Handbook of
Output Based Learning (OutBaL):
A Complete Research Learning

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Foreword

Handbook of Output Based Learning (OutBaL): A Complete Research Learning is structured as a complete innovative approach to research learning, which does not only end up with research reports, but continues until the realization of research outputs in the form of scientific publications, such as journal articles, proceedings or monograph books are realized. With the publication of student research findings, the innovations found can be used directly by the community, both for application and further research.

Complete learning to output like this is also expected to have a big positive impact on the development of higher education, both in terms of student and lecturer performance. Such transformative learning outcomes will ultimately foster a more dynamic, innovative, and globally competitive academic environment.

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INTRODUCTION

Importance of Thorough Research Learning for Students

Learning about research is a crucial aspect of higher education. For students, research skills are not merely part of the academic process but also a crucial tool in developing critical, innovative, and solution-oriented thinking patterns to address real-world problems in society. Therefore, research learning must be thoroughly implemented. Thoroughly learning about research will produce a generation of intellectuals who not only master theory but are also capable of validating, evaluating, and creating new knowledge that can be presented to society [1-3].

Research is defined as a systematic process for acquiring accurate and accountable knowledge [4]. In the context of student learning, several essential aspects of research in the academic world are detailed as follows:

1. Sharpening logic and analysis
   In this case, students are trained to identify problems, formulate hypotheses, and develop arguments based on data and facts.
2. Encouraging intellectual independence
   In this case, research demands exploration, which stimulates students to become independent thinkers.
3. Cultivating academic ethics
   In this case, academic ethics can be cultivated through the process of literature review, data collection, and report preparation. Students learn the principles of ethics and scientific integrity.

Completely learning about research indicates that students not only understand research methods but are also

able to apply them comprehensively. Furthermore, the benefits of thoroughly learning about research include:

1. Increased competitiveness
   In this case, students who master research tend to be better prepared for the world of work and further academic pursuits.
2. Contextual solutions to local problems
   In this case, research can be used to address issues such as stunting, access to healthcare, or community-based development.
3. Soft skills development
   Completely learning about research can train perseverance, systematic thinking skills, and academic communication skills through seminars or publications.
4. Production of new knowledge
   By thoroughly learning about research, students become not merely consumers of knowledge but also contributors to the development of their disciplines.

Although thoroughly learning about research is crucial, research learning often encounters obstacles such as lack of guidance, limited literature, or low interest. Therefore, improvements and enhancements are needed, such as:

1. Project-based research mentoring, manifested in the form of collaboration between lecturers and students in real-life research.
2. Integration of the research curriculum, namely making research learning part of each course and not just a final project.
3. Utilizing technology, realized through the use of platforms such as WordPress, SLiMS, and statistical data analysis tools, can accelerate the research and publication process.

From the above description, it can be emphasized that a thorough study of research is a crucial foundation for students to become intellectually competent, resourceful, and solution-

oriented individuals in facing various local and global challenges. With a thorough and consistent approach, students can make research a lifestyle of academic excellence with broad impact [5].

Importance of Output Based Learning

Students' final assignments in the form of research provide opportunities for them to apply the science and technology they have acquired during the learning process, using logical and systematic scientific methods so as to produce innovative works that are expected to be utilized by the community [6-8]. Thus, ideally, this learning does not only end in the completion of research reports, but until the realization of scientific publications such as journals, proceedings, monograph books and so on.

Until now, there have been many universities that require undergraduate students to publish their research results [9-11], but in general they carry out scientific publications independently outside the guidance of lecturers, in the sense that they are no longer part of the research learning process in the curriculum. With the lack of experience regarding the publication of research, then of course this is very burdensome for students.

Based on the above background, it is necessary to create an innovative new learning approach that can help students to realize research outputs in the form of scientific publications smoothly. Therefore, it was agreed to add new lessons in the curriculum as a continuation of the student's final project, specifically to facilitate students in conducting scientific publications as the output of their research activities. Therefore, this new lesson is implemented with a new approach called

“Output Based Learning (OutBaL)”, which shows that this learning sets OUTPUT as the ultimate goal.

In this research-based learning approach, lecturers serve as dedicated mentors, offering systematic and intensive guidance to students throughout each stage of the academic publishing process. Their role begins with assisting students in writing scholarly manuscripts, ensuring clarity, coherence, and scientific rigor. This support continues into the submission phase, where students are coached on formatting, journal selection, and submission protocols to enhance their chances of acceptance.

As manuscripts progress through peer review, lecturers provide hands-on mentorship during the revision process, helping students interpret editorial feedback and make substantive improvements. They also support students during the editing stage, collaborating to polish the language and structure of the work in preparation for final publication.

To facilitate the success of these academic endeavors, the university has established formal collaborations with several reputable scientific journals. These journals generously offer publication opportunities to students at no cost, thereby removing financial barriers and promoting equal access to academic visibility. Such partnerships not only encourage scholarly engagement but also empower students to contribute meaningfully to the broader scientific community.

Purpose of Output Based Learning

By implementing the OutBaL approach within the framework of research-focused learning, students are encouraged and expected to cultivate academic and professional competencies related to scholarly publishing. The

following activities outline the learning outcomes that students are anticipated to achieve:

1. Write a manuscript for publication in a journal or conference proceedings, or prepare a draft monograph:
   Students are guided to develop original academic works, either in the form of scholarly articles suitable for journals or conference proceedings, or comprehensive draft monographs that encapsulate in-depth research findings.
2. Submit manuscripts to journals or proceedings, or submit draft monographs to scientific book publishers:
   As part of the publishing process, students learn how to formally submit their academic writing to reputable publication channels, including peer-reviewed journals, conference proceedings, or scientific publishers specializing in academic books.
3. Revise the manuscript or monograph draft based on editorial and reviewer feedback:
   Students are trained to interpret and incorporate corrections, critiques, and suggestions provided by editors and peer reviewers, thereby refining the academic quality and rigor of their work.
4. Collaboratively edit manuscripts or draft monographs with the editor:
   During this stage, students engage in a collaborative process with professional editors to further enhance the clarity, coherence, and structure of their manuscripts or monographs, preparing them for final publication.
5. Monitor the publication process from the completion of proofreading to the release of full-text articles and assignment of DOI:
   Students take an active role in tracking the post-proofreading stages, which include verifying final layouts, confirming the issuance of full-text access, and ensuring the

allocation of Digital Object Identifiers (DOIs) for citation and indexing purposes.

6. Register and monitor the indexing status of articles or monographs, along with author profiles, on Google Scholar: To enhance visibility and academic impact, students are also expected to manage their presence on scholarly indexing platforms like Google Scholar. This involves registering their publications, verifying authorship metadata, and periodically monitoring citation metrics.

Benefit of Output Based Learning

The implementation of the OutBaL approach in research-focused learning is designed to foster a range of impactful benefits, not only for students but also for lecturers, institutions, and the academic ecosystem as a whole. These anticipated outcomes include:

1. Students will graduate with comprehensive research competence:
   Through structured and purposeful involvement in research-based activities, students gradually develop a comprehensive set of academic skills that are vital for their intellectual growth and future career pathways. These activities train students to craft well-organized and scientifically sound manuscripts, fostering competence in academic writing that adheres to scholarly standards. The process also introduces them to the intricacies of peer-reviewed publishing, where they gain experience in responding to reviewer feedback, revising manuscripts, and understanding ethical guidelines in research dissemination. In addition, students improve their scholarly communication abilities, learning how to effectively convey research findings, engage in academic discourse, and contribute to

the broader dialogue within their field. These experiences not only strengthen their analytical and critical thinking capabilities but also build confidence in navigating academic platforms and communicating across professional networks. By mastering these core competencies, students are equipped with a strong foundation that prepares them to pursue advanced studies, engage in knowledge production, and thrive in research-intensive or publication-oriented careers.

2. A robust publication track record can serve as a valuable asset for graduates entering the workforce:
   By actively engaging in the process of publishing scientific articles or monographs during their academic journey, graduates cultivate a distinct competitive advantage that sets them apart in both academic and professional arenas. This experience showcases their initiative, discipline, and intellectual maturity—qualities highly valued by employers, research institutions, and graduate programs alike. The ability to navigate the rigors of scholarly publishing reflects a strong capacity for critical thinking, rigorous analysis, and structured communication, demonstrating that these individuals are capable of contributing meaningfully to the advancement of knowledge in their respective fields.
   Furthermore, having a publication track record during university indicates that graduates are not only familiar with research methodologies but have also successfully participated in the dissemination of original findings. These contributions can significantly strengthen their curriculum vitae, lending credibility and substance to their academic profile. In career development contexts, this background signals professionalism, research competency, and readiness to engage in evidence-based practices—making graduates more appealing candidates for competitive roles

in academia, industry, policy-making, or other knowledge-based sectors.

