

Faculty: Medicine

**Department: School of Public** 

Health

Module: Research Portfolio 4
Degree: Global Master of
Public Health (GMPH)
Level: Postgraduate
Number of students: 105

Weighting: 90% Module ECTS: 15 Module Type: Core

### Journal article

#### Assessment overview

The journal article is a 4,000 word written account of a piece of research based on students' final research projects. The assessment is part of a Research Portfolio module delivered on the Online Global Masters of Public Health programme. The article tests the authentic skills of being able to write up a research project clearly, concisely and work to the specifications of the journal article students might want to submit to once the assessment process has been completed.

#### Programme overview

The Global Masters of Public Health is a fully online degree with approximately 100 students per year from different parts of the world. The delivery takes place through Coursera platform with synchronous and asynchronous sessions delivered throughout the programme. Students on the programme are part time mature students who often hold full time jobs and are live in time zones across the globe, necessitating that the programme runs over a long duration, in this case usually over 2-3 years (there is a 2 year and a 3 year pathway to the degree).

The programme aims to mirror the Masters of Public Health programme which is delivered full time on campus. The main assessment point on both programmes is the ability to design and deliver a research project on a topic of students' choice and be able to present the results in writing and orally (traditionally in the form of a dissertation and a viva). The difference between the two programmes is twofold. Firstly, the two final assessments are different yet related—a dissertation and a viva for the on campus cohort and a journal article and a vlog for the online cohort. Secondly, and the on-campus students are encouraged to design their own research question and project; however, can also choose from a list of projects that staff put forward (e.g. research projects staff have developed). All online students design and develop their own project (there is no list of project to choose from).

#### **Design decisions**

#### Rationale for the choice of assessment

One of the aims of curriculum review was reducing assessment burden and making sure that assessments were varied, <u>authentic</u> and appropriate. Authenticity was therefore the main driver for the assessment choice and design. The team wants to build a community of Public Health researchers, and to do that they want to train them to be able to feel confident to read, understand and undertake research, and be able to write it up. With the journal article, it was felt the students were taken through the entire process of identifying a problem, developing their research question, collecting data, and writing it up in a research journal article, mirroring the real research process. Overall, <u>this is thought to be more authentic</u> than a dissertation.

The team's intention is not to pressure students into publishing, however, they are given training to do so. As Imperial is a research intensive

### **Insights colour key**

**Educational Developer** 

Inclusivity

**Learning Designer** 

Registry

**Careers** 



The idea behind this type of assessment is to allow students to produce something more authentic and in some way practical, given the characteristics of the cohort. It definitely appeals to those students who want to carry onto research or who want to publish. Students can develop skills around writing concise information, conveying content that are important in this line of career and reworking content to fit the audience of the journal. Selecting the journal also helps to develop important skills as students learn to understand the environment within which they will be operating.

Transferable skills included in producing a dissertation and a journal article are similar. What is important to highlight is that students on the online programme are from across the world and employers in different parts of the world could be looking for different things - some will value the research aspect, especially the published one, more. Hence for some students, especially the ones hoping for a career in research, a journal article will be a more appealing and authentic option.

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institution and it natural and usual for students to have ambitions in this area. The assessment therefore acts like the first round of peer review - before they even submit it to a journal article it gets double marked and feedback is provided. This means that students can use that feedback to improve their article and submit it to a journal once the assessment process is over if they wish to.

The word count is also designed with authenticity in mind. 3,000 to 3,500 words (plus a 500 word abstract) is the limit for a lot of journals within Global Health. Initially students end up writing more to start with, and then cut down, as often happens with researchers. A short word limit forces students to be cautious about what they report on, and to think about the most important aspects they want to get across, as one would do for a journal.

The research writeup parts that students with dyslexia or specific learning difficulties struggle the most are literature reviews. The reason for it are the difficulties with controlling the flow of information. When working with a bigger number of sources it can be difficult to structure the writing in line with the hypothesis. This is where tools such as concept matrix alongside a visual spacial plan can be useful. Traditionally, students wanting or needing support from the disability office would be supported in isolation, however, integrating those tools into the broader module level teaching can be also beneficial to other students.

