

# Research summary

## *Career-related experiences and the International Baccalaureate Career-related Programme*

**Summary developed by the IB Research department based on a report prepared by:**

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## Background

The International Baccalaureate (IB) Career-related Programme (CP) incorporates academic and career-related studies, providing opportunities for students to make the transition to the workplace, undertake an apprenticeship, continue education in their chosen field or move into higher education. Undertaken in the final two years of secondary school, “career-related experiences” are designed to enable students to make informed decisions concerning their future, and to identify which pathway best suits their career aspirations. Career-related experiences offer students practical experience in the field of their professional interest. Some examples of career-related experiences include, but are not limited to, internships, apprenticeships, work placement, paid or voluntary work.

## Methods

This study involved two components: an online survey on career-related experiences at schools offering the CP, and a literature review of the career-related experiences of senior secondary students in select countries. The survey aimed to elucidate the experiences of schools offering the CP, including models of implementation of career-related experiences, benefits and limitations, teacher perceptions, and students’ educational and career pathways after graduation. Of the 142 surveys sent to schools offering the CP, about two-thirds of responses came from the United States, followed by the United Kingdom and the United Arab Emirates, with small numbers of responses from other countries across the world.

The aim of the literature review was to explore how career-related experiences are conducted in different national contexts in order to understand what benefits students derive from them and to identify effective implementation practices. The countries studied were Australia, India, Norway, Spain, the United Kingdom and the United States.

This summary offers selected findings from these two major research activities and includes an appendix that highlights similarities and differences among career-related experiences across the six countries.

## Findings

### Survey on career-related experiences in the CP

#### General findings

Of the schools that responded, 89.6% stated that they undertook some form of career-related experience, while only 10.4% reported that they did not. The main reason cited for not undertaking career-related experiences was a lack of time in the school calendar (57.1%), followed by a lack of funding (28.6%) and a lack of student interest or lack of suitable employers (14.3%).

#### Implementing career-related experiences

One of the questions in the survey asked respondents to select one or more statement(s) to describe how career-related experiences are arranged in their schools. An almost equal number of respondents stated that either the school or the students identify employers and request a work placement to undertake career-related experiences (65.5% and 63.8% respectively). A

quarter of responses (25.4%) revealed that either an employer offers a work placement or such placements are arranged by an external agency.

Internships and voluntary work (53.5% and 63.9% respectively) were offered as the most popular form of experiences undertaken by CP students. Job shadowing was the next most common form (41.4%), and part-time work and work-based projects received a similar portion of responses (34.5% and 31% respectively). Additionally, summer placement and school-based apprenticeships received a similar share of responses (24.1% and 20.7% respectively), while work placement was identified by less than 5% of respondents.

With regard to curriculum development, less than one-sixth of responses (15.4%) reveal a cooperative approach between schools and employers. A similar percentage (19.2%) stated that employers identify the skills and competencies students should be taught at school, while the same number suggest topics to be taught. Nearly three-quarters of responses reveal that the core CP curriculum contains the skills and competencies students require for their career-related experiences, while less than a third (30.8%) state that these are taught on the job by the employer. In many cases, there is a combination of in-school curriculum development and on-the-job training by employers.

Over 110 responses showed that assessment is almost equally divided between employers assessing students against guidelines provided by the school (29.6%), against their own guidelines (31.5%) or by teachers assessing students in the workplace (31.5%) or on their return to school (38.9%). Only a few responses (9.3%) revealed that assessments are conducted by an external agency or that students are not assessed at all (13%).

From responses to questions concerning the way in which career-related experiences are implemented, it appears that employers are not averse to assisting in the development of the school curriculum and assessment of student skills and competencies as they are applied on the job.

### Career paths offered to CP students

A question in the survey offered the IB list of industries or job groupings from which respondents were asked to select the career paths offered to CP students. About two-thirds selected career paths from this list while the remainder identified other careers, which ranged from the military to accounting, sports, cybersecurity and culinary arts.