3. Lecturers, serving as research supervisors, can expedite the realization of scientific publications:
   With students actively engaged in producing scholarly works that meet the standards for publication, research supervisors are presented with a valuable opportunity to harness this academic energy to pursue their own publication objectives. The mentoring relationship often evolves beyond traditional supervision into a more collaborative dynamic, in which supervisors play dual roles as academic guides and co-authors. Through this partnership, students gain professional exposure and credibility, while supervisors contribute their expertise to refine and elevate the quality of the work.
   This synergy leads to tangible academic outputs that benefit both parties: students receive firsthand experience in navigating the publishing process—from manuscript development to submission and revision—while supervisors can align these contributions with their own research agendas, accelerating the fulfillment of institutional publication targets. In some cases, the collaborative research may open new avenues for further study or interdisciplinary inquiry, reinforcing the intellectual connection between student and mentor.
   Moreover, this model fosters a scholarly environment in which trust, mutual respect, and academic rigor are cultivated. By treating students as emerging peers in the research process, supervisors help create a more inclusive and dynamic academic culture. Ultimately, the combined success in publishing not only enhances individual academic portfolios but also contributes positively to the reputation and productivity of the institution.

4. Enhanced academic interaction and collaboration between lecturers and students:

   The OutBaL framework serves as a catalyst for cultivating an enriched and forward-thinking academic environment. It emphasizes active engagement and continuous dialogue between students and lecturers, encouraging learners to go beyond passive absorption of knowledge and instead become active contributors to their academic development. This interactive process is grounded in structured discussions, critical analysis, reflective feedback, and iterative collaboration that take place throughout the learning cycle.

   Lecturers, in their role as academic mentors, do more than deliver content—they guide, question, and co-navigate complex topics alongside students. Students, in turn, are empowered to express ideas, challenge assumptions, and apply theoretical insights to real-world scenarios. These exchanges help to build a community of inquiry, where diverse viewpoints are respected, and rigorous academic exploration is embraced.

   As students and lecturers engage in joint problem-solving and manuscript development, they build a foundation of mutual trust and respect. This relationship not only enhances academic productivity but also contributes to intellectual growth, self-directed learning, and a lasting commitment to scholarly excellence. The framework ultimately shifts the academic culture toward collaboration and inquiry-driven learning, fostering habits of mind that prepare students to thrive in both academic and professional environments.

   As this collaborative academic culture becomes more firmly established, it also encourages interdisciplinary engagement, reflective practice, and a deeper

understanding of the research enterprise as a collective endeavor. Students begin to see themselves not merely as recipients of knowledge, but as active participants in the creation and refinement of scholarly discourse. This transformation fosters a sense of ownership over their work, motivating them to pursue excellence not only for academic fulfillment but also for broader societal contribution.

Lecturers, in turn, benefit from the renewed intellectual energy that comes from mentoring motivated learners who are keen to explore, question, and innovate. The reciprocal nature of these academic relationships can lead to the development of co-authored publications, joint research proposals, and long-term scholarly partnerships that extend beyond graduation. Furthermore, this evolving culture of inquiry helps align institutional goals with the development of critical competencies—such as analytical thinking, academic integrity, and collaborative research ethics—that are essential for global competitiveness.

Ultimately, the OutBaL framework doesn't just reshape learning outcomes; it redefines the roles of students and lecturers as co-creators in the pursuit of knowledge, contributing to a vibrant academic ecosystem rooted in curiosity, rigor, and meaningful engagement.

5. Improved institutional performance in scientific publication output:

   The consistent production and active submission of student-led research projects play a pivotal role in amplifying the academic output of the university. As students engage in structured research activities—ranging from writing manuscripts to publishing in journals or preparing monographs—the cumulative effect of their contributions substantially boosts both the volume and variety of the university's scholarly publications. This not only reflects the

institution's commitment to cultivating a research-oriented learning environment but also signals its success in integrating students into the knowledge production ecosystem.

Such engagement leads to a more diversified publication portfolio, encompassing a wide array of disciplines, methodologies, and perspectives, thereby enriching the intellectual landscape of the university. The visibility of student-authored works in reputable academic platforms elevates the institution's academic credibility and expands its recognition within national and international scholarly communities.

Moreover, these outcomes reinforce the university's strategic position in academic benchmarking systems, including rankings and accreditation evaluations, where research productivity and impact are key indicators. As a result, the institution is viewed not only as a center for teaching excellence but also as a vibrant hub of scholarly innovation and research development. This reputation becomes a cornerstone for attracting future collaborations, funding opportunities, and high-performing students and faculty.

6. Increased institutional standing in national and international rankings, including accreditation systems:
   Universities that successfully adopt the OutBaL framework and embed research publishing into the core of student learning initiatives often see marked improvements in institutional performance metrics. This integration not only enhances the academic caliber of graduates but also significantly contributes to the university's scholarly footprint. By aligning research activities with student learning outcomes, institutions foster a culture of inquiry and

academic rigor that is visible in the volume and diversity of published works.

The resulting publications—whether in the form of journal articles, proceedings, or monographs—serve as indicators of both instructional effectiveness and intellectual productivity. Their quality reflects the depth of mentorship and academic scaffolding provided by faculty, while their quantity demonstrates systemic commitment to research integration. The visibility of these outputs on respected indexing platforms and academic databases enhances the institution's profile in the global scholarly community.

These cumulative outcomes are often recognized by national and international accreditation bodies and ranking systems, which increasingly prioritize evidence of research excellence, student engagement, and innovation capacity. As such, universities that institutionalize OutBaL not only improve their pedagogical relevance but also position themselves competitively among peer institutions. This strategic advancement translates into higher rankings, increased opportunities for academic collaboration, greater access to funding sources, and a stronger reputation that attracts both high-performing students and faculty.

IMPLEMENTATION

The Setting

The OutBaL approach presents a promising framework that can be adopted universally by higher education institutions, provided they meet specific inclusion criteria that ensure its effective implementation, as follows:

1. Implementing the student's final project policy in the form of a research report
   Universities must embrace a policy in which the final academic project of students is structured as a formal research report. This format not only reinforces academic rigor but also trains students in scientific communication and the documentation of findings in a professional context.
2. Can provide mentors
   Institutions must have the capacity to assign qualified mentors to guide students throughout the research process. These mentors play a crucial role in fostering critical thinking, methodological discipline, and scholarly ethics, which are foundational to high-quality research outcomes.
3. Willing to cooperate with scientific journals and/or publishers
   Participating universities should demonstrate a willingness to collaborate with accredited scientific journals and/or reputable publishers. Such cooperation facilitates the dissemination of student research to broader audiences, encouraging academic dialogue and empowering students to contribute meaningfully to their respective fields of study.

This approach has been taken by several universities in the world during the COVID-19 pandemic, as we know that there has been significant progress in online learning during that period. The implementation of the OutBaL model gained

significant traction during the COVID-19 pandemic, a period marked by sweeping changes in educational delivery methods worldwide. As face-to-face learning was replaced with online and blended modalities, institutions adapted OutBaL as a flexible yet outcome-driven approach that aligned well with digital environments. Several universities across continents integrated this model into their curriculum, recognizing that the shift to online learning had accelerated the adoption of independent research, virtual mentorship, and digital publishing platforms. The pandemic, though disruptive, inadvertently created a fertile ground for reimagining student learning outcomes—placing research and scholarly production at the heart of the academic experience.

Time

The OutBaL approach is designed to be a flexible yet structured learning pathway that can be completed within a single academic semester. Within this timeframe, students are guided through a comprehensive process—starting from the formulation and drafting of their research ideas, followed by systematic data collection, analysis, and culminating in the publication of their work in the form of a scientific article or a monograph book. This condensed model emphasizes efficiency and outcome orientation, enabling students to experience the full research cycle without unnecessarily extending their study period. However, the ideal duration of one semester is not fixed and may be adjusted depending on institutional and programmatic conditions. For instance, a significantly high student-to-lecturer ratio may pose logistical challenges, limiting the availability of qualified supervisors and reducing the quality of mentorship. In such cases, extending the duration becomes a pragmatic solution to maintain

academic integrity and ensure meaningful learning experiences.

Empirical applications of the OutBaL approach have been observed in various universities across Indonesia and the Philippines, where it has been implemented within the confines of a one-semester study plan. These institutions have successfully piloted the model by embedding structured timelines and collaborative supervision processes. Nevertheless, the potential of OutBaL is far from rigid; universities may choose to broaden the learning timeline to one academic year, especially when integrating community-based research, interdisciplinary collaboration, or publication processes involving peer review cycles and editorial refinement. Extending the duration allows for deeper investigation, improved mentoring quality, and increased opportunities for students to contribute to knowledge dissemination. It also opens avenues for integration with regional development themes, health campaigns, or public service initiatives—making the research output not only academically valid but also socially impactful.

Facilities

OutBaL requires the following supporting facilities to ensure its implementation is effective, structured, and academically sound:

1. Hardware, which includes physical devices such as computers or laptops with sufficient specifications to support writing activities, data processing, and online communication. A stable and fast internet connection is essential for accessing digital literature, utilizing web-based applications, and uploading or revising articles and manuscripts. Additional equipment such as printers,

scanners, and documentation cameras can be used based on the research or publication needs.

