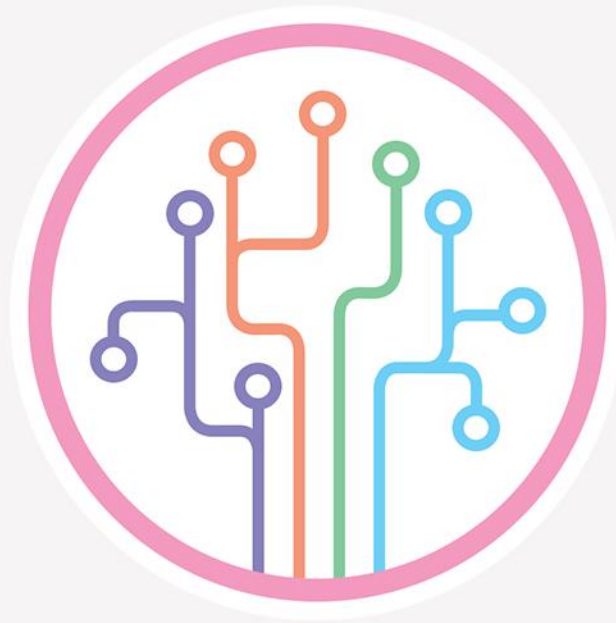




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Data Pathways

Continued Professional Development



Discover pathways to advance data-driven education. Dive into our guide on continued professional development for data professionals in the schools sector, revealing strategies, certifications, and apprenticeships tailored to enhance skills and drive innovation in educational data management.



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Introduction

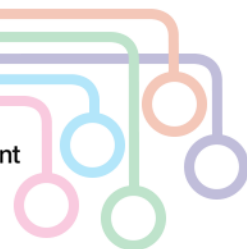
Professional development is essential for the advancement and innovation of the education sector in the UK, especially in the area of data management and analysis. With the increasing reliance on data in education, there is a growing need for skilled professionals who can effectively work with and interpret data. To drive the sector forward and ensure its relevance in the digital age, it is crucial to attract new talent with specialised qualifications in data-related fields and to invest in upskilling the current workforce at all levels.

To meet the diverse and evolving needs of modern education, it is vital to cultivate a workforce that is well-versed in the latest knowledge, tools, and techniques in data analysis, data management, and information governance. This involves not only recruiting individuals with recent qualifications in data but also providing opportunities for continuous learning and development for those already working in the sector. By promoting a culture of lifelong learning and supporting CPD initiatives, the education sector in the UK can develop a skilled workforce capable of leveraging data to drive innovation, improve teaching and learning outcomes, and ultimately enhance the educational experience for students.

To stay competitive and meet the changing demands of the digital era, the education sector must take a proactive approach to talent acquisition and development. This includes attracting new talent with contemporary qualifications in data science, data analytics, and related fields, as well as recognising and nurturing the potential of current staff members. Through targeted CPD programs, educators, administrators, and support staff can acquire new skills, deepen their expertise, and adapt to emerging trends and technologies in data management and analysis. Importantly, investing in the professional growth and development of the workforce sends a powerful message of commitment to excellence and innovation, attracting top talent and fostering a culture of continuous improvement within educational institutions.



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Contents

Introduction	2
Contents	3
Certification	4
Deeper Dive :: Apprenticeships	6
Deeper Dive :: Microsoft Learn	9
Deeper Dive :: Google Career Certificates	12



Certification

One of the most effective ways to enhance individuals' skills and credentials is through certification programmes offered by various organisations. These programmes are a powerful way to enhance individuals' knowledge and credibility and provide structured paths for improving skills and verifying competencies in a range of fields and industries. By undergoing rigorous training, assessments, and exams, certification programmes not only strengthen individuals' abilities but also establish them as skilled professionals in their fields.

Below are a few notable opportunities related to certification that are accessible to school data professionals in the UK. While this list is not comprehensive, it serves as a useful starting point for individuals who are interested in finding suitable professional development opportunities. These opportunities encompass a range of certifications and programs designed to enhance skills and knowledge within the data industry. The document will further explore three of the most popular routes in detail, offering valuable insights and guidance for professionals who are eager to advance their careers through continued professional development.

