



# Issue BRIEF

## Roadmap for Change—Linking Learning to Careers Program

The Rehabilitation Services Administration awarded five-year grants to state VR agencies to identify and demonstrate evidence-based practices for providing work-based learning experiences in integrated settings. Five state VR agencies in five states received awards: California, Maine, Maryland, Massachusetts, and Vermont. Mathematica is involved with the evaluations of the Maryland and Vermont demonstrations.

Linking Learning to Careers (LLC) is a five-year statewide initiative to improve the college and career readiness of high school students with disabilities. The program builds on existing vocational rehabilitation (VR) services (or “core” services), engaging students in additional (“enhanced”) services to help them make a successful transition to adulthood. All services are offered in a team-based environment, with several professionals working with each student. This brief describes LLC’s roadmap for change, or how it intends to help students achieve positive outcomes.

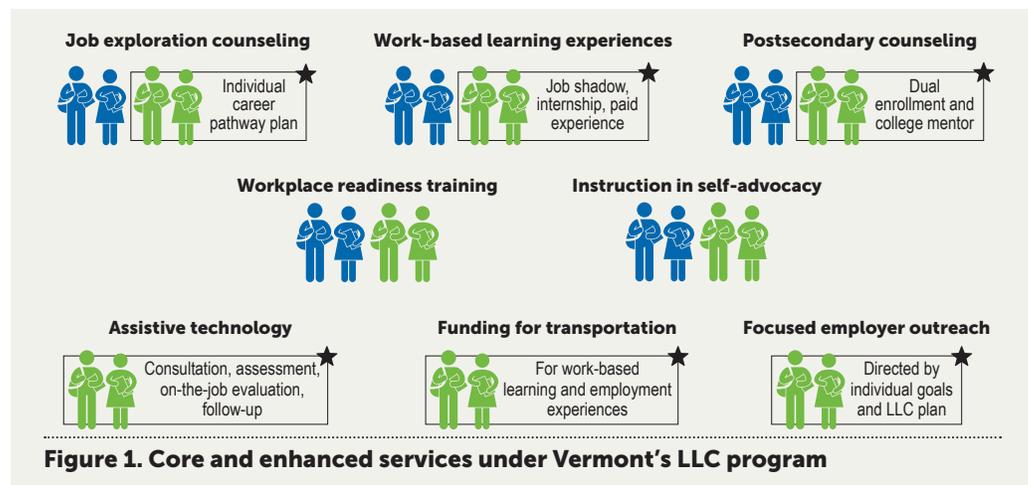
### WHAT DOES LLC ADD?

Vermont’s Division of Vocational Rehabilitation (DVR) makes the following core services available to all high school students with disabilities: (1) job exploration counseling, (2) work-based learning experiences, (3) postsecondary education counseling, (4) workplace readiness training, and (5) instruction in self-advocacy. Students who apply for and are found eligible for DVR services receive additional VR services specific to their needs and goals.

In addition to these core services, LLC students receive enhanced services that provide further support and training. Figure 1 illustrates the relationship between core and enhanced services.

### LLC’s enhanced services include:

- In-school career development work, including an individual career pathways plan (LLC plan)
- Enhanced work-based learning experiences, including at least one job shadow, one unpaid internship or volunteer experience, and one employer-paid job
- Additional college exploration activities including opportunities for dual enrollment and connection with a college mentor
- Dedicated assistive technology support
- Funding for transportation for work-based learning and employment experiences
- Employer outreach guided by students’ goals and LLC plans



Team member	Responsibilities	Core	Enhanced
Transition counselor (TC)	Manages DVR cases, serves as primary point of contact with school, and provides core services	✓	✓
Youth employment specialist (YES)	Helps students explore work options, provides training in work-related skills (such as resume writing and interviewing), and arranges work-based learning experiences	✓	✓
Career consultant (CC)	Works intensively with students to develop their personalized career pathways plan, partners with colleges and universities to arrange dual-enrollment opportunities, collaborates with TCs and YESs on organizing work-based learning activities, and refers students for assistive technology services		✓
Assistive technology specialist (ATS)	Provides consultation, assessment, on-the-job evaluation, delivery of assistive technology equipment, and follow-up		✓

**Table 1. LLC team members**

Much of the work that TCs, YESs, and CCs conduct overlaps (e.g., TCs and CCs connect students with postsecondary opportunities, and YESs and CCs connect students with work-based learning experiences), so collaboration and communication within the team are essential.

