Appendix D (2)



AUN-QA PROGRAMME ASSESSMENT REPORT

AUN-QA Assessment No.:	Date of Assessment:
The 208 th AUN-QA Programme Assessment (Online/Remote Site Visit) at Vinh University	19-23 April 2021
Name of Programme Assessed:	
Bachelor of Mathematics Education	
Name of University:	
Vinh University	
Name of Faculty/School:	
Department of Mathematics, School of Natural Sciences Education	
Name of Management Representative/Designation:	Email:
Dr. Thieu Dinh Phong phongtd@vinhuni.edu.vn	
Name of Assessors:	
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Report Summary

This report is based on the information provided in the self-assessment report (SAR), evidences, site tour and interviews with selected stakeholders including academic and support staff, students, alumni and employers. It should be read together with the preliminary findings presented at the closing ceremony where the key strengths and areas for improvement were highlighted.

The AUN-QA assessment at programme level covers 11 criteria and each criterion is assessed based on a 7-point scale. The summary of the assessment results is as follows:

Criteria	Score
1. Expected Learning Outcomes	4
2. Programme Specification	5
3. Programme Structure and Content	4
4. Teaching and Learning Approach	4
5. Student Assessment	4
6. Academic Staff Quality	4
7. Support Staff Quality	4
8. Student Quality and Support	4
9. Facilities and Infrastructure	5
10. Quality Enhancement	4
11. Output	4
Overall Verdict: Adequate as	Expected

Based on the assessment results, the Based on the assessment results, the **Bachelor of Mathematics Education** fulfilled the AUN-QA requirements. Overall the quality assurance implemented for the programme is **adequate as expected**.

Cr	iteria	Strengths	Areas for Improvement
1. Expected Learning Outcomes	1.1 The expected learning outcomes have been clearly formulated and aligned with the vision and mission of the university [1,2]	 Expected Learning Outcomes (ELOs) of the Bachelor Programme in Mathematics Education (BPME) are clearly formulated and aligned with Vinh University's Vision and Mission (VM) statements and responds to requirements and feedback of stakeholders. A process for developing Programme Dejectives (POs) and Programme Learning Outcomes (PLOs) is formulated and subjected to periodic reviews. The process includes consultation with stakeholders to facilitate alignment with their needs. 	 In light of VU's VM, the School of Natural Sciences Education (SNSE) may want to review whether "a leading center of training, fostering teachers, scientific research and technology transfer of the country, having training programs that meet international standards" should be its mission instead of vision. The SNSE may want to consider revising the formulation of ELOs using a single action verb to make them measurable and observable. There are PLOs that use 2 (two) or more Bloom's Taxonomy verbs (e.g., PLO 1.3, 1.4, 2.3, 3.1). These PLOs may be rephrased to only include the higher order Bloom's Taxonomy verb or may be separated into multiple PLOs to facilitate easier tracking of students' achievement of their PLOs. It is recommended that achievement and impact of POs and PLOs need to be determined. If measuring the achievement and impact after graduation will pose a challenge, it is recommended that the SNSE review the timeframe in which students should have obtained them. Vinh University or the SNSE may want to evaluate the effectiveness of Conceive, Design, Implement, and Operate (CDIO) approach for BPME. See also sub-criterion 1.3 and 11.5.