Professional Associations

Leading professional associations like the British Computer Society (BCS) and the Institute of Data & Marketing (IDM) offer specialised certifications and CPD programmes tailored explicitly for data professionals. These certifications cover a wide range of areas, including data analysis, data governance, and data science, guaranteeing that professionals receive top-notch and pertinent training. For instance, the BCS offers certifications like the BCS Foundation Certificate in Data Protection and the BCS Certificate in Business Analysis Practice, which are acknowledged worldwide and showcase expertise in crucial aspects of data management and analysis.

Apprenticeships

Apprenticeships present valuable opportunities for data professionals to acquire practical experience and formal training while receiving a salary. By participating in apprenticeship programs, individuals can enhance their skills and knowledge in data analysis, data engineering, and related fields, all while collaborating with seasoned professionals in the industry. These apprenticeships typically involve a combination of hands-on training and classroom-based learning, providing a comprehensive education that equips individuals for success in their careers. Moreover, apprenticeships are available at various levels, ranging from entry-level positions to more advanced roles, enabling individuals to advance and flourish within the data profession while attaining recognised qualifications. With the backing of employers and training providers, apprenticeships offer a pathway for individuals to embark on their careers in data and cultivate the skills necessary to thrive in the ever-evolving realm of data analytics.

Vendor-specific Certifications

There are multiple technology vendors within the data analytics and business intelligence sector that provide certifications designed for their specific tools and platforms. These certifications confirm individuals' competency in utilising these tools efficiently in practical situations, elevating their credibility and expertise in the field. For example, Tableau offers certifications like the Tableau Desktop Specialist and the Tableau Desktop Certified Associate, showcasing proficiency in data visualisation and analysis through Tableau's software. Likewise, other vendors such as Qlik and Alteryx offer certifications for their platforms, enabling data



professionals to exhibit their expertise in data analytics and business intelligence tools that go beyond what larger corporations offer.

Microsoft Certifications

Microsoft provides a variety of certifications designed for data experts, such as the Microsoft Certified: Data Analyst Associate and the Microsoft Certified: Azure Data Engineer Associate. These certifications demonstrate expertise in using Microsoft technologies for data analysis, data engineering, and cloud computing. Microsoft's certification programs encompass a broad spectrum of subjects, from basic data analysis knowledge to advanced proficiency in Azure data services, equipping data professionals with a well-rounded skill set to succeed in their positions.

Google Career Certificates

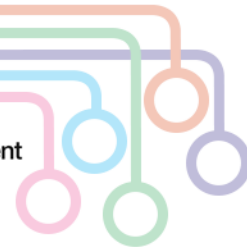
Google offers career certificates in various fields, including data analytics and project management. These certificates aim to equip professionals in the data industry with practical skills and knowledge, enhancing their expertise and credentials. Google's career certificates are widely recognised and respected in the technology sector. They provide hands-on training in areas such as data visualisation, data cleaning, and machine learning, enabling data professionals to make informed decisions and tackle intricate business challenges.

Online Learning Platforms

Online learning platforms like Coursera, Udemy, and LinkedIn Learning provide a wide array of courses and certifications focused on data analysis, data science, and related subjects. These platforms offer convenience and flexibility, empowering data experts to improve their skills at their preferred speed and convenience. The courses available cover a diverse range of subjects, from programming languages such as Python and R to statistical analysis, machine learning, and data visualisation, enabling professionals to customise their learning based on their individual interests and professional objectives.

University and College Courses

In the United Kingdom, various universities and colleges provide opportunities for individuals to pursue degrees, postgraduate certificates, diplomas, and master's degrees in fields related to data. These disciplines include data science, business analytics, and information management. These academic programs are designed to offer a thorough understanding of the subject matter and equip professionals with the necessary expertise to excel in their careers and take on leadership roles. Renowned institutions such as Imperial College London and the University of Edinburgh offer specialised master's programs in data science and analytics. These programs delve into statistical methods, machine learning techniques, and principles of data management, providing students with a profound knowledge in these areas.



Deeper Dive :: Apprenticeships

In today's data-driven world, the effective management and analysis of data have become increasingly vital across all sectors, including education. Schools are accumulating vast amounts of data related to student performance, attendance, and resources, highlighting the importance of skilled data professionals within the education sector. Despite the need for data expertise, the apprenticeship levy, a valuable resource for funding training and development, is widely under-utilised within schools.