2. Software, comprising various applications used throughout the OutBaL implementation stages. This includes operating systems (e.g., Windows, macOS, Linux) to run devices, web browsers (e.g., Google Chrome, Mozilla Firefox, Safari) for literature exploration and article submissions, word processing applications (e.g., Microsoft Word, LibreOffice Writer), spreadsheet programs (e.g., Excel, Google Sheets), statistical tools (e.g., SPSS, R, Stata), PDF managers and creators (e.g., Adobe Acrobat, PDFCreator), and other programs tailored to the student's academic field.
3. Social media platforms, which serve as fast and collaborative communication tools among students, academic supervisors, and journal or publisher partners. Popular platforms such as Facebook for discussion groups and announcements, WhatsApp and Telegram for intensive coordination, and Instagram for visual dissemination of research outcomes can all support the broader dissemination of scholarly work to public audiences as part of academic service and community education.
4. E-journals and/or scientific publishers, which play an essential role in the final publication stage. Collaboration with reputable open-access journals and academic publishers enables students to publish their research work for public access—both nationally and internationally. This partnership helps increase visibility, academic recognition, and strengthens the student publication ecosystem within the OutBaL framework. Some scientific institutions known to be willing to provide support for the implementation of this program are as follows:

a. “Health Notions”, an e-journal that publishes scientific papers in the health field, published by the Humanistic Network for Science and Technology (HNST) [12].
b. “Aloha International Journal of Health Advancement (AIJHA), an e-journal that publishes scientific papers in the health field, published by the Alliance of Health Activists (AloHA) [13].
c. “Aloha International Journal of Multidisciplinary Advancement (AIJMU), an e-journal that publishes scientific papers in the health field, published by the Alliance of Health Activists (AloHA) [14].
d. “Aloha International Journal of Education Advancement (AIJEA), an e-journal that publishes scientific papers in the health field, published by the Alliance of Health Activists (AloHA) [15].
e. “Aloha International Journal of Management Advancement (AIJMA), an e-journal that publishes scientific papers in the health field, published by the Alliance of Health Activists (AloHA) [16].
f. Alliance of Health Activists (AloHA) which facilitates the publication of monographs [17].
g. Health Dynamics (HD) an e-journal that publishes scientific papers in the health field, published by the Knowledge Dynamics (KD) [18].
h. Global Health Science (GHS) an e-journal that publishes scientific papers in the health field, published by the Communication and Social Dynamics (CSD) [19].

Human Resources

Human resources serve as the backbone of research-based learning for university students. Their role transcends simple instruction; they create an academic ecosystem where

inquiry, critical thinking, and innovation can thrive. Lecturers and research supervisors provide essential intellectual mentorship, guiding students in the development of research questions, methodologies, and scholarly writing. Through this dynamic, students not only acquire technical skills but also internalize the rigors and ethics of academic inquiry.

In addition to faculty members, administrative personnel and institutional coordinators facilitate the operational aspects of research learning. They manage credit systems, ensure curriculum alignment, support publication processes, and help integrate student work into broader institutional agendas. Their involvement is crucial in maintaining quality assurance and harmonizing research activities across departments and institutions.

Moreover, the presence of dedicated and well-trained human resources cultivates a sustainable academic culture. By continuously nurturing student research competencies and coordinating collaborative efforts, they ensure that student contributions are not only recognized but also capable of influencing national and international academic landscapes. In essence, human resources enable research-based learning to become a structured, impactful, and institutionally integrated component of higher education.

The successful implementation of the OutBaL framework relies heavily on the active and coordinated participation of various human resources, each with distinct but interrelated roles in guiding, supporting, and validating the academic achievements of students. These roles include the following:

1. Students, specifically those who have completed their research reports or final project manuscripts, play the central role in this process. They are responsible for initiating the scholarly publication phase, whereby their findings are formally presented to the academic and public

domains through scientific journals or monograph books. Their engagement in this process not only reflects personal academic growth but also contributes to the wider knowledge landscape.

2. Lecturers, serving as academic supervisors from the student's home institution, are essential in shaping the quality and integrity of the research output. They guide students through each stage of the publication process—from refining the research methodology and improving the clarity of findings, to ensuring ethical standards and intellectual rigor. Lecturers also act as internal reviewers, providing targeted feedback that elevates the student's work to publication-ready status.
3. Editors, representing scientific journals or publishing entities, serve as external academic collaborators who facilitate the refinement and formatting of manuscripts prior to publication. Their role as supporting supervisors ensures that the submission aligns with journal standards, adheres to publication ethics, and meets technical requirements for layout, referencing, and accessibility. Editors also help streamline communication between authors and reviewers.
4. Reviewers, affiliated with scientific journals or publishing houses, function as external evaluators who assess the scholarly merit, relevance, and originality of the student's work. Through a formal peer-review process, they provide constructive critiques that guide revisions, confirm the validity of the research findings, and ultimately determine the publication viability of the manuscript. Their objective and impartial reviews add credibility to the student's research within the broader academic community.

In practical implementation, learning managers are required to take initial steps by systematically preparing a detailed list that includes the full names and institutional

affiliations of students and academic supervisors who are actively involved in the program. These individuals must come from universities and scientific institutions that have explicitly declared their commitment to collaborate and support the execution of this learning initiative. This documentation serves not only as a reference for monitoring and coordination, but also as a formal confirmation of inter-institutional cooperation, ensuring that every party involved has a clear role and responsibility in advancing the program's academic and publication goals.

In addition to documenting participating individuals and institutions, learning managers are expected to coordinate closely with relevant administrative units to establish clear procedural guidelines and timelines for the learning and publication cycle. This includes aligning each participant's responsibilities with the specific phases of the program—such as manuscript preparation, submission, revision, editorial collaboration, and final publication—so that expectations are communicated transparently and progress can be systematically tracked. To facilitate efficiency and accountability, digital platforms or centralized databases may be utilized for archiving submissions, progress reports, feedback logs, and publication records.

Moreover, periodic coordination meetings among stakeholders—including academic supervisors, institutional representatives, and journal partners—are crucial to assess implementation quality and resolve any emerging challenges. Such ongoing communication ensures that the program remains adaptable, responsive to academic standards, and rooted in best practices. Ultimately, this structured and inclusive approach reinforces the integrity of the learning process while advancing the overarching goal of cultivating a sustainable, high-impact academic ecosystem.

Course Credits

Learning activities within the OutBaL framework are designed to be conducted either individually or in small, focused groups. This structure intentionally avoids conventional classroom-style group learning sessions, where a large number of students work collectively at once. Instead, the emphasis is placed on personalized or micro-group engagement, allowing for deeper academic immersion, more intensive supervision, and tailored feedback throughout the research and publication process. Because of the high level of independence and scholarly output expected from each participant or group, the assigned credit value for these activities tends to be relatively substantial.

Further, for each small group, the credit distribution is as follows:

1. Drafting the manuscript or monograph book is allocated 1 credit, reflecting the time, effort, and intellectual investment required to formulate a coherent, research-based document. This stage includes identifying a research problem, conducting a literature review, developing methodology, and compiling initial findings. The entire process is carried out under the close supervision of a lecturer, who provides academic guidance, ensures compliance with scientific standards, and monitors the students' progress toward a publishable draft.
2. The publication process is valued at a total of 2 credits, acknowledging its complexity and the collaborative nature of preparing a manuscript for formal release. This phase encompasses editing, peer feedback, revision, and formatting according to journal or publisher guidelines. Supervision during this stage is shared between two parties: the lecturer, who continues to mentor students and is

assigned 0.5 credits for this role; and an external mentor from scientific journals or publishing institutions, whose responsibilities include editorial oversight, peer-review coordination, and compliance with academic publication ethics. This external mentor receives 1.5 credits, recognizing their specialized contribution in bringing the manuscript to professional publishing standards.

In one notable instance of OutBaL implementation at a university several years ago, a total of 17 student groups were selected to actively engage in the learning process. The credit allocation was carefully structured to reflect the academic activities undertaken by each group, with guidance from both academic and external mentors. The breakdown of credits is as follows:

1. Writing a monograph or drafting a monograph:
   - Each of the 17 groups was tasked with composing a monograph or its preliminary draft.
   - This activity was supervised by a designated lecturer who provided academic direction and support.
   - As a result, the total credit allocation for this task amounted to 17 x 1 credit = 17 credits.
2. Publication process:
   The publication component was divided into two distinct mentoring stages to support students in preparing their manuscripts for academic journals:
   - First, each group received guidance from lecturers during the initial stages of preparing their work for publication, which was valued at 0.5 credits per group. This totaled to 17 x 0.5 credits = 8.5 credits.
   - Subsequently, the groups were mentored by professionals or experts affiliated with scholarly journals to ensure their work met publication standards. This

advanced mentoring stage was allocated 1.5 credits per group, resulting in 17 x 1.5 credits = 25.5 credits.

Strategy

The implementation of the OutBaL framework within the academic environment is conducted through a structured yet flexible mentoring strategy that emphasizes sustained scholarly engagement, personalized guidance, and formative intellectual development. This mentoring model is designed to span the entire duration of one academic semester, operating not through a rigid weekly schedule or predetermined time slots, but rather through a dynamic, on-demand consultation mechanism that responds to the evolving needs and research trajectories of each student.

