Ebonyi State University, Abakaliki - Nigeria

Institutionalizing the Researcher Development Framework (RDF) in EBSU

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The Researcher Development Framework (RDF)

The RDF is a professional development tool that was developed by Vitae. The purpose of the framework is to support researchers in realising and planning their career development. The RDF articulates knowledge, behaviours and attributes of successful researchers at all stages of their research career. It can be used as an aspiration or as hands on planning tool.

The Vitae Researcher Development Framework is a guide to one's development as a professional researcher, enabling the person to identify the strengths he/she already has and prioritise for personal and career development in the context of future career opportunities.

A variety of knowledge, behaviours and attributes are the key to a successful career. Success means different things to different people. It is up to an individual to decide what his/her priorities may be, how he/she needs to develop and how that can be achieved.

Use of the Vitae Researcher Development Framework (RDF) will help an individual to:
- explore all the aspects of being a researcher
- identify his/her strengths
- prioritise areas for professional development
- write a plan, then monitor progress and success
- have productive discussions with others, e.g. his/her supervisor, PI, careers advisor or other professional development provider
- look for formal and informal development opportunities
- prepare for one-to-one progress reviews, appraisals or career development conversations with ones research manager or mentor.

When an individual is considering future career options and goals, the RDF becomes very useful and helps the person to:
- consider the capabilities and experiences that will enhance ones career prospects
- assess opportunities provided by ones institution and look for development opportunities outside specific research area
- highlight, articulate and provide evidence of the transferability of ones capabilities and expertise in his/her CV, in job applications and at interviews.

The Vitae RDF is an internationally recognised framework for the development of researchers' competencies, encompassing the diversity of skills required to create excellent research with impact. The Vitae RDF is structured into four domains covering the knowledge, behaviours and attributes of researchers. It sets out the wide-ranging knowledge, intellectual abilities, techniques and professional standards required to do research, as well as the personal qualities, knowledge and skills to work with others and ensure the wider impact of research. Within each of the domains there are three sub-domains and associated descriptors.

The Vitae RDF and Postgraduate Students

The Researcher Development Framework, (RDF) encapsulates the skills, knowledge and qualities of successful researchers and is intended as a tool to aid Personal Development Planning, for use by all researchers in Higher Education, for Postgraduate Students just starting their research degrees right through to Professorial level.

The Vitae RDF and Research Managers, Principal Investigators and Supervisors
Principal investigators and supervisors have a significant role in supporting the professional development of researchers. The Vitae Researcher Development Framework (RDF) can help provide that support. It enables structured conversations with researchers about progress to becoming a well-rounded, capable and confident researcher.

Benefits of using the RDF as a Principal Investigator or supervisor includes:
- structuring conversations about professional development to provide clear well-focused guidance
- providing a framework to analyse the capabilities of your team
- identifying useful areas to consider when drafting training and development plans in funding applications

Institutional impact
As we support researcher development at institutional level, EBSU will benfit much if we consider:
- using the Researcher Development Statement as a basis to align institutional strategy with relevant national or international policy
- Actively recommending and championing the Vitae Researcher Development Framework. The framework can inform training and development plans and activities and align them with your overall institutional strategy
- An organisational subscription to the RDF Planner. This is an easy-to-use online application, based on the Vitae Researcher Development Framework, that helps researchers to plan and record their professional development effectively

Domain A: Knowledge and Intellectual Abilities

This domain outlines the knowledge and intellectual abilities needed to be an excellent researcher. It is subdivided into three sub-domains (A1, A2 & A3) with 17 specific qualities or descriptors. Each descriptor has five levels of development ranging from basic knowledge of existing concepts and methods of doing research in one's field of study to a level of influencing policy with research outputs.

Sub-domain A1 (subject knowledge) describes an excellent research as one who has good general knowledge of the subject area; theoretical and practical knowledge of methods of doing research in one's research area; good knowledge of literature resources and how to use current tools to search for information appropriate for own research area; one who has excellent knowledge of languages appropriate for one's research area; and one who has capacity to understand, interpret, create and communicate appropriately within an academic context. The later quality is described as academic literacy and numeracy.

Sub-domain A2(Cognitive abilities) describes a good researcher as one with capacity to critically analyze, evaluate and validate research results (i.e. analyzing power); one with strong ability to synthesize new information from diverse sources and see connections between one's research and previous studies (synthesizing power); one with ability to understand arguments, make sound and realistic judgments based on research findings, and recognize alternative approaches to doing research (critical thinking); one who can understand the impact of one's research findings, accept and give constructive criticisms (evaluating power); and one who has capacity to formulate appropriate research questions, design research projects that challenge traditional thinking and advance knowledge in one's research area (problem solving power).