While justification is very important, there is a clear difference between justifying something in 11,000 words in a dissertation and justifying something in 3,500 words in a journal article. This is effective in enabling students to think about the words they use, and which sections are most important. The students aren't given advice on how many words to use per section as this varies depending on methodology. The methodology adopted by the students for their projects differs, so there are students undertaking primary data collection--quantitative, qualitative but others are also doing secondary data analysis or systematic or scoping reviews. For that reason it is difficult to provide them with definitive guidance as to the word count for separate sections. The students are rather advised to have a look at published journal articles based on their own methodology and see what the authors chose as most important within each section and then come back to their own project and look at tha.

Another reason for implementing the journal article is to have better parity with the on campus Masters students, who prepare a 9,000 to 11,000 word dissertation. The Research Portfolio is made up of four consecutive modules (RP1, RP2, RP3 and RP4). Across RP1-RP3, students have already submitted a search strategy, a 1,500 word literature review, a 1,500 word research proposal plus two 500 word essays (on ethics, public involvement or funding). By the time they come to RP4, they have already written approximately 4000-5000 words on their research project. Although there are four modules, these are almost considered as one big overall module and these works all together making up the dissertation. If students were asked them to write another 9000-11000 words, there would not be parity



Giving students a choice is very valuable, however, it is important to bear in mind that there is a balance to be struck between giving students appropriate choice and agency – but also ensuring that they are sufficiently informed / supported in the choices they make, particularly if this can have implications for future study and employment prospects.

Assessment design that allows students to build up the necessary skills that they can take forward can facilitate student learning. The main consideration is to ensure that the same task is not (in effect) assessed twice as part of a different module at a later stage; the nature and purpose of each assessment at each stage has to be sufficiently discrete to ensure that students are building / progressing on what they have done previously and not simply replicating it.

Assessment design that builds on other assessment pieces across the modules is a good way to bring all the learning together, historically this is the purpose of the dissertation.

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with the on-campus cohort.

The ethos of the assessment is built upon the foundations of treating students as partners in their own learning. This means that the team want to give students the space to make the choice of what they want to study, what they're interested in. This is the reason why there isn't a list of research questions for students to choose and explore but rather the students are asked to pick the topics that they're interested in.

**Fit with other assessment methods on the module and programme**The module aims for students to achieve the following Intended Learning
Outcomes:

- 1. Conduct a research study in order to answer a research question;
- 2. Structure a paper that sets out all the elements of research in a clear, articulate, concise and precise manner;
- 3. Critique methods or data used and use ancillary insights to suggest how these could affect the conclusions;
- 4. Draw conclusions and formulate recommendations to inform further research, practice, and/or policy;
- 5. Clearly explain findings to a lay audience in order to engage the wider public in research;
- 6. Design a comprehensive dissemination plan to maximise the impact of the research.

There are four modules that are interlinked, i.e. Research Portfolios 1, 2, 3 and 4. The journal article is at the end of research portfolio 4 and throughout those four modules the students design and develop their own research project. In research portfolio 1, they design and develop the research question. They complete a literature review which they are advised to use as the basis for their introduction section for their journal article, i.e. amend it from 1,500 words to an appropriate number of words for their article and research. In Portfolio 2, they design and develop their methodology. They prepare a protocol which should be used as the basis of their methods section for the journal article (with amended word count). In Portfolio 3, they apply for ethics if required. And finally in Portfolio 4 they undertake their research and then they write it up as a journal article. Throughout the different modules there are different assessments and it's not just the journal article that is the final one at the end of RP4 (research portfolio 4). RP4, however, has the highest weighting out of the masters because it's equivalent to students undertaking their research. The journal article is the accumulation of these four modules work and the final output. Other assessment methods across the RP (Research Portfolio) modules include:

- RP1 (5 ECTS) Search Strategy (no word count) 15%, Research question and literature review (written assessment, 1500 words, 85%);
- RP2 (5 ECTS) Research proposal (written assessment, 100%);
- RP3 (5 ECTS) (choose two topics from ethics, funding, public involvement and write a 500 word essay (50% for each essay)

The Journal Article assessment indirectly links to other modules on the programme as students go back to what they have previously learned,



Having a clear guidance about what is expected from the students that is written in an accessible way is important to ensure all students can engage appropriately with the assessment task. What we do see a lot of are briefs that are unnecessarily wordy and don't actually clarify clearly what the aims, objectives or outcomes are. This means that students need to do the extra work of picking out what is important. This is why a step-by-step bullet point guidance notes that are text light and written in a clear and concise way are more accessible and inclusive.

