Supplementary material

Appendices

Appendix 1 Verbatim statement by ResearchGate (RG) that it would be phasing out the RG Score

"We will remove the RG Score from ResearchGate after July, 2022

To help improve our approach to metrics, we will discontinue the RG Score.

Learn more about this decision, our new approach to metrics, and what comes next.

Learn more

Why we're removing the RG Score (and what's next)

At the start of this year, we announced the decision to remove the RG Score after July 2022. We're aware that many of you found the RG Score valuable, so we'd like to provide some more detail on our thinking behind this decision and give you a sneak peek into what's next.

What did we learn from the RG Score?

The RG Score was released in 2012 as a way for our members to get recognition for their work and contributions in a simple, trackable metric that could be used as an alternate measure of research impact.

From the start, our members appreciated the ability to quickly evaluate their own and other researchers' contributions to science through the RG Score. We were happy to see that the RG Score acted as a source of motivation for many to advance their research and support the community through Q&A on ResearchGate.

On the flip side, some members were frustrated with the RG Score's intransparency and with their research impact being bound to a single metric. We also heard from members who reported fluctuations in their score that they couldn't explain. At the same time, we have been following the movement within the academic community towards responsible use of research metrics and a more holistic approach to assessing research impact.

Through all this, we recognized that despite the benefits that the RG Score provided to our members, we could still do better. And while all metrics usually only describe a particular facet or view and don't tell the full story about the interest in a researcher's work, we believe there is a place for better metrics and indicators on ResearchGate to support the community.

Our new approach

We realized we need to adopt a more regular practice of continuous evaluation of our metrics to ensure that they work to support the science community and not harm it. To help facilitate this, we started by defining a set of criteria that we strive to follow for our metrics moving forward:

1. **Intuitive**: We strive to make our metrics intuitive to understand, so that you can apply/use them responsibly.
2. **Transparent**: We strive to make the calculation and inputs of our metrics transparent for everyone.
3. **Robust**: We strive to make our metrics difficult to artificially manipulate or influence and to not experience disruptive calculation changes over time.
4. **Relevant**: We strive to not show our metrics out of context, pushing for their responsible use and to always provide the right context to our metrics.

Unfortunately, the RG Score doesn't meet some of these criteria. After considering these points, together with community feedback, we made the decision to remove the RG Score.

What's next?

For those who want the benefit of having a metric to quickly assess their own and others' profiles to understand their contributions to science, we would encourage the adoption of Research Interest, a metric that captures the interest in a researcher's work within the scientific community. It provides an indication of a

member's impact, but in a more intuitive, transparent, and stable way than the RG Score did. In addition, we will soon update your profile to showcase a set of metrics to allow a more holistic assessment of your research impact. This will include Research Interest, h-index, citations, reads, and recommendations forming the core set of metrics that we use to represent your impact to you and others on the platform. We believe that this holistic approach, backed up by our new metrics criteria, provides a better way forward for everyone on ResearchGate, and we're excited to move the platform in this direction this year."

Source of full statement: https://www.researchgate.net/researchgate-updates/removing-the-rg-score

Date of extraction: April 14, 2022

Appendix 2 Verbatim description of the ResearchGate (RG) Score provided by RG in 2017, and in 2022

2017:

"The **RG Score** is a metric that measures scientific reputation based on how all of your work is received by your peers. We believe that fellow researchers are the best judges of each other's work, and that all your research, published or not, deserves credit. With this in mind, your **RG Score** is based on how both your published research and contributions to ResearchGate are received by your peers.

A contribution is anything you share on ResearchGate or add to your profile, from published papers and questions and answers, to negative results and raw data. Our algorithm looks at how your peers receive and evaluate your contributions and who these peers are. This means that the higher the scores of those who interact with your research, the more your own score will increase.

In contrast to more traditional metrics, the **RG Score** focuses on you, an ever-growing community of specialists, and puts reputation back into the hands of researchers. To view your RG Score and how it's broken down, go to your Scores tab.

For more information, go to: https://www.researchgate.net/publicprofile.RGScoreFAQ.html

Why has my RG Score decreased or not changed?