Sub-domain A3 (Creativity) presents a sound researcher as one who is willing to learn and demonstrates flexibility and open mindedness (inquiring mind); one who is intelligent and has capacity to create new ideas (intellectual insight & innovative power); one with capacity to constructively defend own research outcomes (power of argument); create new ways of doing research; and one who has confidence to expose one's ideas to critical audience, has capacity to critically appraise other people's research and challenge the status quo (intellectual risk).

Domain B: Personal Effectiveness

This domain contains those personal qualities, career and self-management skills required to take ownership for and control of one's professional development. The section has three Sub-domains and 26 descriptors. Each has 5 robust phases as a strong strategy/tool to monitor the strength and weaknesses of the early career researcher. These sub- domains and their descriptors are

B1: Personal qualities with five descriptors

1. Enthusiasm
   Here the researcher is motivated to be passionate about own research, proud of own work, motivated even when the work is boring knowing that the outcome will benefit you and inspires others. This may lead you to becoming international researchers
2. Perseverance
   The researcher demonstrates self-discipline, perseveres in the face of obstacles by developing some resilience for others to emulate.
3. Integrity
   Demonstrates good research practices and is honest in data handling. Showing exemplary life to less experienced staff by respecting their views.
4. Self-confidence
   Committed to completing project on time and establishes research credentials by developing excellence in research (Prioritization) from ordinary to the extraordinary researcher determined to leave a legacy as an inspirational researcher
5. Self-reflection
   It makes the researcher to be aware of some personal abilities and willing to demonstrate them by recognizing the boundaries of own knowledge, skills and expertise to led others
6. Responsibility
   Accepts and takes responsibility for building/leading research team and developing its members. Engages in and encourages the development of well-being in other researchers/the team.

B2 Self-management

1. Preparation and Prioritization
This sub-domain enables the early career researcher to plan, prioritize, balance and respond effectively to unexpected challenges during his/her career progression.

2. Commitment to research.

Highly determined to leave a legacy of inspirational research by being committed to and completes first project in order to establish research credentials.

3. Time:

Has established own time management skills, advises others and acts as role model. Manages multiple or complex projects to time; balances constraints.

4. Responsiveness to change

Has leading responsibility for delivering highly skilled researchers for academic and non-academic professions, is responsible for leading the discipline/research area nationally and/or internationally. Engages in and encourages the development of well-being in academic and non-academic colleagues.

5. Work-life balance

Actively maintains attention to work-life balance issues by promoting an effective work-life balance for self and team. Sensitive to signs of pressure on and stress in colleagues, students and staff; provides support, advice and management where necessary. Influences departmental, institutional or disciplinary policies on work-life balance and well-being.

B3 Sub-domains

1: Professional and career development.

Takes ownership for and manages own career progression, sets realistic and achievable careergoals, by crystalizing and identifying ways to achieve them to improve employability.

3. Responsiveness to opportunities

Recognizes, creates and confidently acts on opportunities with the potential to develop own career within or outside academia. Understands the complexity of the academic job market; able to advise others effectively and in a sensitive manner. Actively creates and champions opportunities for others within and outside academia. Is responsive to collaborative opportunities across disciplines/research areas and with non-academic organizations

4. Networking

Develops and maintains co-operative networks and working relationships with supervisors, colleagues and peers, within the institution and the wider research community. Uses personal and/or online networks effectively for feedback, advice, critical appraisal of work and for responding to opportunities. Engages with learned societies and public bodies.

5. Reputation and esteem

Speaks with authority on own topic. Begins to be known as a good researcher. Is globally renowned; becomes international authority and leading speaker on own focal topic and related areas Actively champions the reputation of the discipline/research area and own institution.

Domain C: Research Governance & Organization

This domain contains the knowledge of the standards, requirements and professional conduct which that are needed for the effective management of research.

1. **Health and safety**
   Understands relevant health and safety issues and demonstrates responsible working practices. Takes responsibility for own workspace and be aware of its impact on othersand wider environment**.**At the end you try to shapes policy and procedures of own institution, national or international professional associations/bodies

2. **Ethics, principles and sustainability**
   The ECR applies the relevant codes of conducts and guidelines for the ethical conduct of research; seeks advice from supervisor and creates awareness of issues relating to the rights of other researchers, of research subjects, members who may be affected by the research. Understands how to behave and work in a sustainable way.