### WHO PROVIDES LLC SERVICES?

LLC services are provided by teams of professionals who collaborate closely with one another. Table 1 contains descriptions of the primary roles.

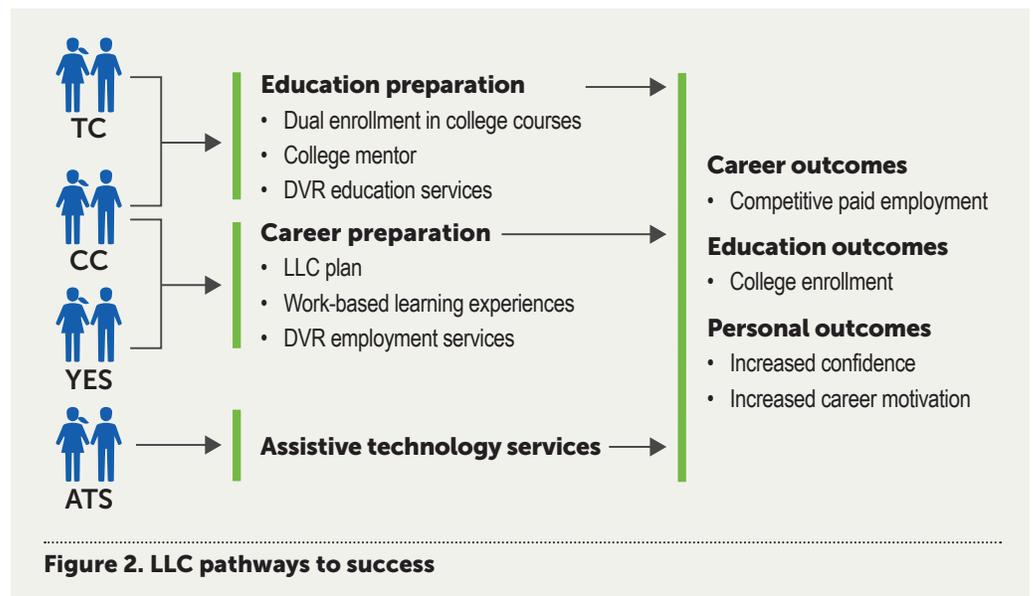
### WHAT ARE KEY LLC INTERMEDIATE OUTCOMES?

To monitor progress of the students involved in LLC, DVR will track short-term outcomes such as completion of work-based learning experiences, completion of secondary school, dual-enrollment in postsecondary education courses, and receipt of employment-based DVR services.

### WHAT ARE KEY LLC LONG-TERM OUTCOMES?

LLC services eventually end, but the effects of participating in the program are expected to endure (Figure 2). LLC participation is intended to increase employment and/or postsecondary education enrollment among students with disabilities. The program is also intended to increase students' confidence and motivation to achieve career goals.

The contents of this issue brief were developed under a grant (H421B160002) from the Department of Education. However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government. (Authority: 20 U.S.C. 1221e-3 and 3474).





**Mathematica**  
Progress Together

# Issue BRIEF

Sarah Wissel, Mathematica; Rich Tulikangas and Brian Guy, Vermont Linking Learning to Careers

## Why are Work-Based Learning Experiences Valuable?

The Vermont Division of Vocational Rehabilitation's (DVR's) Linking Learning to Careers (LLC) program provides enhanced work-based learning experiences to help high school students with disabilities as they make the transition to careers or postsecondary education. This brief describes these work-based learning experiences, which are the core component of LLC's enhanced services.

Vermont's DVR received a five-year grant from the Rehabilitation Services Administration to demonstrate evidence-based practices for providing high school students with work-based learning experiences in integrated settings. See the issue brief "[Roadmap for Change—Linking Learning to Careers Program](#)" for more information about the specific services provided through LLC.

