RESEARCH MADE EASY

INTRODUCTION TO BASIC RESEARCH CONCEPTS

Workshop Project Report

Cameroon

THE COLLABORATION FOR RESEARCH EXCELLENCE IN AFRICA
(CORE AFRICA)

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EXECUTIVE SUMMARY

The Collaboration for Research Excellence in Africa (CORE Africa) has as its mission to develop a sustainable network of skilled researchers in Africa, who are capable of addressing societal challenges through quality research. Our aim is to increase research capacity and output in Africa, by;

- Increasing awareness on the importance of research in Africa
- Identifying and addressing research challenges in Africa
- Creating opportunities for research skill development
- Promoting the creation of research-friendly environments and
- Producing information that can influence research practices in Africa.

The 'Research Made Easy' (RME) programme was informed by these objectives, as well as students' responses to our Attitudes Towards Research (ATR) surveys[1], which aim to understand their perceptions about research. The programme comprises of interactive webinars designed to provide students with a simple guide to conducting academic research, and focus group discussions (FGDs) aimed at identifying challenges they face with academic research and potential solutions for them.

This report documents the outcomes of the RME programme delivered to students and researchers in Cameroon, on 22nd and 23rd May, 2020. The programme was attended by 81 participants from 15 universities. Students gained knowledge on the relevance of research to themselves and to society, how to find a research topic, steps involved in the research process, how to find research literature, how to disseminate research findings and how to access research support from CORE Africa.

Key challenges identified during the FGDs included difficulties with identifying suitable research topics, challenges with narrowing down research interests, course structures not giving students enough time to learn how to conduct research effectively, students not feeling sufficiently supported with the practicalities of conducting a research project, and lack of awareness and guidance on research publication. Potential solutions identified by students were early exposure to research, access to research support initiatives and programmes, and learning about the potential benefits of conducting research and disseminating research findings.

Our recommendations in view of these findings are for academic institutions to introduce students to research as early on as possible during their academic courses, review the structure/content of research courses and the roles of supervisors, create opportunities to promote research activities and skill development (e.g. through mentorship, internships and research clubs), and embed key messages about the importance of research to students and the wider society. The outcomes and recommendations from this report will be disseminated to universities and other academic institutions in Cameroon. This report is also available for download at the CORE Africa website.

The RME programme has also been delivered in one other African country (Uganda – report available at the CORE Africa website) and will be extended to other African countries and regions. Outcomes from these will be reported in separate country or region-specific reports. CORE Africa plans to conduct a cross-country analysis to integrate shared lessons from students' research experiences across Africa.

PROGRAMME SUMMARY

The RME webinar was open and free to any university students, researchers and interested parties in Cameroon willing to contribute towards the discussion on research challenges faced by students. Participants were invited through a flyer (Appendix A) which was shared through the CORE Africa website and our social media platforms (Facebook, LinkedIn and WhatsApp). The event took place on Friday 22nd and Saturday 23rd of May, 2020, and was delivered online, via the Zoom video conferencing platform.

81 participants registered for the programme. 76 participants were in attendance on day one and 79 on Day two. Participants were mainly students, with professionals from various disciplines such as teachers, medical doctors and independent researchers also in attendance. Participants came from 15 institutions in total, 10 from Cameroon and five international institutions (Table 1). Students were from a variety of academic backgrounds, with an even mix of health and non-health-related courses (see Appendix B).

Table 1: Institutions represented by webinar participants

University represented	Number of participants
National Institutions	
University of Buea	36
University of Bamenda	20
University of Yaounde I	8
St. Louis University, Bamenda	4
University of Maroua	2
Saint Monica University	2
University of Dschang	1
Catholic University of Central Africa, Yaounde	1
Catholic University of Cameroon, Bamenda	1
Goethe Institute	1
International Institutions	
Politecnico di Milano, Italy	1
Ahmado Bello University Zaria, Nigeria	1
Arsi University, Ethiopia	1
African leadership University, Mauritius	1
University of Botswana	1

Day one of the webinar – 22nd May, 2020

Participants were engaged in discussions and reflections on the importance of research to students, and to society. Students learnt about the various stages and activities involved during the research process, and the level of support that CORE Africa provides at each stage. Sessions were delivered through a combination of interactive presentations which included scenario research planning, quizzes and question and answer (Q&A) sessions. The Q&A sessions were scheduled during and after presentations, giving participants an opportunity to discuss or seek clarification on the content presented. Questions were addressed by the session speaker and members of the CORE Africa team. Appendix C outlines the programme schedule for the day, which lasted approximately 1 hour 45 minutes.

Day two of the webinar – 23rd May, 2020

The first half of Day two commenced with participants engaging in an interactive tutorial on how to find a research topic, which was followed by a presentation on different research dissemination pathways. There were Q&A sessions during and after presentations in this session as well, and questions raised by the audience were addressed by the session leader and members of CORE Africa team.

The second half of the programme engaged participants in focus group discussions (FGDs) where they were split into small groups, each led by a CORE Africa team member. The aim of the FGDs was to provide an opportunity for students to express any challenges they were facing in relation to conducting academic research, and to propose solutions which they believe could be useful in increasing their research knowledge, enhancing their research skills or improving their research experiences at their respective institutions of learning and beyond. The questions addressed and findings are described in section C.

After the FGDs, all participants returned to the plenary session, where they were addressed by the former Vice Chancellor of St. Lawrence University in Uganda, Professor Andrew Ssemwanga, who reiterated the importance and value research to students and society, encouraging participants to engage and develop research projects that add value to their societies. The programme for Day two was scheduled as shown in Appendix C and lasted approximately 2 hours 15 minutes.

PROGRAMME DELIVERABLES

Links to video material presented during the webinar were shared with all participants after the programme. Participants were also informed about different forms of support they could get from CORE Africa, including mentorship through the CORE Africa research mentorship scheme (CARMS), and research internships.

Before attending the webinar, all registered participants were invited to complete a pre-event baseline survey assessing students' knowledge and perceptions of various aspects about research. Participants were then invited at the end of each day to complete another survey relating to the information presented on that day, as well as the intended programme outcomes.

Findings from these surveys were analysed quantitatively and used to determine the usefulness of the programme, the programme outcomes, as well as prospects for continuity and reproducibility across different countries and regions in Africa. Findings from the FGDs were also analysed qualitatively and both sets of analyses contributed towards the recommendations made. These will be circulated to universities, other relevant academic institutions and relevant stakeholders in Cameroon.

PROGRAMME OUTCOMES

Section A: Findings from the pre-event survey

The pre-event survey was completed by 65 out of 76 students who attended Day one (85.5% participation rate), while the post-event surveys were completed by 68 out of 79 students who attended Day two (86.1% participation rate).

1. Relevance of research and knowledge of the research process

Before the event, students were asked to indicate whether they think research is important, and whether they think it is necessary for students to do research. All survey respondents felt that research is important and that it is important for students to do research (Figs 1a and 1b).