3. **Legal requirements**
   The ECR is guided by his basic understanding of legal requirements surrounding research, e.g. Data Protection Act, Freedom of Information Act, Equality Act 2010 and equivalent Northern Irish Legislation. This knowledge helps him to shapes policy and procedures of the HE sector and professional associations/bodies. Leads by example.

4. **IPR and copyright**
   Has basic understanding of data ownership rules as they apply to own research. Shapes policy and procedures of the HE sector and professional associations/ bodies.

5. **Attribution and Co-authorship**
   Recognize contributions and co-authorships. Advises peers and less experienced on citation practices. Directs local policy, advises all staff &contributes to Institutional policy.

C2 Sub-domains and descriptors Research management

1. **Research strategy**
   Align research with Institutional strategic policy ensuring that research contributes to solving societal challenges, publics and business sector's needs-. Outcome of researches should not ending on the shelf

2. **Project planning and delivery.**
   Early Career Researcher here applies skill on how to effectively manage multiple research projects and both the research agenda and bureaucracy for various projects in order to take unpopular but evidence-based appropriate decisions.

3. **Risk management**
    Makes basic risk assessment and is able to manage risks in own project with support. Aware of risks in virtual environments and when using interactive communication technologies

C3 Finance, funding and resources

1. **Income and funding generation1**

   Aware of wider granting sources and their economic context. Understands funding complexities and variety of sources for funding. Educates, advises and guides others on income and funding generation. Applies for increasingly larger grants, seeking alternative sources. Engages in income generation for own institution. Supports funding applications led by others.

2. **Financial management**

   The ECR gains ability to writes own research proposal, creates awareness on key funding bodies to others by educating, advising and guiding others on fund generation/Grants.

3. **Infrastructure and resources**

   Understands the basic principles of financial mgmt. for grants. Keeps basic accounts and reconciles them. Helps shape/contributes to funding of others. How to respond to Funders mechanisms accounting and of procurement law and makes efficient use of available resources. ECR tries to improvise resources where necessary.

Domain D: Engagement, influence and impact

This domain contains:

knowledge, understanding and skills needed to : engage with, influence and impact on the academic, social,

cultural and economic context. It is further divided into

knowledge, understanding and skills needed fpr

Working with others D1

- Collegiality: This deals with encouraging proper forward and feedback mechanism amongst a research team or an organization. There must be a transverse relationship.

- Team working: There must be harmony amongst all.

- People Management. In a research or organization, there should be Negotiation of activities and deadlines with supervisors and line managers.

- Supervision: a research team or an organization must have a supervisor, he/she engages in peer support and evaluation, and undergraduate support and assessment.

- Mentoring: this is a very sensitive aspect of any research activity. The masters in an area have to effectively support the learning of others especially those lower and following members of the team.

- Influence and Leadership: this includes engagement in debates and inviting of Challenges

- Collaboration: working together to Co-produce research outputs with supervisors/research leaders.

- Equality and Diversity: research teams should be sensitive to and respectful of individual differences.

2. Communication and dissemination D2

- Communication Methods: Team member have to promote coherent arguments and clear Ideas.

- Communication media: research information has to be communicated face to face and technologically.

- Publication: research results have to be published following academic procedures.

3. Engagement and impact D3

- Teaching: transmit or transfer research methods and results in (class room, seminar, research etc.

- Public engagement: use the media to bring research work to the public.

- Enterprise: from the beginning, a research should target an audience, and the research should be salable.

- Policy: there are laid down policies that research should follow.

- Society and Culture. Every research should impact a society and a culture.

- Global citizenship (research relationship and the globe, the ICT effect, AI, ES and the Cyber space)

Conclusion and Prayer:

Researcher Development Framework (RDF) is a widely adopted tool in higher education institutions (HEI) worldwide for professional and career development of researchers. It is one of the most important gains of ACU-CIRCLE institutions including EBSU from the five(5) years of CIRCLE activities. The RDF teaches the characteristics and attitudes of excellent researchers. ACU organized a workshop for CIRCLE Champions in December 2018 in Nairobi on embedding CIRCLE gains and encouraged member institutions to develop embedding strategies. Efforts to embed the tool in EBSU have not been successful. The EBSU-CIRCLE Institutional Strengthening Programme (ISP) Team has organized a series of RDF workshops both at university-wide and faculty levels, but staff participation was never impressive. We have considered its inclusion as a general course for postgraduate students, but feel that it may be difficult to implement.

