade for CTE.

CTE programs that integrate with rigorous core academic coursework, referred to as college and career pathways, are gaining traction, yet remain inaccessible for far too many high school students and in particular, low-income students from minoritized backgrounds.[3] A report released by the Center for American Progress, *Creating Strong Building Blocks for Every Student: How Middle Schools Can Lay the Foundation for Rigorous High School Pathways*, advocates introducing career exploration to middle school students as a means to disrupt these patterns.[4] The report provides, as described in Section II below, a set of recommendations for states and districts as they move to deploy newly available CTE funds to "help break down barriers to access high-quality pathways toward college and careers."[5]

The report claims to identify what middle school CTE should look like by building on state efforts to prepare students for college and career through K-12 Common Core State Standards. Based on a landscape analysis conducted of standards broken down by grade levels, the report gauges how many states currently encourage middle school college and career exploration and provides a set of recommendations. The recommendations, while generically appealing, are not informed by the analysis. As states and districts move to implement mid-

dle school CTE, they need empirical evidence regarding the potential of career exploration at the middle school level and how it can address current inequities. Unfortunately, the report does not meet this threshold.

II. Findings and Conclusions of the Report

The report cites research to show that access to high-quality pathways is "skewed toward high-achieving, more affluent student populations and certain racial and economic subgroups." Informed by the work of Advance CTE and the Association for Career and Technical Education (ACTE)—two national organizations dedicated to advancing CTE—the report identifies components of fifth- through eighth-grade CTE programs that they claim can prepare students for these pathways.

The report then presents findings from a "landscape analysis" in which a review of state websites, policies and legislative archives identified state policies that potentially support middle school CTE components.

The report identifies 16 states with specific middle school college and career standards. Of these states, the report found that standards are more focused on career development than future postsecondary opportunities. In most states, middle school students are prepared via "learning goals" focused on career and financial literacies or "21st Century Skills" that center on employability, civic, financial, technology, and health literacy skills. Two states were highlighted for requiring the successful completion of a college and career exploration course with specific middle school competencies. A few states upheld standards that focused on targeted career development in fields like STEM. Only one state requires students learn how course selection and middle school performance influences high school readiness.

The report found that 36 states instituted some type of requirement regarding college and career counseling. Many states facilitate counseling by requiring students to produce individualized career and academic plans. Other states provide parameters for counselors in helping students prepare for college and career (e.g., rubrics). Some states incorporate tools that aim to assist middle school students in exploring career opportunities through testing and counseling. These efforts, according to the report, could provide a cost-efficient way to encourage students to career plan when counselor resources are limited.

Informed by the guiding principles set forth by the advocacy organizations ACTE and Advance CTE and in consideration of landscape analysis findings, the report provides six recommendations for state and district policymakers:

- Develop an articulated strategy to prepare students to reach their postsecondary goals.
- Establish better data collection strategies to assess the quality of and participation in pathways.
- Increase funding for school counselors who can assist students with their college and career plans.

- Provide professional development on implicit bias for school staff.
- Improve family-school communication to increase knowledge of available college and career opportunities.
- Implement personalized academic and career plans that reflect the evolving interests of students.

With these steps, the report claims that middle school students can begin to take advantage of resources and opportunities that cultivate college and career readiness.

III. The Report's Rationale for Its Findings and Conclusions

As stated in the report, today's workforce requires some level of postsecondary education.[6] To better prepare young people for their futures, some high schools are creating opportunities for students to create a path to achieve their college *and* career aspirations through integrated pathways. Accordingly, access to college and career pathways must improve and broaden.

To increase access, new quality measures introduced in Perkins V encourage states and districts to design CTE programs that fully develop the academic knowledge *and* technical skills students need for postsecondary success through pathways.[7] Middle school CTE is also promoted as part of the solution. According to the report, middle school CTE programs can ready young people to access high-quality pathways by enabling them to enter high school with rigorous academic records, prepared for advanced coursework, and a sense of postsecondary and career development opportunities.