C	riteria	Strengths	Areas for Improvement
1. Expected Learning Outcomes	1.2 The expected learning outcomes cover both subject specific and generic (i.e. transferable) learning outcomes [3]	 ELOs cover both subject specific and generic learning outcomes. CDIO approach influence the process of developing and formulation of POs and PLOs which is subjected to periodic reviews. 	 During interview, stakeholders identified that Nghe An people are risk-takers and willing to take responsibility and that a number of leadership position are held by individuals with mathematics background. Therefore, the SNSE may want to formulate or add leadership as a stand alone PLO in the BPME. The SNSE may also want to consider formulating a PLO that expects students to demonstrate scientific research abilities to be aligned and address Vinh University and the SNSE's mission of fostering scientific research towards becoming a leading center for educational, applied and basic research and technological transfer in Northern Central Vietnam as well as the whole country. See also sub-criterion 1.3.
1. Expected Learning Outcomes	1.3 The expected learning outcomes clearly reflect the requirements of the stakeholders [4]	 The POs, PLOs, and ELOs are results of a series of survey and consultation with external – especially the Department of Education and high schools of provinces within the region – and internal stakeholders. Independent lecturers and external experts reviewed the program. 	• Employers expect graduates to hold leadership roles within their organization. The SNSE may want to consider to explicitly include a PLO that expects students to exhibit leadership qualities to ensure the BPME provides opportunities to develop this and not just a by-product of the teaching methodology and innate qualities of students. See also sub-criterion 1.2.

	Criteria	Strengths	Areas for Improvement
			• It is recommended to evaluate the effectiveness and understanding of CDIO approach among academic staff and students. See also sub-criterion 1.1 and 11.5.
2. Programme Specification	2.1 The information in the programme specification is comprehensive and up-to-date [1, 2]	 The information in the BPME Programme Specification is comprehensive and up to date. Process of regular review and revision of the program specification is evident. 	
2. Programme Specification	2.2 The information in the course specification is comprehensive and up-to- date [1, 2]	The information is the course specification is comprehensive and up to date.	 It is recommended that the SNSE consider reviewing the course specification document to consistently indicate that the contents of the column Description of Course Learning Outcomes are expected of students at the end of the course. It is also recommended that the SNSE consider reviewing the formulation of Course Objectives in Course Specification documents. The course objectives describe what students should be able to do at the conclusion of the course rather than what academic staff teaching the course intend to cover in the study.
2. Programme Specification	2.3 The programme and course specifications are communicated and made available to the stakeholders [1, 2]	 BPME Programme Specification and Course Specification documents are published in Vinh University website and other channels that may be accessed by all BPME stakeholders. 	 Since stakeholders, especially external ones, have not clearly understood the PLOs, POs, and Course Learning Objectives (CLOs), it is recommended that the SNSE

Cr	iteria	Strengths	Areas for Improvement
			 review current method and modes of communication of these objectives to build more awareness that may create sense of ownership to the BPME. The SNSE may want to review BPME Programme Specification to make it more appealing and easier to read to serve as recruitment material for potential students.
3. Programme Structure and Content	3.1 The curriculum is designed based on constructive alignment with the expected learning outcomes [1]	Constructive alignment of curriculum with ELOs is apparent.	 The BPME may want to review the course learning outcomes of each course such that it may be limited to a few essential learning outcomes for each course. Too many learning outcomes to track and monitor for achievement will be too cumbersome to manage. It is recommended to review curriculum mapping to ensure the interconnectedness of all subjects.
3. Programme Structure and Content	3.2 The contribution made by each course to achieve the expected learning outcomes is clear [2]	 PLOs are broken down into sub- components facilitating clear alignment of courses with the ELOs . 	 Current students and alumni expressed the importance of demonstrating a good command of the English language. It is therefore recommended that the use of English should be emphasised or encouraged including but not limited to teaching major courses in English to help students achieving higher level of English proficiency. See also sub- criterion 4.2, 8.5, and 11.5.

