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Ritchie, Jeff; Lythgoe, Emma; Donovan, John

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Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)
<https://www.zbw.eu/>

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Chapter 2.7

RMA Education, Training and Professional Development in North America and Europe

Jeff Ritchie^a, Emma Lythgoe^b and John Donovan^c

^aHamilton College, Clinton, NY, USA;  Conceptualization, Writing – original draft, Writing – review & editing

^b 0000-0002-0673-8634, European Association of Research Managers and Administrators, Rome, Italy;  Conceptualization, Writing – original draft, Writing – review & editing

^c 0000-0001-8639-0959, Technological University Dublin, Dublin, Ireland;  Conceptualization, Writing – original draft, Writing – review & editing

Abstract

Starting in the late 1950s with the creation of the National Council of University Research Administrators (NCURA), followed by the formation of other professional organisations both in the USA and Europe, there was a growing sense that research management was indeed a profession. One goal was the creation of professional standards that would lead to a standard training curriculum and, ultimately, a professional credential, and there have been many attempts at developing research administration certification. Now, in the US, accreditation through the Research Administrators Certification Council (RACC) exam has become ubiquitous, whereas in other parts of the world, certification by portfolio is more common. This chapter will compare and contrast the salient features of certification, certificates, and degree programs in research administration and review their development and growth over the past 30 years. The chapter will discuss their relative merits and how they work to advance the profession of research administration.

Keywords: Europe; European Union; North America; ERA; Research Management and Administration; Professionalisation; RAAAP; RACC; NCURA; SRAI; ARMA; EARMA; CRA; CRM; formation-RMA

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Introduction

This chapter focuses on certification for research managers and administrators (RMAs) in Europe and the US – note that in the latter the term ‘research administrator’ is used with the same meaning as RMA, and in this chapter we use both nomenclatures. Certification through exam and portfolio routes are explored, as well as RMA-specific academic programmes, and the relative merits of each approach for the individual.

Background

If one uses the broadest of definitions, the origins of sponsored research could be traced back to the system of patronage that supported renaissance artists and scientists, with a recognisable through-line up to the National Institutes of Health and Horizon Europe. The origins of research administration as a profession, however, date back to the 1950s, when government agencies in the US began to create complex administrative and financial structures for conducting external research with universities, non-profit research institutions, and the private sector. Prior to that era, the majority of federally funded research was the result of a specific federal agency engaging in a relationship with an individual investigator or laboratory.

The Second World War was a catalyst for change with regard to government sponsorship of research and development, in both the US and Europe. According to Vannevar Bush in his seminal report ‘Science, The Endless Frontier’ (1945), on the eve of the war, investments in scientific research by the US government were approximately \$1.5 billion per year (in current dollars), or a fraction of 1% of FY 2021 expenditures. Because of the exigencies of the war, and the guidance of people like Vannevar Bush in the immediate post-war era, research budgets continued to increase in the immediate post-war era. A significant impetus towards increased spending was defense-related research, driven by concerns of ‘falling behind’ technologically to the Soviet Union. By 1950, total US outlays for research and development were approaching \$18 billion per year and would skyrocket when the Soviet Union launched its Sputnik satellite in 1957 (Brozen, 1961). Expenditures in the European Union were not as dramatic in the immediate post-war era (due to the demands of rebuilding), but have increased steadily since the 1980s with increasing national expenditures and the introduction of pan-European funding from the European Commission.

Prior to World War II, individual scientists or their staff provided the administrative and financial oversight of research, but as those administrative and financial structures grew more complex after the war, laboratories required full-time staff. In some cases, these individuals were trained scientists themselves, but in other cases, administrative and clerical assistants stepped into this role. Starting in the late 1950s with the creation of the NCURA, followed by the formation of other professional organisations both in the USA, Canada, Europe, and other parts of the world, there was a growing recognition that research management was becoming a profession. One goal was the creation of professional standards that would lead to a standard training curriculum and, possibly, a professional credential. An early advocate of this approach was Krebs (1992), who suggested two paths forward for a curriculum in research administration, one of which would eventually become a Master’s level programme and the other would become the Certified Research Administrator (CRA) credential.

A similar story unfolded among research administrators in Europe, albeit somewhat later. RMA formation in Europe largely took place on a national basis and with a national flavour. However, the 27 states comprising the European Union operated in a wider supra-national framework that saw the development of a variety of

supra-national research programmes, the best known of which is the Framework Research Programme operating since 1984 (Guzzetti, 1995).