Fig 1a) Do you think research is important?

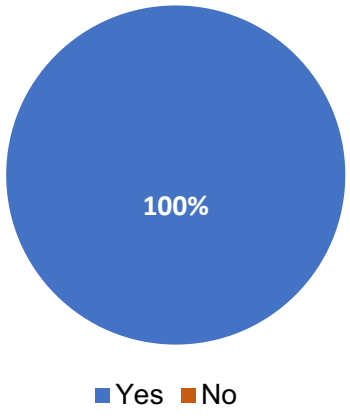
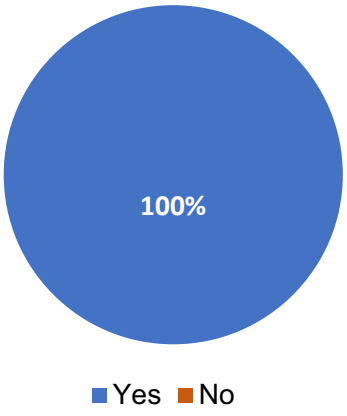


Fig 1b) Do you think it is important for students to do research?



The survey also assessed students' understanding of the research process and their knowledge of the different types of research. A majority of students (61%) identified that they do not really understand the process of doing a research project (Fig 2a) and most students (83%) noted that they did not know the different types of basic research (Fig 2b).

Fig 2a) Do you understand the process of doing a research project?

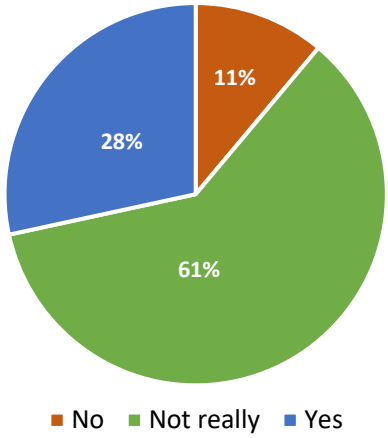
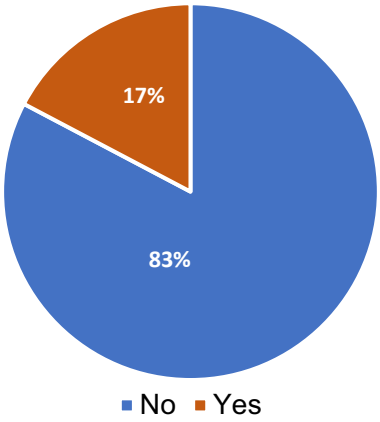


Fig 2b) There are 3 types of basic research. Do you know the different types?



2. Finding a research topic

A majority of students (70%) identified in the pre-event survey that they do not know how to find a research topic, and also did not understand what makes a good research topic (73%) (Figs 3a and 3b). Most students indicated that they find the process of finding a research topic difficult (76%), and a few (29%) did not know the difference between a research topic and a research question (Figs 3c and 3d).

Fig 3a) Do you know how to find a research topic

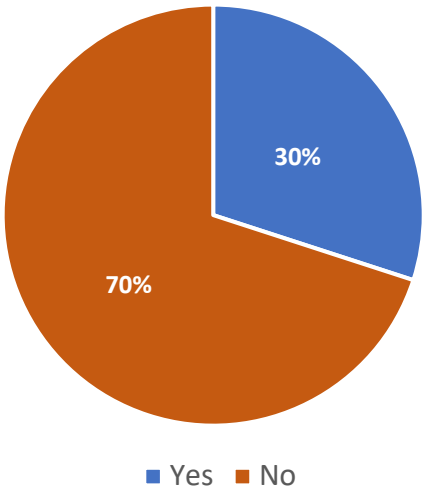
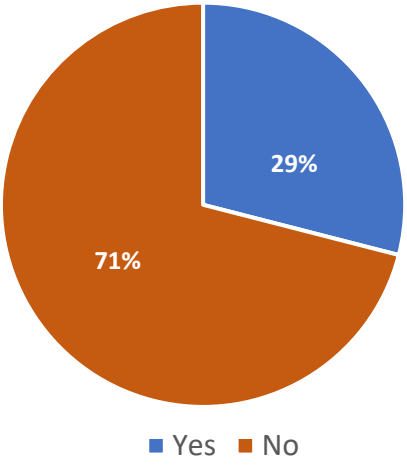
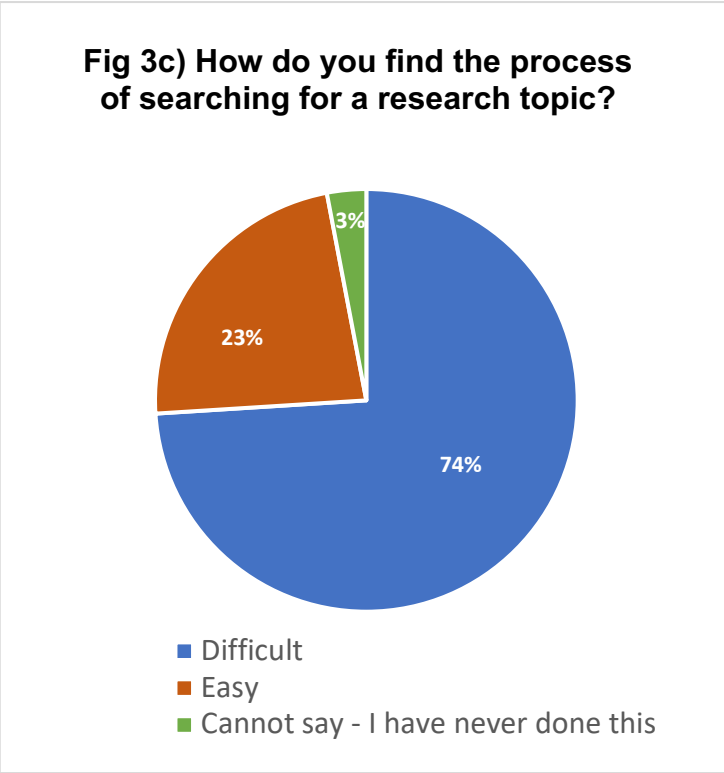
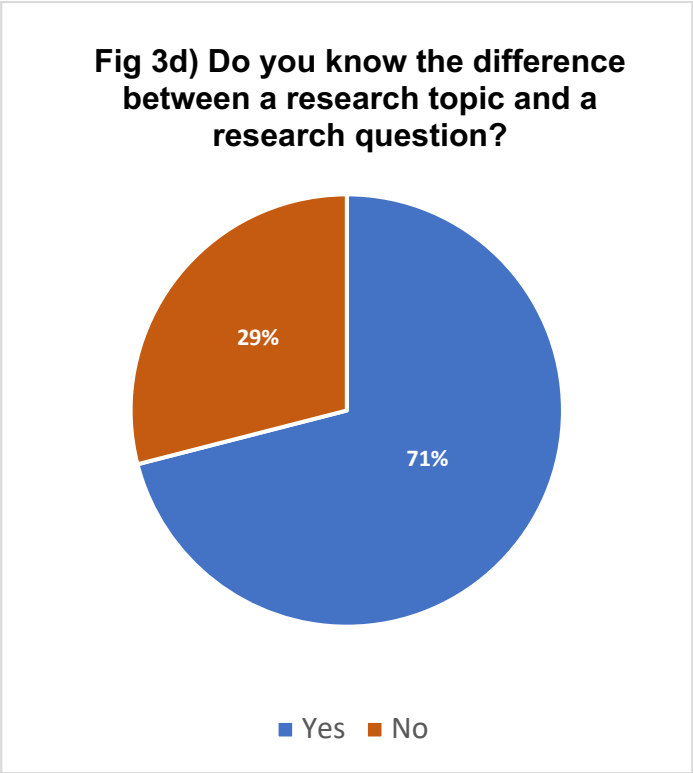