Career path	Responses	Percentage
Agriculture, food and natural resources	6	10.4
Architecture and construction	8	13.8
Arts, AV technology and communications	20	34.5
Business management and administration	24	41.4
Education and training	9	15.5
Finance	9	15.5
Government and public administration	3	5.2
Health science	22	37.9
Hospitality and tourism	16	27.6
Human services	3	5.2

Information technology	26	44.8
Law, public safety, corrections and security	6	10.4
Manufacturing	2	3.5
Marketing	11	19.0
Science, technology, engineering and mathematics	27	46.6
Transportation, distribution and logistics	3	5.2

Table 1: Career paths offered to CP students

When questioned about the motivation schools had for selecting these career paths, over two-thirds of responses (70.2%) stated that it was to provide students with practical experience in the field “of their choice”. Many also noted that the motivation was to provide a more “comprehensive CP” (57.9% of responses) and to meet the requirements of the curriculum (50.9%).

### Benefits and challenges of implementing career-related experiences

In terms of what motivated students to undertake career-related experiences, over three-quarters (77.6%) of respondents stated that these experiences enable students to explore potential pathways, gain practical experience in the workplace (70.7%) or develop skills that enable them to make a smooth transition into the labour market (69%). As one respondent noted:

*“[A career-related experience] increases student motivation and provides a depth of knowledge that will be hard to achieve in a classroom setting”.*

Both schools and students saw career-related experiences as helpful for preparing students for the labour market, as one respondent noted.

*“[A career-related experience] builds confidence, helps students discover what their future career may be, helps students recognize what transferable skills they already have and need to build up, (and) gives them the more practical type of real-life learning they need.”*

Certain respondents noted, however, that their CP curriculum covered career or professional fields for which there were limited or no work experience opportunities for students.

*“We also have limitations in what classes we offer. We only offer technology/ engineering and multimedia. Many students are interested in nursing and business, but we do not offer opportunities in these.”*

Others explained that legislation or employment regulations meant that career-related experiences were unavailable, despite employers’ willingness to host students.

*“Organizing a career-related experience at my school has been very challenging ... due to strict labour laws as the minimum working age is 21 and all (workers) require a work visa and contract. However, with supportive parents who are mainly business owners, we have been able to develop good opportunities for our students.”*

However, not all schools found it as challenging to garner employer engagement, as one respondent noted.

*“Once we explain the value of the programme and why we are undertaking career-related experiences, most employers are open to the idea.”*

## Impact of career-related experiences on students and teachers

When asked if career-related experiences had enhanced CP students' motivation, nearly three-quarters (74.5%) agreed or strongly agreed, and a little under a quarter (21.6%) agreed somewhat. On the question of whether or not career-related experiences had enhanced students' transition into the labour market, the responses were overwhelmingly positive (30.6% somewhat agreed, 30.6% agreed and 30.6% strongly agreed).

Positive outcomes may be achieved when there is a clear connection between the skills and competencies gained during career-related experiences and those required in the labour market. For example, one respondent stated that:

*"(the) impact of career-related experiences on our CP has been enormous".*

This individual goes on to state that:

*"It has enhanced the image of the programme as having a real link with future employment needs. It has enabled students to experience a real-life working environment, it has boosted their confidence significantly, it has created opportunities for the school to link with local employers and it has improved the school's reputation within the local community. Win-win on all levels."*

Nearly two-thirds of respondents (60%) stated that they agree or strongly agree that their school has been able to actively engage with employers. According to respondents, however, engaging with employers has not always been an easy task. When asked if they had found it difficult to gain employer support, nearly half (48.9%) expressed strong agreement, with one-third agreeing (32.6%) or agreeing somewhat (30.5%). Over half of the respondents (60.9%) found engaging with employers difficult because of insufficient experience or guidance, while others cited the demand on the time of teachers and administrators.

It can be concluded that issues important to individual teachers (such as time, experience, matching students to employers and generating student interest) are factors that contribute to the level of enjoyment or satisfaction teachers get out of managing career-related experiences. The quality of the career-related experiences, and how teachers integrate local or environmental conditions, can make their task easier and therefore more likely to increase their enjoyment and enhance their career.

Despite the difficulties expressed by respondents, nearly half (47.1%) strongly agreed that all schools offering the CP should consider including career-related experiences as part of the curriculum. Similar numbers stated that they agreed (23.5%) or somewhat agreed (21.6%) with this proposition, while only four responses reflected disagreement. Nearly three-quarters (73.01%) stated that employers in their region actively supported career-related experiences. The next section of this report considers what can be defined as "career-related experiences" in the CP and further describes characteristics of effective career related experiences.