### WHY IS WORK-BASED LEARNING VALUABLE?

Work-based learning experiences help students develop important soft skills, expand their professional networks, and better assess their own capacity for and interest in a given career.<sup>1,2</sup> Students also learn to identify what supports they might need to succeed in a workplace.<sup>3</sup> Through these experiences, students prepare for their transitions from school to adulthood and become better able to make informed decisions about integrated, competitive employment that lines up with their interests and goals. Work-based learning experiences are intended to offer specific skills or knowledge that support the goals of each student. Each work-based learning experience is guided by a set of clear roles and responsibilities for the student, employer, and work-based learning coordinator.<sup>4</sup>

### HOW ARE WORK-BASED LEARNING EXPERIENCES ALIGNED WITH STUDENT GOALS?

Students work with their career consultants to develop LLC plans. The LLC plan is a living document that records the student's aspirations, values, skills, and interests. The student and career consultant then use that information to define specific short- and long-term goals and to determine which LLC activities and services

will best enable the student to reach those goals. A student should choose the work-based learning experiences that will help him or her achieve the goals in the LLC plan.

### WHAT IS AN LLC WORK-BASED LEARNING EXPERIENCE?

Students in LLC can take part in several work-based learning experiences. They can expect to participate in at least one job-shadowing experience, one unpaid internship, and one employer-paid job. These experiences may occur in any order, but the duration and degree of student responsibility logically progresses from job shadowing to unpaid internship to paid job.

Youth employment specialists work with employers to arrange work-based learning experiences for each student. For job shadowing, the youth employment specialist coordinates a training agreement. For unpaid internships and paid jobs, a training plan defines the roles and responsibilities of the employer, the student, and the youth employment specialist; the benefits to each; the skills to be acquired during the experience; and the timeline for the experience. If warranted, the youth employment specialist trains the student and employer on how to engage with each other during the experience. LLC also covers the cost of transportation to and from a worksite, if needed.

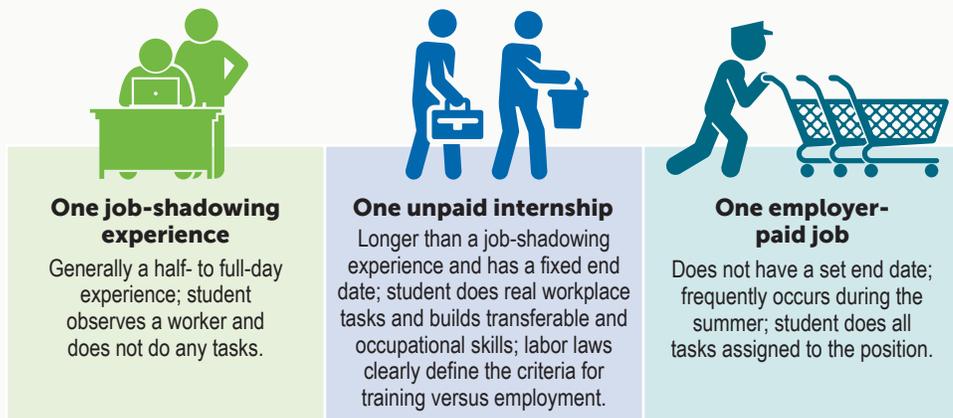
Youth employment specialists (YES) work with LLC and core students. The YES helps students explore work options, provides training in work-related skills, and arranges work-based learning experiences.

Career consultants (CC) are only available to LLC students. The CC works intensively with students to develop their personalized LLC plan and collaborates with other staff and organizations on dual-enrollment opportunities, work-based learning activities, and assistive technology services.

After each work-based learning experience is completed, the career consultant or youth employment specialist asks the student and employer to fill out a short survey about the experience. The survey responses inform the student's LLC plan. Career consultants and

youth employment specialists also use the responses to arrange additional work-based learning experiences or to otherwise help the student accomplish his or her career goals identified in the LLC plan.

## LLC work-based learning experiences



## FOR MORE INFORMATION

For more information about Linking Learning to Careers and Mathematica's evaluation, visit <https://www.mathematica-mpr.com/our-publications-and-findings/projects/evaluation-of-the-vermont-linking-learning-to-careers-model>

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## ENDNOTES

<sup>1</sup> Federal Partners in Transition. "What to Know About Work-Based Learning Experiences for Students and Youth with Disabilities." Washington, DC: Author, November 2015. Available at <https://www2.ed.gov/about/offices/list/osers/transition/products/fpt-fact-sheet--work-based-experiences--11-5-15.pdf>. Accessed November 21, 2018.