Cr	iteria	Strengths	Areas for Improvement
			• Likewise, opportunities for student exchange may also be made available for students who wish to be exposed to other cultures and to practice communicating in English with non-Vietnamese students.
3. Programme Structure and Content	3.3 The curriculum is logically structured, sequenced, integrated and up-to-date [3, 4, 5, 6]	 The curriculum is structured and sequenced logically. Curriculum structure allowed students to focus on Graduation internship to demonstrate application of all they have learned from their courses. 	A graduate thesis or research output could be required from students for graduation to allow them to synthesize and integrate all they have learned in the BPME. It is highly recommended that the SNSE gather more feedback from external stakeholders for this issue.
4. Teaching and Learning Approach	4.1 The educational philosophy is well articulated and communicated to all stakeholders [1]	 The education philosophy – "collaboration and creativity" – is clear and concise for everyone to understand easily, and communicated to Vinh University stakeholders through website. 	 Despite being core values, "creativity and collaboration" are not yet evident during the interview where students hardly helped one another. Therefore, Vinh University or the SNSE may want to review current method of communicating the newly introduced educational philosophy to ensure all stakeholders especially students understand and be instilled in it.
4. Teaching and Learning Approach	4.2 Teaching and learning activities are constructively aligned to the achievement of the expected learning outcomes [2, 3, 4]	 Constructive alignment of teaching and learning activities with the BPME ELOs is evident in course specifications. Employers identify teaching methodology as one of the main elements for BPME becomes a quality programme that produces good graduates. 	• Since course specifications show the use of the same methods in teaching various topics throughout the course, it is recommended that the SNSE also employ different or additional methods.

Criteria	Strengths	Areas for Improvement
		 Being in an education programme, BPME students should be made aware of the purpose and importance of POs, PLOs, Course Objectives, and CLOs in the design and delivery of programme and courses because they are fundamental concepts in teaching. Therefore, it is highly recommended that the SNSE create programmes or learning activities to build such awareness to students. It is recommended that Teaching Practice of students to be revised in order for enhancing opportunities to experiment and innovate in teaching mathematics to make it more applied and relevant to young learners.
		• The internship program may be enhanced through expansion to more remote areas of the region and be able and possibly expose students to the needs of the region and by working closely with high schools to determine the best time to send students for internship such that they may be mentored properly and be exposed to a more holistic experience.
		• It is recommended that the SNSE may consider collaborating with other units in Vinh University especially the Faculty of Foreign Languages to creatively find solutions to improve

	Criteria	Strengths	Areas for Improvement
			student English proficiency. See also sub-criterion 3.2, 8.5, and 11.5.
4. Teaching and Learning Approach	4.3 Teaching and learning activities enhance life-long learning [5]	 Various teaching and learning activities are employed to foster life-long learning competencies. 	 There is room to enhance support for life-long competence in Entrepreneurship. Aside from setting up mathematical application examples in different career fields, collaboration in organizing learning activities with other departments, such as Business Administration, may expose students to what Entrepreneurship is really about and how they may apply their knowledge in Mathematics Education to Entrepreneurship.
5. Student Assessment	5.1 The student assessment is constructively aligned to the achievement of the expected learning outcomes [1, 2]	 Academic staff are guided in the scientific construction of exam questions to ensure its uniformity and suitability for the learning outcomes. 	 The SNSE may want to consider removing the practice of grading attendance because it does not really contribute to assessing achievement of course learning outcomes. It is also recommended that the SNSE consider setting a maximum number of session that students may miss in order to get credit from the course instead.
5. Student Assessment	5.2 The student assessments including timelines, methods, regulations, weight distribution, rubrics and grading are explicit and communicated to students [4, 5]	 Students are informed about details of their assessments which include methods, timelines, weight distribution through the programme and course specification documents. 	 It is recommended to provide standard regulations for implementation of internship programme in high schools and provide a Standard Assessment Toolkit, which mentors may refer to as they supervise, give feedback, and