Fig 3b) Do you understand what makes a good research topic?

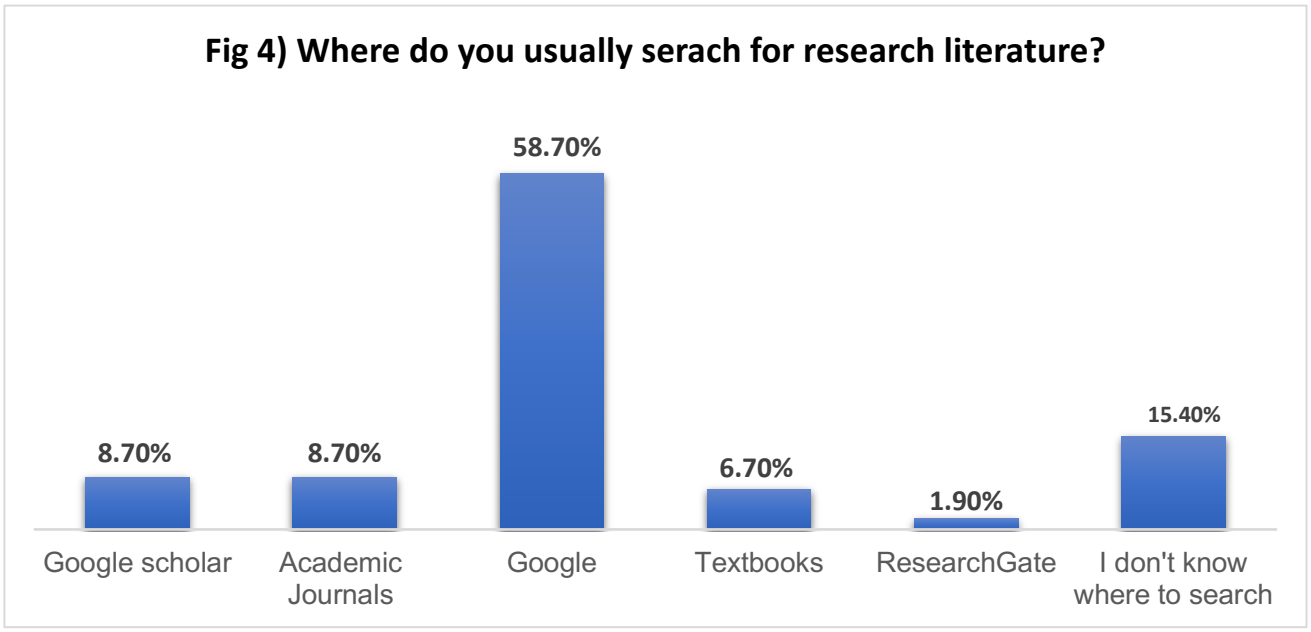






3. Searching for research literature

Students were asked about the sources they usually use when searching for research literature, for example, when writing the introduction of their research report or conducting literature reviews. The main source of research literature for most students was Google (58.7%) (Fig 4). Knowledge of other sources like academic journals and Google Scholar was low (8.7% each). A few students (15.4%) identified that they do not know where to find research material.



4. Disseminating research findings

The pre-event survey responses showed that 64% of the participants had been involved in carrying out a research project, while 36% had never done a research project (Fig 5a). Of those who had carried out research, 86% reported that their findings had never been published or disseminated in any way, while only 14% had published results from their research (Fig 5b).

Fig 5a) Have you ever carried out a research project

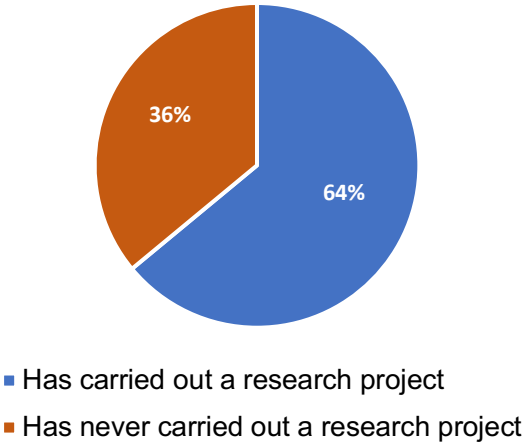
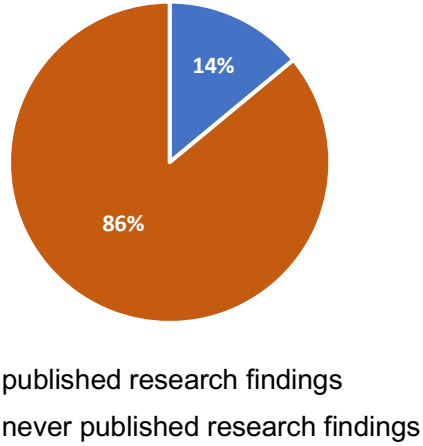


Fig 5b) Have your research findings been published or disseminated in any way?



5. General perceptions about research and sources of support

Students mostly described the idea of doing research as interesting (83%), and most of them reported that they enjoy doing it (72%), while some felt it was difficult (11%) (Fig 6a). A few students (17%) felt that research is boring and difficult (Fig 6a). Most students (74%) identified that they do not know where to seek help or support when faced with difficulties relating to their academic research projects (Fig 6b).

Fig 6a) How do you feel about research generally?