<sup>2</sup> Rogers-Chapman, M., and L. Darling-Hammond. "Preparing 21st Century Citizens: The Role of Work-Based Learning in Linked Learning." Stanford, CA: Stanford Center for Opportunity Policy in Education, August 2013. Available at <https://edpolicy.stanford.edu/sites/default/files/publications/preparing-21st-century-citizens-role-work-based-learning-linked-learning.pdf>. Accessed November 21, 2018.

<sup>3</sup> Luecking, Richard, and Meredith Gramlich. "Quality Work-Based Learning and Postsecondary Employment Success." National Center on Secondary Education and Transition issue brief. Examining Current Challenges in Secondary Education and Transition, vol. 2, no. 2, September 2003. Available at [http://www.ncset.org/publications/issue/NCSETIssueBrief\\_2.2.pdf](http://www.ncset.org/publications/issue/NCSETIssueBrief_2.2.pdf). Accessed November 21, 2018.

<sup>4</sup> Federal Partners in Transition. "What to Know About Work-Based Learning Experiences for Students and Youth with Disabilities." Washington, DC: Author, November 2015. Available at <https://www2.ed.gov/about/offices/list/osers/transition/products/fpt-fact-sheet--work-based-experiences--11-5-15.pdf>. Accessed November 21, 2018.





# Issue BRIEF

Frank Martin

## Assistive Technology Services for Youth in the Vermont Linking Learning to Careers Program

The Rehabilitation Services Administration awarded five-year grants to state VR agencies to identify, implement, and evaluate evidence-based practices for providing work-based learning in integrated settings for transition-age youth with disabilities. State VR agencies in five states received awards: California, Maine, Maryland, Massachusetts, and Vermont.

Mathematica is evaluating the Maryland and Vermont demonstrations. See the issue brief **“Roadmap for Change—Linking Learning to Careers Program”** for more information about the Vermont LLC program’s design, services, and evaluation.

The Vermont Linking Learning to Careers (LLC) program is a five-year statewide initiative designed by Vermont’s Division of Vocational Rehabilitation (VR). The program is intended to improve the employment and postsecondary educational outcomes of high school students who have disabilities. LLC provides enhanced services on top of the core state VR services typically provided to eligible high school students. One of these enhanced services is access to assistive technology (AT), provided by dedicated staff. This brief summarizes students’ AT needs and their experiences with LLC’s AT services.

### WHAT IS AT?

AT is any technology or equipment that helps people, regardless of age or disability. It includes high-tech options, such as laptops and downloadable software applications, and no- and low-tech options, such as specialized seating or grab bars. AT can be particularly useful for students with disabilities because it can provide reasonable accommodations that help them better participate in education- or work-based settings.

to gain a better understanding of the areas in which students might benefit from AT. After consulting with students and assessing their school or workplace needs, the AT specialists demonstrate products to help students make informed choices. LLC then loans the products to or purchases the products for the student, and the specialists provide ongoing follow-up help to monitor the student’s progress.

### LLC’S AT SERVICES COMPARED WITH CORE AT SERVICES IN VERMONT

LLC employs two dedicated AT specialists who provide consultations, product demonstrations, and access to AT products via loan or purchase to students receiving enhanced services. Table 1 shows the types of services that AT specialists provide to these students. Services typically begin with general information sessions involving students, teachers, and family members

On the other hand, students who receive core VR services in Vermont can seek AT supports from their high school or in partnership with the four regional offices of the [Vermont Assistive Technology Program \(VATP\)](#). AT staff from these offices consult with students and their families and provide guidance, device demonstrations, and short-term equipment loans. However, due to funding policy, the VATP cannot purchase equipment or devices for students, and high schools only provide AT for specific educational purposes and the equipment remains with the school, not the individual, upon graduation.

