

The Microsoft Office Specialist program from Certiport

Enter

Assessment Efficacy Report — Spring 2021



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| Introduction



In 2013, we were the first company to make a commitment to measure our impact on some of the outcomes that matter most to learners, such as academic achievement. But there was no rule book and no model to follow. We've had to carve our own path to define what efficacy looks like in education.

While our approach is rigorous, the concept underlying it is simple: we use evidence and research to design products and solutions to help learners achieve the outcomes that matter to them. Then, we measure the impact of using our products, report that impact in a transparent way, and use what we learn to help learners — and ourselves — continuously improve.

Today, we are taking what we have learned and evolving our approach. We are focusing more on designing products to have a measurable impact, not just during education, but on employability and lifelong learning as well.

We want our commitment to efficacy to be a reason for learners to believe in Pearson, to see us as their trusted guide to a lifetime of learning, as they navigate a changing world of work. Skills that are hard to automate, like communication and critical thinking, are in more demand than ever. And now that the idea of a job for life is gone, people need to continuously grow, demonstrate their skills and adapt their talent to support the development of the key skills people need to thrive today and in the future.

Our efficacy reports help us, and the wider education community, build a better understanding of not just what works, but how, why, and in what context — helping us learn, not guess, about how the design and use of products relates to the achievement of outcomes that matter most.



Efficacy in 2021

Assessment is a critical segment of Pearson's portfolio. This report on the Microsoft Office Specialist program by Certiport is part of our ongoing commitment to communicate about our impact in a transparent way for our assessment offerings.

We are pioneering the application of efficacy in education. As such, we are driven by continuously pushing the boundaries of what learners can and should expect from learning experiences. Our commitment to transparency reflects our desire to build public trust in our ability to support learners at all ages and stages to achieve the outcomes that matter to them. In doing so, we want to be the trusted guide for learners through a lifetime of learning.

Our commitment to efficacy is on-going and all our 2021 efficacy reports are available [from our website](#).



Special thanks

We want to thank all the customers, test-takers, research institutions and organizations we have collaborated with to date. If you are interested in partnering with us on future efficacy research, have feedback or suggestions for how we can improve, or want to discuss your approach to using or researching our assessments, we would love to hear from you at efficacy@pearson.com.

Kate Edwards, PhD

SVP Efficacy & Learning, Pearson

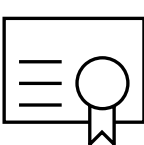


About efficacy reporting at Pearson

Learn more about the processes and principles of efficacy [here](#)



As part of our commitment to being open and transparent about how we design, develop, and evaluate the impact of use of our products on learning, we produce a range of efficacy publications, including reports and guides. This report is one of our Assessment Reports.



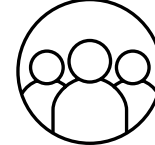
Technical Research Reports ¹⁻²⁻⁴

These describe a single piece of impact evaluation research into the use of a product, undertaken to meet the standards expected for publication in a peer-reviewed academic journal. Selected statements in our Technical Research Reports are independently assured by PricewaterhouseCoopers (PwC).



Product Guides & Spotlights ³⁻⁴

These explain what the evidence about a single product means for users of that product. These combine research findings with stories from real users to help you replicate best practice with the product and achieve the best outcomes for learners.



Assessment Reports ³⁻⁵

These summarize the evidence about a single assessment's capability to measure a trait or ability in a valid, reliable and fair manner. These reports are not independently assured, because we do not expect assessments to have a direct effect on outcomes for learners.



Product Efficacy Reports ¹⁻³⁻⁴

These summarize all the relevant impact evaluation research related to the use of a single product. This includes research described in Technical Research Reports and learning research that informed the product's design and use. Selected statements in our Product Efficacy Reports are independently assured by PwC.



Qualification & Certification Reports ³⁻⁵

These reports include information about how the design of the qualification or certification was informed by research. They bring in evidence about how the qualification is delivered, and how it supports experience and progression. They summarize relevant Technical Research Reports associated with the assessment of the qualification and impact evaluation research related to learner outcomes.

Key

- 1. Independently assured by PwC
- 2. Details a single study
- 3. Summarizes all relevant evidence
- 4. Evaluates impact on learner outcomes
- 5. Evaluates assessment quality indicators: validity, reliability, and fairness



Efficacy and assessments

Usually when we talk about the efficacy of a product, we mean the impact of its use on outcomes for learners, like achievement and progression.

Assessments and tests are a little different. Taking a test is not a learning experience in itself — but instructors can use the results of a test to make decisions about a learner’s progress. So the efficacy of an assessment is the extent to which it provides an accurate snapshot of what the learner knows and can do.

We judge the efficacy of assessments like the Microsoft Office Specialist program against three Assessment Quality Indicators (AQIs): validity, reliability, and fairness. These factors help us evaluate whether the assessment gives an accurate picture of the learner’s knowledge and capabilities.



Validity

Validity depends on evidence that the assessment is suitable for a **specific intended purpose**, and that we can interpret the results as intended. Validity is always context-sensitive; we cannot say that an assessment is or is not valid, period, only that it is or is not valid *for a particular purpose*.



Reliability

Reliability depends on evidence that the **results stay consistent** over time, over multiple forms of the assessment, and/or over multiple scorers.



Fairness

Fairness depends on evidence that the **results mean the same thing for all intended test-takers**. This means it is not systematically biased against any group of test-takers and the way it is administered does not hinder any test-takers in demonstrating their ability in the area being assessed.

Our AQIs are based on attributes defined in the Standards for Educational and Psychological Testing, developed in 2014 by the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME). These standards have long been recognized as best practice for both developing and evaluating assessments, and play a role in legal defences of assessment.





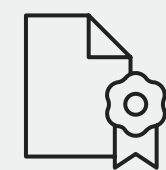
| Executive summary



Executive summary

While young people are generally better educated today than ever before, recent graduates tend to lack practical skills – especially digital skills.

Certification programs offer one effective way to address this digital skills gap. They give learners a way to gain the skills they need to compete, and also to demonstrate credibly that they possess those skills. This allows employers and educators to confidently assess a candidate's ability, and therefore their suitability as an employee or student.