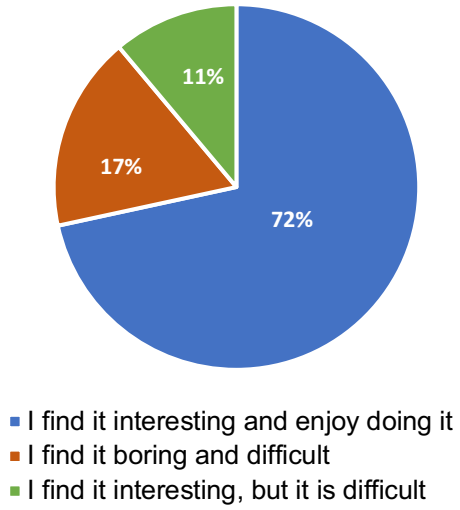
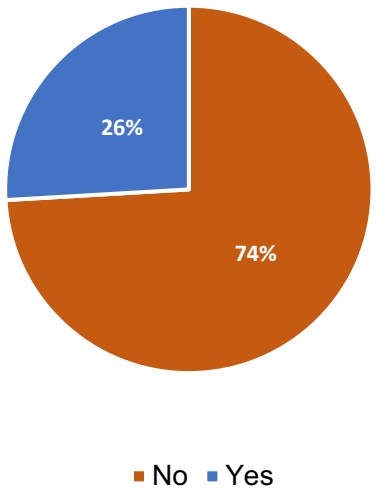


Fig 6b) Do you know where to seek help when faced with difficulties with your research project?

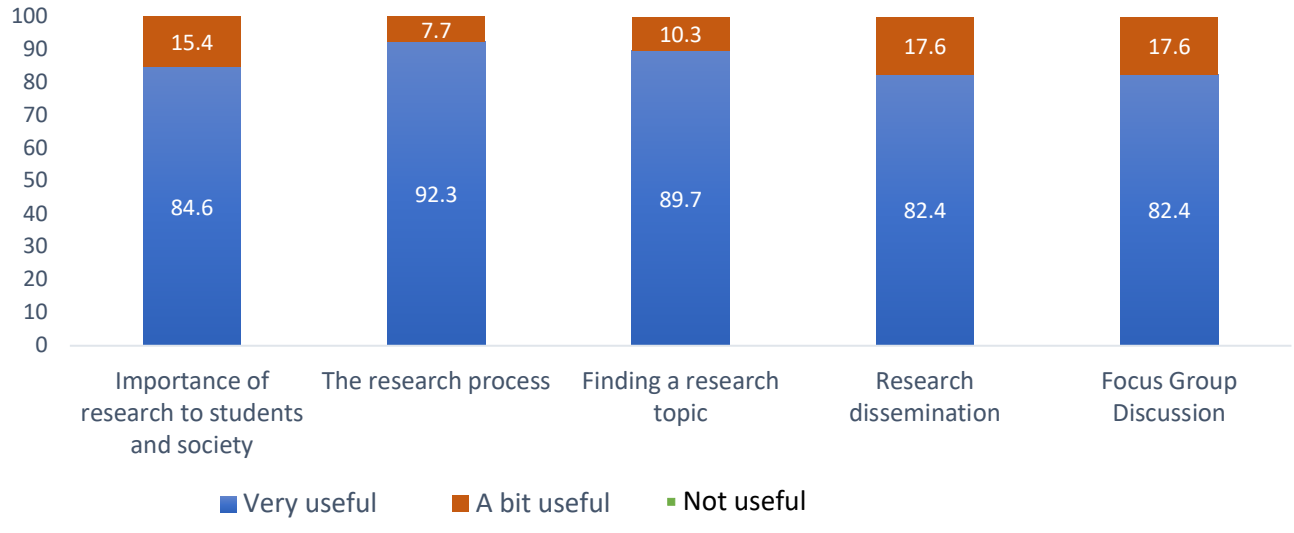


Section B. Findings from the post-event survey

1. Usefulness of webinar sessions

Figure 7 below shows students' ratings on the usefulness of the different sessions delivered during the webinar. The session participants enjoyed the most was that on the research process (92.3%), followed by finding a research topic (89.7%), the importance of research to society (84.6%), and finally the sessions on research dissemination and the FGD (82.4%).

Fig 7) Usefulness of sessions presented during the webinar



2. Knowledge gained from the webinar sessions

We assessed the knowledge students had gained from the sessions and grouped this into three categories which were over 90% (in green), 80-89% (in blue) and 70-79% (in orange) (Fig 8). Over 90% of respondents reported having learnt what makes a good research question, how to find a research topic, the process of doing a research project and how they could disseminate their research findings. In the second category, we had over 80% of students reporting that the sessions helped them understand what makes a good research topic, the different parts of a research report and what to include in them, the importance of research to the society, where to search for research literature, how to use Google scholar, the differences between quantitative and qualitative research and the importance of referencing. In the last category, over 70% of students gained knowledge on how to search for research gaps, the importance of research to students, and the different types of research.

Fig 8) Knowledge gained from the RME webinar

3. Impact of webinar on perceptions of research

A majority of students (62%) reported after the programme that they find research more interesting than they did before, and others found it less difficlut (38%). No student found research to be boring, neither was there any student who still had the feeling that research is difficult after the programme (Fig 9). All students felt that the RME programme was useful and indicated that they would recommend it to other students (Fig 10).

Fig 9: Has the RME programme changed the way you feel about research in any way?

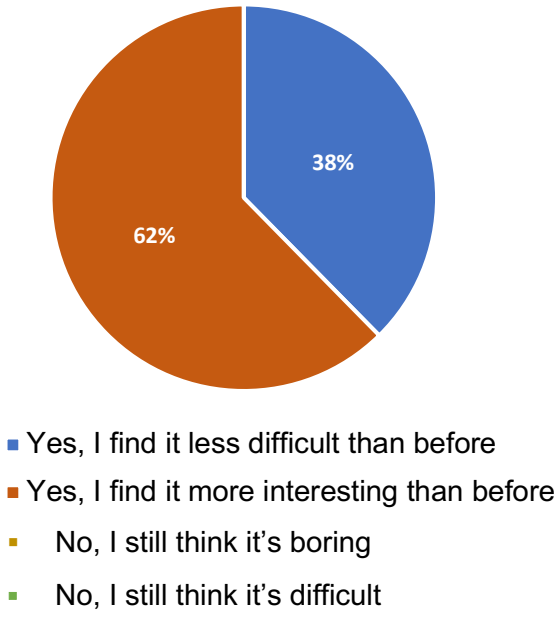
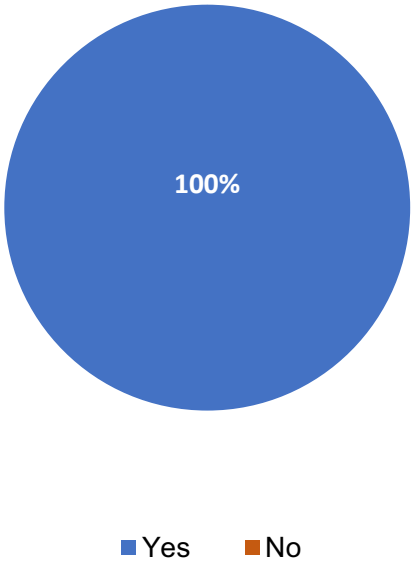


Fig 10) Would you to recommend the RME programme to a friend or colleague?