The EU research programmes created an environment where funding, and its concomitant regulations, crossed the borders of the various member states, making the development of transnational standards both practical and necessary. As in the USA and Canada, most European research administrators 'discovered' their vocation through a variety of routes (see, e.g., Dutta et al., 2023, Chapter 2.3; Poli, Kerridge, et al., 2023, Chapter 2.4), resulting in a diverse range of previous professional experiences. It did not take long for employers and sponsors to recognise the need for increased professionalism through education, training, and professional development opportunities.

Significant change started in the US. After nearly two decades of discussion, in 1992 the Society for Research Administration International (SRAI) took steps towards a certification programme by offering a grant that sponsored the creation of the RACC and the CRA credential. The move was not without its detractors, as some felt that the diverse tasks in a research administrators' professional portfolio could never be distilled into a Body of Knowledge, while others feared creating a 'caste system' of professionals who were certified and those who were not.

In addition to professional certification from RACC, a host of entities (primarily academic and non-profit) has offered an array of certificate programmes in research administration. More recently, several academic institutions in the US have established graduate degrees in research administration and at least one (George Washington University) now offers an undergraduate degree, albeit in the narrower field of clinical research administration. As these programmes mature, and because they are offered largely via distance education, one can reasonably anticipate that more academic institutions will offer degree programmes in research administration. This chapter will compare and contrast the salient features of certification, certificates, and degree programmes in research administration and review their development and growth over the past 30 years. The chapter will discuss their relative merits and how they work to advance the profession of research administration.

Definitions

Before delving into the relative merits of the three approaches to professional development, it is important to understand what they are and what they mean. In particular, one needs to understand the critical difference between a certificate and a certification, as the terms are often used interchangeably, but they refer to two quite different credentials. This is not to say that one is inherently or always superior to the other; both perform a useful function in the context of providing professional development to research administrators.

Certification indicates that an individual who holds the certification has met the requirements of an impartial third-party evaluator's review of the individual's professional expertise. In the US, to receive the CRA credential, the individual must successfully pass a written exam that evaluates knowledge in the field of research administration. A feature that is unique to most certification programmes is that certifications expire, typically within 3–5 years and require continuing education, typically in the form of Continuing Education Units (CEUs) or Contact Hours.

Certificate programmes can be offered by third parties or in-house through one's own institution, and the certificate acknowledges the completion of one or more workshops or courses in the field. In most cases, certificates do not expire and require no follow-on professional development requirements after being obtained by the individual. It should be noted that the institution's accrediting body does not typically accredit certificate programmes offered by an academic institution.

Academic programmes (most often Masters-level) must pass through the institution's accreditation process, which requires the curriculum to be reviewed by an external evaluator and that the credentials of the faculty are considered sufficient to offer the programme. These programmes fall under the purview of the Dean of Faculty (or equivalent) at the offering university.

Certification

In the early 1990s, a cohort of US RMAs (primarily within SRAI) created a certification exam that would offer the research administration equivalent of the Certified Public Accountant (CPA) credential. At the time, it was not widely agreed that research administration could (or should) be considered a profession similar to accounting, and many were doubtful that such an exam could be created. With a \$5,000 grant from SRAI, the newly created RACC completed a Job Task Analysis and developed the first CRA Examination.

The RACC today is governed by a board of 15 active research administrators and offers three credentials: The CRA, the Certified Pre-Award Research Administrator (CPRA) and the Certified Financial Research Administrator (CFRA). There are approximately 4,000 people across the US who have at least one of the three certifications, although the CRA remains the most commonly received credential.

In order to sit for any of the three exams, an individual must typically have a bachelor's degree and three years of relevant professional experience. For educational levels below the Bachelor's level, RACC requires more years of experience. All three tests share a focus on the federal regulations regarding sponsored research, as opposed to best practices or procedures that might vary from institution to institution.

The CRA exam, in particular, is a broad review of all areas in research administration, from proposal development to research compliance to financial reporting. While the CRA exam does not go into great depth on any topic, the breadth of the exam is what makes it challenging. The CPRA and CFRA exams, being more narrowly focused, go into far greater detail in their respective areas. At all times, however, the focus is on US federal regulations.

Certificate Programmes

Professional certificate programmes, including those in research administration, have been offered by academic institutions and professional societies in the US since the 1980s. In most cases, the syllabi for these programmes are developed by the individual providing the training, with this individual being generally recognised as being a subject matter expert in the area. Depending on the nature of the programme, some certificates are more portable than others; certificates that focus on an institution's own internal policies and processes may not carry as much weight outside of the institution as a certificate that focuses on broader issues in research administration.