Apprenticeships follow a unique model where individuals split their time between on-the-job training and classroom-based or remote learning. Typically, apprentices spend around 20% of their time engaged in formal study, either at a college or through a training provider, while the remaining 80% is dedicated to practical, hands-on work within their chosen field. Although this approach may require a modest investment of time and resources from the education sector initially, the benefits quickly outweigh the costs. By involving apprentices in the day-to-day operations of educational institutions, they gain valuable real-world experience and can immediately apply their learning to the sector's challenges and opportunities.

As a sector deeply committed to education, it is crucial to invest in the development of our workforce through apprenticeships. This not only ensures that we have a skilled and knowledgeable workforce capable of meeting the evolving needs of educational institutions but also shows our dedication to nurturing talent and fostering professional growth within our ranks. By actively participating in apprenticeship programs, we enrich the lives and careers of those who work for us and contribute to the broader goal of advancing education and driving positive change within our communities.

Level 3 & 4 Apprenticeships

Level 3 and 4 apprentice programs play a vital role in enhancing the skills of current employees and providing them with a comprehensive understanding of data management in the educational field. These programs not only provide individuals with the necessary technical skills for data analysis but also cultivate an awareness of how data can be effectively utilised to improve educational outcomes. Furthermore, participation in these apprenticeships helps individuals become key members of local data management communities, promoting collaboration and knowledge-sharing within the industry.

It is important to highlight that a Level 3 & 4 apprenticeship is comparable to an A Level or a foundation degree. There is a wide range of Digital apprenticeships available at these levels, including data technician, data engineering, data science, business analysis, and data analysis. Additionally, there are Level 4 apprenticeships for Data Protection and Information Governance practitioners and Information Managers in the Business & Administration sector, which can support career advancement in Data Compliance and Governance, as well as Information Systems & Quality career paths as outlined in Workstream 2.

Level 6 & 7 Apprenticeships

Level 6 and 7 apprentice courses present a valuable opportunity to attract fresh talent to the education sector, while also providing a pathway for existing data workers to advance in their careers. These advanced courses not only enhance individuals' expertise in data analysis and management, but also foster leadership and strategic skills that are crucial for driving data-driven initiatives within schools. By utilising the apprenticeship levy to support these higher-level courses, schools can not only bridge the skills gap, but also establish themselves as pioneers in data-driven decision-making within the education sector. It is worth noting that Level 6 & 7 apprenticeships are equivalent to a bachelor's or master's degree.



At these levels, the options within the Digital apprenticeship family (Digital & Technology Solutions Professional or & Specialist) may be more limited, but the quality of the offerings remains equally strong. Furthermore, in the Business & Administration apprenticeship family, there are Level 7 courses in Senior Leadership & Systems Thinking that can greatly enhance individuals' understanding and career development.

A Generalist Approach

Although some of these apprenticeship courses may appear to be applicable to all sectors and not specifically to education, this should not be seen as a disadvantage. On the contrary, it can be extremely advantageous for professionals in the education field to acquire a broad, comprehensive approach to data management and analysis. By acquiring skills that can be transferred to different industries, individuals can develop a versatile skill set that enables them to easily adapt to new technologies and approaches. This comprehensive understanding of data not only enhances their ability to navigate the complexities of educational data, but also empowers them to utilise emerging technologies and methodologies to drive innovation and improvement within schools. Therefore, even though these skills may not always align directly with the specific needs of education, they provide a strong foundation upon which educators can build and innovate in an ever-changing data landscape.

Initiating Data Apprenticeships

The screenshot shows the homepage of the Institute for Apprenticeships and Technical Education (IfATE). The URL in the browser is <https://www.instituteforapprenticeships.org/>. The website features a blue header with the IfATE logo and navigation links: About, Occupational maps, Ensuring quality, Qualifications, Apprenticeships, and Have your say. A search bar is also present. Below the header, there is a large blue banner with the text: "Do you have an interest in the levels 4 to 6 technical qualifications system?" and a link to "Help shape IfATE's role in the LLE approvals gateway." Below the banner, there is a section titled "WELCOME TO THE INSTITUTE FOR APPRENTICESHIPS AND TECHNICAL EDUCATION." followed by a paragraph about IfATE's role and a link to "Shaping skills training." At the bottom, there are four tiles: "Apply for an apprenticeship", "Search occupational maps", "Apprenticeship search", and "Qualifications search".