Service	Description
Information session	AT specialists conduct general information sessions for individuals or groups of students on how AT might be useful.
Consultation	AT specialists consult with students, their counselors, teachers, special education paraprofessionals, and family members on specific AT options, based on the students' needs and their goals for work or postsecondary education.
On-the-job evaluation/ workplace assessment	AT specialists conduct on-site work evaluations to assess students' needs and identify technology or equipment that can help them work more independently.
Product demonstration	Specialists demonstrate AT products and allow students to test them. During demonstrations, students can compare products and inquire about different AT options.
Loan	Students can borrow AT products at no cost to obtain first-hand experience and to decide on the appropriateness of the AT before a purchase.
Purchase	Using LLC funds, specialists can buy AT products for students after an assessment and successful demonstration.
Follow-up	AT specialists provide follow-up services such as check-ins, referrals for additional AT evaluations, additional demonstrations, and troubleshooting.

**Table 1. Enhanced AT services offered by LLC**

### WHAT TYPES OF AT DO LLC STUDENTS NEED AND RECEIVE?

Between November 2017 and October 15, 2019, LLC AT specialists provided a wide range of services, technology, and equipment to 80 of the program's 441 students. Of these students, 75 received a consultation, 43 received a product demonstration, and 30 received purchased AT products. The AT products and strategies were mainly designed to address students' reading, comprehension, and notetaking needs. The AT specialists also recommended strategies to help students with visual, hearing, speech, and mobility impairments. Table 2 shows the most common AT needs among LLC students and the tools recommended, lent, or bought by the specialists.

### NO-TECH, LOW-TECH, AND HIGH-TECH AT

AT specialists can recommend no-tech, low-tech, or high-tech forms of AT, depending on a student's needs and preferences.

- No-tech forms of support include schedule changes or the relocation of items, such as shelving.

- Low-tech forms of support include simple or easy-to-use devices, such as reading guide strips to improve comprehension, graphic organizers and worksheets to help with communicating ideas, and grabber tools to extend a student's reach.
- High-tech forms of support include smartpens, which can help with notetaking, and accessible computer devices for students with limited dexterity, such as one-handed keyboards. Students have also received Chromebook computers, screen reader software, bone conduction Bluetooth headphones to enhance hearing, specialized grammar software, and a variety of computer applications to meet students' learning needs.

### AT CAN HELP STUDENTS, BUT IT'S NOT ALWAYS THEIR PREFERRED SOLUTION

Of the LLC students who completed initial AT satisfaction surveys after receiving a product demonstration, most (77 percent) said that they were better able to perform at school or work as a result of the help they received through LLC.<sup>1</sup> But a large share of respondents who received an AT consultation (33 percent) said that they did not use the AT offered through LLC.

AT needs	LLC technology or equipment provided	
Auditory access	Bluetooth headphones Bone-conduction headphones	Personal amplifiers
Augmentative and alternative communication	Touch-based speech tablets	
Grammar tools, spelling	Grammarly software	Dictionary and thesaurus applications
Math	Downloadable computer applications Khan Academy online tools	Fraction calculators
Mobility	Accessible keyboard Accessible mouse Step stools for reaching objects	Accessible shelving Egg pencil grip for writing Hand-extension tools or grabbers
Reading, handwriting, solving problems	Paper with raised lines Reading guide strips Online text-to-speech reading tool	PDF document readers Claro ScanPen Speech-to-text software Handwriting workbooks
Study skills, note taking, memorization, comprehension, concentration barriers	Claro ScanPen Computer applications (such as dictionaries, flashcards, and vocabulary-building programs) Computer tablets Chromebooks	Graphic organizer worksheets Colored overlays for isolated reading Time management tools Icon-based watch Reminder apps
Test taking, homework	MyHomework application	Photo Math
Visual access	Text magnification tools Screen readers	Handheld magnifier Irlen Overlays

**Table 2. Common AT needs and LLC tools to address them**

According to AT specialists, most students do not understand what AT is before their first consultation. Others are reluctant to use a tool that is different from those of their peers. This reluctance may be a contributing factor to the percentage of students who indicated they did not use the AT equipment offered by LLC.

AT is one of many tools that students with disabilities may need to make a successful transition from high school to college, a job, or independent living. However, students' preferences and beliefs may sometimes affect their decisions about using AT in ways that may not be in their own self-interest.

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contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government. (Authority: 20 U.S.C. 1221e-3 and 3474).