Mentoring interactions are conducted on a continuous basis, allowing students to initiate discussions, request feedback, and seek academic support at any time, in accordance with mutually agreed-upon arrangements between the student and their assigned supervisor. This flexible framework promotes deeper academic reflection, encourages autonomous learning behaviors, and enhances the relevance of each mentoring session by aligning it with real-time challenges and milestones encountered in the student's research and publication process.

Such a model supports individualized pacing, fosters academic maturity, and accommodates the specific timelines of each student's research development—whether they are drafting manuscripts, analyzing data, preparing for publication, or refining scholarly arguments. It also empowers mentors to provide responsive input tailored to the student's level of progress, enabling a more meaningful alignment with the learning outcomes outlined in the OutBaL framework.

Ultimately, this non-linear, consultative mentoring approach advances the institution's commitment to outcome-based education by embedding adaptability, relevance, and academic rigor into the student's learning journey.

Details of Activities

The implementation of OutBaL is carried out with details of the following activities:

1. Students initiate the registration process through online platforms provided by e-journals or scientific publishers that have formally established partnerships or collaborations with the institution. This process is carried out under the direct supervision and guidance of assigned academic advisors—typically lecturers who serve as research mentors—and/or journal editors or publishing representatives who are familiar with the procedural and editorial requirements of the respective publication outlet. The purpose of this coordinated guidance is to ensure that students adhere to appropriate academic standards, fulfill all technical and ethical criteria for submission, and strategically align their manuscript with the scope and expectations of the targeted journal or publisher.

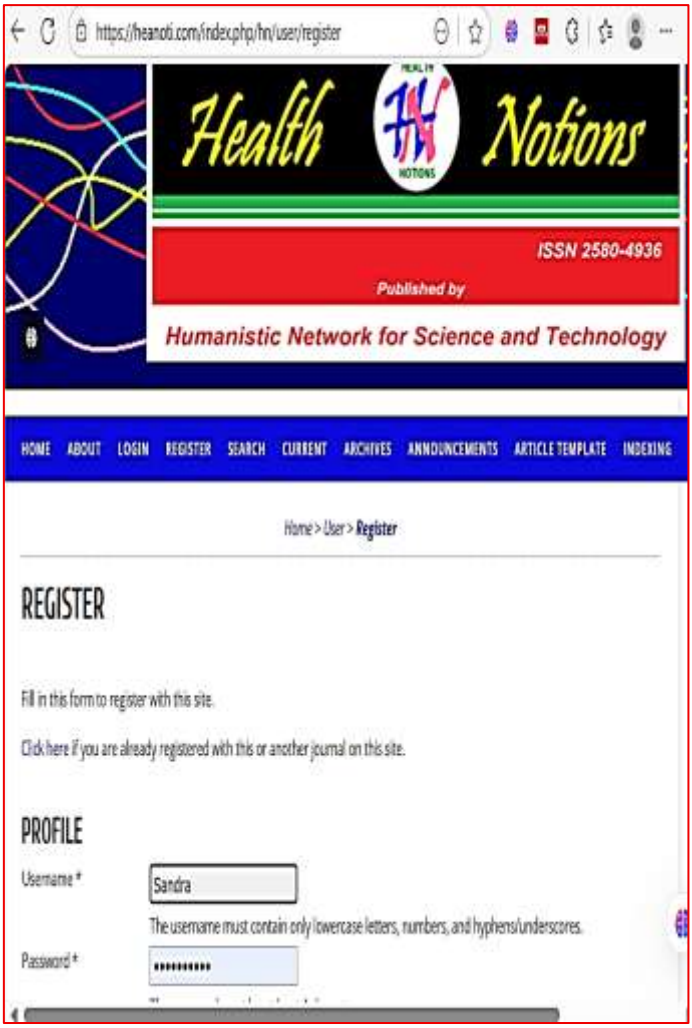


Figure 1. Example of registration process in the journal "Health Notions" [12]

2. Students learn the aims and scope of scientific journals/publishers with the guidance of lecturers and/or journal editors

Figure 2. Example of information about the aims and scope of the journal "Health Notions" [12]

3. Students carefully study the publication process instructions with the guidance of lecturers and/or journal editors

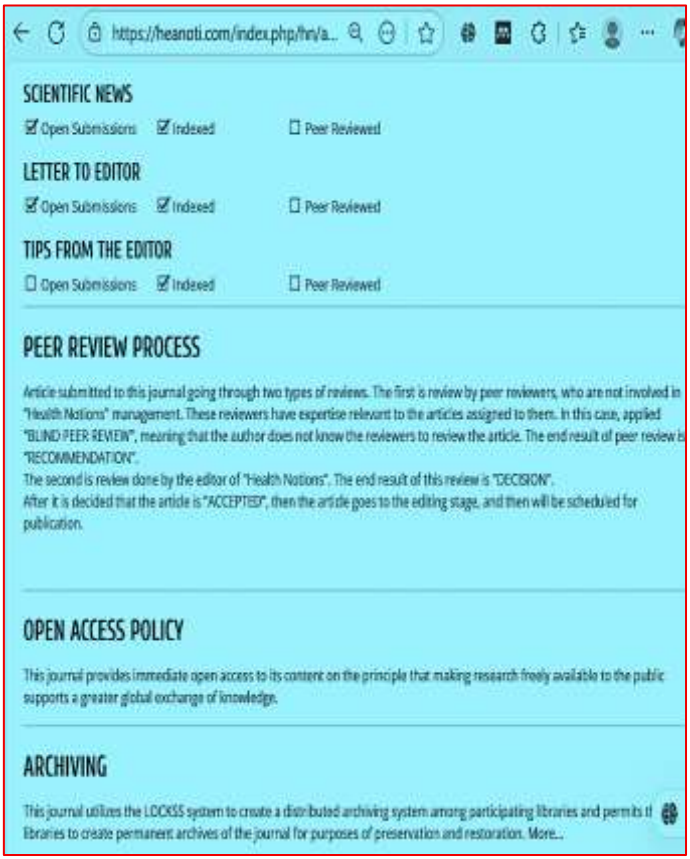
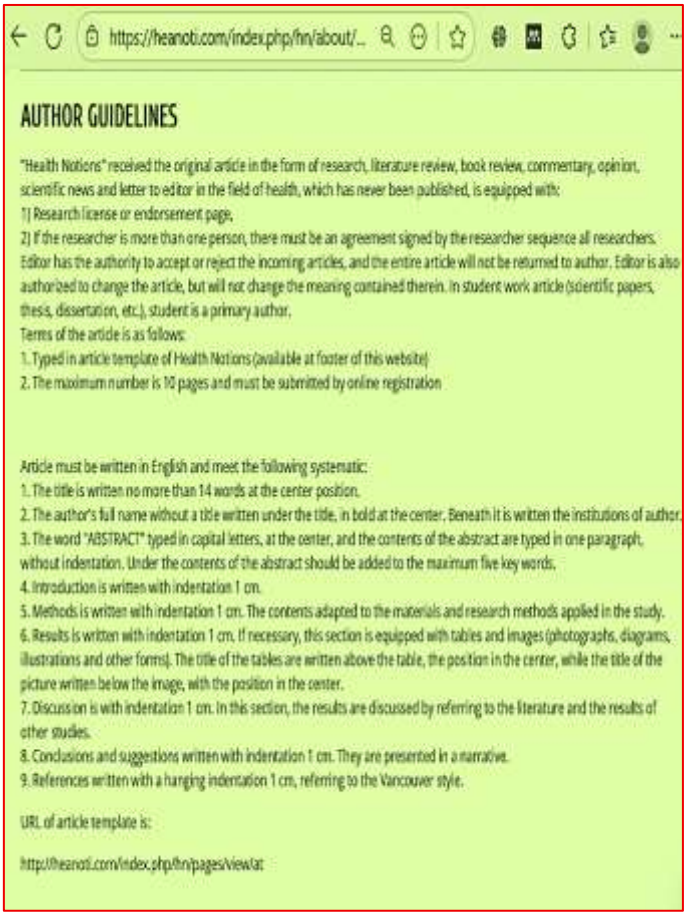


Figure 3. Example instructions on the scientific publication process in the journal "Health Notions" [12]

4. Students study the instructions for writing manuscripts with the guidance of lecturers and/or journal editors



AUTHOR GUIDELINES

"Health Notions" received the original article in the form of research, literature review, book review, commentary, opinion, scientific news and letter to editor in the field of health, which has never been published, is equipped with:
1) Research license or endorsement page,
2) If the researcher is more than one person, there must be an agreement signed by the researcher sequence all researchers. Editor has the authority to accept or reject the incoming articles, and the entire article will not be returned to author. Editor is also authorized to change the article, but will not change the meaning contained therein. In student work article (scientific papers, thesis, dissertation, etc.), student is a primary author.
Terms of the article is as follows:
1. Typed in article template of Health Notions (available at footer of this website)
2. The maximum number is 10 pages and must be submitted by online registration

Article must be written in English and meet the following systematic:
1. The title is written no more than 14 words at the center position.
2. The author's full name without a title written under the title, in bold at the center. Beneath it is written the institutions of author.
3. The word "ABSTRACT" typed in capital letters, at the center, and the contents of the abstract are typed in one paragraph, without indentation. Under the contents of the abstract should be added to the maximum five key words.
4. Introduction is written with indentation 1 cm.
5. Methods is written with indentation 1 cm. The contents adapted to the materials and research methods applied in the study.
6. Results is written with indentation 1 cm. If necessary, this section is equipped with tables and images (photographs, diagrams, illustrations and other forms). The title of the tables are written above the table, the position in the center, while the title of the picture written below the image, with the position in the center.
7. Discussion is with indentation 1 cm. In this section, the results are discussed by referring to the literature and the results of other studies.
8. Conclusions and suggestions written with indentation 1 cm. They are presented in a narrative.
9. References written with a hanging indentation 1 cm, referring to the Vancouver style.