Please note that the RG score is a relative score. This means that it takes the scores and interactions of every researcher into account when producing a relative rating of your contributions. For example, if your contributions are less than the average of all users that week, your RG Score could decrease or remain constant. Please also make sure that your publications are linked to their journals correctly. Please also make sure that any articles published in journals are correctly linked to the journal they were published in. See Editing and deleting research for more information about linking your publications to their journals.

Why can't I see my RG Score on my profile?

Your RG Score will be activated when it reaches 1. Only then will it be visible to other researchers. If you've just signed up and confirmed authorship of a significant number of publications, your RG Score will likely become visible with the next weekly update. Please also make sure that any articles published in journals are correctly linked to the journal they were published in. See Editing and deleting research for more information about linking your publications to their journals.

Why is my RG Score not changing?

It is recalculated once per week, so depending on your interactions and the content you have added to your profile, it is likely that your new score will appear with the next update.

Asking questions, providing helpful answers, or adding data and figures are all good ways to improve your RG Score. If your peers think it's worthwhile, they will likely give you feedback, which will affect your score. By connecting with other researchers and contributing high-quality content, your score will increase. Please also make sure that any articles published in journals are correctly linked to the journal they were published in. See Editing and deleting research for more information about linking your publications to their journals.

How does the RG Score account for quality?

The RG Score is based on what your peers think of your work. Low-quality contributions won't attract positive feedback and recognition from the rest of the community, so they won't contribute to a researcher's score in any significant way. With this in mind, we've given you the ability to downvote and flag any contribution that doesn't reach the standards upheld by the rest of the community. We'll be introducing more ways for you to point out these contributions in the near future.

Can I turn off my RG Score?

The RG Score is a metric that measures scientific reputation based on how all of your research is received by your peers. As an integral feature of ResearchGate, it can't be turned off or hidden. We are constantly working on ways to improve the RG Score to reflect your needs as a researcher.

How can I improve my RG Score?

To improve your RG Score:

- Share anything from negative results to raw data or full-fledged publications
- Create a project, or add an update to your existing project(s)
- Ask a question or give another researcher a helpful answer
- Follow other researchers
- Comment on and recommend your peer's research, projects and questions

If it's worth to the community, your peers will likely give you feedback, and this will factor into your RG Score. Connect with others, contribute high-quality content, and your score will rise."

2022:

"The **RG Score** indicates how your work is received by your peers. We believe that researchers are the best judges of each other's work and that all a person's research, published or not, deserves credit. With this in mind, your RG Score is calculated based on any contribution you share on ResearchGate or add to your profile, such as published articles, unpublished research, projects, questions, and answers.

Our algorithm looks at how your peers receive and evaluate these contributions, and who they are. The higher the RG Scores of those who interact with your research, the more your own score will increase. A low-quality contribution probably won't attract positive feedback and recognition from the community, so it won't contribute to your score in any significant way.

In contrast to more traditional metrics, the **RG Score** focuses on you, an ever-growing community of specialists. You can view your RG Score from your Scores tab.

Why has my RG Score decreased or not changed?

The RG Score is calculated once a week, so if you've added publications and your score has not yet changed, please be patient. It's also relative, it can go up or down depending on the activity and scores of other ResearchGate members. This means it takes the scores and interactions of every researcher into account to give a relative rating of your contributions.

To improve your RG Score:

- Share anything from negative results to raw data or full-fledged publications
- Create a project, or add an update to your existing project(s)
- Ask a question or give another researcher a helpful answer
- Follow other researchers
- Comment on and recommend your peer's research, projects, and questions

Why can't I see my RG Score on my profile?

Your RG Score will only be activated and displayed when it reaches a minimum of 1. If you've just signed up and confirmed authorship of a significant number of publications, please be patient, as the score is only updated once per week.

Can I turn off my RG Score?

The RG Score is a metric that indicates how all of your research is received by your peers. As an integral feature of ResearchGate, it can't be turned off or hidden."

Appendix 3 Response from ResearchGate (RG) after a query was sent requesting background into how some RG users could achieve a high RG Score, even with a small or modest publication record. There are two concerns with RG's response: firstly, the response did not actually provide a response, but instead deflected, simply promoting the RG Score rather than addressing the question and request directly; secondly, the email was signed with a first name only, without any family name, apparently to avoid traceability and accountability.