IV. The Report's Use of Research Literature

The report references data that demonstrate inequitable access to high school programs that enable students to earn postsecondary credits or a credential. As cited, participation in early college programs increases graduation rates, college enrollment, and completion rates.[8] Yet, research also demonstrates that access to these programs is skewed towards students with strong academic backgrounds, and from particular racial and economic subgroups.[9] Using data from the US Government Accountability office and the National Center for Education Statistics (NCES), the report argues that students from low-income backgrounds and minoritized populations enroll in dual-enrollment programs at lower rates than their more affluent and White and Asian counterparts.[10] These findings shed light on inequitable access to early college programs but because these programs are not synonymous with college and career pathways, they do not accurately reflect access to high-quality pathways.

The report does not reference the growing body of research that highlights the potential of high-quality pathways that integrate college preparatory academic content, including du-

al-enrollment programs in some instances, with CTE. Longitudinal studies demonstrate the positive outcomes of students who have participated in Linked Learning—an approach that integrates college preparatory academics with CTE, work-based learning, and student supports. Linked Learning students are less likely to drop out of high school and more likely to graduate than their peers in traditional schools.[11] Linked Learning students also complete more college preparatory courses and students with low prior achievement were more likely than similar peers to enroll in college after high school.[12]

Information regarding the extent to which dual-enrollment programs integrate with CTE to create high-quality pathways, like Linked Learning, is also omitted from the report. NCES data show that during the 2016-17 school year, 65% of districts that offered CTE programs reported that all or most programs were structured as pathways that align with related postsecondary programs.[13] Further, almost three-fourths of districts offered CTE courses wherein students could earn postsecondary credits.[14] These data are more appropriate than the dual-enrollment data presented and underscore the report's argument that states and districts must increase access to the growing number of pathways nationwide that look to integrate a college preparatory curriculum with CTE to prepare students for college and career.

Among the range of issues that perpetuate inequitable access to rigorous pathways, the report finds that many middle school students are not provided the preparation required by these programs.[15] The report indicates that many states have strict requirements for dual enrollment (again, dual-enrollment programs are not synonymous with high-quality pathways), preventing students who may lack adequate resources or preparation in earlier grades from participating.[16] While the need to better prepare middle school students for high school success is well-documented in the report and in the literature—providing younger students with the opportunity to challenge themselves academically, with guided support, can influence high school and postsecondary outcomes—states must also address these restrictive policies.[17] Research demonstrates that students with low prior academic achievement can benefit significantly from high-quality pathways, yet current policies and practices that prevent access are not taken up by the report.[18]

In addition to increasing the "rigor" of middle school programs, the report highlights the need to improve students' understanding of college and career opportunities, assist teachers in creating more engaging lessons or projects that align with real-world situations, tap into the assets of all families, and challenge common cultural and occupational stereotypes. Unfortunately, research that links the implementation of these sensible components to high-quality high school pathways is largely missing from the report.

For example, references to literature on the science of learning could bolster the recommendations offered while providing important cautions. Research on the science of learning can begin to answer *how* CTE programs potentially align with the developmental needs of young adolescents and can influence outcomes. Research shows that the rapid neurological, cognitive, socioemotional and physical development that mark adolescence affects how middle school students learn and should influence how educators interact with them.[19] The literature identifies the importance of school environments and cultures in promoting ambitious learning goals and beliefs about students' abilities to learn and succeed.[20] It also identifies the learning experiences—hands-on learning, opportunities to develop and use individual

talents and interests through real-world applications often found in CTE programs—that can increase relevancy and foster success.[21] Referencing these studies would assist in understanding how middle school CTE can support the academic, social, and emotional needs of students that could prepare them for success in high school pathways and beyond.

V. Review of the Report's Methods

Due to unspecified limitations, the report did not involve data collection or measures that align with its suggested key components. It looks to two sources that are central to its arguments, neither of which provides an adequate research basis for its recommendations. The first source is a set of middle school CTE "building blocks" provided by the advocacy organizations ACTE and Advance CTE. The second is a "landscape analysis," conducted by the authors, of existing state policies and standards. This landscape analysis consisted of a review of state websites, policies, and agency/legislative archives to identify states that list standards or expectations for middle school college and career exploration and states with a framework to advance counseling.