Microsoft Office Specialist is a certification program provided by Certiport, a Pearson VUE business, and officially sponsored by Microsoft. It appraises students' and professionals' understanding of the Microsoft Office applications, including Word, Excel, PowerPoint, Access, and Outlook. It is offered all over the world, through a global network of more than 15,000 Certiport Authorized Test Centers.

The program provides learners with everything they need to learn, practice, and certify the Microsoft Office skills they are likely to need in further education or employment. Microsoft Office Specialist practice tests and certification exams are task-based and administered 'live in the app', mirroring the experiences learners will be presented with in real-life situations.

The program aims to guarantee employers and educators that anyone who holds a Microsoft Office Specialist certification has successfully demonstrated the ability to command the full features and functionality of the relevant Microsoft Office application, and is prepared for future academic or workforce opportunities. This report summarizes evidence that supports the validity, reliability, and fairness of the program in assessing these qualities.

In addition, the way an assessment is implemented has as much influence on its efficacy as its design, so the report also includes first-hand testimonials from people and organizations who are using Microsoft Office Specialist in real life settings.

'We believe in the added value of official certification training as a safe bet for all professionals, and it also provides an increase in employment rates.'

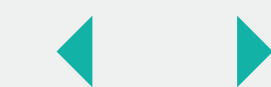
– [How Fundación Paco Puerto uses Microsoft Office Specialist](#)

'Microsoft Office Specialist certifications have definitely helped our students to land a job in the industry more easily, receiving pay above the industry average!'

– [How Siam University uses Microsoft Office Specialist](#)

"By investing in digital transformation at schools, you invest in teachers, students, and their skills for the future."

– [How Dimitar Makedonski uses Microsoft Office Specialist](#)



About the Microsoft Office Specialist program





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- 1 The importance of digital skills certification**
- 2 Learn, Practice, Certify, Advance model
- 3 History and reach
- 4 Development of the Microsoft Office Specialist program

Microsoft Office Specialist is a Certiport certification program that appraises students’ and professionals’ understanding of Microsoft Office applications, including Word, Excel, PowerPoint, Access, and Outlook.

Like all Certiport certification programs, Microsoft Office Specialist encompasses learning materials and practice tests, as well as the certification exam itself.

The program aims to guarantee employers and educators that anyone who holds a Microsoft Office Specialist certification has successfully demonstrated the ability to command the full features and functionality of Microsoft Office, and is prepared for future academic or workforce opportunities. These certifications are officially sponsored by Microsoft.



The importance of digital skills certification

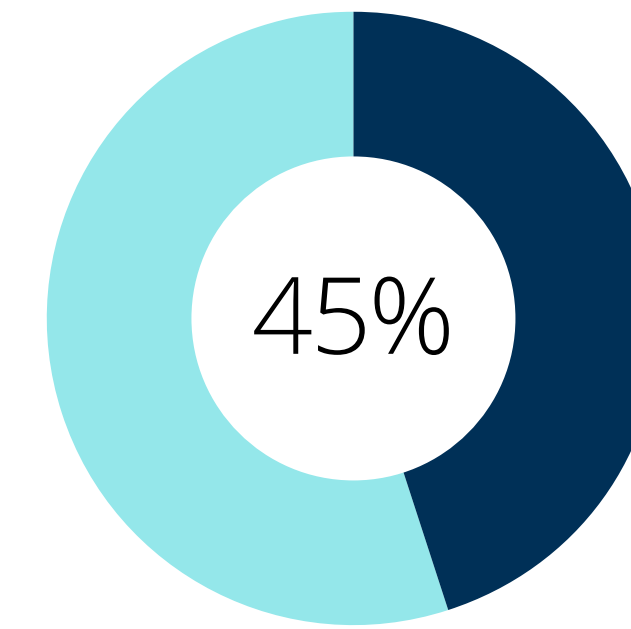
All over the world, employers are experiencing a widening gap between the skills they need and the knowledge, skills, and abilities of prospective employees.

Employees feel the disconnect just as keenly; a survey by the Organisation for Economic Co-operation and Development (OECD) showed that 45% of workers felt they lacked the appropriate skills to perform their jobs effectively (*Certiport, 2020*).

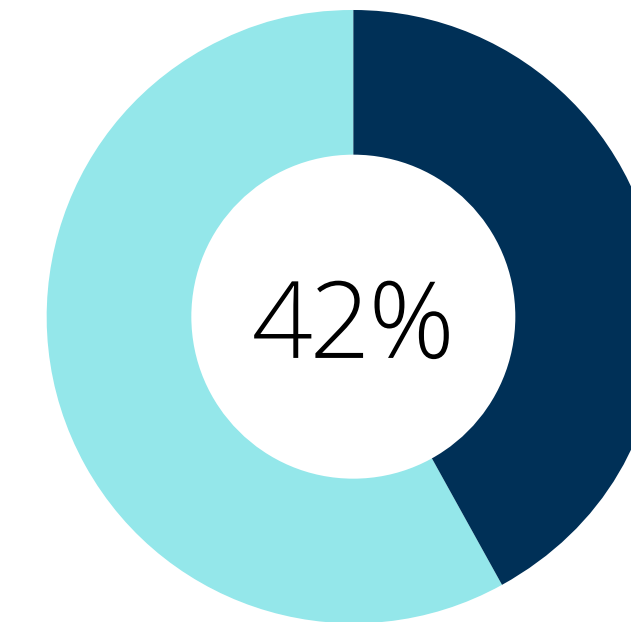
Overall, young people are better educated than ever before. What recent graduates tend to lack is practical skills — and especially digital skills.

Digital skills are in high demand. In the USA, salaries in information technology-specific roles increased between 2018 and 2020 (*Schweer, 2020*) and now pay more than 2.5 times the average national wage. At the same time, these skills are ever-changing, making candidates' self-assessments of their own skill levels unreliable (*Grant, Malloy, & Murphy, 2009*).