## Literature review

An important facet of the literature review was to establish a list of activities that can be considered “career-related experiences”. The following were found to align with the conceptualization of career-related experiences in the CP.

- **Internship:** Formal employment (often unpaid) in a workplace during out-of-school hours or semester breaks.
- **Non-school-based apprenticeship:** An apprenticeship undertaken post-school, usually by students graduating after the final two years of secondary school.
- **Paid work:** Part-time or after-school work. This can include enterprises created within the school for the purpose of applying and practising skills and competencies gained during vocational studies.
- **School-based apprenticeship:** Organized as part of the senior secondary school curriculum.
- **Unpaid work:** Work experience that is not related to a student’s career-aspirations, for example, work for a family business or employment with a voluntary organization.
- **Vocational Education and Training (VET):** Career-related experiences that provide education and/or training in job-readiness, professional and technical skills.
- **Voluntary work:** Unpaid work from which a student gains skills and competencies essential to employment but which are not necessarily defined in the school curriculum or assessed for the purpose of a qualification or certification.
- **Work-based learning:** Learning activities conducted in a real or model workplace that concern skills and competencies essential to the achievement of business outcomes, such as customer service, financial transactions, marketing and advertising.
- **Work experience:** Generally undertaken in the final two years of secondary school in order to give students experience in the workplace. Work experience is usually unstructured but subject to close supervision.
- **Work placement:** The placement of a student with an employer in order to apply and enhance skills and competencies learned at school but tested on the job.

## Characteristics of an effective career-related experience

Evidence drawn from the literature review suggests that, to be successful, career-related experiences should include the following characteristics.

- **Relationships between schools and employers:** The needs of employers and students are articulated and addressed through ongoing and close relationships between schools and employers. Employers also require a single point of contact within a school to understand the purpose of the career-related experiences, the role they are expected to play and the objective(s) students are to achieve.
- **Skills and competencies:** The senior secondary curriculum provides a broad base of skills and competencies that enhance the employability of students in diverse careers. In some countries, these are known as “employability skills” or “work-readiness skills”. These skills include working on teams, the importance of punctuality, the ability and willingness to learn, self-discipline, occupational health and safety, technology, problem-solving, decision-making and interpersonal skills.

- **Integration of academic and career-related subjects:** The senior secondary curriculum integrates essential academic subjects with career-related studies, and is relevant to the workplaces in which career-related experiences are being carried out. In preparing students for the workplace, academic subjects such as mathematics, science and technology are taught in relation to the workplaces where career-related experiences are taking place.
- **Competency-based assessment:** The measurement of student employability and career-readiness involves on-the-job application of skills and knowledge. In cooperation with employers, the standards of such skills and knowledge are identified, articulated and integrated into assessment processes, both during studies and while students are employed. This is known as “competency-based assessment” and is commonly practised in most VET systems.
- **Flexible pathways at articulation points:** An “articulation point” is a logical milestone or break in the curriculum, at which time a student may make the transition to another subject or a higher level of study in the same subject. For students, these milestones can occur at any point until the first year of upper secondary school when students are “locked into” a career or trade. This can lead to frustration on the part of students who decide to pursue alternate studies. Articulation pathways should be flexible enough to allow students to take up another career-related focus, enter into an apprenticeship or return to an academic pathway.

### Developing a model for career-related experiences

To develop a model applicable to the needs of current and future students, the CP should integrate the needs of employers, the career aspirations of students, and the curriculum, which informs both the skills and competencies they learn. By maintaining a focus on the needs of employers, a curriculum can support career-related experiences by incorporating and assessing skills and competencies that are relevant to the workplace.

Skills and competencies should be described in terms of observable performance in the workplace; assessments should reflect competency-based assessment processes (where the performance and not the underpinning knowledge is assessed). This requires an understanding of the skills and competencies employers demand of students graduating into the labour market. Additionally, instruction needs to be offered in a sufficiently flexible manner to allow students to gain experience at applying these competencies within the workplace context. Describing and assessing performance in terms of the qualities expected of a CP student will enable schools to develop useful career-related experiences.

An effective model for career-related experiences will both provide students with an understanding of what is available in the labour market with regard to careers or vocations, and prepare students for entry into the world of work in whatever field they choose. This is achievable under the current CP model, as the IB provides the curriculum and assessment framework and schools determine the programme’s core contents and delivery methods.