The government-funded Institute for Apprenticeships and Technical Education [\[Link\]](https://www.instituteforapprenticeships.org/) is a valuable resource for those considering apprenticeships. This institute offers a comprehensive catalogue of all apprenticeships, providing detailed information on course content, assessment methods, and available apprentice providers. One notable feature of this catalogue is the ability to filter apprenticeships based on location and delivery mechanism, ensuring accessibility and relevance for individuals.

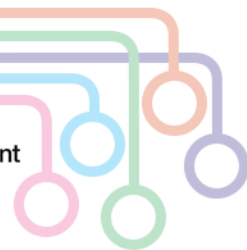


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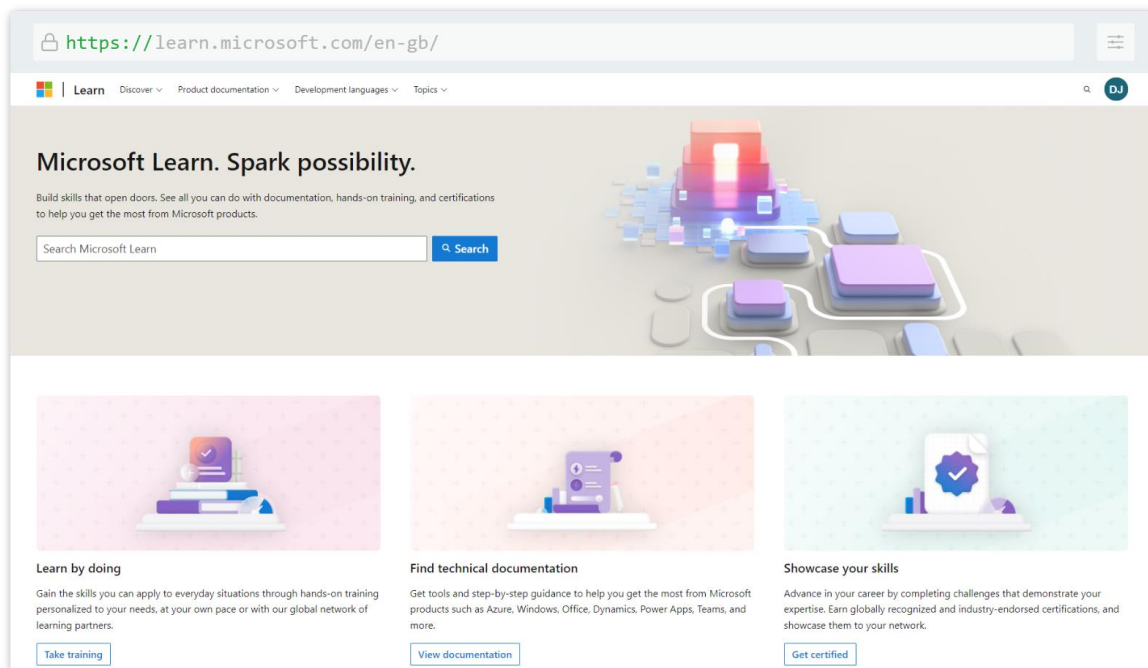


In addition to the Institute, there are major apprenticeship providers specialising in the Digital and Business & Administration fields. Public sector institutions such as colleges and universities often offer tailored apprenticeship programs in these sectors, combining theoretical learning with practical experience. Private sector organisations, including training companies and industry associations, also provide specialised apprenticeship training. They leverage their expertise to deliver high-quality education and mentorship that caters to the specific needs of the digital and business sectors.

With the combined efforts of these providers, aspiring professionals have a wide range of pathways to choose from when seeking apprenticeships. This ensures that individuals can find programs that align with their interests and career goals.



Deeper Dive :: Microsoft Learn [\[Link\]](#)




Microsoft Learn is a comprehensive digital platform developed by Microsoft, designed to provide individuals with the necessary knowledge and skills to excel in various technical roles. With a wide range of courses, learning paths, and certifications, Microsoft Learn serves as a valuable resource centre for professionals in the data sector in English schools. It covers a variety of topics such as data analysis, cloud computing, artificial intelligence, and machine learning, catering to individuals of all skill levels by offering guidance from basic concepts to advanced techniques.