## ENDNOTES

<sup>1</sup> Of the 43 LLC students who received at least one AT product demonstration, 30 completed at least one survey, for a total of 39 survey responses.

## Data Sources

Data sources for this brief include LLC administrative data files, LLC AT surveys, and site visit interviews with LLC AT specialists.





# Issue BRIEF

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## Postsecondary Education Services for Students in the Vermont Linking Learning to Careers Program

The Rehabilitation Services Administration awarded five-year grants to state VR agencies to identify, implement, and evaluate evidence-based practices for providing work-based learning in integrated settings for transition-age youth with disabilities. State VR agencies in five states received awards: California, Maine, Maryland, Massachusetts, and Vermont. Mathematica is evaluating the Maryland and Vermont demonstrations. See the issue brief “[Roadmap for Change—Linking Learning to Careers Program](#)” for more information about the Vermont LLC program’s design, services, and evaluation.

The Vermont Linking Learning to Careers (LLC) program is a five-year statewide initiative designed by Vermont’s Division of Vocational Rehabilitation (DVR). The program, which began enrolling students in July 2017, is intended to improve the employment and postsecondary educational outcomes of high school students who have disabilities. LLC uses a team-based approach and provides enhanced services on top of the usual services that eligible high school students typically receive from schools and state vocational rehabilitation (VR) agencies.

One of these enhanced services is additional postsecondary education assistance from dedicated LLC staff and the Community College of Vermont (CCV), a primary partner for the program. CCV has 12 campuses across the state (closely aligned with DVR’s 12 district offices), thus enabling students who are enrolled in LLC to access the college’s offerings.

This brief describes LLC’s postsecondary education services.

### POSTSECONDARY EDUCATION AND HIGH SCHOOL STUDENTS WITH DISABILITIES

Postsecondary education refers to any specialized post-high school education or training, such as two-year or four-year colleges and vocational, business, or technical schools. Students who enroll in postsecondary education typically focus on knowledge and skills related to their future career goals. Similar to their peers without disabilities, many high school students with disabilities have postsecondary education goals and can benefit from counseling or education services—such as assistance with college applications or financial aid, college readiness training, academic mentoring, or reasonable accommodations—to help them reach their goals. LLC offers enhanced postsecondary education options for students in the program in addition to what they could receive through usual services (Table 1).

### COUNSELING ON POSTSECONDARY EDUCATION

The Workforce Innovation and Opportunity Act of 2014 requires all state VR agencies to provide pre-employment transition services to eligible youth, including counseling on postsecondary education. Counseling on postsecondary education commonly involves exploration of education and training programs and opportunities, guidance on financial aid, and training to access resources available through the adult disability service system.

Since LLC started, it has provided 62 percent of its 441 students with counseling on postsecondary education (Table 2). Students receiving usual VR services can also access this counseling service, but LLC differs in an important way. The program uses a team-based approach led by dedicated LLC staff to coordinate and provide pre-employment transition services. LLC staff assess

each LLC student’s readiness for college coursework and refer students to a regional CCV campus for postsecondary education services and academic courses, as appropriate. Students receiving usual VR services cannot access this intensive, team-based assistance.

**ENHANCED EXPOSURE TO POSTSECONDARY EDUCATION OPPORTUNITIES**

LLC students who are interested in postsecondary education at CCV can join information sessions and college tours and receive counseling to learn about courses and accessibility issues addressed by the Americans with Disabilities Act.

LLC also piloted a mentoring program with a small group of LLC students. The mentors were work study students at CCV who shared their stories about transitioning to postsecondary

education, discussed career goals, and helped LLC students navigate their work-based learning experiences. LLC designed and offers these services to support high school students interested in gaining postsecondary education experience and encourages students to attend who might not otherwise consider college. Students receiving usual VR services can access CCV information sessions and resources on their own, but they do not take part in the mentoring program.

According to LLC staff, these information, counseling, and mentoring services can demystify the college process for students and make postsecondary education seem more accessible and attainable. Since the start of LLC, 19 percent of LLC students have received one or more of these in-person postsecondary education experiences. These experiences are more in-depth than basic counseling and college exploration services.