Section C: Findings from focus group discussions

Three key questions were addressed during the FGDs which were:

1. What are the main challenges students face with doing research?
2. Why do students not publish their research findings? and
3. What factors can positively influence students' research experiences?

The findings from the FGDs were audio-recorded using digital voice recorders. Verbal consent to record was obtained from participants. Audio recordings were transcribed verbatim by CORE Africa's research assistants. Transcripts were anonymised by removing all identifiable information and assigning unique identification numbers to participants. Transcripts were then coded and analysed using thematic analysis. Findings from these are presented below.

1. Main challenges students face with doing research

a. Struggling right from the beginning

Students reported facing challenges from the very beginning of doing a research project. Choosing a research topic, identifying a research problem, asking suitable research questions and developing research objectives were common areas of difficulty amongst students:

> *"As one who also guides students in research, the problems I always identify are at the level of – right from the beginning, developing an interest, choosing a topic and identifying problems; and also setting objectives and linking that to setting research questions".*

Students also expressed a need for guidance on how to narrow down their research interests, especially for those who seemed to have developed interest in multiple research areas across disciplines:

> *"I am in the school of medicine and I find it difficult choosing a topic depending on the fields that we have; for instance, whether to choose a topic in medicine, surgery, gynecology or pediatrics. All seem interesting but, in the end, I have to work on one, but I am lost there".*

In their discussions, students felt that the process of finding a suitable research topic and generally the entire process of conducting a research project would be easier if they had more support on how to go about it, as evidenced in the quote below:

> *"It is the whole matter of going about it like what Core Africa is doing, teaching students on how to go about the research. Just studying in school and getting to a certain level and you are asked to write a thesis or do research and you don't know how to go about it and the whole thing just becomes a night-mare".*

The need for support throughout the different stages of conducting a research project is also reflected in the quotes below, where students describe other common challenges they face at different stages of the research process:

> *"For me personally, I have two challenges; when it comes to reviewing literature, I have a big problem. I tried to learn it, but I was not on track the first time, I will try again the second time". "Then to group data in data analysis; when we are analyzing the data, let me say for inter-group differences, I have a problem with that; and also where you get to talk about the p-value".*

This student expresses difficulties with reviewing the literature and analysing data, which are two key stages of the research process. Another student described struggling with data collection and not knowing how to address issues with sampling and response rates:

> *"I had a sample size of 300 to meet up, but when I administered my structured questionnaires, I realized that not all the participants filled my questionnaire. I had 233 questionnaires filled, and so about 70 questionnaires were still pending, and for me to get them to fill the 233 questionnaires was not something easy. I calculated my response rate and it was about 77.6%, in that situation, what can I do? I don't know whether to report it that way or what to do".*

This example describes a common phenomenon in the research process where things do not go as planned, and also identifies a need for guidance on what to do in these circumstances. When asked whether they had received any training on the subject, his repose was:

> *"To be honest I haven't received any training as far as going about the response rate of questionnaires".*

Students generally acknowledged that they had been taught statistical analyses at some point during their university studies, usually in the second year. However, there was a perception that *"there's no training to actually give you the skills that you're going to need when you start your research".*

Another common challenge students expressed was with citing sources used in their research reports and managing references:

> *''I think one of the problems is referencing. That is really a great problem because at times when we work on a project, by the time you open a website you have so many references and you cannot actually put one hundred and something references in the project. So, I really have a problem with referencing".*

As seen from the descriptions above, these students face challenges at all stages of conducting research. The findings highlight a need for more guidance on the process of finding a suitable research topic, as well as on the different stages involved in carrying out a research project.

Supervisors too busy or not always available:

Students generally acknowledged the role of their supervisors as being the primary source of support for their research projects. However, several students faced a challenge of not always being able to get access to their supervisors, as illustrated below:

> *''At times your supervisors are far away from you, sometimes even out of the country. It is not really easy; I think that is also a major problem for some of us".*

Meanwhile, other students felt that their supervisors were usually "too busy" or took very long to respond to their emails. In explaining potential reasons for this, students felt that this may be due to the workload of their supervisors:

> *"…obviously they have other things that they're doing – that they're working on, and sometimes maybe they have many students that they're supervising too so I think that's why".*

This raises an important discussion on challenges faced with research supervision, both by students and their supervisors. It brings in a question of how much time is allocated towards one-to-one support for students and whether research supervisors' other engagements may be preventing them from being as available to students as needed. Perhaps, peer support and additional support beyond the University and other academic institutions may play a major role in addressing this gap?

b. Course structure: timing of introduction of research

Students generally felt that the way their courses were structured and the timing of introducing research did not give them enough time to learn how to conduct research properly:

> *"Research is being introduced at a very late point, so it poses a problem, as many students are naïve to research when introduced at the tail end of their study, when they are about to carry out a project in their final year. So, it becomes really tedious and cumbersome, to have to assimilate a lot of concepts and information about research at once, alongside the project itself, and it poses a serious challenge to the students".*

As described, students feel that introducing courses on research towards the time when they are expected to carry out their own projects does not permit them to assimilate the "still very new" research concepts learnt and put them into practice. As such, they described feeling "confused" and "frustrated" when working on their projects, and these feelings were further compounded by the fact that they felt they did not have enough guidance:

> *"You just got to your final year and everyone is like, okay you're supposed to do your thesis, go out and do it. Nobody tells you about research ethics; about the fact that, okay you'll need to apply for ethical plan; nobody tells you about, uh…maybe the statistical analysis or what you'll need for your research. Yes, maybe we did Statistics in the second year, but it's a whole different thing when it comes to your thesis".*

The quote above highlights a gap between learning the theoretical concepts of research and being supported on the practical aspects of doing a research project. Students lamented on the lack of practical support, with many of them feeling "rushed" because they had limited time to complete and submit their dissertations.

c. Research as only a requirement to graduate

There was a common perception that research is usually seen by students as just a requirement to earn an academic qualification, often due to a lack of interest, a lack of motivation and a lack of awareness on the importance of research:

> *"Most of the time we do research just to fulfill a requirement to be awarded a degree, so it's not really like we are interested".*
>
> *''Sometimes they do it just with the intention of graduating, they just want to fulfill a condition to have written a dissertation and awarded either bachelor's degree or a master's degree''.*
>
> *"if students understood that research is important and were motivated to see that it's something that can help to solve some problems, I think they will get more engaged and more interested, and it will also make it less challenging for them".*

It was also reported that due to the numerous challenges preventing students from being interested in or enjoying the process of conducting a research project, in addition to the lack of appreciation for its importance, some students take shortcuts or develop "coping strategies" – usually research malpractices – in order to fulfill the requirement of submitting a thesis in order to graduate. For example:

> *"Sometimes they would sit in the comfort of their rooms and they fabricate figures and results and present, which may look very good to the eyes but they themselves know what they did".*
>
> *"Instead of carrying out the work from step to step, some students just tend to go to some libraries, copy some topic, and copy the whole research someone else has done and submit it so that they can just get through with the research, without proper understanding the whole thing".*

Such research malpractices were said to be "very common" and serving as an enabler for students in that it helped them to "avoid stress" and to "submit on time".