Of note, the report **did not** attempt to evaluate college and career exploration standards nor whether the standards are implemented with fidelity. As such, while states may list a particular policy or standard, the extent to which an identified standard is implemented, or to what effect, is unknown. This is of particular concern. As stated in the report, limited data on the quality of, participation in, and on the outcomes of students from high school and middle school CTE programs is a major barrier to mapping the participation of different student groups against program quality and identifying inequitable feeder patterns (establishing better data collection is one of their recommendations). Without these data, and lacking an **evaluation of policies or programs**, we must be cautious of unintended consequences such as the reinvention of tracking mechanisms that can effectively undermine the goal of preparing more youth, especially those from low-income backgrounds and minoritized populations for high-quality pathways. Significantly, without these data, the report is unable to reliably provide information regarding what middle school CTE should look like—the stated purpose of the report.

The landscape analysis demonstrates, at best, a growing interest in the implementation of college and career exploration in middle school across states. Recommendations are not explicitly tied to the analysis, nor are they corroborated by the appropriate research that demonstrates CTE will ready middle school students to access high-quality high school pathways. While the report makes broadly appealing recommendations, it misses the opportunity to demonstrate if and how middle school CTE programs are positioned to effectively implement the identified key components to achieve desired outcomes.

VI. Review of the Validity of the Findings and Conclusions

The misalignment between findings from the landscape analysis and the report's recommendations warrants critique. The consequence is a failure to address the empirical foundation that can support middle school CTE.

The landscape analysis demonstrates that states are expanding policies to encourage exploration of college and career opportunities in middle school. Findings also show that middle school exploration standards skew towards career development. The report suggests that a reliance on core academic standards via Every Students Succeeds Act can address this imbalance. Given that a lack of academic preparation at the middle school level is identified in the report as a key contributor to inequitable access to high-quality pathways, the current emphasis on career development should give pause. Without intentional integration of standards that emphasize college *and* career, there are no assurances that middle school CTE programs can provide students with the academic preparation they need to access and succeed in high school pathways or guide them in selecting the appropriate course progression that meets their postsecondary goals.

In addition to improved academic preparation, middle school CTE programs must provide the necessary student supports and resources that can ensure *all* students succeed in these programs. If, as the report claims, middle school CTE programs are part of the solution to better prepare young people for rigorous high school programs, it is crucial that schools ensure they do not mimic the historical stratification that we have witnessed at the high school level. It is easy to fall into familiar routines and practices that reinforce oppression and maintain the status quo for students from marginalized backgrounds. Beyond the need to establish better data collection strategies to assess participation, the report does not acknowledge or address these critical issues, and its recommendations (e.g., implicit bias training) lack the evidence base needed to move forward assuredly.

VII. Usefulness of the Report for Guidance of Policy and Practice

There is substantial evidence suggesting that high-quality high school pathways that integrate an academic and CTE curriculum can produce the student outcomes states, districts and schools aim to achieve—readiness for postsecondary success. Ensuring students from historically underserved groups have access to the learning experiences and opportunities that will prepare them for postsecondary education and well-paying jobs is paramount. The question is: Can middle school CTE programs equip young students with the skills, knowledge, tools and learning experiences needed to access and succeed in high school pathways that integrate college and career preparation? This report offers recommendations that are broadly appealing but it does not provide an answer to that question.

Notes and References

1 The *Strengthening Career and Technical Education for the 21st Century Act*, commonly referred to as Perkins V, seeks to increase the quality of and access to career and technical education and encourages states to begin to start pathways programs earlier to lessen inequities. The new law includes specific supports for unique demographic groups, referred to in the law as "special populations," intended for recruiting and retaining these groups in high-quality career and technical education programs and improving their overall academic performance. The new law also includes an accountability provision that requires states and school districts "to continually make meaningful progress toward improving the performance" of all CTE students, including the performance of historically underserved students. Perkins V requires local grant recipients to conduct a comprehensive local needs assessment as the basis for local plans and funding strategies. The assessment must consider the quality of the programs and progress toward equity and access, among other factors. For more information see, for example: Alliance for Excellent Education (2019). *Perkins career and technical education primer: Special populations*. Retrieved October 15, 2020, from https://mk0all4edorgjxiy8xf9.kinstacdn.com/wp-content/uploads/2019/09/Perkins-CTE-Special-Populations_FINAL.pdf