## Recommendations based on the literature review

The following recommendations are offered for IB World Schools with regard to career-related experiences.

- When possible, schools should consider integrating career-related experiences with academic subjects to give greater meaning and relevance to educational skills. The literature is very clear on the benefits of using real-world examples when presenting academic subject matter.
- Career-related experiences should emphasize general employability skills rather than specific trade or industry competencies.
- Schools should develop and maintain close links with local or regional employers. In creating links between schools and employers, teachers are better able to understand the needs of the local job market when developing and implementing career-related experiences.
- Create and adopt innovative approaches to career-related experiences, such as in-school enterprises (student-run business within a school) or teacher and employer collaboration on curriculum development to address the needs of all parties.
- Consider internal (in-school) assessment of student skills and competencies but external (external to the school) certification/qualifications.

## Conclusion

The nature of the modern workplace demands a more flexible approach on the part of schools, particularly in their relationship with employers and the capacity to be more adaptive in their curriculum. Schools with a flexible curriculum that combines academic and career-related subjects are more likely to meet the needs of employers than those that employ a more rigid, centrally controlled academic or career-related curriculum.

Based on the survey data, the majority of respondents agreed that career-related experiences were beneficial both to students and to schools. Limitations in the implementation of career-related experiences across all schools included a shortage of time in the school calendar to fully exploit career-related opportunities and a lack of employers either capable or willing to provide placements for students. Teachers also raised the issue of insufficient experience or guidance as challenges in implementing and managing career-related experiences.

An integrated curriculum increases opportunities for students to gain skills and competencies that are relevant to the labour market they expect to enter. The literature suggests that the possession of such skills and competencies increases the likelihood that students will seamlessly graduate to the job market.

Despite the limitations, the responses generally indicated that students enjoyed enhanced learning outcomes and made career decisions with greater confidence through participation in career-related experiences. Respondents were overwhelmingly in support of career-related experiences as an essential element of the CP curriculum.



## Appendix 1: Overview of country findings

Based on findings from the literature review, “Appendix 1” (below) identifies similarities and differences among career-related experiences across the countries studied.

This summary was developed by the IB Research department. A copy of the full report is available at <http://www.ibo.org/en/research/>. For more information on this study or other IB research, please email [research@ibo.org](mailto:research@ibo.org).

To cite the full report, please use the following.

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Country	VET / Qualifications system	Career-related experiences conducted in school	Curriculum development and assessment	Skills and competencies gained	Comments
<b>Australia</b>	Australian Qualifications Framework (AQF)	Career-related experiences are not mandatory in all states except for apprenticeships.	Curriculum developed from National Training Packages (NTP) relevant to each vocational subject. Assessment is conducted by the Registered Training Organisation (either school or private training provider) under whose registration the training is being undertaken.	As described in the relevant training package. Can be either the Mayer Key Competencies (early version of employability skills) or the more recent Employability Skills Framework. <b>Mayer Key Competencies</b> • Collecting and analyzing information; • Communicating ideas and information; • Planning and organizing activities; • Working with others in teams; • Using mathematical ideas and techniques; • Solving problems; • Using technology <b>Employability Skills Framework</b> (Integrated into current VET system) • Communication skills; • Teamwork; • Problem-solving; • Self-management; • Planning and organizing; • Technology; • Lifelong learning skills; • Initiative and enterprise skills (Integration into new school curriculum) • Literacy/numeracy; • ICT; • Thinking skills; • Creativity; • Self-management; • Teamwork; • Intercultural understanding; • Ethical behavior; • Social competence	Skills and competencies students must achieve in order to gain the VET qualification are contained in the Training Package relevant to the field of study.
<b>India</b>	National Vocational Education Qualifications Framework (NVEQF)	Career-related experiences for students in India are undertaken in the workplace or polytechnics.	Not clear in the data. Some pilot projects have seen curriculum developed with input from employers or subject matter experts.	National occupational standards do not yet exist in India. The skills and competencies required for the workplace are specific to organizations sponsoring students	Aside from pilot projects the national VET system and related schools-based career-related experiences are still under development. The NVEQF is also still in the development phase.
<b>Norway</b>	European Qualifications Framework (EQF)	Not included within high school curriculum. Career-related experiences primarily undertaken during apprenticeships. Students achieve trade or journeyman's certificate upon completion of training.	Students undertaking an apprenticeship are taught and assessed under curriculum developed for specific trade or craft.	As described in apprentice or trade curriculum. In 2012 a pilot project identified the following employability skills and competencies as important to small and medium size enterprises: • Responsibility; • Digital skills; • Communication skills; • Motivation; • Story and narrative skills; • Commercial understanding; • Interpersonal skills; • Creativity; • Ability/skill of getting things done and completing what's begun	Academic and vocational subjects do not appear to be integrated in Norwegian secondary schools. Academic studies are completed during the first two years of senior secondary study and students enter an apprenticeship for the second (and subsequent) years. Students are employed outside of the school and are paid a wage similar to full-time employees.
<b>Spain</b>	European Qualifications Framework (EQF)	Students undertake a three-month work placement for any intermediate or higher vocational program.	Skills and competencies are taught in school-based workshops and confirmed and enhanced on the job by employers.	In 2012 a pilot project identified the following employability skills and competencies as important to small and medium size enterprises: • Ability to learn; • Motivation; • Creativity; • Information and communications technology; • Teamwork; • Problem solving; • Know how to sell and how to sell oneself	Students only require a school certificate to enter intermediate VET programs, however they require the <i>Bachillerato</i> certificate to undertake higher VET programs. This is the same qualification required for entry into university and includes greater emphasis on the theory within the vocational field.