It is interesting to note that serious Universities like University of Liverpool UK run bimonthly workshops for introducing researchers to the framework.
POLICY ON RDF

On 11th December, 2019 a Stakeholders Meeting on Institutionalizing the Researcher Development Framework (RDF) & Academic Mentoring in Ebonyi State University was held. Participants were HODs Directors and Deans. It was agreed that RDF should be institutionalized in Ebonyi State University as soon as possible with the following recommendations:
1. Regular RDF training for PG supervisors.
2. Regular RDF training for those aspiring to supervise PG students.
3. Regular RDF training for early career Academics.
4. Regular RDF training for newly employed academic staff and laboratory Technologists.
5. Compulsory regular training for all PG students.

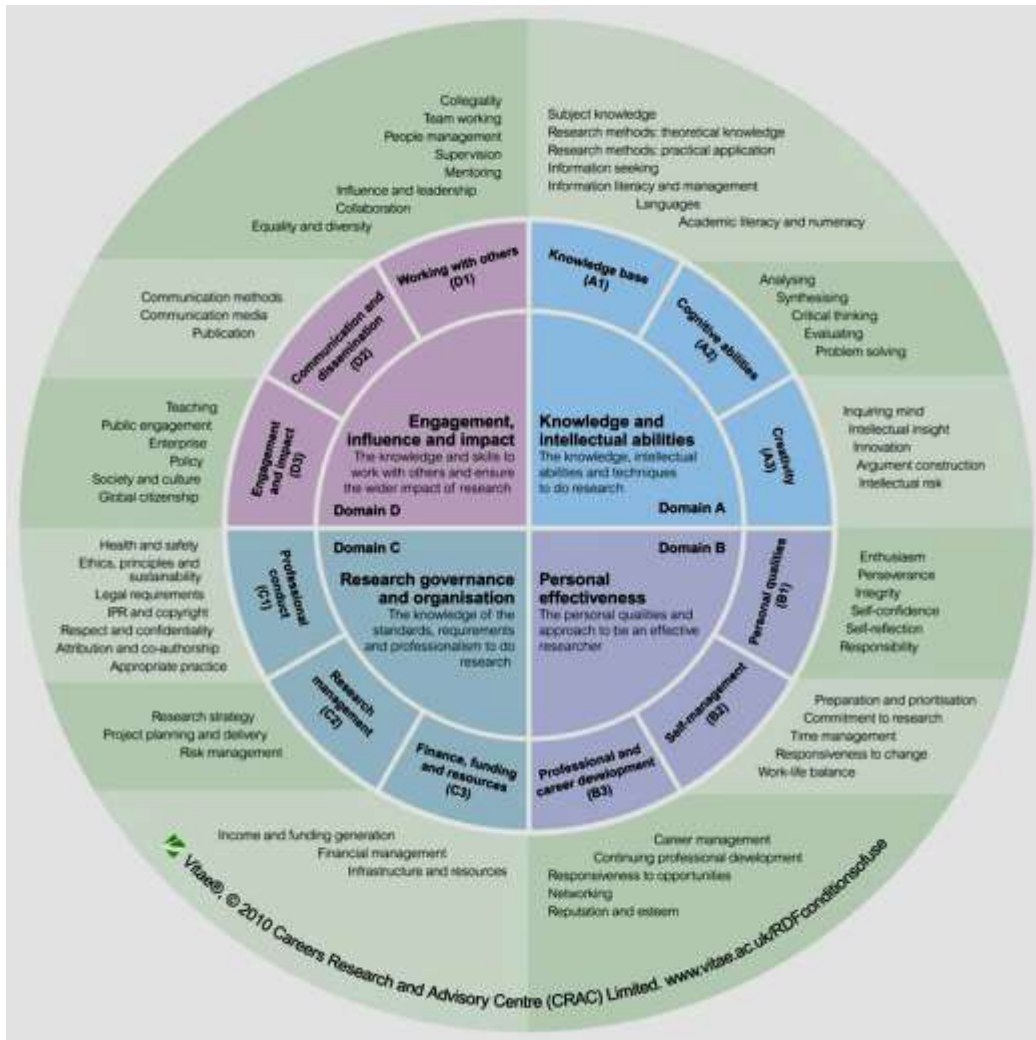6. PG school and ISP will work the implementation frame work for the RDF trainings.

Fig. 1: The RDF at a glance (RDF Planner)