URL of article template is:

http://heanoti.com/index.php/hn/pages/view/at

Figure 4. Example instructions on the scientific publication process in the journal "Health Notions" [12]

5. Students download article templates from the e-journal website and study the contents under the guidance of lecturers and/or journal editors

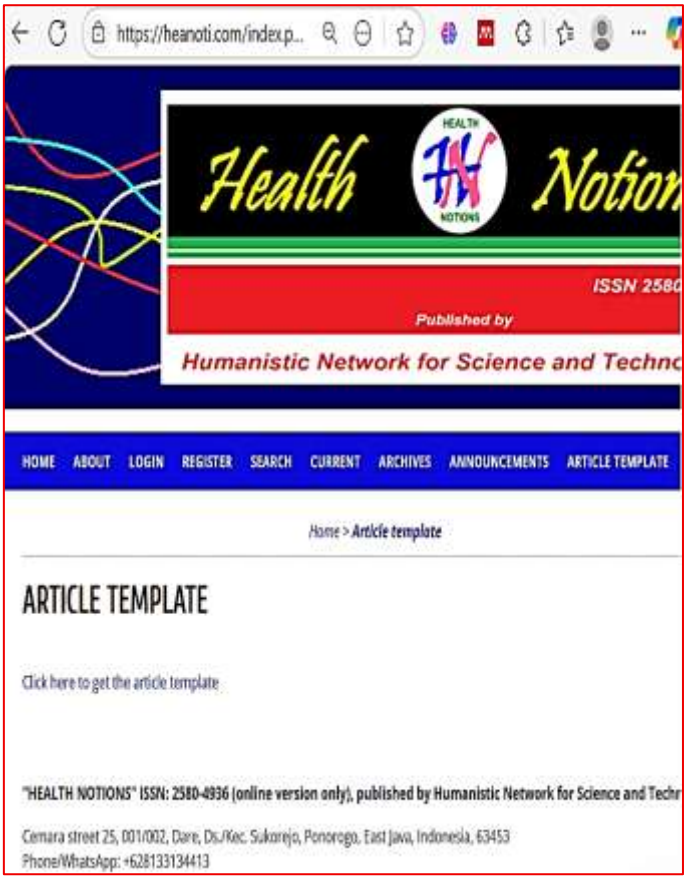


Figure 5. An example of providing an article template for download in one of the journals, namely "Health Notions" [12]

6. Students write manuscripts based on their respective research reports, with the guidance of lecturers

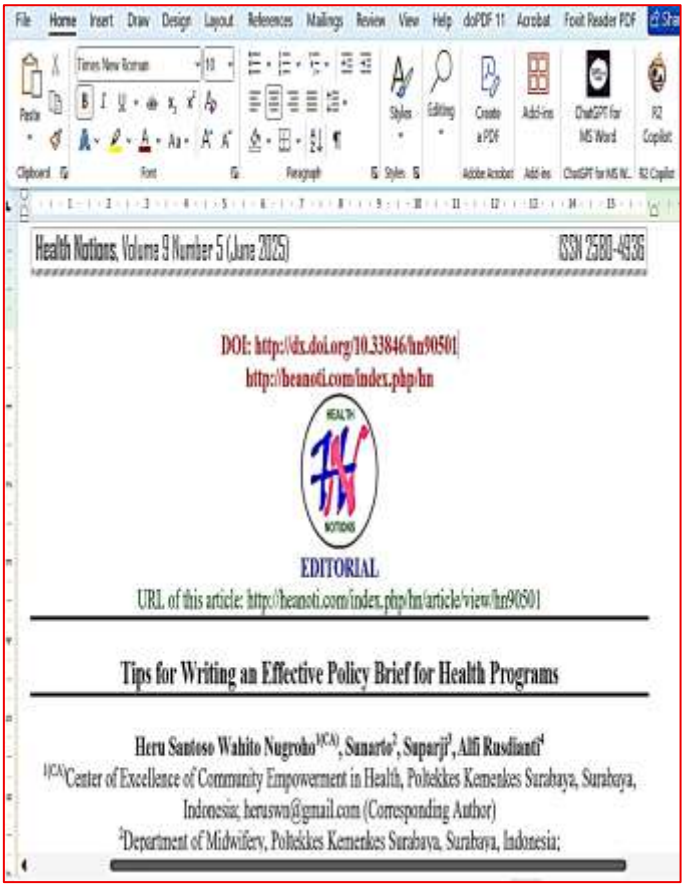


Figure 6. An example of writing a manuscript using an article template from one of the journals, namely "Health Notions" [12]

7. Students submit manuscripts online equipped with the required metadata with the guidance of lecturers and/or journal editors

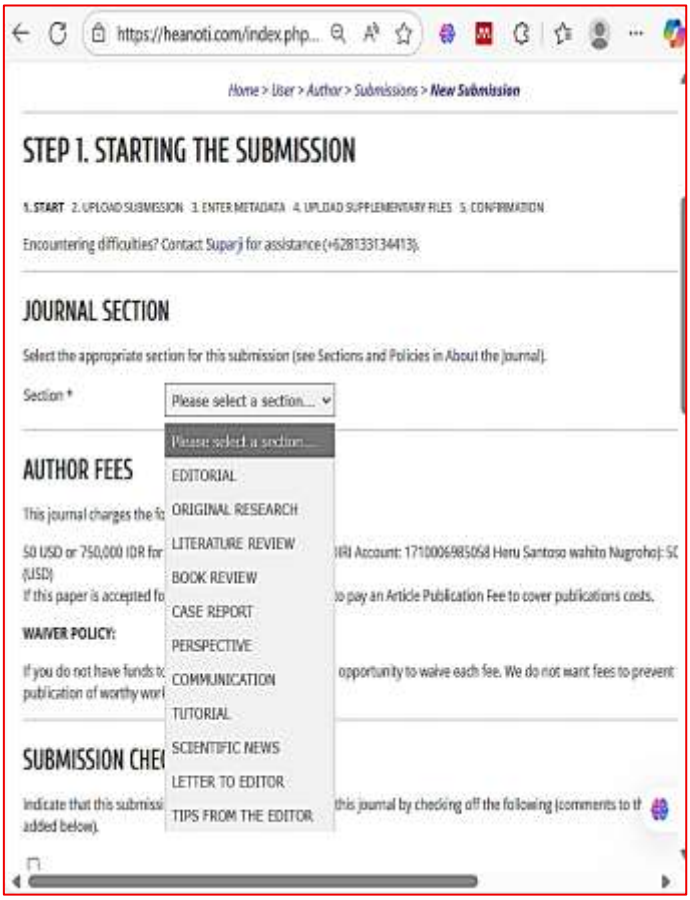


Figure 7. An example of a manuscript submission in one of the journals, namely "Health Notions" [12]

8. Students wait for the results of the review, and revise the article according to the results of the correction by the reviewer and editor with the guidance of the lecturer

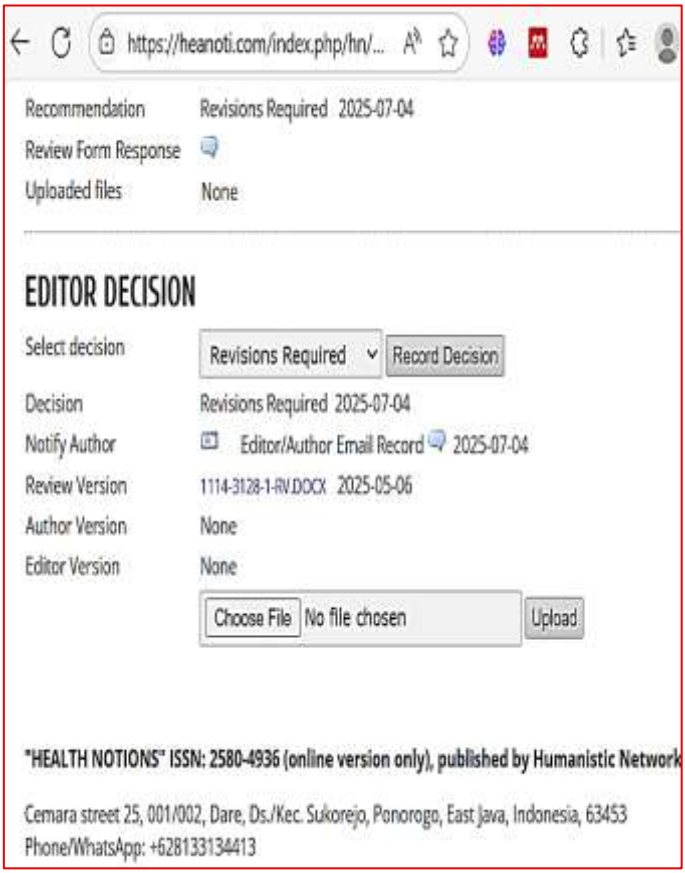


Figure 8. An example of the results of a manuscript review in one of the journals, namely "Health Notions" [12]