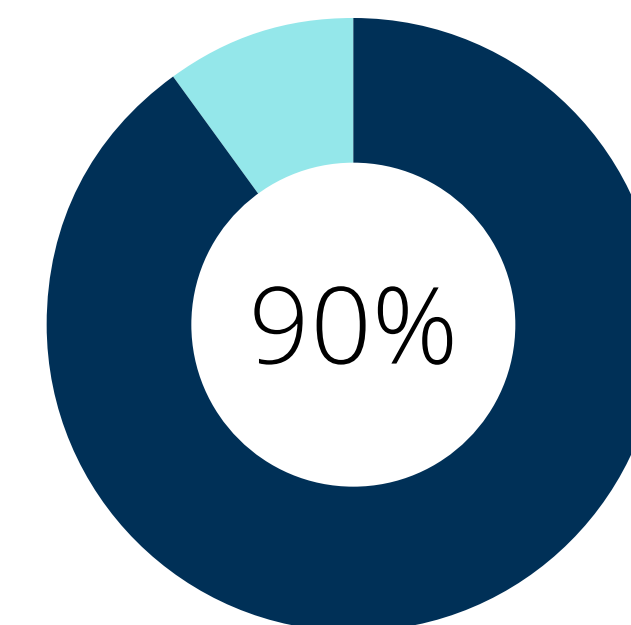
The picture is similar in Europe, where 42% of the population lack basic digital skills at a time when 90% of all jobs require them (*European e-Skills Association, 2020*). Using a computer and using Microsoft applications are among the most frequently mentioned skills in vacancies listed online in Europe (*European Commission, 2019*).



of workers feel they lack the appropriate skills to perform their jobs effectively



of the population lack basic digital skills in Europe



of all jobs require basic digital skills

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So to compete for these increasingly lucrative roles, candidates need to gain the necessary skills, but they also need a way to demonstrate that they possess those skills. Certification is an effective way to demonstrate mastery of a set of industry-validated skills (*Schweer, 2020*).

Certification programs like Microsoft Office Specialist address digital skills gaps by connecting learners with the training they need to compete. As well as helping learners become more employable, offering industry-recognized certification programs can help schools build a good reputation with employers (*Certiport, 2020*).

In order to prepare students to enter the workforce, many business schools around the world require students to be certified in Microsoft Office applications before enrolling in their programs. Certifications in Microsoft Excel and Access are especially common conditions of enrollment.

Employers value certification as a way to build a skilled workforce that will meet their needs. It allows employers to assess the actual capability of job applicants who list ‘Microsoft Office skills’ on their resumé.



Learn, Practice, Certify, Advance model

Unlike some certification programs that only offer the certification exam itself, Microsoft Office Specialist provides everything learners need to learn, practice, and certify their skills, all in one place.

This Learn, Practice, Certify, Advance model is common to all Certiport certification programs. It offers candidates a total learning pathway, from aligned curriculum to practice tests and ultimately the certification exam.

Learn

The Microsoft Office Specialist program includes a set of materials, tools, and resources to assist instructors and prepare learners to succeed in the certification exam.

These include textbooks, study guides, multimedia tutorials, e-learning, social learning communities, courseware, projects, and activities for learners; and lesson plans, classroom management tools, and a learning management system to assist instructors.

Some of the resources are created by Pearson, and others by third party partners and publishers. What they all have in common is that they are mapped directly to the certification exam.

With other certification programs, instructors or learners may have to search for learning resources themselves and settle for something that is a close, but not exact, match to the exam. By mapping a set of resources directly to the objective domains of the exam, and providing them as part of the certification program, the Microsoft Office Specialist program provides all learners with an opportunity to develop and demonstrate their skills.

Practice

The program also includes practice tests, once again mapped directly to the certification exam, which use the same software environment as the exam.

These help learners become familiar with timed, project-based tests like the ones they will sit in the exam. The tests also provide learners and educators with detailed score reports, including remediation paths, to help them prepare to take the certification exam.

According to Certiport data from 2016, learners who took at least one of the practice tests were more likely to pass the certification exam than those who did not use the practice tests at all.

Certify

To achieve certification, learners must complete the certification exam. In the exam, learners complete between five and eight projects within a set time limit, working live in the Microsoft Office applications themselves. Each project consists of between one and six tasks. Once a learner completes all the tasks in a project, they can submit the project file and start the next one. As long as there is time left in the exam, learners can review and change the project files before finishing the exam.

Advance

Earning a certification is a major accomplishment in itself. It is also the first step towards advancing academic pursuits or career success.

To acknowledge this next step of the journey, Certiport is expanding the Learn, Practice, Certify model to include a fourth element: Advance.

After earning a certification through Microsoft Office Specialist or another Certiport program, learners can take advantage of My Pathway — a visual journey of career goals designed to highlight learners’ accomplishments, track progress, and show a path towards additional certifications designed to prepare them for career success.

Learners can augment their advancement with additional third-party tools provided through My Pathway, such as Resume Library, which provides guidance for building resumes that effectively highlight certification achievements.

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History and reach




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The Microsoft Office Specialist program is one of 16 certification programs managed by Certiport, a Pearson VUE business, and offered all over the world.

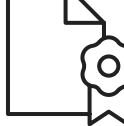
Established in 1997, Certiport is now the leading provider of certification exam development, delivery, and management services, working with industry-leading certification providers to bring their programs successfully to market. Certiport delivers more than three million exams each year, in 148 countries and 26 languages, through its worldwide network of more than 15,000 Certiport Authorized Test Centers. Customers include the secondary, post-secondary, workforce, and corporate technology markets.

All Certiport certification programs offer the same Learn, Practice, Certify, Advance model as Microsoft Office Specialist.

 3 million + exams each year

 148 countries

 26 languages

 15,000 + Certiport Authorized Test Centers



Development of the Microsoft Office Specialist program



Within the Microsoft Office Specialist program, there are various certifications available, corresponding to different versions of the Microsoft Office suite. From oldest to most recent, the available certifications are:

- **Microsoft Office 2013:** Word, Word Expert, Excel, Excel Expert, PowerPoint, Access, Outlook, OneNote
- **Microsoft Office 2016:** Word, Word Expert, Excel, Excel Expert, PowerPoint, Access, Outlook
- **Microsoft Office 365 apps and Office 2019:** Word, Word Expert, Excel, Excel Expert, PowerPoint, Access, Outlook

The older versions of the certification exam require learners to complete a single, large project. The more recent versions, from the Microsoft Office 2016 certifications onwards, instead require learners to complete several smaller projects.