Aside from certificate programmes specific to research administration (including post-award financial and research compliance), institutions also offer broad programmes in all disciplines through the offices of Adult and Continuing Education. Where these programmes involve sponsored research, they are typically in the area of proposal development. Certificate programmes of this type provide institutions with the ability to reach a niche market of students (especially professionals in the non-profit sector) who do not require an academic degree to pursue their vocational goals. Although these programmes are not accredited, certificates offered by academic institutions are typically of high quality and reflect an acceptable degree of academic rigour.

In the UK an important study on Professionalising Research Management was commissioned and jointly funded by the Higher Education Funding Council for England (HEFCE) and the Medical Research Council (MRC). The project leaders Dr John Green and Dr David Langley first reported on the results of this project in 2009. The objectives of the study were first to investigate the demand for the development of a professional framework of training for research management and second to explore approaches to addressing any identified demand. They identified 86 universities, based in the UK that received research funding. From these, they took a sample size of 25% based on specified criteria (Total turnover, Amount of externally sponsored Research Income, Age of institution, Geographical location, and total number of students). The study identified that there was a demand for delivery of high-quality training, holistic enough to develop the skills required for research managers and administrators (Green & Langley, 2009).

The conclusions of this study proved to be an important driving force for the first professional development framework (PDF) designed by the Association of Research Managers and Administrators (ARMA, 2011). This led ARMA in partnership with Awards for Training and Higher Education (ATHE) and supported by Cancer Research UK, Association of Medical Research Charities (AMRC), Research Councils UK, and the Wellcome Trust, to develop the first certified professional training programmes in the UK in 2013. The programme consisted of two certificates. The first was the Certificate in Research Administration (now CRM: Foundation) which provided an introductory-level Certificate, for those starting their career in research administration. The second was the Certificate in Research Management (now CRM: Advanced), for those with at least two years' experience in the field, it was designed to give an insight into the technical and professional skills needed in research management today providing students a broader view of the issues from the wider organisational and sector position. On successful completion of the programme the students are awarded a vocational Qualification Credit Framework (QCF) (Level 3 (Foundation) and Level 5 (Advanced)) accredited by Awards for Training and Higher Education (ATHE) and regulated by OFQUAL.

The ARMA process was not happening in isolation, other professional associations were developing similar programmes for similar reasons. Between 2002 and 2004, EARMA, working with the Open University Graduate Studies Programme in the UK, offered a Professional Certificate in Management. That programme lapsed in 2004. In 2010, EARMA re-embarked on the process of developing a professional development programme. The 2010 approach was much more focused on a bottom up, needs driven scheme applicable to all RMAs and not just those who dealt with European Programmes. By 2013, the shape of a suite of programmes was clear. EARMA had proposed the development of three accredited professional development programmes (The Certificate of Research Administration (Europe) – CRA, The Certificate of Research Management (Europe) – CRM, and the Certificate of Research Leadership (Europe) – CRL).¹ These initiatives to develop certified training programmes gained momentum in 2013 leading to ARMA acting as an accredited centre for other associations such as the European

¹ More recently in 2020, EARMA developed an 'Early-stage Research Administrator Masterclass (ESRAM)' programme. The aim of ESRAM is to 'empower research administrators to undertake their new role with confidence, to present career pathways and give the participants an appreciation of the full research project life-cycle and related service tasks'. ESRAM is not certified but provides a starting point for engagement with the professional development programme offered by EARMA.

Association of Research Managers and Administrators (EARMA) and the Canadian Association of Research Administrators (CARA). In 2014, EARMA, working in close association with ARMA, launched the Certificate of Research Management (Europe). The programme was designed to help students consolidate the knowledge and skills required to be successful research managers. The course which continues to this day is aimed at practitioners in the field of research management and administration with at least 3–4 years RMA experience in Research Performing Organisations (RPOs), Research Funding Organisations (RFOs), Research Consultancy Companies, and other research support service providers. The certificate is taught as a combination of five face-to-face workshops for each mandatory unit, one online optional unit and self-study. On successful completion of the programme, the students are awarded a vocational QCF (Level 5) which is aligned to the European Qualifications Framework (EQF) (Level 5) accredited by ATHE and regulated by OFQUAL.