At the centre of Microsoft Learn is its structured learning pathways, which act as guiding frameworks for learners in English schools. These pathways, such as "Data Analyst", "Data Engineer", "AI Engineer", or "Power BI Professional", offer systematic approaches to mastering essential concepts and tools used in data analysis, data engineering, AI development, and Power BI visualisation. By navigating curated modules and engaging in hands-on exercises, individuals can develop proficiency in specific technical domains at their own pace, empowering them to meet the evolving demands of the data-intensive educational landscape.


Microsoft Learn offers a variety of certifications that are highly valuable for data professionals in UK educational institutions. Certifications like "Microsoft Certified: Data Analyst Associate", "Microsoft Certified: Azure Data Engineer Associate", and "Microsoft Certified: Power BI Associate" are concrete proofs of individuals' skills in utilising Microsoft tools for data analysis, cloud computing, data engineering, and Power BI visualisation. These certifications not only boost credibility but also create pathways to career growth and progression in the data-focused academic field, emphasising the significance of ongoing learning and career development for achieving excellence.




**COURSE**
Microsoft Power BI Data Analyst

[Continue course >](#)


Training in this course




Discover data analysis
36 min • Module • 6 units




Get started building with Power BI
21 min • Module • 6 units




Get data in Power BI
1 hr 46 min • Module • 13 units




Clean, transform, and load data in Power BI
2 hr 1 min • Module • 10 units



Design a semantic model in Power BI
1 hr 23 min • Module • 10 units




Add measures to Power BI Desktop models
58 min • Module • 8 units



Add calculated tables and columns to Power BI Desktop models
19 min • Module • 6 units

[See more](#)



The training presents two distinct pathways for skills validation: Microsoft Certification routes and Microsoft Applied Skills. Microsoft Certification routes focus on validating proficiency through formal examinations and assessments, while Microsoft Applied Skills offer a more practical, hands-on approach to learning. By engaging in projects, labs, and real-world scenarios, individuals can demonstrate their ability to apply theoretical knowledge to practical situations, showcasing their readiness for real-world challenges within the data profession. This dual approach ensures that learners not only acquire theoretical knowledge but also develop practical skills essential for success in their professional endeavours.

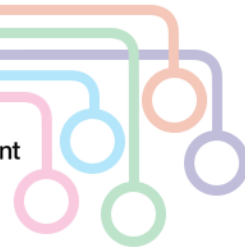


Data Analyst Career Path [\[Link\]](#)

Microsoft Learn provides a comprehensive collection of resources for individuals pursuing a career as a Data Analyst. This curated collection is designed to equip learners with the necessary skills and knowledge to excel in the field of data analytics. It includes a series of learning modules, hands-on exercises, and practical projects that guide learners through the intricacies of data analysis, visualisation, and interpretation using Microsoft Power BI and other relevant tools. Whether you are just starting or looking to enhance your existing skills, the



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Data Analyst Career Path covers foundational concepts as well as advanced techniques. By mastering the art of extracting actionable insights from complex datasets, individuals can make data-driven decisions that have a significant impact across various industries.

Microsoft Certificated: Power BI Data Analyst Associate [\[Link\]](#)

The Microsoft Certified: Power BI Data Analyst Associate certification stands as an industry standard credential within the realm of data analytics, specifically tailored for professionals seeking to excel in Power BI data visualisation and analysis. This certification serves as proof of an individual's expertise in utilising Power BI tools to convert raw data into valuable insights. By doing so, it enables organisations to make well-informed decisions. In the education sector, schools gather a significant amount of data on student performance, attendance, and behaviour. Being able to effectively analyse and visualise this data, without being limited by isolated systems, becomes crucial. By obtaining this certification, data professionals can enhance their professional reputation, open up new career opportunities, and contribute to the ongoing improvement of the education system in the UK through data-driven insights and decision-making.