Certiport recently made improvements to its certification exams following feedback from expert advisors and teachers. These improvements include:

- revising instructions to avoid naming relevant commands and functions, so learners require a deeper understanding of the application’s functionality to complete the task
- incorporating more objective domains across the different exam forms
- providing real-world context for exam content
- introducing a performance-based format to improve aptitude testing

After earning a certification through Microsoft Office Specialist or another Certiport program, learners can take advantage of My Pathway — a visual journey of career goals designed to highlight learners’ accomplishments, track progress, and show a path towards additional certifications designed to prepare them for career success.

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How did evidence inform the design of the Microsoft Office Specialist program?

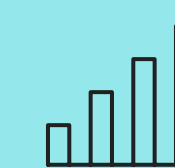


In this section

- 1 Expert input
- 2 Formative assessment and feedback
- 3 Authenticity
- 4 Focus and practice

To enable learners to demonstrate their IT skills and compete for skilled job roles, the Microsoft Office Specialist program from Certiport has been designed with a number of learning science principles in mind. These principles take insights from learning science research about how to maximize learning, and incorporate them into learner-focused design practices to support the learning, practice, and certification of IT skills.

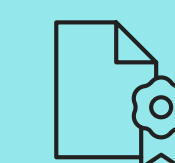
In particular, the Microsoft Office Specialist program aims to provide:



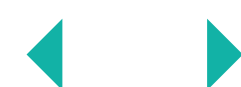
formative assessment and feedback to promote learners' acquisition of relevant knowledge, skills, and abilities



an authentic experience of real-world tasks using Microsoft Office applications, to prepare learners for relevant academic and workplace roles



a credible, recognized certification status to inform employers' hiring, promotion, and advancement decisions



Expert input

The Microsoft Office Specialist program was designed according to best practices developed by Certiport.

These best practices include consulting a range of subject matter experts at key points in the design process. For the Microsoft Office Specialist program, these subject matter experts included employers, teachers, authors, trainers, and Microsoft Most Valuable Professional (MVP) award holders. Authors, trainers, and Microsoft MVPs are experts on the Microsoft applications, while teachers and employers understand the program’s target market.

This subject matter expertise informs the certification’s objective domain and the certification exam blueprint — two foundational elements of the certification design.

Objective domain

The objective domain is a comprehensive set of specific and measurable knowledge, skills, and abilities. It serves three purposes:

1. It focuses the development of the certification exam, ensuring that the projects and tasks assess the right things
2. It tells learners what knowledge, skills, and abilities they will need to become certified
3. It tells employers and educators what a certified candidate should be expected to know

To define the objective domain, it is important to understand:

1. What knowledge, skills, and abilities determine whether a candidate should qualify for certification?
2. Who is the target audience for the certification?
3. What does the target audience know, and what should be covered in the certification exam?

This final point requires a job task analysis, where a psychometrician leads a focus group of subject matter experts to outline the duties, actions, and responsibilities of the target audience.

Exam blueprint

The exam blueprint defines exactly what the certification exam will assess. It is directly informed by the objective domain.

To develop the exam blueprint, subject matter experts participate in a blueprint survey. This involves reviewing the objective domain and rating the knowledge, skills, and abilities it specifies according to their:

- **relevance** — how relevant are the tasks to a learner’s certification status?
- **frequency** — how often is a successful certification holder likely to use the tasks in the real world?

A psychometrician processes the data from the blueprint survey to specify how many items there should be in each section of the certification exam. This is the exam blueprint.



Formative assessment and feedback

In this section

- 1 Expert input
- 2 Formative assessment and feedback**
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Microsoft Office Specialist practice tests provide learners with feedback for each question they attempt.

Formative assessments like these, which include timely, informative feedback, support the learning process by helping both learners and instructors to monitor progress towards learning goals, identify and learn from mistakes, and think deeply about the correct information (*Hattie & Timperley, 2007*).

Immediate feedback, in particular, is strongly beneficial for learning (*Azevedo & Bernard, 1995; Shute, 2008*). When students are beginning to learn something new and potentially challenging, immediate feedback can keep them on track and help them achieve more (*Dihoff, Brosvic, Epstein, & Cook, 2004*). Feedback on incorrect attempts shores up learners’ understanding of the problem (*Anderson, Reder, & Simon, 1999*) and helps them develop the motivation and confidence to keep going (*Duckworth & Gross, 2014*). Feedback on performance improves learners’ knowledge transfer, and supports their ability to monitor their own understanding (*Butler & Winne, 1995*).



Authenticity

Microsoft Office Specialist certification exams are performance-based and are uniquely administered live in the app.

This makes the tasks learners complete in the exams nearly identical to the tasks they will be expected to complete in the real world. In other words, the exams have a high level of authenticity.

Authenticity is particularly important in a certification program, where the goal is to confer knowledge, skills, and abilities that learners will later need to apply. Learners are more likely to correctly apply their knowledge and skills when the learning context and the real-world application context are similar (*Bransford, Brown, & Cocking, 2002; Brown, Collins, & Duguid, 1989; Clark & Mayer, 2001; Lockhart, 2002*).

The way the exams are assessed is similarly authentic, in that learners' scores are based on the results they achieve, not the methods they use to achieve them. For example, in the Microsoft Word Specialist exam, learners are asked to create and manage documents, format text, create tables and lists, apply references, and insert and format objects, among other tasks. Just as in the real world, learners may use any method to complete each task. Scores are ultimately assigned based on changes to the project files.

Microsoft Office Specialist's pursuit of authenticity also extends to the Practice part of the Learn, Practice, Certify, Advance model. The learning resources and practice tests offered as part of the program are mapped directly to the certification exam. The practice tests also replicate the exam's live Microsoft Office environment, so learners can experience exactly what the exam will be like before taking it.

In this section

- 1 Expert input
- 2 Formative assessment and feedback
- 3 **Authenticity**
- 4 Focus and practice

Focus and practice

In this section

- 1 Expert input
- 2 Formative assessment and feedback
- 3 Authenticity
- 4 **Focus and practice**

In the Microsoft Office Specialist certification exams for Office 2016, Office 365 apps and Office 2019, learners complete between five and eight small projects. Previous exams asked learners to complete a single, large project.

The project-based structure of the certification exams is designed to mirror the real-world workplace or academic environment that learners will experience after certification.