<p><b>United Kingdom</b></p>	<p>National Vocational Qualifications (NVQ)</p>	<p>Career-related experiences include learning through work (for example, short periods of work experience), learning about work and careers education, or learning for work (for example, by developing enterprise and employability skills).</p>	<p>All vocational studies in the UK are standards-based and modular, allowing for on-the-job/workplace assessment of learning outcomes.</p>	<p>As described in relevant National or Scottish Vocational Qualification (NVQ/SVQ).          In 2017 the British Council reported on the results of a wide-ranging study into skills and competencies deemed essential by employers and training providers. These include: Positive approach (ready to participate, make suggestions, accept new ideas, and constructive criticism, take responsibility for outcomes); use numbers (calculate), language (write clearly) and ICT (operate a computer and use a telephone to communicate); self-management, thinking and solving problems; working with others, communicating and understanding the business.          In 2012 a pilot project also identified the following employability skills and competencies as important to small and medium size enterprises: •Ability to learn; • Motivation; • Team work; • Communication; • Quality and improvement focus; • Understanding business context; • Verbal and written communications; • Creativity; • Motivation; • Working under pressure.</p>	<p>Students in the UK may study either academic GCSE or Vocational GCSEs. Students studying under the Scottish Credit and Qualifications Framework (SCQF) may undertake a broader range of courses, including courses outside of the traditional school-based vocational programs. Organizations such as ASDAN (a nationally approved qualification awarding body) offer GCSE equivalent qualifications for employability skills from intermediate to Certificate of Higher Education.</p>
<p><b>United States</b></p>	<p>N/A</p>	<p>Career-related experiences include work placement, in-school workshops and enterprises, internships and apprenticeships.</p>	<p>Curriculum developed with input from local employers. Assessment against school curricula but certification by trade organization.</p>	<p>The US government facilitated the development of a framework of employability skills and competencies for adoption by schools. This framework included the following:  <b>Applied knowledge:</b>          Academic skills (reading, writing, mathematical strategies and procedures, scientific principles and procedures)          Critical thinking skills (analyze, reason, solve problems, plan, organize, and make sound decision in work)  <b>Effective relationships:</b>          Interpersonal skills (ability to collaborate as a member of a team, work independently, communicate effectively, maintain a positive attitude, contribute to the overarching goals of the workplace).  <b>Personal qualities:</b>          Responsibility, self-discipline, flexibility, integrity, initiative.  <b>Workplace skills:</b>          Managing time and other resources, understanding, evaluating and using a variety of information, communicating effectively with others in multiple formats, including speaking, writing and listening, understanding relationships among the components of a system, applying information technology appropriately and effectively.</p>	<p>While the basic concept of vocational qualifications (industry certification) is consistent in all states of the US, each state has different requirements for attaining qualification. Skills and competencies required for a qualification in one state may not be recognized in another meaning that student competence may be the equivalent in two or more states, gaining recognition for such competence may require additional study or testing.</p>

Appendix 1: Overview of career-related experiences in countries