9. Students edit the manuscript together with a copy of the journal editor with the guidance of the lecturer and/or journal editor

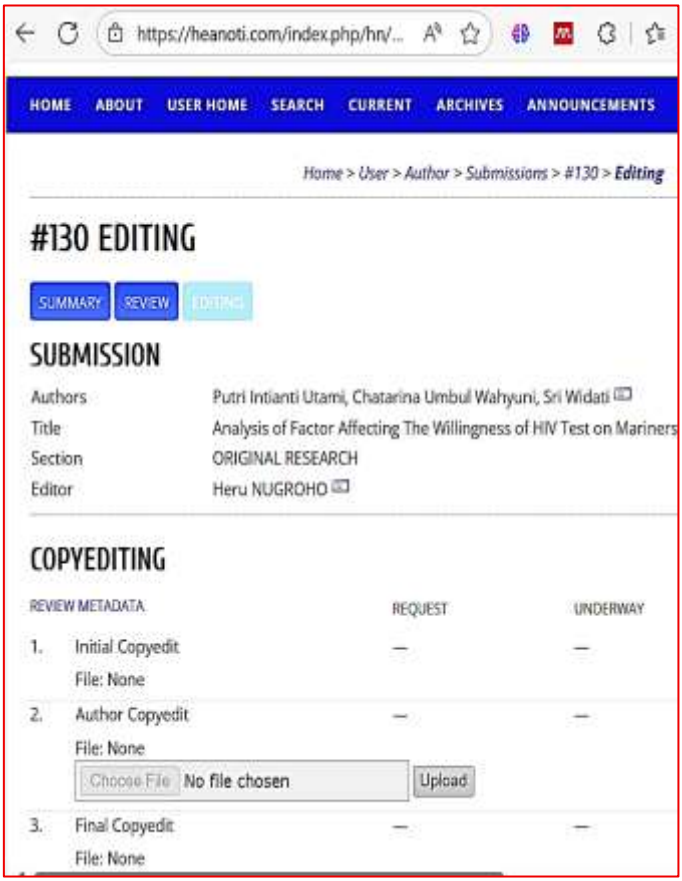


Figure 9. An example of the editing process in one of the journals, namely "Health Notions" [12]

10. Students carry out proofreading galleys with journal proofreaders under the guidance of lecturers and/or journal editors

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RESEARCH

Dynamics of Indonesian Coffee Export Sustainability in the Global Market

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ABSTRACT

Coffee has a big potential in the international market as proven by the level of coffee consumption that tend to rise despite the global crisis such as the economic crisis and pandemic. This study aimed to analyze the dynamics of macroeconomic indicators and real-sector variables influencing the Indonesian coffee trade in international market. This study included Indonesian coffee export volume, global coffee price, production amount of Indonesian coffee, Rupiah's exchange rate on US$, and economic crisis. This study used the Vector Autoregression (VAR) analysis method. The analysis result showed that global coffee price, production amount of Indonesian coffee, and economic crisis have significant influence on the certain lag in the development of Indonesian coffee export; meanwhile, the exchange rate does not have a significant influence. As conclusion, implementation of institutional development strategies for coffee farmers, improving the quality of coffee beans, developing human resources and infrastructure, and environmentally friendly production innovations can create sustainability for coffee commodities in both domestic and global markets.
Keywords: coffee; global coffee price; crisis; vector autoregression

INTRODUCTION

Figure 10. Example of proofreading in one of the journals, namely "IJMA" [16]

11. Students monitor the process of publishing fulltext articles and DOI with the guidance of lecturers and/or journal editors

Figure 11. An example of monitoring the publication of articles in one of the journals, namely "Health Notions" [12]

12. Students register and monitor the index of articles / monographs and authors on Google Scholar

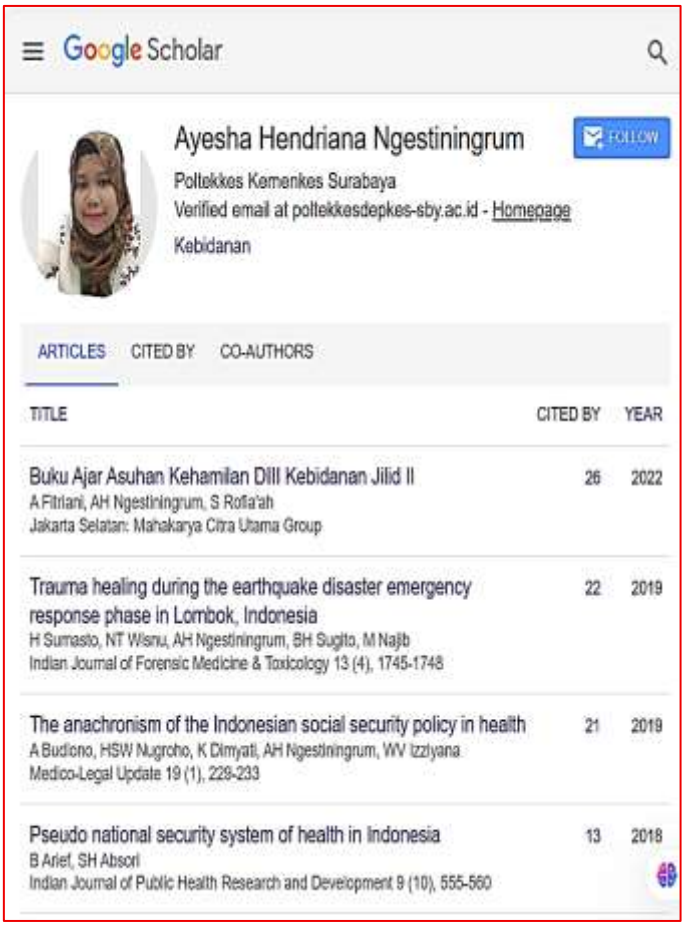

Figure 11. Example of monitoring scientific work index in Google Scholar [20]

EVALUATION

Evaluation for Students

Achievements by students in research-based learning can be measured through a variety of short-term and long-term indicators, each reflecting different dimensions of scholarly progress, productivity, and academic impact. These indicators are especially valuable for evaluating the effectiveness of research mentoring, publication frameworks, and institutional support for student research output.

Achievements that can be evaluated in the short term include:

1. Achievement of accepted status for articles in journals or monographs in publishers, indicating that student-authored manuscripts have successfully undergone peer review and met the editorial standards set by academic journals or publishing houses. This milestone demonstrates the scholarly rigor and relevance of the student's work and readiness for dissemination.
2. Achievement of published status as a full-text article in a journal or monograph e-book at a publisher, signifying that the student's work has been formally published and made publicly accessible. This reflects the finalization of editorial and production processes and affirms the student's contribution to the academic community.
3. Number of scientific papers on Google Scholar, which shows the volume of student publications that are indexed and traceable through open academic search engines. This metric provides initial insights into productivity and visibility within scholarly databases.

   However, this visibility is not limited solely to Google Scholar. A thorough and multidimensional evaluation of student

research output should take into account not only the publications indexed in Google Scholar, but also those recorded in a range of internationally and nationally recognized databases. These platforms collectively offer diverse perspectives and analytical tools that enrich institutional assessments and strategic development.

For instance, **Scopus** is an internationally respected citation and abstract database that curates peer-reviewed literature across various disciplines. When student-authored publications are accepted into Scopus-indexed journals, it indicates that these works have met stringent standards for academic quality and editorial review. Their inclusion supports institutional credibility, contributes to bibliometric analyses, and strengthens research-based education by allowing students to actively engage with globally visible scholarly networks.

Likewise, **Web of Science** functions as a selective database that only indexes journals maintaining rigorous peer-review practices and demonstrating scholarly impact through measurable citation performance. Student publications in this index often reflect advanced research capabilities and strong mentorship. Such recognition not only affirms the students' academic maturity but also helps institutions position themselves competitively in regional and global rankings, research collaborations, and funding initiatives.

In the context of open-access publishing, the **Directory of Open Access Journals (DOAJ)** holds particular relevance for student researchers. DOAJ supports the dissemination of scholarly work beyond traditional subscription barriers, fostering ethical, inclusive, and transparent research practices. When students publish in DOAJ-indexed journals, their work becomes accessible to a broader, non-specialist

audience—including practitioners, educators, and policymakers—which significantly enhances its educational and societal reach.

Within Indonesia, the **Science and Technology Index (SINTA)** plays a pivotal role in monitoring and quantifying research activities conducted by students, faculty members, and institutions. Publications listed in SINTA directly inform national accreditation systems, contribute to funding eligibility criteria, and guide policy decisions related to academic incentives. For students, visibility in SINTA confirms their active participation in research ecosystems that are recognized by the Ministry of Education, Culture, Research, and Technology.