The move to multiple smaller projects means that learners and instructors can focus their studies on practicing and mastering the specific skills tested in each individual project. Learners can complete one of the exam projects, then continue their studies before moving on to the next project.

It also allows the exams to test knowledge, skills, and abilities more broadly and deeply.





What does the evidence say about the Microsoft Office Specialist program?



The efficacy of an assessment considers its capability to measure a trait or ability in a valid, reliable, and fair manner.

The purpose of the Microsoft Office Specialist certification is to furnish evidence that the certified individual has demonstrated the ability to command the full features and functionality of the relevant Microsoft Office application (such as Word, Excel and so on), preparing them for future academic or workforce opportunities.

Therefore, to determine the efficacy of the Microsoft Office Specialist program, we need to review evidence related to its capability to measure these traits or abilities in a valid, reliable and fair manner.

In this section

- 1 Validity
- 2 Reliability
- 3 Fairness

Validity	Can the assessment be used for its intended purpose, and can we interpret the results as intended?	The Microsoft Office Specialist program’s intended purpose is to furnish evidence that certified individuals have demonstrated the ability to command the full features and functionality of Microsoft Office applications. Results are intended to allow learners to demonstrate their abilities to potential employers, and to allow potential employers to identify candidates with the digital skills they need to succeed.
Reliability	Are the results consistent between discrete items or tasks?	To measure this, researchers evaluate whether all the items in the test measure the same thing in the same way.
Fairness	Can the results be used the same way for all test-takers?	For all test-takers, the results of the Microsoft Office Specialist exams should indicate their ability to command the features and functionality of Microsoft Office applications.

Validity

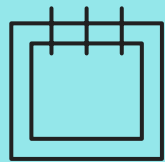
Can the assessment be used for its intended purpose, and can we interpret the results as intended?

There is evidence that Microsoft Office Specialist certification allows learners to demonstrate their abilities to potential employers, and allows potential employers to identify candidates with the digital skills they need to succeed.

How does Certiport ensure the validity of the exam content?

As described earlier, subject matter experts are heavily involved in developing the objective domain and exam blueprint for the certification exam. These experts help to ensure that each task in the exam is relevant to the real-world tasks learners may be called on to complete in the workplace, or in an academic setting.

As well as calling on subject matter expertise, Certiport uses beta testing to develop and refine new certification exams. The aim of a beta examination is to evaluate a pool of tasks and identify the ones that most effectively assess learners’ skills.



beta exams are available for 2-4 weeks



250 qualified candidates

Certiport makes beta exams available in its Certiport Authorized Test Centers for two to four weeks, with the aim of having at least 250 real, qualified certification candidates participate.

Participating candidates are issued with vouchers that allow them to take the beta exam for free. They are allowed more time than usual, to account for the larger number of tasks in a beta exam. They receive an initial score as soon as they complete the exam, and receive their final results six to eight weeks after the beta testing period ends, to allow for analysis of the tasks, results, and feedback.

Once the beta testing period ends, psychometricians analyze the tasks' performance data and candidate feedback to identify and remove tasks that:

- are too easy or too difficult
- are not relevant to real-world use
- show evidence of not being clearly understood
- do not provide a valid assessment of candidates’ knowledge

Live exams are then constructed from the remaining tasks.

Certiport certification exams are designed to measure skills on an individual basis, rather than in relation to other individuals or groups. The goal is to allow employers and educators to distinguish between candidates based on whether or not they passed the exam and achieved their certified status, not to rank certified candidates based on their precise scores.

Setting the score candidates will need to pass the exam and become certified is therefore an important process. To set this pass mark, Certiport uses criterion-referenced standard-setting procedures, developed based on universally accepted psychometric practices.

In this section

- 1 Validity
- 2 Reliability
- 3 Fairness

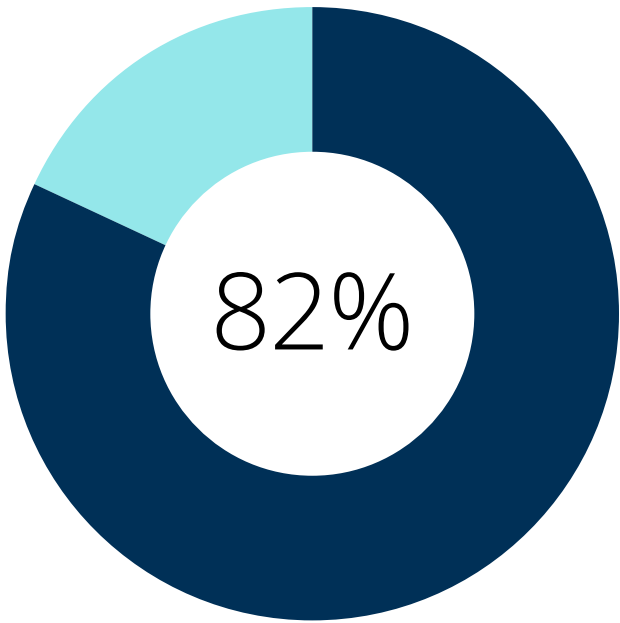
Can learners use Microsoft Office Specialist certification to demonstrate their abilities?

According to credential attainment data provided by 30 US states, more kindergarten–12th grade (K–12) students earned Microsoft Office Specialist certification than any other credential in the academic year 2018–19 (*Burning Glass Technologies & ExcellnEd, 2020*). Moreover, the Microsoft Office Specialist Candidate Net Satisfaction Survey, administered by Certiport to all candidates who complete a certification exam, provides evidence that those aspiring to certification see it as a credible signal of their skills to potential employers. According to data collected from the survey in 2019:

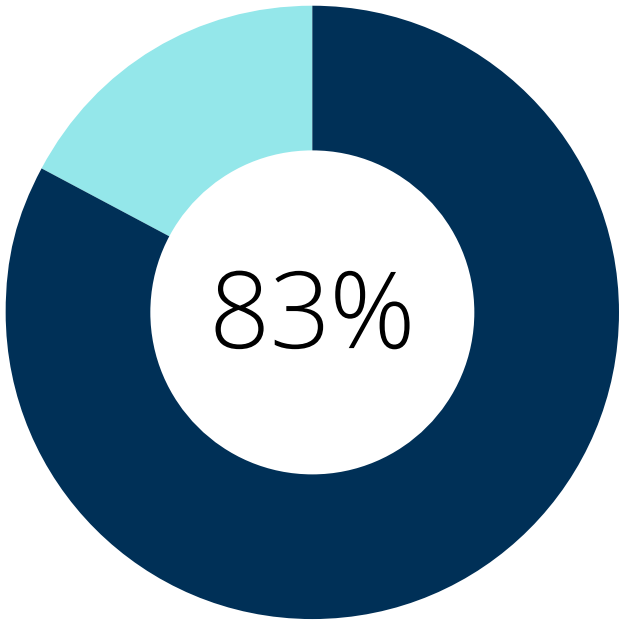
- 82% of respondents at least somewhat agreed that the exam covered skills directly relevant to jobs involving the use of the relevant Microsoft Office application
- 83% of respondents at least somewhat agreed that Microsoft Office Specialist certification is a good way to distinguish themselves from others

Data from certification earners supports this view. Based on internal data, in 2019 alone, 559,895 badges were issued to certificate-holders, and these badges were shared on various social media channels like LinkedIn and Twitter more than 58,000 times.

Finally, there is evidence from one state suggesting that those earning certification are more likely to find employment or go on to higher education. In two consecutive annual reports analyzing participation and performance in programs authorized by Florida’s Career and Professional Education (CAPE) Act, participants with industry certifications (including Microsoft Office Specialist) were more likely to have been placed in post-secondary employment or enrolled in post-secondary education than those without such certifications (*Division of Career and Adult Education, 2015, 2016*). This was true for all program cohorts participating between the 2009–10 and 2015–16 academic years.



of respondents at least somewhat agreed that the exam covered skills directly relevant to jobs involving the use of the relevant Microsoft Office application



of respondents at least somewhat agreed that Microsoft Office Specialist certification is a good way to distinguish themselves from others



number of times certification badges were shared on social media channels like LinkedIn and Twitter in 2019

In this section

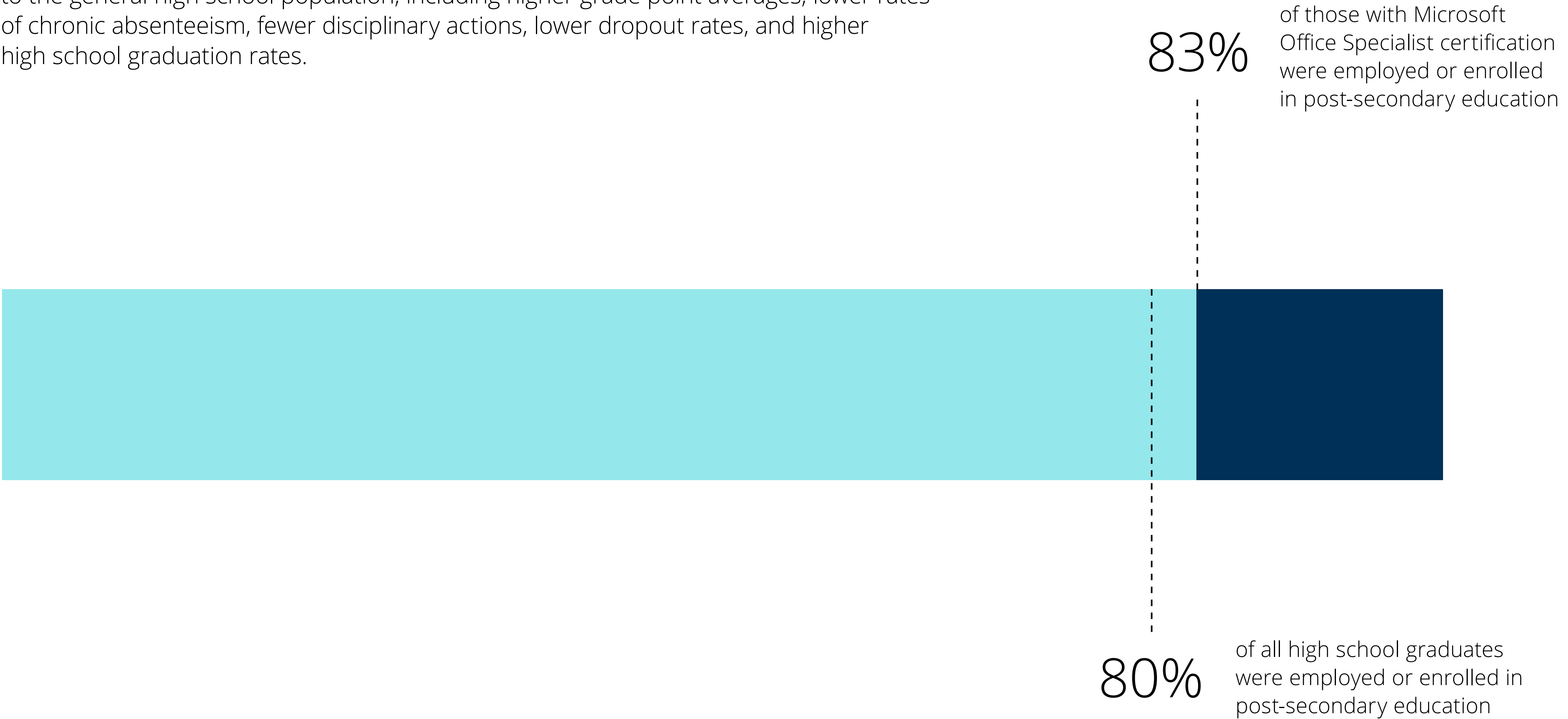
- 1 Validity
- 2 Reliability
- 3 Fairness

When the Florida data was disaggregated by certificate program, the same trend played out for Microsoft Office Specialist certificate earners specifically. Of participants in the 2015–16 program, nearly 83% of those with Microsoft Office Specialist certification were employed or enrolled in post-secondary education, compared to around 80% of all high school graduates.

Those earning industry certifications also enjoyed a number of other outcomes compared to the general high school population, including higher grade point averages, lower rates of chronic absenteeism, fewer disciplinary actions, lower dropout rates, and higher high school graduation rates.

In this section

- 1 Validity
- 2 Reliability
- 3 Fairness



Can employers and educational institutions use Microsoft Office Specialist certification to identify skilled candidates?