	Criteria	Strengths	Areas for Improvement
			assess interns placed under their care.
5. Student Assessment	5.3 Methods including assessment rubrics and marking schemes are used to ensure validity, reliability and fairness of student assessment [6, 7]	 Assessments are mostly conducted online to facilitate objectivity and reliability and easier management of student learning outcome results. 	 The SNSE may want to consider adding a qualitative rubric in assessing student internship.
5. Student Assessment	5.4 Feedback of student assessment is timely and helps to improve learning [3]	 The SNSE is required to release results of Final Exams 2 (two) weeks after tests are administered. 	 It is recommended that the SNSE consider giving results of formative assessment as possible to allow students to improve while the course is in progress and allow them to prepare for the Final Exams accordingly.
5. Student Assessment	5.5 Students have ready access to appeal procedure [8]	 Regulation and mechanism for student appeal is established and students are duly informed of its details and procedures that must be followed. 	 The SNSE may want to consider providing an online appeal mechanism to facilitate easier appeal process.
6. Academic Staff Quality	6.1 Academic staff planning (considering succession, promotion, re- deployment, termination, and retirement) is carried out to fulfil the needs for education, research and service [1]	 The fact that the SNSE have been run by acting dean without having any serious issues, especially considering AUN-QA Programme Assessment, shows that the system works well. Good selection process in academic staff results to quality delivery of BPME. 	 Since current trend shows a discrepancy between retirement/resignation and recruitment, it is recommended that the SNSE review the existing succession academic staff planning to ensure good quality of education, continuous leadership, and teaching capacity of the department.
6. Academic Staff Quality	6.2 Staff-to-student ratio and workload are	 As shown in Figure 6.1., the SNSE have objective assessment of academic staff 	 It is highly recommended that the SNSE draw up an action plan to

	Criteria	Strengths	Areas for Improvement
	measured and monitored to improve the quality of education, research and service [2]	workload quota vis-à-vis workload implementation.	mitigate the discrepancy between workload quota and workload implementation. It is also recommended that the SNSE evaluate the reason why, despite having the ideal staff-to-student ratio of 1:9.63, there are substantial excess of workload implementation for academic staff.
6. Academic Staff Quality	6.3 Recruitment and selection criteria including ethics and academic freedom for appointment, deployment and promotion are determined and communicated [4, 5, 6, 7]	 The SNSE follow Vinh University regulation on recruitment and selection criteria. The regulation has clear and objective criteria pertaining to the issue. 	
6. Academic Staff Quality	6.4 Competences of academic staff are identified and evaluated [3]	 Employers identify the expertise of academic staff as one of the main elements for BPME producing quality graduates. 	• The SNSE may want to benchmark competences to similar local or foreign programmes for continuous improvement. For instance, how to encourage or facilitate existing academic staff to become full professors. It is therefore recommended to draw up a systematic plan for upgrading competences through partnership with those institutions. See also sub- criterion 6.5. and 6.7.
6. Academic Staff Quality	6.5 Training and developmental needs of academic staff are identified and activities are	 Academic staff feel encouraged to develop themselves through various trainings and conferences. 	 It is recommended to have institutional partnership with foreign universities to improve trainings and developmental needs of academic

Cı	riteria	Strengths	Areas for Improvement
	implemented to fulfil them [8]		staff. See also sub-criterion 6.4. and 6.7.
6. Academic Staff Quality	6.6 Performance management including rewards and recognition is implemented to motivate and support education, research and service [9]	Academic staff are happy with performance rewards.	
6. Academic Staff Quality	6.7 The types and quantity of research activities by academic staff are established, monitored and benchmarked for improvement [10]	 There are good quantity of research output and financial support for research projects. 	• The SNSE may want to encourage academic staff and students to pursue research on experimental learning for Applied Mathematics. See also sub-criterion 10.4 and 11.4.
			• It is recommended that the SNSE benchmark research activities to similar programmes in Vietnam or overseas for continuous improvement. See also sub-criterion 6.4. and 6.5.
7. Support Staff Quality	7.1 Support staff planning (at the library, laboratory, IT facility and student services) is carried out to fulfil the needs for education, research and service [1]	 Support staff planning is in place and executed accordingly. 	 Vinh University may want to evaluate whether staff rotation meets its objective vis-à-vis requirement of each unit, department, or programme.
7. Support Staff Quality	7.2 Recruitment and selection criteria for	 Vinh University have clear regulation for recruitment and selection criteria. 	