"On Tuesday, August 15, 2017 12:02 AM, ResearchGate Community Support <email redacted> wrote:

Dear Jaime,

Thanks for getting in touch. The aim of the RG Score is to help you measure and leverage your standing within the scientific community. We want to provide you with a metric that is calculated based on how all your research is received by your peers, not just the work you've published.

At this stage, we are unable to share information on the RG score calculation. This, however, might change in the future. We are already in the planning phase of working on an approved version of the RG score. As we continue to improve our reputation indicators on Researchgate, we are considering transparency, reliability, and simplicity. To illustrate this, we have included established measures for reputation (h-index and citations). We believe these supplement the RG score to provide a complete picture of the researcher's reputation.

It is our intention to continually improve in this area and we will consider your feedback towards this.

Kind regards,

Sarah

RG Community Support"

Appendix 4 Verbatim statement by ResearchGate (RG) regarding the Research Interest Score

"The **Research Interest Score** (RI Score) is a convenient way to help you track the impact of your research within the scientific community. The score combines reads by unique ResearchGate members, recommendations on ResearchGate, and citations (excl. self-citations). We believe that citations are not the only indicator of a researcher's impact – while they are the longest-standing measure, it can take months or even years before you start receiving citations after a paper is published. At the same time, researchers are reading and learning from each other's work on ResearchGate every day. These interactions can impact future research, but not all of them end in citations. That's why using citations alone in measuring impact can underrepresent the full impact of a piece of research. By combining reads, recommendations, and citations, we believe that the Research Interest Score offers a holistic indicator of the impact of a person's research.

On your own profile, you can see your score, along with a breakdown of the metrics that are used to calculate it. You'll also be able to compare yourself to your peers by seeing your percentile rankings.

When you look at **someone else's profile** you can see their Research Interest Score too, helping you understand the impact of their research.

How the Research Interest Score is calculated

We built the Research Interest Score to be intuitive and transparent so that researchers can quickly understand and use it.

The score focuses on individual research items and researchers' interactions with them. This means that you can assess the impact of an individual research item using its Research Interest Score. In addition, a researcher's Research Interest Score is simply the sum of all the Research Interest Scores for all of the research items on their profile.

When a ResearchGate member reads a research item on ResearchGate, recommends it, or cites it, that item's Research Interest Score goes up. It's that simple.

The Research Interest Score uses a system for weighting the different types of interactions:

- An **other read*** has a weighting of 0.05.
- A **full-text read*** has a weighting of 0.15.
- A **recommendation** has a weighting of 0.25.
- A **citation** has a weighting of 0.5.

*An 'other read' is counted when a ResearchGate member views a publication summary or clicks on a figure. A 'full-text read' is counted when a ResearchGate member views or downloads the full-text. Learn more about how we count reads.

What the Research Interest Score doesn't include

To make the Research Interest Score meaningful to our members, we exclude certain types of data:

Self-citations and reads by authors

- Self-citing – when an author of a citing publication overlaps with the authors of a cited publication – is a valid practice that represents how science builds upon itself. However, the Research Interest Score is designed to look at how *others* interact with your research. To help focus on the impact that your research has in your field and on your peers, we, therefore, exclude self-citations from our calculations. For the same reason, a read also isn't counted when you or one of your co-authors access your own publication.

Reads by people who are not ResearchGate members

- By only measuring interest from researchers who are logged in to ResearchGate we can try to ensure that the score remains meaningful and that the people reading and learning from your work are from within the scientific community. This also allows us to show you the people behind the metrics, a key part of understanding how your work is being received.

Multiple reads and recommendations by a researcher in a single week

- A researcher interacting multiple times with the same research within a short period of time doesn't represent an increase in interest but leaves the score more open to abuse.

Interactions from bots, crawlers, and other automated systems

Our bot detection system is constantly monitoring abnormalities so that we can react quickly to any irrelevant or fraudulent activity. You can also send feedback to our Community Support team if you suspect any unusual activity in your stats."

Source: https://help.researchgate.net/hc/en-us/articles/14293473316753

Appendix 5 Verbatim statement by ResearchGate (RG) regarding Reads

"**Reads** is a simple metric designed to show you exactly how often research is being accessed on ResearchGate.