In this section

- 1 Validity
- 2 Reliability
- 3 Fairness

The value of Microsoft Office Specialist certification is explicitly supported by a variety of independent and trustworthy organizations, including Microsoft itself. Microsoft reviews and approves each certification exam before it is released and officially sponsors all Microsoft Office Specialist certifications.

In the USA, for example, the American Council on Education has ruled that Microsoft Office Specialist exams qualify for college credits, and various US state governments endorse the program by providing funding. Microsoft Office Specialist is also endorsed by many global organizations.

These endorsements show employers and educational institutions that Microsoft Office Specialist certification is credible and globally recognized.

According to a database of job postings, Microsoft Office Specialist certification was the number one most demanded credential by employers recruiting for living wage occupations in the academic year 2018–19 (*Burning Glass Technologies & ExcellnEd, 2020*). This evidence suggests that employers recognize the validity of the certification.



Reliability

Are the results consistent between discrete items or tasks?

There is evidence that Microsoft Office Specialist certification exam scores are internally consistent.

Are the Microsoft Office Specialist program’s results internally consistent?

An assessment is internally consistent if all the items in the test measure the same thing in the same way. We measure internal consistency using Cronbach’s alpha, an index that measures how closely related a set of items are as a group.

We collected data from multiple forms of the Microsoft Word, Excel, PowerPoint, Access, and Outlook certification exams throughout 2018 to compute Cronbach’s alpha for the Microsoft Office Specialist program. Sample sizes ranged from 1,308 test-takers (for form A of the Access exam in February 2018) to 6,574 (for Form A of the Access exam in September 2018), and averaged 4,514.

These analyses placed Cronbach’s alpha for the Microsoft Office Specialist program between 0.85 (for Form B of the PowerPoint exam in May–July 2018) and 0.93 (for Form A of the Word exam, also in May–July 2018).

This means that all Microsoft Office Specialist certification exams demonstrate a level of internal consistency that is high enough to support applied research, and that approaches or exceeds the level required to support important decisions (see Table 1).

Table 1: Guidelines for interpreting Cronbach’s alpha (Nunnally & Bernstein, 1994)

Cronbach’s alpha	Sufficient to support...
≥0.70	exploratory research
≥0.80	applied research
≥0.90	important decisions

In this section

- 1 Validity
- 2 **Reliability**
- 3 Fairness



The Cronbach's alpha results for all the different forms of the exam all fall within a tight range



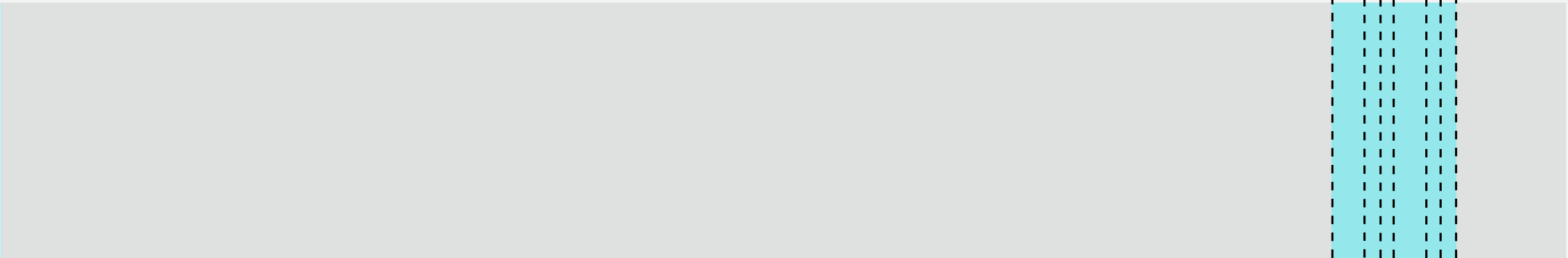
0.93

0.85

In this section

- 1 Validity
- 2 Reliability
- 3 Fairness

0.85 0.93



All the Cronbach's alpha results are at the high end of the scale – all above 0.8, making them strong enough to support applied research, and many above 0.9, making them strong enough to support important decision-making

Fairness

Can the results be used the same way for all test-takers?

There is evidence that Certiport takes steps to mitigate the risk of bias against particular groups of test-takers.

What steps does Certiport take to mitigate against bias when developing program content?

Certiport localizes the Microsoft Office Specialist program for different markets, including translating the learning materials and exams into 26 languages, and seeking recognition and endorsement from local industries and government bodies. In this way, Certiport intends to mitigate the risk of bias in favor of test-takers whose first language is English.

In 2020, Certiport carried out accessibility reviews of the Microsoft Office 365 apps and Office 2019 certification exams against the World Wide Web Consortium’s (W3C) Web Content Accessibility Guidelines (WCAG) 2.1. The results were used to improve both the content of the exams and the user interface, making them more accessible and so aiming to mitigate the risk of bias against people with disabilities.

Since then, process improvements have also been made for developing content that is accessible from the start. Certiport now has exam item templates that specify design and alternative text standards, to support test-takers who use assistive technologies. There are also internal review processes in place, using Microsoft Accessibility Insights.

What steps does Certiport take to mitigate against bias when setting certification exams?

Through a process known as equating, Certiport adjusts the score required to pass the Microsoft Office Specialist certification exam, so that different versions of the exam all require an equivalent level of proficiency to pass.

Different candidates will be required to complete different sets of tasks in order to pass the exam. The goal of the equating process is to make sure that each candidate is presented with a statistically equivalent exam. That is, statistically speaking, no version of the exam is easier or harder than the version presented to any other candidate.

Certiport uses industry best practices to establish the right passing score for the certification exam. Passing standards are derived from a combination of:

- expert opinion on ‘minimal competence’
- observations about how well a certification exam actually differentiates between low and high performing candidates

In this section

- 1 Validity
- 2 Reliability
- 3 **Fairness**





The Microsoft Office Specialist program in action



In the workforce

About

Juan José Cantador is the Training Coordinator for Fundación Paco Puerto, the training center for the largest trade union in Spain: the Workers' Commissions of Catalonia (CCOO). Àngel García is the Academy Director for PUE, Certiport's partner in Spain.