Exemplars can be a very useful tool to help students understand expectations around assessment. One suggestion is to incorporate the exemplars into a specific teaching activity on using exemplars critically. If this is not possible, providing prompt questions to encourage students to think critically about the nature, strengths and limitations of the different exemplars can direct their thinking to specific aspects of the work.

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and identify the aspects they find interesting. Throughout the Masters, students gain experience in journal clubs, where they read, research, and evaluate others' work which assists in writing their own journal article. Public Health Research (i.e. the research portfolio as a module) is a massive area that overlaps with several other modules. For example, in term 1 EPI (epidemiology) module, covers several aspects of quantitative studies. This means that anyone taking a quantitative study is likely to go back to EPI and revise using their material. The Participatory Approaches in Public Health module covers a lot of participatory approaches, qualitative research, directly linking to informing students' study design.

In terms of assessments on RP4, the journal article is followed by a 5 minute vlog (please read a case study here) where students summarise their research to a non-scientific audience, so this assessment directly links to the journal article with the exception that it is aimed at a lay audience. While the journal article is thought to be equivalent to a dissertation, the vlog is thought to be equivalent to a viva.

#### **Practicalities**

#### **Preparation for Students**

The students are given the handbooks for the research portfolio in the induction period at the start of September. There is an induction session where the team invites them to go over what the research portfolio is and what assessments are involved. This is where students can read about the journal article. The assessment requirements are outlined at that point explaining the brief, outlining the criteria involved in the assessment, including the rubric, percentage weighting, and when the assessments are due. This is done early as students tend to feel some anxiety about such a heavily weighted component of the degree. Transparency is important and the team are open about it throughout the entire Masters so students can ask questions.

The team also organises a live session closer to the assessment date. This is an opportunity to go over the assessment, the rubric, the expectations and answer any outstanding questions. Throughout the RP modules, they provide exemplars for all written assessments. For the journal article, they provide an exemplar per each methodology. Students do like having access to exemplars, but they don't specifically state how or why it is useful. The on-campus students are provided with examples of dissertations as it helps to see what the expectations are. The team have noticed that some students do seem to copy the style of the exemplars that have been provided so they wish to review this practice prior to the next iteration.

#### Supporting students through the project

Students are supported by working with supervisors. Each student is allocated to a project support group starting in Research Portfolio 3. In Research Portfolio 1 and 2, the main source of support is the teaching



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team. From Research Portfolio 3 to 4 where students have to submit the journal article, they are allocated to a project support group where there is one member of staff (this could be a Teaching Fellow or an Academic) that does group supervision. Each group has five or six students. Students are allocated to supervisors based on research interests and or methodology.

The expectations of the supervisors is that they have to read the journal article and provide feedback; this can either be in sections i.e. someone could submit their introduction or methods separately or they could just submit the full assignment that would be fed back on in one read. This feedback is important due to the high weighting attached to the journal article. The team wants students to feel that they are being supported: they can go to the supervision meetings, ask questions while they're undertaking their research, talk to staff regarding any problems that arise, and when they are writing up, and they can get direct written feedback about each of their sections so they can improve it prior to submitting.

The teaching team also supports students through drop in sessions. Every 4 weeks students can drop in and ask questions whether that be about the assessment or about their own research or if they just want to talk because this final term is very different to the other terms. In other terms they have regular teaching sessions as they're undertaking three or two modules while in the final term it really feels like most of that scaffold goes away because there aren't regular teaching sessions as part of the RP module. It's really just them focused on their research. So the supervision support as well as the drop in sessions are important.