Since it can take a long time before your research gets cited, **reads** are a great way to see early interest in your work – from both ResearchGate members and non-members.

Your **Stats** tab is where you can find out how many **reads** your research items are getting. You can also see information about your readers by country, institution, seniority, and discipline.

Depending on your profile visibility settings, you can also see some of the profiles of the people who recently read your work, allowing you to connect with people who are interested in your research. (Note: You'll only see readers if you allow others to see when you've read their work and if your reader has done the same.)

How are reads calculated?

We count and display the number of **reads** for each publication on ResearchGate, each question asked and answer added in Q&A.

For a publication, a '**read**' is counted each time someone views the publication summary (such as the title, abstract, and list of authors), clicks on a figure linked to the publication (either directly on the publication page or via the home feed), or views or downloads the full-text, if there is one.

To show how engaged viewers are with your research, you will also be able to see the **full-text reads** metric for your own publications. For publications, a '**full-text read**' is counted each time someone views or downloads the full-text.

For questions, a **'read'** is counted each time someone views the question. A **'read'** of an answer in Q&A is only counted if someone looks at that particular answer.

To show the full reach of your work, we count reads from both logged in ResearchGate members and logged out readers.

To make sure **reads** gives you an accurate picture of the attention your research is getting, a read isn't counted when you or one of your co-authors access your own publication, or when you view your own question or answer. It is also not counted when your work is accessed by an artificial traffic source (such as a robot or bot). We're continuously working on improving our ability to detect different sources of artificial traffic to make sure we show you accurate metrics.

How can I see who my readers are?

To see the identities of your readers, you first need to enable your reader visibility settings. Once enabled, others will be able to see when you've read their work and you'll be able to see the profiles of your readers who also have these settings enabled. To see them:

1. Log in to your account https://www.researchgate.net/login
2. Visit the **Stats** tab on your profile and click on the **Reads** tab
3. If you have more than two readers, then under **People who read your publications** click on **View more researchers.**

How can I see my readers by publication?

1. Log in to your account https://www.researchgate.net/login
2. Visit the **Stats** tab on your profile and click on the **Reads** tab.
3. Under **Reader demographics for the last 8 weeks** click on **View individual publication stats.**

Alternatively, you can go to your individual publication pages directly, click on **Stats**, and scroll down to see your readers (if applicable).

How can I see my reader demographics?

1. Log in to your account https://www.researchgate.net/login
2. Visit the **Stats** tab on your profile and click on the **Reads** tab
3. Under **Reader demographics for the last 8 weeks** click on **View all demographics.**

What are my read demographics based on?

Your read demographics provide a demographic breakdown of the reads your work has received over the past 8 weeks (when such information is available).

Reads by country and institution are based on the institutional affiliation or location your readers have listed on their ResearchGate profiles.

Reads by discipline are based on the disciplines your readers have added to their ResearchGate profiles. If a reader has two disciplines, they might be counted twice. For example, if one of your readers has Software Engineering and Computer Architecture listed as disciplines on their profile, you might receive one read for Software Engineering and one read for Computer Architecture.

Data relating to your **reads by seniority level** comes from information your readers have added to their ResearchGate profiles (if they have added such information). In some cases, this data might also be based on inferences we've made about your readers' seniority levels based on other data from their profiles, such as their position, degree, and years since first publication. This additional data helps us make a reasonable guess about what their seniority level might be.

Why have my stats decreased?

There are a few possible reasons why your reads statistics may have decreased. The reads counter on your profile's **Stats tab** is a sum of the reads of your individual research items, which you can find on your **Research** tab. If a research item is removed from your **Research** tab, deleted from ResearchGate, or merged with a duplicate item, the item's reads will also be removed.

Your stats and those of others may have decreased because we've been working extensively to give you a more accurate picture of the attention your research is getting on ResearchGate.

As part of this, we remove traffic from artificial sources from our members' stats. This means that visits by automated programs like crawlers and bots, which remotely load pages and download content to retrieve information, aren't counted. Reads also aren't counted when you or one of your co-authors accesses one of your own publications, you view your own question, answer, or figure.

We're continuously working on detecting unusual patterns of activity that could skew your stats."

Source: https://help.researchgate.net/hc/en-us/articles/14293467928209