Industry-recognized credentials

Fundación Paco Puerto has more than 30 years of experience in management and organizational training, including technical courses in computer science and office automation. Paco Puerto realized these computer courses would be more valuable to students if they included industry-recognized certification to validate their skills.

As Juan himself says:

'No matter how well we teach Excel, it would be more valuable if the course was accredited by Microsoft itself.'

PUE helped Paco Puerto understand just how much more valuable. Says Àngel:

'We believe in the added value of official certification training as a safe bet for all professionals, and it also provides an increase in employment rates.'

Value for students and employers

Paco Puerto became a Certiport Authorized Test Center in 2012 and began offering its students formal Microsoft Office Specialist training and certification. Since then, it has trained more than 6,500 students and more than 5,000 have become certified.

Juan says Paco Puerto has realized two main benefits of offering Microsoft Office Specialist certification.

'First, students gain a professionally-recognized qualification that is valued by employers. Second, Paco Puerto is authorized to deliver Microsoft exams, which helps to motivate the trainers and also makes us a center of reference.'

In this section

1 In the workforce

2 In higher education

3 In K-12 education



In higher education

In this section

- 1 In the workforce
- 2 In higher education
- 3 In K-12 education

About

Dr Dechanuchit Katanyutaveetip is the Dean of Siam University's Faculty of Information Technology. The university added Microsoft Office Specialist certification to the curriculum to help solve a digital skills gap in Thailand's workforce.

21st century skills

Over the past 40 years, Siam University in Bangkok, Thailand has introduced more than 90,000 quality graduates into the international workforce. Says Dr Katanyutaveetip:

'Our mission is to equip students with 21st century skills and beyond ... such as communication, collaboration, digital literacy, critical thinking and creativity.'

Supplying the demand

A few years ago, businesses in Thailand found the workforce was lacking in IT skills. In response, Siam University worked with ARIT Co, Ltd, Certiport's partner in Thailand, to add Microsoft Office Specialist certification to the curriculum for both faculty and students.

More than 10,000 students have earned their Microsoft Office Specialist certification at Siam University in the past five years. Feedback from graduates has been positive, showing that they feel more confident in their digital skills after becoming certified.

'Microsoft Office Specialist certifications have definitely helped our students to land a job in the industry more easily, receiving pay above the industry average!'



In K-12 education

About

Julijana Todorovska is the Director of Dimitar Makedonski, a primary school in the city of Skopje, North Macedonia. Marko Serafimovski is the Chief Operations Officer of Certiadria, Certiport’s partner in the Adriatic region. Both were involved in the local Department of Education’s initiative to improve students’ digital literacy by certifying teachers’ Microsoft Office skills.

An investment in society

It all started when Certiadria gave a series of presentations to primary school directors and the Department of Education in Aerodrom, a municipality within the city of Skopje.

With support from the Mayor, the Aerodrom Department of Education provided funding for more than 100 local primary school teachers to gain Microsoft Office Specialist certification. The idea is that digitally literate teachers will lead to digitally literate students, as Julijana explains:

'The goal is for our students to be prepared for the jobs of the future. We are investing in the development of our society as a whole.'

Teaching with flair

In the project’s first phase, 150 teachers in five schools were certified: most in Microsoft PowerPoint, some in Excel and Word.

The primary school directors soon saw the benefits. Marko says that certified teachers gained creativity as well as digital skills, leading to more dynamic lessons, visual learning, research activities, and digital projects.

'Our message is clear: by investing in digital transformation at schools, you invest in teachers, students, and their skills for the future.'

In this section

- 1 In the workforce
- 2 In higher education
- 3 In K-12 education



Discussion



Discussion

Microsoft Office Specialist is a certification program that appraises students' and professionals' understanding of the Microsoft Office applications. By giving learners a way to both gain and demonstrate digital skills, Microsoft Office Specialist has a role to play in addressing the global digital skills gap.

It is clear that Certiport takes steps to ensure the validity, reliability, and fairness of the Microsoft Office Specialist certification exams. The objective domain and exam blueprint are founded on relevant subject matter expertise, exam content is developed with accessibility in mind, and each form of the exam goes through psychometric analysis, assembly, and equating.

There is evidence to suggest that these measures are effective. For example, Microsoft Office Specialist exams demonstrate a high standard of internal consistency: high enough for exam results to support applied research and, in many cases, important decision making. This is significant because employers and educators need to be able to use Microsoft Office Specialist certification to make important decisions about who to hire or accept.

Most significantly, based on data from one US state, there is evidence that Microsoft Office Specialist certificate holders are more likely to gain employment or post-secondary education opportunities than the general population of high school graduates.

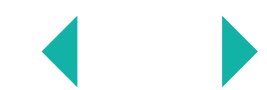
Combined with the many endorsements the program receives from organizations around the world, and program participants' own perceptions that certification is a good way to stand out, it seems that the Microsoft Office Specialist program is well positioned to help supply the demand for digitally literate candidates.

However, gaining employment or enrollment is not the end of the story for certificate holders. By allowing learners to learn, practice, and certify live in the app, Microsoft Office Specialist provides an authentic experience intended to make sure learners not only understand the applications, but can also apply their knowledge effectively from their first day in employment or post-secondary education.

It would be fruitful to investigate how the program's use of project-based, live-in-the-app exams affects learners' ability to apply their knowledge in the real world, and to what extent this approach to exams contributes to the development of in-demand digital skills. How easily Microsoft Office Specialist certificate holders are able to apply their digital skills in real life workplace or academic settings, after their certification has opened the door to these settings, and how they perform compared to their colleagues — those who use Microsoft Office software but are not certified — are also potentially productive areas for future research.

The program itself is evolving to support this next stage of the journey more explicitly, as Certiport expands its Learn, Practice, Certify model to include a fourth element: Advance.

Robust research into the program's efficacy beyond certification could support this evolution, ensuring any changes are underpinned by strong evidence. This in turn could support one of Certiport's key ambitions for the Microsoft Office Specialist program: to have the program not only endorsed, but officially incorporated into curricula by education departments at the national government level.



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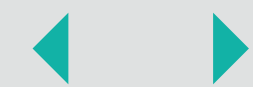
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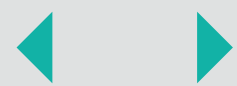
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