If students are made to understand the importance of carrying out research and the potential benefits of doing it the right way (e.g. skills to gain, increased confidence, ability to publish etc), this may stimulate the development of positive research practices.

2. Why students do not publish their research findings

a. Lack of awareness

The first and most prominent reason mentioned as accounting for why a majority of students do not publish their research findings was that students generally lack awareness about research publication – that is, they do not know that their findings can be published, and also do not understand the importance of disseminating research findings.

> *"The first thing I would like to say is lack of awareness entirely, like many students do not even have an idea that they can publish their research work. So, they lack awareness based on that fact and also on the fact that they don't know how to go about the publishing process. So they give up even before they begin, so most at times it's really lack of information and awareness on the fact that they can actually publish their research work and how to go about it".*

As earlier reported, students identified that their primary focus when doing research at the university is to *"finish and submit the dissertation"*, and that they normally do not think of things like presenting their work anywhere or taking their research beyond submission.

> *"You've reached at the final stage, you have to do a research project and you're just doing it because you want to meet up the criteria for graduation and leave, so what will you be wanting to publish? When you know you just did it to leave the school…".*

> *"Most students, when they do research, they think it is just a prerequisite for them to be able to earn a graduation, after they are done with their research thesis, they keep them in their cupboards".*

In explaining their reasons, students commented again on the structure of their research courses, stating that these mostly laid emphasis on earning marks and obtaining an academic award, with not much indication of how academic research could be useful, be it to them or to others:

> *"We are not informed about it…whether the advantages of publishing your research or how it can be useful. They don't talk about that".*

> *"I would like to say that what Core Africa has just done for this programme of yesterday and today is very very good – letting us to know the importance of publishing your research work because when we know the importance of publishing it…if we know the benefit of publishing our work, why won't we publish?"*

This lack of awareness resonated throughout the discussions, with several students mentioning that they usually get to learn about research publication by themselves, outside academic settings, and typically long after having worked on their research projects.

b. Lack of guidance and cost barriers

Secondly, it was reported that many students do not know how to go about getting their research findings published, and also lack guidance on where they could publish their research findings. The difficulties with finding information on how to publish and identifying suitable platforms where they could publish their research findings were further compounded by funding challenges, because *"you have to pay and it's not small money":*

> *"I did my thesis and I managed to publish it but I had to publish it 3 years after I had submitted my thesis. The major difficulty I had was that I did know how to go about the publication process, and also I knew that to publish an article in a scientific journal you had to pay huge amounts of money. Even aside that, I didn't know where to start".*

For some students, even after completing their academic work and having taken part in several research projects, they were still unable to publish their findings due to the lack of guidance and funding barriers:

> *"Personally I have participated in so many research projects, but I have never published because, first of all I didn't know how to go about it, and secondly the platform where I could publish, I had to pay; and that was a barrier for me. That's why I didn't publish any".*

c. Self-depreciation

Another factor reported was that *"some students tend to have the feeling that their work is not good enough, so there is no reason to even consider publishing*". For some, this came as a result of under-valuing their efforts and work:

> *"Maybe it's based on the way they evaluate it, you might think you didn't do your best, and it's not worth putting it out there. Even for some students who do good research that feeling is usually there that maybe it's not good enough".*

In another example, a student described feeling "scared" to put their work out there because they questioned the quality of the research based on the sample size:

> *"The reason why I was scared to publish my research work was because, I thought the sample size was small, because I was working with the second division players, and only 60 participants took part in my research".*

Again, this highlights a need for support on how students can address situations that are perhaps, different from what they had expected. Meanwhile, many students also believed it was not necessary to publish research findings where they had negative results, stating that *"it's of no use"* and *"a waste of time"* .

At the other end of the spectrum, it was reported that some students were unable to consider publishing their research findings due to the fact that they had taken shortcuts or adopted some research malpractices as earlier reported,

"…and so *you cannot think of publishing because you know that you played some tricks and your sources are doubtful"* or *"because their work was plagiarised and it's not accepted in research".*

While acknowledging that not all student projects can indeed be published, supporting students to consider sharing their research findings beyond academic walls can stimulate greater interest in their research, prompt the adoption of good research practices and ultimately, increase research output.

3. Factors that can positively influence students' research experiences

In the last phase of the discussion, students outlined factors they believe could positively influence their research experiences at the university, increase their knowledge and skills, and also increase their motivations to do research.

a. Early exposure

Students identified that introducing them to learning about research in the early stages of their university studies could give them more time to learn and better prepare them for their research tasks:

> *"I think it's something that should be introduced at the earlier stages in studies. It shouldn't be at the final stage where there are a lot of thoughts on the mind of students. If it is introduced from Level 1, Level 2, before they get to that level, they're already prepared".*

> *"Rather than waiting for students to conduct their research, collecting data wrongly and analysing that data and at the end of the day, you realise the mistakes you have made; its preferable to prepare them from the start".*

Early exposure was also cited as a factor that could encourage students to be more positive about publishing their research findings:

> *"If students are prepared from even level one or two about research writing, at the final level they are already aware, and already groomed that 'I am to do a research project and I know what I am getting into and how to do it'. So, in that process, when your research is done, obviously you would be like excited to publish your work because you know the value of what you have done".*

b. Mentorship

The need for mentorship was eminent, as students yearned for mentors who could guide them through the different stages of their academic research. Students felt that having mentors to support them would make a positive impact both on their learning experiences and research

outcomes. A few students shared their experiences of how they had been supported through mentoring:

> *"This guy who has been like a mentor for me, he has research at heart; in fact research is his hobby. So he has the tendency to also make students to love research. He gives you a wider spectrum of how research should be done, of how you should think about research and not just merely an academic requirement. He makes you fall in love with research, and it makes research easy…so those things have really influenced the way I look at research now".*

> *"I got to know it's possible to publish at zero cost because I found someone who had already been publishing in the field. So that's the person who guided me first of all with publishing my work; so I got mentorship for there".*

As demonstrated in the quote above, students' interest in and love for research can be ignited through mentors who are passionate about research. Unfortunately, very few students had benefitted from this form of support. Another advantage of mentorship as described in the quote below is the opportunity of having someone to follow students up.