2 Perkins V was drafted to support a state's vision for college and career readiness and the alignment of specific definitions and provisions with Every Student Succeeds Act. Perkins V was also drafted to promote the inclusion of rigorous academic coursework in CTE programs and instruction that will prepare students for postsecondary education and career. The report's use of "college and career readiness" aligns with these changes in Perkins V.

3 The reviewers use the term "minoritized" in reference to groups that are different in race, nation of origin, sexuality, and gender and as a result of social constructs have less power or representation. See https://www.theodysseyonline.com/minority-vs-minoritize

4 Benner, M., & Sargrad, S. (2020). *Creating strong building blocks for every student: How middle schools can lay the foundation for rigorous high school pathways,* Washington, D.C.: Center for American Progress. Retrieved September 15, 2020, from https://www.americanprogress.org/issues/education-k-12/reports/2020/08/05/488493/creating-strong-building-blocks-every-student/

5 Benner, M., & Sargrad, S. (2020). *Creating strong building blocks for every student: How middle schools can lay the foundation for rigorous high school pathways,* Washington, D.C.: Center for American Progress. Retrieved September 15, 2020, from https://www.americanprogress.org/issues/education-k-12/reports/2020/08/05/488493/creating-strong-building-blocks-every-student/

6 Available data, not cited in the report, finds that 80% of good-paying jobs require some level of postsecondary education, yet in 2018, among working age Americans only 25% of Latinx 25% of Native Americans, and 32% of African Americans held an associate's degree or higher. See Lumina Foundation, *A stronger nation: Learning beyond high school builds American talent*. Retrieved October 15, 2020, from http://strongernation.luminafoundation.org/report/2019/ - nation

7 The new indicator of program quality in Perkins V requires states to include at least one of the following indicators in their Perkins V state accountability system: 1) the percentage of CTE concentrators who graduated fromhigh school having attained a recognized postsecondary credential; 2) the percentage of CTE concentrators who graduated from high school having attained postsecondary credits in the relevant CTE program of study earned through dual-enrollment or concurrent enrollment or another credit transfer agreement; or 3) the percentage of CTE concentrators who graduated from high school having participated in work-based learning. Both ESSA and Perkins V require states to track the four-year adjusted cohort graduation rate and student proficiency in English language arts and mathematics. For more information see, for example: Advance CTE (2018). *Perkins V Accountability Comparison*. Retrieved October 15, 2020, from https://cte.careertech.org/sites/default/files/AdvanceCTE_Perkins_Accountability_Comparison_October2018.pdf

8 Caspary, K., Woodworth, K., Keating, K., & Sands, J. (2015). *International Baccalaureate national trends for low-income students 2008–2014*. Menlo Park, CA: Center for Educational Policy.

American Institutes for Research, *Evaluating the impact of early college high schools*, available at https://www.air.org/project/evaluating-impact-early-college-high-schools

Song, M., & Zeiser, K.L. (2019). *Early college, continued success: Longer-term impact of early college high schools*. Arlington, VA: American Institutes for Research.

9 Fink, J., Jenkins, D., & Yanagiura, T. (2017). *What happens to students who take community college "dual enrollment" courses in high school?* Community College Research Center,. New York, NY: Teachers College, Columbia University.

10 U.S. Government Accountability Office, (2018). *Public high schools with more students in poverty and smaller schools provide fewer academic offerings to prepare for college*. Washington, D.C.: US Government Accountability Office. Retrieved November 24, 2020, from https://www.gao.gov/assets/700/694961.pdf

See National Center for Education Statistics (2019), *Dual enrollment: Participation and characteristics*." Washington, D.C.: US Department of Education. Retrieved November 24, 2020, from https://nces.ed.gov/pubs2019/2019176.pdf

11 Caspary, K., & Warner, M. (2017). *Linked learning and postsecondary transitions: A report on the early postsecondary education outcomes of linked learning students*. Menlo Park, CA: SRI International.