Criteria		Strengths	Areas for Improvement
	appointment, deployment and promotion are determined and communicated [2]		
7. Support Staff Quality	7.3 Competences of support staff are identified and evaluated [3]	 Vinh University have good number of support staff with master and doctoral background. Two-way evaluation approach provides objective assessment of support staff performance and competence. 	
7. Support Staff Quality	7.4 Training and developmental needs of support staff are identified and activities are implemented to fulfil them [4]	 Training and developmental have been directed to improve services performance. 	
7. Support Staff Quality	7.5 Performance management including rewards and recognition is implemented to motivate and support education, research and service [5]	 Supporting staff are happy with performance rewards. 	
8.Student Quality and Support	8.1 The student intake policy and admission criteria are defined, communicated, published, and up-to-date [1]	 Admission policy and criteria are clear, and objective based on standards set by the MOET. 	

Criteria		Strengths	Areas for Improvement
8.Student Quality and Support	8.2 The methods and criteria for the selection of students are determined and evaluated [2]	 Good selection process in student intake, based on National High School Exam as well as direct admission for winners of national or international prizes, results in quality delivery of BPME and production of graduates. 	 The SNSE may want to consider whether BPME needs to keep its focus on educating students in the region or expand its focus to broader area of the country.
8.Student Quality and Support	8.3 There is an adequate monitoring system for student progress, academic performance, and workload [3]	 Objective monitoring system is established. 	
8.Student Quality and Support	8.4 Academic advice, co- curricular activities, student competition, and other student support services are available to improve learning and employability [4]	 Student support services are established. 	See also sub-criterion 11.5.
8.Student Quality and Support	8.5 The physical, social and psychological environment is conducive for education and research as well as personal well- being [5]	 Students feel safe on campus ground. 	 It is recommended that the SNSE optimise and integrate English Club activities to improve students' English proficiency. See also sub-criterion 3.2, 4.2, and 11.5.
9. Facilities and Infrastructure	9.1The teaching and learning facilities and equipment (lecture halls, classrooms, project rooms, etc.) are adequate and updated to support education and research [1]	 The SNSE have good facilities to support various teaching and learning methods employed in the BPME. Existing facilities fully support for flipped classroom. High satisfaction rate from stakeholders is acknowledged. 	See sub-criterion 11.5.

	Criteria	Strengths	Areas for Improvement
9. Facilities and Infrastructure	 9.2 The library and its resources are adequate and updated to support education and research [3, 4] 	 BPME is supported by good collection of literature and reading materials in cooperation with prominent institutions in Vietnam for teaching and learning experience. 	See sub-criterion 11.5.
9. Facilities and Infrastructure	 9.3 The laboratories and equipment are adequate and updated to support education and research [1, 2] 	 Teaching and learning experience in BPME are supported by good laboratories and equipment. 	See sub-criterion 11.5.
9. Facilities and Infrastructure	9.4 The IT facilities including e-learning infrastructure are adequate and updated to support education and research [1, 5, 6]	 Majority of stakeholders are satisfied with the IT facilities. 	See sub-criterion 11.5.
9. Facilities and Infrastructure	9.5 The standards for environment, health and safety; and access for people with special needs are defined and implemented [7]	 Environment, health, and safety notifications are well-placed in building or room entrance. Vinh University have non-academic facilities that would support good mental health in students and academic staff. It is noted that teaching and learning activities in Vinh University have had smooth transition due to COVID-19 pandemic. 	• See sub-criterion 11.5.