> *"Some students need to be followed up. For example; for me, I need to be followed up, like you need to give the deadlines that "from this time to this time, this is what I expect from you and when you come, you're going to present what you have done, the challenges that you've had and then we're going to talk about them". So all of these things you can get through mentorship".*

While being important and beneficial for most students, follow-up is perhaps, even more needed for students studying in a conflict-prone environment such as Cameroon, where their education is constantly being disrupted by violent attacks (some targeting schools) and "ghost town days" where neither students nor teachers can go to school. Under these circumstances, students are further limited from getting access to and receiving support from their tutors and supervisors:

> *"Ok, like last year [2019] in Cameroon, we had some commotions; the Anglophone crisis, and many other things, so most students did their research particularly on their own, like in our department, our head of department was always in commotion with the military boys, so we didn't really have time to discuss things with him. He came to school once in a while and that was difficult, so it's this year that the school was relocated and we are now actually trying to get serious with research".*

c. Knowledge on the potential impact of research and research skills

Students felt it would be useful to know that there is a potential audience out there that could be interested in their research findings, and also that their research could potentially have an impact. In addition, they felt that they would be more motivated to do research if they knew how the skills they could gain from the process of conducting research could be beneficial to them in the future.

> *"Just by knowing the advantages can increase your motivation because most times when you understand something especially if it's beneficial for you, you start having passion for it. So*

yes, making students to know these things even before they do their research will motivate them"

d. Networking opportunities

Students identified that it would be beneficial for them to be given opportunities where they can attend conferences and interact with other researchers, as these would help them learn more about research, its importance and impact. They also felt that listening to what other students and researchers have done could inform their own research ideas.

"I think that if we had these opportunities to go and attend maybe conferences or things like that, listening to others speak might permit me to identify issues in my own area or gaps or even a new area which I would like to focus on".

CONCLUSION

The RME project was successfully delivered in Cameroon and well-received by participants. There was a high level of interest in the sessions delivered, which students also found to be very useful. In addition to student feedback, there was a high level of appreciation from researchers and other professionals in attendance.

Through this project we identified important knowledge gaps that need to be addressed, as these are likely to have an impact on students' research experiences, research abilities and research outcomes. Without intervention, students will continue to face these challenges during their academic research, which will inevitably have a negative impact on research quality and output in Africa.

These findings also identify missed opportunities for identifying societal challenges in Africa and tackling them. Academic research can make a useful contribution towards addressing pressing problems in Africa, especially at local level. For this to happen however, students need to have the right levels of motivation, guidance and support.

While the evidence presented in this report pertains mostly to Cameroon based on the population involved, there are similar challenges faced by university students in other African countries, as evidenced in our ATR surveys[1] and RME reports for other countries. These will be highlighted in our cross-country analyses.

RECOMMENDATIONS FOR UNIVERSITIES, OTHER ACADEMIC INSTITUTIONS AND RELEVANT STAKEHOLDERS

Based on the findings from this project, CORE Africa would like to make the following recommendations to the stakeholders specified:

Recommendations for the National Curriculum Accreditation Officials, Universities and other academic institutions

- **Early exposure to research** – Introduce students to research as early on as possible during the course of study to give them sufficient time to gain the basic knowledge and skills required to conduct research. Early exposure will also enable students to develop the motivation required to ignite their interest in research.

Recommendations for Universities, other academic institutions, and course instructors including lecturers and teaching assistants

- **Research awareness** – embed key messages about the importance of research to students and the wider society in research courses, including information on how skills gained from conducting research could enhance their professional development and employability.

- **Dissemination of research findings** – Develop strategies to support students to start thinking about the dissemination of their findings as early as possible, such as by introducing them to the concept of using research repositories, encouraging them to participate in student conferences, and guiding them in publishing their findings in research journals. This will not only add value to the body of existing knowledge, but will also increase the visibility of both the student and the institution to the wider research community.

- **Practice exercises** – Explore possibilities of integrating basic research activities into other non-research modules or courses. For example, encouraging students to use multiple sources of information when doing coursework, getting students to cite references during assignments, etc.

Recommendations for Stakeholder Engagement and Alumni Offices within Universities

- **Skill development opportunities and support systems**– create opportunities where students can engage in research activities and develop their research skills, such as by forming partnerships with organisations offering mentorship services or internships, creating peer-mentoring programs where alumni can support current students on academic research, and creating research clubs where students can learn more about research. It is important to ensure that these opportunities are consistent and are able to meet the students' needs (e.g. mentors being available when students need them).

Recommendations for the research organisations, think tanks and the Ministry of Higher Education

- **Research challenges and support pathways** – Engage both students and staff in the exploration of research challenges at academic level (including funding limitations and all other concerns highlighted in this report); and also in identifying opportunities through which academic institutions can be supported to maximize research outcomes and output.

PROJECT CONTINUITY AND FURTHER GUIDANCE FROM CORE AFRICA

The recommendations made above are aimed at helping to improve the student research experience, students' research skills and outcomes, as well as the research output of universities. CORE Africa hopes that the recommendations outlined are taken on board by universities and academic institutions in Cameroon and any other African countries with similar challenges.

CORE Africa runs a number of programmes aimed to support students with their academic research, such as our research mentorship scheme, research internships and snapshot reports/articles on different research topics published on our website and social media platforms. More information about our programmes can be found on the CORE Africa website (www.coreafrica.org).

Several Cameroonian students signed up to our Research Mentorship scheme after the RME programme, and the mentorship programme has shown great benefits on the research abilities, knowledge and skills of our mentees (see Appendix D).

After the RME programme, students requested for a similar programme focussing on the following areas:

- Developing a research proposal
- Quantitative research methods
- Qualitative research methods
- Data analysis
- Report writing
- Referencing
- Research publication

Based on the outcomes of this project, the RME programme will be continued to provide additional support to students, starting with these requests. CORE Africa is open to working collaboratively with universities to support students during their academic research, and are available for contact at admin@coreafrica.org.

This report is available online for download via the CORE Africa website and printed versions will be distributed to academic institutions and key stakeholders in Cameroon.

ACKNOWLEDGEMENTS

We would like to thank all the students who shared their experiences with us, and also the researchers and other professionals for their input in the discussions. We also acknowledge the collaborative efforts of all individuals and organisations who supported us in spreading the word and reaching out to potential participants.