Furthermore, platforms such as **Dimensions** extend the analysis of student publications by linking them to broader datasets—such as funded research projects, intellectual property registrations, and references in policy documents. This integration allows institutions to evaluate not only academic performance but also the applied and translational impact of student work, particularly in areas of innovation, development, and evidence-based policymaking.

Lastly, **GARUDA**, Indonesia's national academic repository, serves as a strategic channel for archiving and disseminating locally produced research, including undergraduate theses, research papers, and co-authored journal articles. GARUDA helps ensure that student contributions are traceable, preserved, and available for citation by future scholars, thereby strengthening the domestic knowledge base and promoting inter-institutional collaboration.

By leveraging data from multiple indexing platforms, institutions can generate a far more nuanced and

comprehensive portrait of student engagement in scholarly activities. This approach captures both the volume and qualitative richness of student research contributions, reinforces curriculum relevance, and informs strategies for enhancing academic writing, mentoring, and publication pathways. Ultimately, such evaluation frameworks support institutional objectives related to educational quality assurance, performance-based funding, and continuous improvement in outcome-based learning systems.

Achievements that can be evaluated in the long term include:

1. H-index on Google Scholar for students, a bibliometric indicator that measures both the productivity and citation impact of the student's published work. A higher H-index implies sustained relevance and scholarly influence across multiple publications.
2. i10-index on Google Scholar for students, which identifies the number of student-authored papers that have received at least ten citations. This index highlights the consistency and depth of academic engagement with the student's research outputs over time.

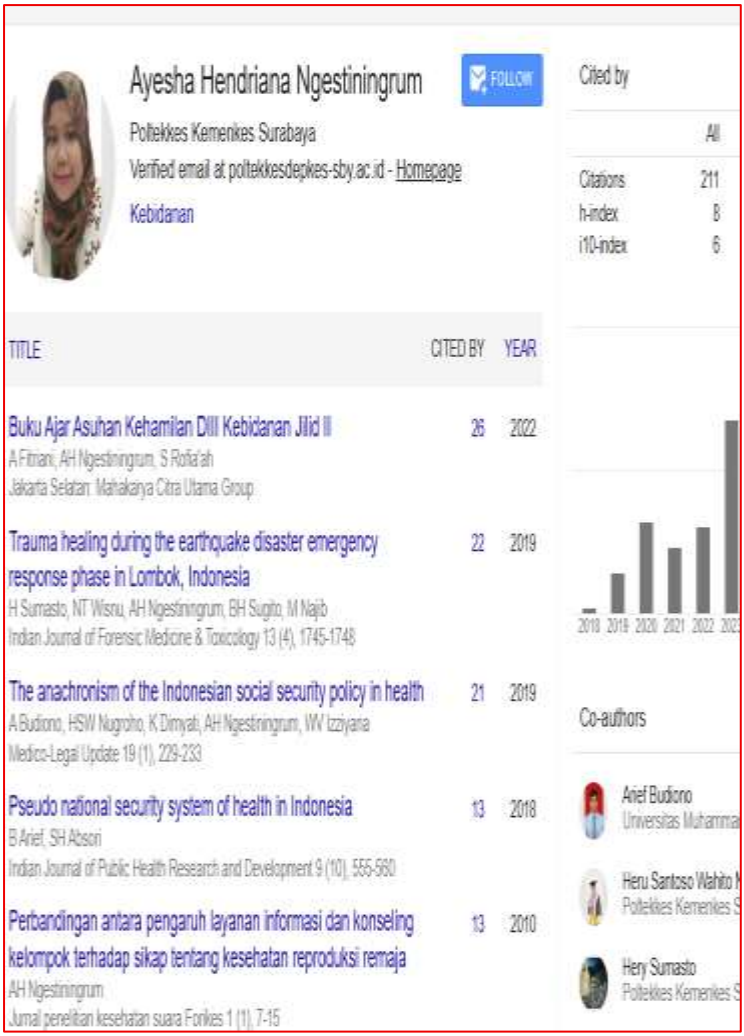

Figure 12. Example of h-index and i10-index for author in Google Scholar [20]

Evaluation for University

Achievements by higher education institutions can be assessed through both short-term and long-term indicators. These indicators play an essential role in measuring institutional capacity for generating knowledge, fostering scholarly engagement among academic stakeholders, and enhancing competitiveness at national and international levels.

Achievements by universities that can be evaluated in the short term include:

1. Number of scientific papers indexed on Google Scholar, serving as a quantitative indicator of the visibility and productivity of publications authored by faculty members, researchers, and students. This figure reflects the effectiveness of institutional systems for research mentoring, academic writing facilitation, and publication strategy. However, this metric is not limited to Google Scholar alone. A more comprehensive evaluation should include indexing across other prominent databases, such as:
   a) Scopus – Offers standardized citation and bibliometric analysis across disciplines. Widely used for measuring research impact and institutional reputation.
   b) Web of Science (WoS) – Curates select journals based on editorial rigor and impact factor, serving as benchmarks for grant proposals and institutional rankings.
   c) DOAJ (Directory of Open Access Journals) – Indexes open-access journals, promoting visibility for socially-oriented and educational research outputs.
   d) SINTA (Science and Technology Index) – A national indexing system in Indonesia used for evaluating academic productivity and influencing accreditation and incentive schemes.

e) Dimensions – Integrates publication analytics with data on grants, patents, and policy citations, supporting a broader assessment of research's societal and economic impact.

By considering multiple indexing systems, institutions can obtain a more strategic and multidimensional view of scholarly output, sustainability in research productivity, and the broader success of academic ecosystems.

2. Number of scientific papers produced by universities, encompassing published works in journals, proceedings, academic books, or other scholarly formats. This metric demonstrates the institution's success in cultivating a research-based culture and building an active, structured, and collaborative research ecosystem.

Achievements by students that can be evaluated in the long term include:

1. H-index on Google Scholar for college students, measuring the academic quality and consistency of students' contributions based on the citation impact of their publications. A rising H-index reflects sustained scholarly relevance;
2. i10-index on Google Scholar for college students, indicating the number of student-authored publications that have received at least ten citations each. This index reveals the depth of academic engagement and the recognition of student research across fields;
3. Increase in the ranking of higher education accreditation, which signals institutional commitment to academic quality assurance, learning outcome integrity, and strategic performance benchmarks. Student publication performance and citation impact contribute significantly to external evaluation metrics in accreditation systems.

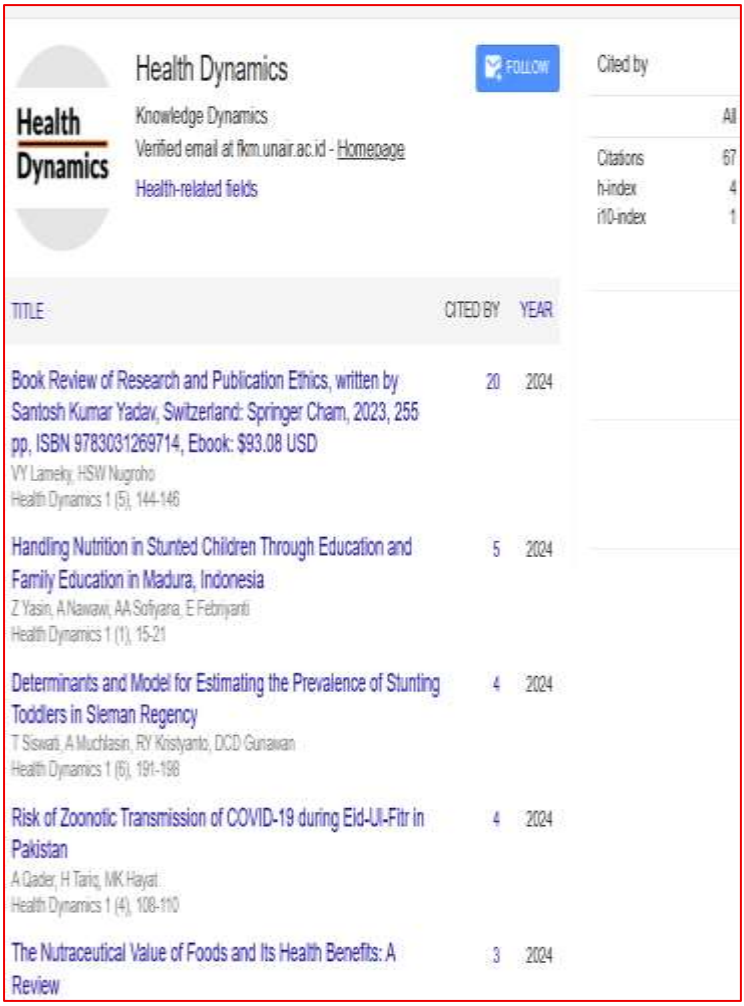

Figure 13. Example of h-index and i10-index for college or institution in Google Scholar [21]

FURTHER DISCUSSION

Final research projects serve as a vital capstone to a student's academic journey, enabling them to apply accumulated knowledge, methodologies, and technological skills through structured scientific inquiry [22-26]. These projects are expected not only to culminate in a written report, but also to contribute to the broader scientific community through dissemination in the form of journals, proceedings, or monographs [27-30].