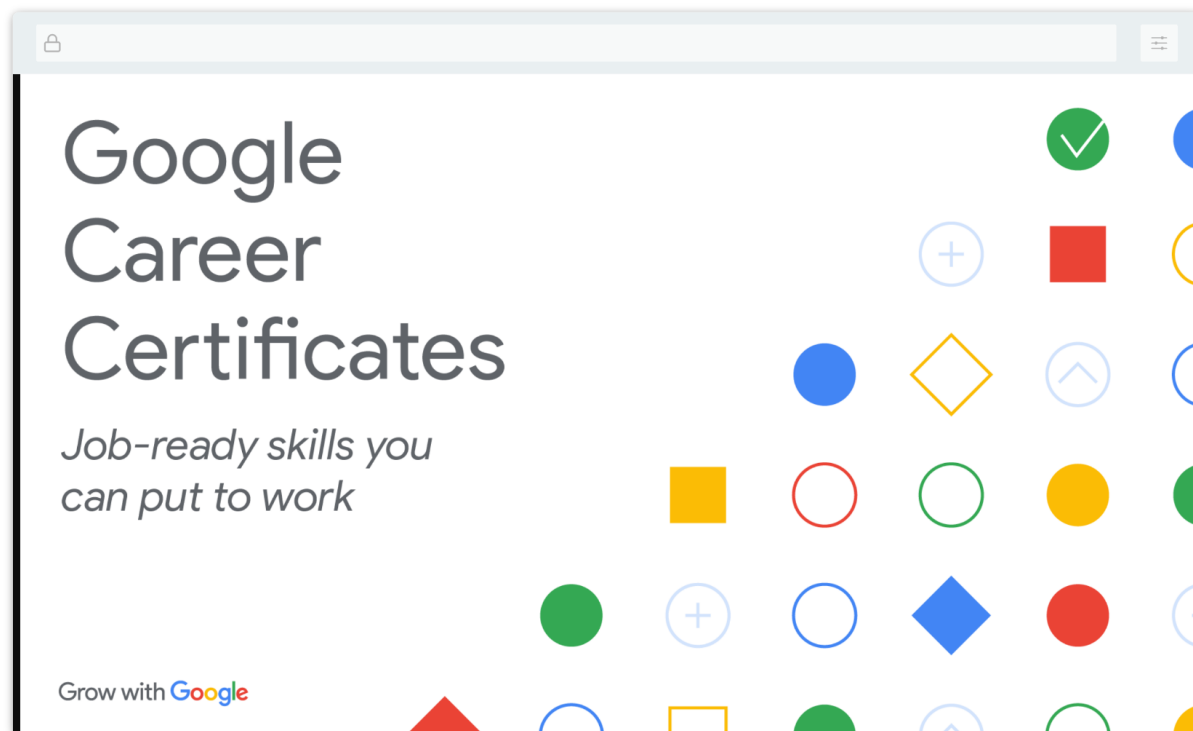
The Expanding Realm of Data

Power BI, a prominent business intelligence solution, holds a pivotal position within Microsoft's Power Platform and Azure ecosystem in the UK. Its impeccable integration with a range of Microsoft offerings such as Azure Synapse Analytics, Azure Data Lake Storage, and Azure Machine Learning amplifies its functionalities and expands its influence in various domains of data management and analytics. By leveraging the power of Power BI in conjunction with complementary Azure services, organizations with advanced data capabilities can discover fresh opportunities for data exploration, predictive analytics, and business intelligence. This synergy promotes innovation and facilitates growth in the current data-centric environment.

Power BI's relevance goes beyond standalone usage, intersecting with other Microsoft certifications, career paths, and applied skills courses. Professionals pursuing Microsoft other certifications such as the Microsoft Certified: Azure Data Engineer Associate often integrate Power BI into their skill sets to augment their proficiency in data analysis and visualisation. Moreover, within Microsoft Learn's official collections, Power BI prominently features in data analyst career pathways, providing learners with the opportunity to master Power BI alongside other essential data analytics tools and techniques. Likewise, Microsoft's Applied Skills courses incorporate Power BI training, furnishing practical experience in utilising the tool in real-world scenarios, thereby bridging the gap between theoretical knowledge and practical application. This interconnectedness underscores Power BI's significance as a foundational component within Microsoft's broader ecosystem, enhancing professionals' capabilities and empowering them to drive innovation and progress in the UK's data-centric landscape.