REFERENCES

1. CORE Africa (2018) Attitudes Towards Research: Research Barriers at Secondary School Level, and Experiences Of University Students in Africa. Available at: https://coreafrica.org/wp-content/uploads/2020/05/ATR_university-students-1.pdf

APPENDICES

Appendix A – RME flyer

Appendix B – Courses studied by students who attended the programme

Health-related courses

- Biochemistry
- Nursing Sciences
- Biomedical Sciences
- Epidemiology
- General Medicine
- Public Health
- Medical Laboratory Sciences
- Parasitology
- Pharmacology
- Physiology
- Radiology

Non-health related courses

- Communication
- Geography
- German Language
- Global Challenges
- Journalism
- Mechanical Engineering
- Nuclear Engineering
- Project Management and Evaluation
- Soil Fertility
- Supply chain management and Logistics
- Technology and its impact in Cameroon

Appendix C – RME programme schedule

THE COLLABORATION FOR RESEARCH EXCELLENCE IN AFRICA (CORE AFRICA)

Programme for Research Made Easy: An Introduction to Basic Research Concepts

Free webinar for university students

Friday 22nd May 2020

5:30 – 5:35 PM	Welcome and programme introduction (5 mins)
5:35 – 5:55 PM	About CORE Africa (20 mins)
5:55 – 6:15 PM	Importance of research to students and society (20 mins)
6:15 – 6:20 PM	*********Break*********(5 mins)
6:20 – 7:00 PM	The research process (40 mins)
7:00 – 7:10 PM	Common myths about research (10 mins)
7:10 – 7:15 PM	Announcements and closing remarks (5 mins)

Saturday 23rd May 2020

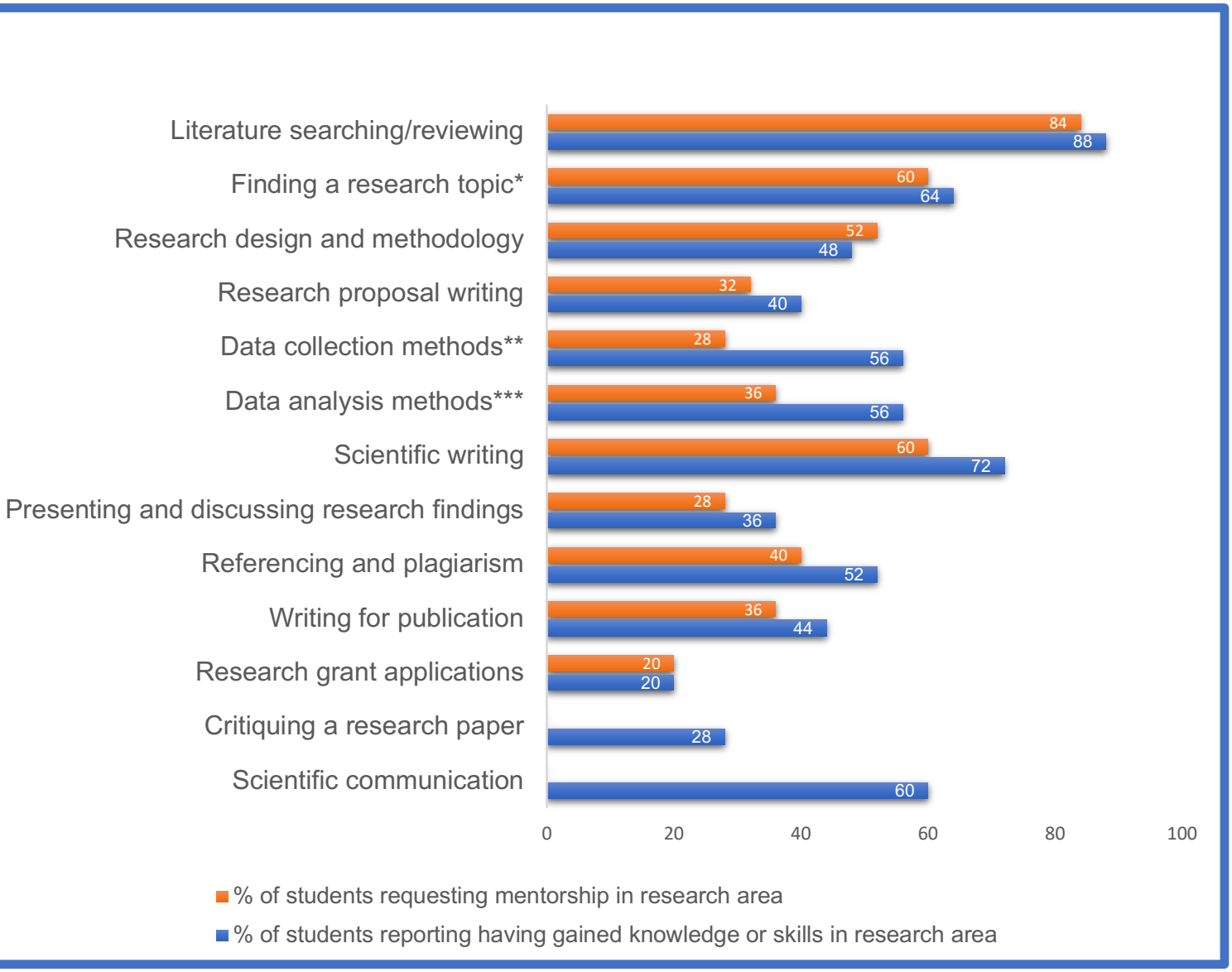
5:30 – 5:35 PM	Welcome and programme introduction (5 mins)
5:35 – 6:05 PM	Finding a research topic (30 mins)
6:05 – 6:15 PM	Research dissemination (10 mins)
6:15 – 6:20 PM	*********Break*********(5 mins)
6:20 – 7:05 PM	Shared experiences on research challenges and proposed solutions (30 mins)
7:05 – 7:15 PM	A word to students (10 mins)
7:15 – 7:25 PM	Further questions (10 mins)
7:15 – 7:25 PM	Closing remarks (5 mins)

*Sessions include 5-10 minutes at the end to take questions from the audience

Please note:

- Session times may change slightly during the event due to network or other technical issues. We advise that attendants join the meeting at least 5 minutes before the programme starts.

Appendix D (i) Impacts of the CORE Africa Research Mentorship Scheme (CARMS)



*Requests for mentorship on finding a research topic including support on formulating research questions, hypotheses and objectives
** Requests for mentorship on choosing appropriate data collection methods including practical support e.g. designing questionnaires, developing interview questions, etc
***Requests for mentorship on analysing different types of data s including practical support e.g. choosing appropriate statistical tests, using statistical software, etc

Note: Most mentees gained knowledge and skills in other research areas besides those they requested support for (e.g. while 84% of mentees signed up for mentorship on literature searching and reviewing, 88% reported having learnt how to do this from their mentor).

Some mentorship areas shown in the figure were not included in the mentorship request form, but mentees reported gaining knowledge and skills in those areas (e.g. critiquing a research paper and scientific communication).

Appendix D (ii) – Mentee feedback on the CARMS

Appendix E – Team members involved in the development of the RME project and preparation of this report

Steering Committee and presenters

Dr. Lem Ngongalah

Program Coordinator

CORE Africa

Rawlings Niba

Director of Programmes

CORE Africa

James Musisi

Director of strategy

CORE Africa

Dr. Emerson Wepngong

Programme Support Officer

CORE Africa

Programme facilitator

Dr. Kimonia Awanchiri

Programme facilitor

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