Although many universities now mandate publication as a graduation requirement, students are often left to pursue this process independently, outside formal academic guidance. This disconnect between research learning and scientific publication results in challenges due to students' limited publication experience.

To address this gap, a new learning model "Output-Based Learning (OutBaL)" has been designed. This approach explicitly positions output, in the form of a scientific publication, as the final learning goal. OutBaL integrates post-research publication processes into the curriculum and enables structured mentorship by faculty and journal editors. Partnering with selected open-access journals, universities using OutBaL help students publish at no cost, ensuring accessibility and academic credibility.

Through the OutBaL framework, students are systematically guided to: 1) develop and write manuscripts or monograph drafts based on their research; 2) submit their work to appropriate journals, proceedings, or publishers; 3) conduct revisions based on editorial and peer review feedback; 4) collaborate with editors during the editing phase; 5) track the article's progress from proofreading through DOI assignment;

and 6) register and monitor their academic output and author profiles on Google Scholar

OutBaL offers multifaceted advantages, including: 1) producing graduates equipped with complete research and publication competencies; 2) strengthening student portfolios through tangible academic achievements; 3) supporting supervisors in meeting research dissemination targets; 4) fostering dynamic academic interaction between students and lecturers; 5) enhancing universities' scientific output and visibility; and 6) Contributing to improved institutional accreditation and rankings.

If universities adopt the OutBaL approach in research-based education for students, its implementation is likely to yield promising long-term developments in both academic quality and institutional performance. OutBaL equips students with comprehensive competencies in research methodology and scientific publication, ensuring that graduates are not only theoretically proficient but also capable of producing and disseminating scholarly work that meets academic standards. This contributes directly to the development of more credible and competitive graduate profiles, enabling smoother transitions to professional roles or further academic pursuits.

Moreover, by integrating structured publication outputs into learning processes, student portfolios become significantly richer. Publications in indexed journals, conference proceedings, or academic repositories serve as tangible academic achievements, boosting employability and providing measurable evidence of scholarly engagement. These contributions also strengthen faculty supervision outcomes, as supervisors benefit from increased dissemination of student-led research, supporting institutional targets for research productivity and performance indicators.

OutBaL also encourages a dynamic academic culture where interaction between students and lecturers becomes more collaborative, outcome-driven, and reflective. This fosters mentorship, interdisciplinary dialogue, and joint knowledge creation, reinforcing the academic ecosystem as a whole. From an institutional perspective, increased student publication efforts help expand the university's scientific output and improve its visibility across national and international indexing platforms, including SINTA, Scopus, and DOAJ. Over time, these improvements contribute positively to accreditation processes, research assessments, and global rankings.

However, several challenges must be anticipated. Internally, institutions may face resistance from faculty unfamiliar with publication-oriented mentoring or from students who lack adequate research preparation. Limited access to editorial services, publication funding, and journal networks can also hinder equitable participation. Curriculum alignment and assessment redesign may be needed to ensure publication activities are well-integrated into formal learning outcomes.

Externally, challenges include restrictive indexing policies, language barriers for international publication, and insufficient national policy recognition of student-authored works as valid performance indicators. Publishing costs in reputable journals may pose financial obstacles, particularly in underfunded programs or for economically disadvantaged students.

To fully harness the transformative potential of OutBaL in research education, universities must take deliberate and sustained action to overcome both structural and operational challenges. This involves prioritizing targeted faculty development programs that equip academic staff with mentoring skills tailored to publication-oriented research supervision, as well as building strategic partnerships with

reputable journals to streamline publication pathways for student-authored work. Institutions should also invest in inclusive editorial support systems that facilitate equitable access to proofreading, formatting, and translation services—particularly for students from diverse linguistic and socioeconomic backgrounds.

Equally important is ongoing policy advocacy at both institutional and national levels. By aligning academic regulations with contemporary research-based learning practices, universities can secure broader recognition for student publications as formal indicators of educational achievement. With these multidimensional efforts in place—and supported by consistent leadership commitment, resource allocation, and curriculum integration—OutBaL can evolve from a pedagogical framework into a strategic mechanism for elevating institutional reputation, fostering meaningful student engagement, and producing scholarly outputs that are both impactful and measurable.

Promoting OutBaL to key educational stakeholders—such as policymakers, university leaders, curriculum developers, and accreditation authorities—is a vital strategy for advancing institutional quality and educational relevance. A structured offer, particularly in the form of a policy brief, functions as an effective advocacy tool to introduce and legitimize OutBaL as a recommended learning model. OutBaL centers on student achievement through measurable competencies rather than traditional input-based instruction. When well-communicated to decision-makers, it fosters a transition toward transparent, accountable, and quality-focused education systems. A policy brief that clearly articulates the rationale and benefits of OutBaL can demonstrate how the approach strengthens graduate readiness by embedding research and publication outputs into the learning process;

enhances performance-based accreditation through alignment with national and global standards; and supports policy reform agendas emphasizing innovation, employability, and lifelong learning. Its modular and replicable format allows broad scalability across disciplines and institutions. Furthermore, the use of OutBaL metrics—such as scholarly productivity, publication indexing, and student research engagement—provides tangible data for planning, funding allocation, and evaluation. To be impactful, the policy brief should include a compelling problem statement, comparative case studies, targeted stakeholder benefits, a clear implementation strategy, and projected outcomes. Framed through institutional forums and academic dialogues, OutBaL becomes not just a pedagogical choice, but a strategic tool for systemic improvement in higher education.

CLOSING

This handbook serves as a foundational guideline for universities interested in establishing academic collaborations with the *Humanistic Network for Science and Technology* (HNST) and the *Alliance of Health Activists (AloHA)*. It outlines essential principles, strategic directions, and operational frameworks that can facilitate joint research endeavors and scholarly engagement. The initiative opens up broad opportunities for higher education institutions to conduct research studies in a comprehensive and integrated manner, culminating in tangible outcomes such as the publication of scientific articles in journals, papers in proceedings, and full-length monograph books.

This inaugural effort represents our first foray into developing a socially-driven academic project. We acknowledge that, as with any pioneering work, there may be gaps, inefficiencies, or elements requiring further refinement. We sincerely welcome constructive feedback, insights, and recommendations from readers, collaborators, and stakeholders. These contributions are invaluable to us as they inform our commitment to continuous improvement, institutional learning, and the sustainability of future iterations of this program.

We extend our heartfelt gratitude to everyone who has taken time and interest in engaging with this handbook. Your attention and encouragement signal a shared dedication to enhancing academic quality, promoting interdisciplinary cooperation, and empowering students and lecturers alike. We warmly invite universities, faculty members, and research communities to join us in this journey of collaboration and innovation—for the advancement of education, public health, and scientific excellence.

By joining this collaborative initiative, institutions and individuals not only participate in a meaningful academic movement, but also contribute to shaping a future where knowledge is democratized, health equity is prioritized, and innovation flourishes across borders. The spirit of this handbook reflects a commitment to inclusive scholarship—one that values diversity of thought, interdisciplinary synergy, and mutual capacity building.

We believe that collective engagement from diverse academic and community actors is essential to address real-world challenges through evidence-based solutions. As such, this handbook is not merely a reference guide—it is an invitation to co-create, to advocate for student-centered research, and to nurture a generation of critical thinkers and responsible knowledge producers.

Let this be the first chapter in a long-standing partnership, where academic vision is translated into impactful practice, and where learning becomes a vehicle for social transformation. Together, let us uphold the principles of integrity, innovation, and shared responsibility in pursuit of better outcomes for education, public health, and society at large.

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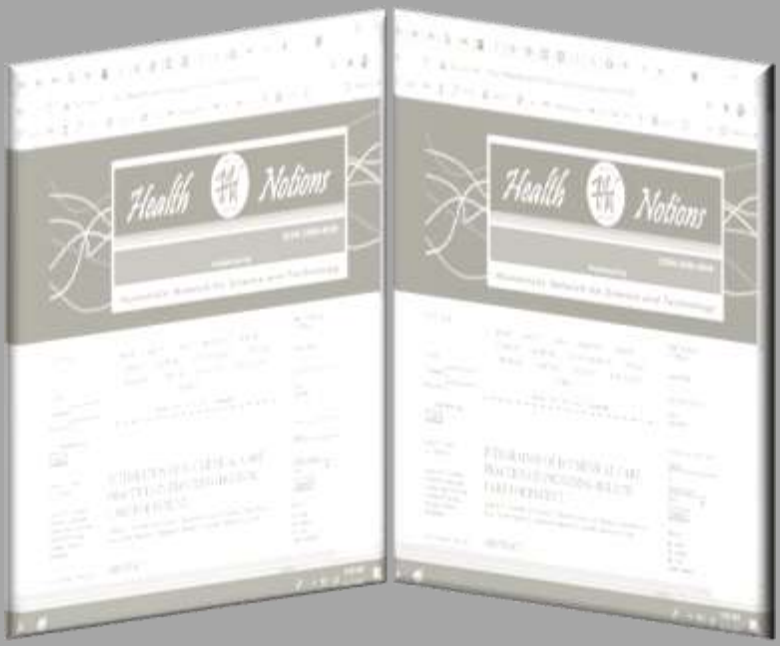
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