Deeper Dive :: Google Career Certificates [\[Link\]](#)



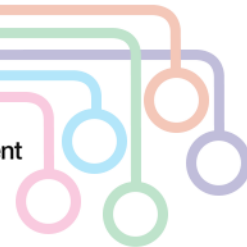
As part of its Grow with Google initiative in 2018, Google introduced Career Certificates as a pathway for individuals looking to acquire the necessary skills for success in our industry. These certificates play a crucial role in bridging the gap between educational institutions and the changing needs of the industry, providing valuable advantages for those working in data-related roles in UK schools.

Google Career Certificates consist of a wide range of specialised programs designed to meet the needs of various industries, with themes that are relevant to the overall skill development required in our sector. These programs cover areas such as data analytics, project management, IT support, and user experience design, and are developed in collaboration with experts from Google and other leading organisations to ensure their practicality and effectiveness in real-world scenarios.

The flexibility offered by Google Career Certificates allows individuals to pursue their studies at their own pace and convenience, making it ideal for educators juggling professional responsibilities and personal commitments. Whether it's during evenings, weekends, or holidays, the self-paced nature of these programs caters to different learning preferences and schedules.

These certificates are highly regarded by employers worldwide, including educational institutions, as they enhance individuals' employability and create new opportunities within the education sector. Schools and colleges actively seek professionals with expertise in data analysis and IT support to drive innovation, enhance efficiency, and enrich learning experiences.

In addition, Google Career Certificates provide a cost-effective alternative to traditional degree programs or extensive training courses, making education more accessible to a wider range of individuals, including those with limited financial resources or prior experience in the field.



Google Data Analytics Professional Certificate [\[Link\]](#)

The educational journey offered is tailored for individuals looking to excel in the field of data analysis. Created in collaboration with industry professionals, this program offers a structured curriculum to give learners a strong foundation in data analytics. Participants will explore key concepts, tools, and methodologies used in data analysis, setting the stage for a deep understanding of the subject matter.

Central to the program is hands-on practical learning, allowing participants to gain experience with popular data analysis tools like SQL, Python, and spreadsheet applications. While these tools may not be essential now, they provide the knowledge and skills to adapt as new tools emerge in the future. Through interactive exercises, quizzes, and projects, learners can apply their theoretical knowledge to real-world situations, enhancing their ability to collect, clean, and interpret data effectively to extract valuable insights and make informed decisions.



Upon completing the Google Data Analytics Professional Certificate, individuals will possess a versatile skill set ready to meet the needs of various industries. With a solid grasp of data analysis principles and proficiency in using industry-standard tools, participants will be well-prepared to pursue diverse career opportunities. Whether aiming for roles as data analysts, business analysts, or data scientists, graduates of this program will have the expertise needed to succeed in today's data-focused environment.

Google Project Management Professional Certificate [\[Link\]](#)

Using the same principles, robust industry input and learning mechanisms as the Data Analytics Professional Certificate, this certification path offers a systematic approach to developing adept project managers. Participants actively engage with fundamental project management principles, techniques, and frameworks that are crucial for orchestrating smooth project lifecycles. From the initial stages of project initiation and planning to the execution and closure phases, individuals acquire the ability to navigate challenges proficiently, ensuring timely achievement of project objectives while adhering to budgetary constraints. By placing a strong emphasis on fostering leadership, communication, and risk management skills, learners emerge as adept



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individuals capable of steering projects towards successful completion, regardless of the industry or project scope.

Google UX Design Professional Certificate [\[Link\]](#)

The course provides a thorough examination of user experience (UX) design principles and methodologies, equipping participants with the knowledge and skills needed to develop user-friendly digital experiences. Although not specifically tailored to data professionals, the concepts and topics discussed in this program are crucial for designing data dashboards. Effective data dashboards necessitate thoughtful consideration of presentation, accessibility, and usability to ensure that users can efficiently interpret and interact with data.

For example, when creating a data dashboard for educators in the UK education sector, accessibility considerations are vital to guarantee that all users, including those with disabilities or limited technical skills, can access and understand the information provided. Concepts from the Google UX Design Professional Certificate, such as inclusive design techniques and usability testing, can assist data professionals in creating dashboards that are accessible to a diverse audience. Furthermore, principles of information architecture and visual hierarchy outlined in the program can steer the development of user-friendly data dashboards that emphasise crucial information and facilitate seamless navigation, thereby enhancing the overall user experience.