The problem the team are facing is that their students are across the globe, so they can't always attend. Hence it is important to give students other channels of communication as not everybody can always attend live sessions. Hence the students can e-mail at any point or make use of the online discussion forum if they wish. Many students have said that in this last term they feel lonely and they feel like it's really just them by themselves because they don't have regular classes. In response the team tries to make sure there are spaces where they can go, feel supported and feel like at least there is some structure. Generally there is poor engagement with the discussion forums. Students either ask questions during office hours/teaching sessions or via e-mail. They are reluctant to ask questions via discussion forum.

Forums need to be regularly monitored and questions responded to promptly, so that students feel they get a 'better deal' if they ask on a forum. Sometimes, students are a bit self-conscious about asking under their own name - tools like Ed (the College discussion tool) allow for 'pseudo-anonymous' posts - author's name is hidden but retrievable by the teacher should there be misconduct or other concerns. Forums should also be regularly signposted and students reminded that they are the main platform for communicating with faculty. If several forms are given (email, forum, etc.) students will not naturally go to forums.

Engaging students in online discussion has been identified as a big challenge for many practitioners. The earlier students are encouraged to engage with the forum, the less daunting it will be. Specific tasks can be used to get the students involved in it early on but the success of a forum can often rely on how it has been set up and moderated. There are a number of other suggestions in this resource:

EDU-guide-to-facilitating-anonline-discussion-forum.pdf (imperial.ac.uk)

#### **Submission, Marking, and Moderation**

The work is submitted through an online virtual learning environment,



currently Wiseflow, in the past Coursera. The team set-up two submission portals as student submit two versions of the same assignment - one with acknowledgements that won't be marked and one without acknowledgements that will be marked. While this is a smaller output than the dissertation the team still want to give students a chance to thank whoever they might wish to thank and acknowledge throughout the hard work. The two portals that are clearly labelled so anonymous marking is not compromised.

There are two blind independent markers marking the assignments separately taken from the academics in the school of Public Health. Those markers are identified from the department based on their interests and research methodologies they apply in their own research. The submission day is mid-September. The first marker discusses the work with the second marker and they combine their comments to provide to the student.

If the two markers are within 5% of each other within the same grade category--so if one gave 61 and one gave 64, they can just take the average. But if they're over a grade boundary, so one giving 69, one giving 71, they have to moderate; or if they're over 5% different, so one giving 61 one giving 68 they have to moderate. The nature of Wiseflow set up means that the first marker on the system acts as the reviewer. Once the second marker finishes marking, the first marker will be able to see if moderation is required. The two markers will discuss, combine their comments together and then they submit their final scores and feedback. There are no strict guidelines as to what this form of discussion needs to be, so it could be in person by a phone or video call, or by e-mail, as long as there is some form of discussion and agreement on the final mark.

Sample moderation is applied to some samples - one of the module leads reviews a percentage of assessments. The fails have to be reviewed, and then a range of the other marks - some passes, some merits, some distinctions - get sent for both the journal article and the vlog (the other assessment method) to the module lead. The lead reviews the grading and the feedback and intervenes if and when necessary. Feedback for the journal article is further moderated by the five teaching staff for RP4 - each

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take a selection of (all) the students' journal articles and read the feedback to make sure they are happy with the feedback that goes out to students. While this worked in the past the future feasibility of such a robust marking and moderation practice can be questioned with the cohort of 105 students this year (as opposed to 60 in the previous years). This year other leads who are familiar with the programme are asked to review the marking alongside the RP team.

The team developed the rubric based upon the rubric for the dissertation for the on campus equivalent, but it was adapted to what was most appropriate for the journal article. Those two assessments are seen as equivalent because both of them are supposed to showcase the research project that the student has undertaken independently, with the recognition of different word limits for each. The criteria are as follows:

- Abstract Is the abstract clear, focused, concise?
- Introduction Has the student consulted, read and understood the related literature? Is the literature appropriately cited and referenced? Has previous research been critiqued? Is there an effective justification of the aim?
- Methodology Are methods described in detail?
   Do they reflect sound scientific practice? Were they implemented in a creative, problem solving fashion? Are ethical issues considered (if appropriate)?
- Results Have the results been presented appropriately? Are the results complete?
- Discussion Has the student demonstrated a critical understanding of the results and their implications? Has the student appreciated the limitations of the data/methods and discussed the subsequent generalisation of results and directions for further work?
- Writing style and referencing Style including delivery, language, tone, and grammar

Please click here for the full rubric.