Service type	LLC services	Usual services
Counseling on post-secondary education	High school and college students with disabilities can receive a range of individual or group counseling services, including guidance on college courses, career options, and occupational training programs. Services may include help with the Free Application for Federal Student Aid and advising on postsecondary education disability programs and services. Students do not have to be eligible for VR to receive these services.  The LLC team’s career consultant coordinates service delivery as part of enhanced services.	The usual services are the same as for LLC students.  The VR transition counselor coordinates the services.
Enhanced exposure to postsecondary education opportunities	LLC students can join information sessions and college tours and receive application assistance, tutoring, and mentoring at CCV.  CCV and LLC staff coordinate service delivery as part of enhanced services.	VR clients can join information sessions and college tours and receive application assistance and tutoring at CCV.
Dual-enrollment courses	LLC students can apply for a voucher to take <b>four</b> dual-enrollment courses.	Any high school junior or senior in Vermont can apply for a voucher to take <b>two</b> dual-enrollment courses.
LLC-contracted course	LLC students can take a special field-based course established and paid for by LLC. The course focuses on exploring careers, working in professional environments, and setting employment goals.	This course is not offered outside of LLC.
Introduction to College and Careers course	LLC students can take a free, noncredit course that explores career and college planning. Students develop individualized plans and identify future career goals.  LLC students can also take a four-hour precourse module on self-advocacy.	VR clients can take a free, noncredit course that explores career and college planning. Students develop individualized plans and identify future career goals.

**Table 1. LLC’s postsecondary education services versus usual services**

**DUAL-ENROLLMENT COURSES**

In Vermont, all high school juniors and seniors are eligible for the state’s dual-enrollment education program. Dual enrollment enables students to take college-level courses that support their goals and interests. Participating institutions include four-year colleges and universities, two-year community colleges, a culinary institute, and a technical college. Students can receive vouchers to cover the tuition for two courses worth up to four credits at participating institutions. LLC raised this number to four courses, which can include noncredit college preparation courses, for its students. One in 10 LLC students (8 percent) have started a dual-enrollment course, with most using the vouchers at CCV for courses in English composition or math.

**LLC-CONTRACTED COURSE**

LLC contracted with CCV to provide a college course exclusively for LLC students. This field-based course, titled Exploratory Workplace Experience, consists of 15 class hours on working in professional environments and 80 hours in a work-based learning experience. Seven percent of LLC students have taken the course,

and students in only 5 of the program’s 12 district offices have enrolled. The low numbers of participants might be due to two factors. First, CCV campuses can only offer the course if enough LLC students are interested in taking it. Second, some CCV campuses are small and do not have the staff to offer the course, making it unavailable to students who live in areas served by those campuses.

**INTRODUCTION TO COLLEGE AND CAREERS COURSE**

Introduction to College and Careers (ICC) is a noncredit course intended to orient students to college and prepare them for postsecondary education. The course includes content on self-advocacy and time management. Although students receiving usual VR services can enroll in ICC, LLC students who enroll receive a supplemental, one-week, four-hour precourse module on self-advocacy. This supplement teaches students about the different ways that the Americans with Disabilities Act is applied in high school versus college and the nuances of navigating adult service systems. Since the program’s start, 3 percent of LLC students have taken the ICC course.



Source: DVR administrative data through May 5, 2020 (sample size = 441).  
 Note: LLC-contracted course services were not available in a few DVR districts.

**Table 2. LLC student use of the program’s postsecondary education services**

**SUMMARY**

LLC’s enhanced services related to postsecondary education are more numerous and intense and involve more team-based coordination than the usual services available to students in Vermont. As part of its enhanced services, LLC

gives students the chance to take part in four dual-enrollment courses, one-on-one mentoring, an exclusive college course at CCV, and precourse modules on self-advocacy. These services may be particularly valuable to LLC students who had not considered attending college before their involvement in LLC.

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Although most LLC students received counseling on postsecondary education, fewer took part in other opportunities. Reasons for the lower take-up, according to LLC staff, include the busy academic and extracurricular schedules of students and their hesitation to take high school and college courses simultaneously. As students enter their last year of high school and prepare to graduate, they might take greater advantage of these services.

## **DISCLOSURE INFORMATION**

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