12 Caspary, K., & Warner, M. (2017). *Linked learning and postsecondary transitions: A report on the early postsecondary education outcomes of linked learning students*. Menlo Park, CA: SRI International.

13 Findings reported are based on 98% of districts that offered CTE programs to high school students. Gray, L., & Lewis, L. (2018). *Career and technical education programs in public school districts: 2016–17*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved September 25, 2020, from https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018028

14 Gray, L., & Lewis, L. (2018). *Career and technical education programs in public school districts: 2016–17*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved September 25, 2020, from https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018028

15 The report cites studies that demonstrate that there are significant differences in access to algebra I in eighth grade based on subgroup status as well as in proficiency rates in math by 8th grade.

U.S. Department of Education, *A leak in the STEM pipeline* (2018, November). Retrieved November 24, 2020, from https://www2.ed.gov/datastory/stem/algebra/index.html

The Nation's Report Card, *NAEP mathematics report card: National achievement-level results*. Retrieved November 24, 2020, from https://www.nationsreportcard.gov/math_2017/nation/achievement?grade=8

16 Zinth, J.D. (2016, March). *Dual enrollment: Student eligibility requirements*. Denver, CO: Education Commission of the States.

17 Research demonstrates that access to higher-level math courses in middle school influences high school trajectories. See, for example, Finkelstein, N., Fong, A., Tiffany-Morales, J., Shields, P., & Huang, M. (2012). *College bound in middle school and high school? How math course sequences matter*. Sacramento, CA: The Center for the Future of Teaching and Learning at WestEd. Retrieved October 20, 2020, from https://www.wested.org/online_pubs/resource1274.pdf

18 Caspary, K., & Warner, M. (2017). *Linked learning and postsecondary transitions: A report on the early postsecondary education outcomes of linked learning students*. Menlo Park, CA: SRI International.

19 Alliance for Excellent Education (2019). *Science of learning: What educators need to know about ado-*

lescent development. Washington, D.C.: Alliance for Excellent Education. Retrieved September 25, 2020, from https://mk0all4edorgjxiy8xf9.kinstacdn.com/wp-content/uploads/2019/09/05-SAL-What-Educators-Need-to-Know-About-Adolescent-Development_FINAL.pdf

Darling-Hammond, L., & Cook-Harvey, C.M. (2018). *Educating the whole child: Improving school climate to support student success*. Palo Alto, CA: Learning Policy Institute. Retrieved September 25, 2020, from https://learningpolicyinstitute.org/sites/default/files/product-files/Educating_Whole_Child_REPORT.pdf

20 Alliance for Excellent Education, (2019). *Science of learning: What educators need to know about adolescent development*. Washington, D.C.: Alliance for Excellent Education. Retrieved September 25, 2020, from https://mk0all4edorgjxiy8xf9.kinstacdn.com/wp-content/uploads/2019/09/05-SAL-What-Educators-Need-to-Know-About-Adolescent-Development_FINAL.pdf

Darling-Hammond, L., & Cook-Harvey, C.M. (2018). *Educating the whole child: Improving school climate to support student success*. Palo Alto, CA: Learning Policy Institute. Retrieved September 25, 2020, from https://learningpolicyinstitute.org/sites/default/files/product-files/Educating_Whole_Child_REPORT.pdf

21 Alliance for Excellent Education, (2019). *Science of learning: What educators need to know about adolescent development*. Washington, D.C.: Alliance for Excellent Education. Retrieved September 25, 2020, from https://mk0all4edorgjxiy8xf9.kinstacdn.com/wp-content/uploads/2019/09/05-SAL-What-Educators-Need-to-Know-About-Adolescent-Development_FINAL.pdf

Darling-Hammond, L., & Cook-Harvey, C.M. (2018). *Educating the whole child: Improving school climate to support student success*. Palo Alto, CA: Learning Policy Institute. Retrieved September 25, 2020, from https://learningpolicyinstitute.org/sites/default/files/product-files/Educating_Whole_Child_REPORT.pdf