Not long after adopting the UK-initiated CRM, CARA instead developed their own through a joint venture with Mohawk College in Hamilton, Ontario. The programme, first offered in 2017 for ‘foundational’ research administration, was expanded in 2022 to include a certificate programme in research management. The programme requires the completion of six courses: Funding Proposal Development, Contracts and Reporting, Financial Management in Research Administration, Canadian Research Funding Environment, Research Project Management, and Research Ethics, Integrity, and Governance. Courses carry three credit hours and feature written assignments that receive evaluation from the course instructor, who is a research administration professional. Successful completion of all six courses is required in order to obtain the certificate.

On average, students in the programme require about 10 hours per week, as the programme includes a mix of lectures and reading assignments, in addition to writing papers – including the completion of an actual grant application. Both programmes are offered entirely online and are asynchronous, allowing research managers and administrators anywhere on Earth with the ability to obtain a certificate. Residents of Canada may be eligible for financial aid to complete the programme.

In contrast, Australasian Research Management Society (ARMS) developed their own suite of certificates – but they are self-accredited by the association itself. They offer a Foundation Accredited Research Manager – ARM(A) and an advanced option – ARM(F).

Starting in the late 1990s, for-profit entities began offering their own certificate programmes. In general, these entities are consulting firms that work with higher education, and their workshops either are sold as standalone products or marketed as part of the fee the institution is paying for their consulting services. As non-profit and professional organisations have increased their certificate offerings, often at higher quality and lower cost, certificates from for-profit entities have declined.

Academic Programmes

With the success of the US CRA Examination and the growth of academic-based certificate programmes, it was not an unreasonable next step to create an accredited programme in research administration. NCURA provided multiple planning and implementation grants (most notably to the University of Central Florida). As with any certificate programme, an academic degree is a confirmation that at a specific point in time, the degree holder met all the requirements of the programme. There is no expiration of the credential, and the holder is not required to pursue continuing professional development in order to retain it.

The first graduate programmes to offer A Master's in Research Administration (MRA) came from the University of Central Florida, Emerson College, and Johns Hopkins University. These programmes have an established curriculum and are accredited by the offering institution's accreditor. Programmes typically feature a number of required 'core' courses along with additional courses that can be selected by the student to reflect a concentration or area of focus (i.e. international research administration, proposal development, and post-award financial). These programmes are typically offered entirely online. The following are the required courses in the MRA Program at the University of Central Florida:

Introduction to Research Administration

- Governance and Regulatory Issues for Sponsored Programs
- Leadership and Organization Models in Research Administration
- Intellectual Property, Technology Transfer and Commercialization
- Public Program Evaluation Techniques
- Audits in Research Administration
- Financial Management in Research Administration
- Grant and Contract Management
- Strategic Planning and Management
- Human Resource Management

While there are currently no undergraduate programmes in general research administration, a handful of institutions have started offering bachelor's programmes in the more specialised area of clinical research administration (i.e. the administration of clinical trials). These programmes typically exist as an area of concentration within a traditional undergraduate degree in healthcare management.

Following the financial crisis of 2008 R&D funding dropped significantly, particularly in Southern European Countries ([Rehm, 2018](#)). As a result, some European Member States encouraged their scientists to look to the European framework programme for funding which may have led to the development of accredited qualifications sponsored by their governments. For example, the Universidad Politécnica de Madrid runs a diploma in the Promotion and Management of International Research and Development and Innovation projects and Actions (Polytechnic University of Madrid, n.d.). It is supported by the CDTI-E.P.E (Centre of Industrial Technological Development) a public entity of the Spanish Ministry of Science and Innovation. This is a prestigious diploma consisting of six modules with a total value of 15 ECTS of which the prime objective is to improve Spanish participation in the European framework programme as well as other international programmes as well as to improve best practices. It is aimed at professionals in the field who are supported by their organisations.

In Norway there have been proactive efforts to offer formal certification courses specifically designed for research managers and administrators. The University of South-Eastern Norway (USN) provided a one-year program on EU Project Management which we believe was offered from 2013 to 2016. Nord University offered a course called EU instruments for funding of research and innovation in 2017–2018.

What is the future of degree programmes in research administration? Even before the COVID-19 pandemic, institutions were moving towards a broader offering of online-only degrees as a way to increase enrolments and reach out to underserved communities. All current master's programmes and most current undergraduate degrees in clinical research administration are offered online only. As the technology matures and becomes more accepted, one can reasonably expect that an undergraduate degree

in research administration will be offered at some point in the not-too-distant future. Additionally, in Europe, there is foRMAtion (Giorgilli & Bodino, 2019), a project supported by the European Commission is developing and delivering specialised research management across four European Universities.