	Criteria	Strengths	Areas for Improvement
10. Quality Enhancement	10.1 Stakeholders' needs and feedback serve as input to curriculum design and development [1]	 Vinh University and/or the SNSE collaborate with the MOET and high schools of provinces within the region to provide a good applied learning and practical experience for their students. 	 System of gathering feedback should ensure that stakeholders are informed whether their inputs are taken into consideration
10. Quality Enhancement	10.2 The curriculum design and development process is established and subjected to evaluation and enhancement [2]	 BPME curriculum complies with the MOET and Vinh University regulations and subject to periodical evaluation. 	
10. Quality Enhancement	10.3 The teaching and learning processes and student assessment are continuously reviewed and evaluated to ensure their relevance and alignment [3]	 BPME follows Vinh Regulation on teaching and learning including their evaluation. The regulation makes room for feedback from internal stakeholders. 	The SNSE may want to evaluate teaching and learning experience and their effectiveness during COVID-19 pandemic and benchmark it to other programmes in Vietnam and/or other countries.
10. Quality Enhancement	10.4 Research output is used to enhance teaching and learning [4]	 Research output has been used for teaching and learning in BPME. 	The SNSE may want to encourage academic staff to conduct research on experimental learning for Applied Mathematics among others by offering refreshing courses for alumni for their continuous professional development. See also sub-criterion 6.7. and 11.4.
			• It is recommended that the SNSE consider benchmarking research output with other universities locally and internationally whether current research output of the Department of Mathematics is at par or should be improved. See also sub-criterion 11.5.

Criteria		Strengths	Areas for Improvement	
			It is recommended to encourage students to produce scientific papers as part of their output in the Scientific Research in Education course. See also sub-criterion 11.4.	
10. Quality Enhancement	10.5 Quality of support services and facilities (at the library, laboratory, IT facility and student services) is subjected to evaluation and enhancement [5]	 It is acknowledged that document keeping and management in Vinh University and/or the SNSE as support services is very good. 		
10. Quality Enhancement	10.6 The stakeholder's feedback mechanisms are systematic and subjected to evaluation and enhancement [6]	 Stakeholder's feedback mechanism is established. 	It is recommended that SNSE to collaborate with the same set of stakeholders to determine future challenges that may affect the BPME, its students, and the region, and come up with creative ways to overcome challenges, and monitor improvement over time.	
11. Output	11.1 The pass rates and dropout rates are established, monitored and benchmarked for improvement [1]	 Pass and dropout rates are established. The SNSE have identified causes for student transfer or dropout. As a result, the dropout rates have reduced. 	See sub-criterion 11.5.	
11. Output	11.2 The average time to graduate is established, monitored and benchmarked for improvement [1]		 Although average time to graduate has been established, the rate of graduation after fourth year remains relatively high. It is therefore recommended that the SNSE review and identify causes for late graduation for continuous improvement. 	

	Criteria	Strengths	Areas for Improvement
11. Output	11.3 Employability of graduates is established, monitored and benchmarked for improvement [1]	 Employability rate of graduates is very good. 	
11. Output	11.4 The types and quantity of research activities by students are established, monitored and benchmarked for improvement [2]	 Students are encouraged to engage in research. 	• The SNSE may want to stimulate research activity on experimental learning as part of teaching mathematics and encourage creativity in students. See also sub- criterion 6.7 and 10.4.
			 BPME may want to consider benchmarking student research activities to other programmes in Vietnam and/or overseas. See also sub-criterion 11.4 and 11.5.
11. Output	11.5 The satisfaction levels of stakeholders are established, monitored and benchmarked for improvement [3]	 System of gathering feedback from stakeholders is established to facilitate continuous improvement in learning activities, facilities and delivery of services. Employers recognise BPME graduates as dynamic, creative, autonomous, and proactive, which make them very good candidates for leadership roles. The fact that a number of graduates are currently holding leadership roles in high ranking position both in academic institutions and Department of Education of various provinces shows that 	 See also sub-criterion 10.1. Since the purpose of benchmarking is to have objective parameter of BPME and/or the SNSE for continuous improvement, it is therefore recommended that the SNSE should consider it in its broadest sense. For instance, how similar universities improve students' English proficiency, teaching and learning facilities, or academic staff credibility. See also sub-criterion 11.4 and others above. It is obvious that geographical proximity is one of BPME' strengths.

Criteria	Strengths	Areas for Improvement
	stakeholders are satisfied with the quality of education of BPME.	For continuous improvement, it is suggested that Vinh University or the SNSE evaluate employment of CDIO approach vis-à-vis challenges and expectations in the region. See also sub-criterion 1.1. and 1.3.