#### Feedback

Once the assignment is formally submitted students receive summative feedback and a grade. The journal article is the only assessment throughout the RP four modules that is a must pass, given its importance and high weighting, so students have to get at least 50% to pass it.



Formative feedback is provided by the supervisor linked to the criteria. The supervisors are provided with the training that clearly outlines what the expectations are. They are asked to provide feedback on a full draft (either in section or for the entire journal article). There is, however, no guidance that this process cannot be repeated and the work cannot be looked at more than once. However, because all the supervisors have five or six students, it isn't feasible to read through each work multiple times for every student. The guidelines, however, will be made clearer for this year making sure that the work is looked at once to ensure consistency and fairness across the supervisory groups.

In terms of summative feedback, students are provided with combined feedback from the two markers alongside their grade. In terms of engagement with this feedback there is a suspicion that a lot of students just look at the grade and are less interested in the feedback but there comes a time when they will find this feedback useful. This is because the majority of students didn't have any experience with research prior to starting the programme hence doing the project is a big undertaking. Feedback is important for them to understand what they did well, what they could improve on, and particularly for anyone who's interested in publishing, what to improve on prior to submitting their article to their chosen journal. The students are briefed about the purpose of feedback and it being a process, however there is more that the team could do in terms of putting the point across especially for those students whose intention is not to publish, as they might find summative feedback less useful.

In order to ensure that feedback is taken on board the structure and signposting of the feedback is key. This can be achieved through making it clear from the headings / sections what each part of the feedback is intended to address — to focus students' attention on the value.

#### Advantages of the assessment type

 The authentic nature of a journal article puts students in a good place to publish the work they were doing extending the audience for their assignments beyond the markers;

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 Giving students the freedom of choice to pursue their interest can help them sustain their interests and motivation

#### Limitations of this assessment type

- Writing the rubric is difficult because of the range of methodologies that students can apply. Hence the question of "is their research methodology scientifically appropriate", which is one of the criteria, can be difficult to unpack and assess given that one student is doing a qualitative study, one is doing a secondary data analysis, one is doing a survey or a systematic review or a scoping review. The rubric covers what students are marked on, but it can't be as specific as one might want it to be because there's so much variety that makes it difficult;
- This has implications on marking allocation that then limits the pool of assessors to those familiar with a given methodology. This is particularly challenging for qualitative projects. Within School of Public Health there are only a limited number of staff who are familiar with this methodology and it can be difficult to identify appropriate markers;

#### **Advice for implementation**

- Supervisors, students and markers need to be given clear detailed guidance regarding the assessment and the purpose of the assessment. For the markers and supervisors guidance on feedback (including how to write constructive feedback and what to focus on) would be beneficial:
- Keeping track of how students engage with their supervisors and supervisors and whether both are responding on time is important;
- Identifying appropriate markers for diverse projects takes a long time so needs to occur far in advance;
- Having a more detailed rubric could be beneficial.
   In the case of this module this is not possible.

   Providing training or guidance to staff and students regarding expectations is equally important;
- Consider the possibility of plagiarism, especially as the cohort includes students from different academic backgrounds where the standards may vary. A similarity checking tool may be helpful, provided both staff and students are trained in



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- how to understand its function and the score it gives;
- Make sure that the way the brief is presented to the students is written with inclusivity in mind, this includes being concise and using font that is accessible for students with specific learning needs such as Arial or Verdana;
- It is useful to direct students to inclusivity tools that all students could benefit from such as concept matrix which can help them better organise their ideas
- When providing feedback ensure there is useful information that students can take forward in the future. This could include comments about publishing or some useful transferable advice they could use when working outside of academia;
- When integrating exemplars ensure that these are discussed alongside marking rubrics to help students develop better understanding of what different criteria mean in practice and what performance at different grade boundaries looks like.