Relative Merits

For a research administrator seeking professional development, particularly for those with an eye to move upward in the profession, which of the three options is the best? It's an old joke among research administrators, but we all know that the answer to every question is always, 'Well, it depends'. All three options have their strengths and weaknesses, their advantages and their disadvantages. The right choice is whichever option is right for you.

One of the benefits of *certification* is that, given that there are minimum requirements for years of professional experience, one need only devote a few months of free time studying in order to successfully pass the US exam. One need not attend a series of workshops or enrol in for-credit courses. Another benefit is that the cost of certification is reasonable, certainly compared to tuition for a graduate degree and even to the cost of some of the better certificate programmes. As of 2022, the cost to sit for any of the three certification exams offered by RACC was \$395. For a research administrator who is confident about passing the exam, certification can be an attractive option.

Another feature of certification has both advantages and disadvantages. Unlike certificates or academic programmes, a certification is a time-limited credential that has a specific expiration date. In order to maintain the certification, the certificant must remain professionally active in the field and must document a minimum number of contact hours, which are similar to some degree to CEUs within a prescribed period. The advantage is that the certification proves that the certification holder's knowledge is always up to date, but the disadvantage is that they must continually work to maintain their certification.

While *certificates* are also available for short one-off courses and workshops, these do not necessarily add much value to an individual's resume. The certificates that are of interest (and value) for this discussion are those that involve multiple training sessions and are offered by an organisation with a solid academic or professional reputation. For these certificates, one of the principal benefits is that they can be completed in as little as one year by completing as few as 2–4 courses or workshops. For a research administrator working full time, particularly those with other personal and family commitments, this makes a certificate programme an attractive option. Another benefit of certificate programmes is that, while costs can vary widely depending on the provider, certificate programmes will cost significantly less than a master's degree. A typical certificate programme offered by an institution of higher education in the US can cost as little as \$2,500. Of course, if the programme is offered either locally or online, there won't be any travel costs associated with the certificate. For a research administrator whose institution is not reimbursing for the cost of continuing education, the comparatively lower cost of a certificate can be important.

Certificates and certifications can be of use to a jobseeker provided that the hiring official is aware of the organisation that provided the credential. The principal benefit of an *Academic Programme*, such as a Master's in Research Administration, is that the credential enjoys universal acceptance by nearly any employer, just as with any other master's degree. This credential is recognised both nationally and internationally, and is further recognised and appreciated even by persons who do not work in the field of research administration.

There are two principal barriers to receiving a MRA. The first is that the tuition and fees for an MRA are largely on par with those of any other graduate degree; while many research administrators work at institutions with tuition benefits, those benefits typically don't apply to graduate programmes and almost never apply to tuition paid to another institution. Degree candidates must often pay the costs out of pocket, and the cost for an MRA averages at about \$30,000.

The second barrier is the time commitment. With a regular (and admittedly intense) schedule of coursework, one could complete a master's programme in as little as two years; however, professional and personal requirements often do not allow for this, and for that reason, most institutions assume that participants will require three or more years. The University of Central Florida, for example, allows up to seven years to complete the programme. Of all the varieties of credentials, a graduate degree will require the most time.

Summary



Many are attracted to a career in research administration because of the constant evolution of the field – never doing exactly the same thing this year as last. Research administration is a lifestyle choice, but one that requires a constant commitment to keeping up with or even staying ahead of the changes.

Around the world, the universal call for 'professionalisation' requires adequate and appropriate education and training provision for RMAs. As the role of Research, Development, and Innovation gets more complicated and moves to the heart of social and economic progress, it becomes more complex and demanding of good governance. RMAs are often the interface between research and funders and RMAs being aware and fluent in these issues are increasingly important.

Simply falling into RMA must become less and less the route into the profession and be replaced by a more structured process of formation. In North America, and in particular the US, this 'professional formation' has been established for a while, in Australasia and the UK it's also developing but the lack of undergraduate and even postgraduate courses around Europe is of concern. The professional qualifications available to the community do provide a structured formation of the profession but places are limited and hence the number of accredited professionals remains low.

Recent attempts by the European Commission (2022b) through the European Research Area instrument, hint at the development of common EU standards, qualifications, and expectations developing but this is a slow burner requiring the consistent and constant attention of the professional representative associations.

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