Training needs assessment on the teachers' functional and research competencies: Basis for competency training plan

Belinda A. Liwanag, Elgien C. Padohinog, Nilda W. Balsicas

Abstract

The assessment of competencies is aimed to help teachers in demonstrating the key behaviors and to discuss the strengths and improvements to guide them in enhancing their professional development. This descriptive study aims to assess the functional and research competencies that can determine faculty members' knowledge and skills. The authors used a faculty training needs survey form adapted from Ulrich and Dash (2013) which included a 5-level checklist and a 5-point Likert scale regarding the competencies acquired by the faculty members and was made through Google Forms. Thirty-five (35) faculty members of St. Dominic College of Asia from different schools in the Higher Education Department have responded to the faculty training needs survey. Based on the findings, most of the teachers have manifested the functional and research competencies required for their teaching and practice, although their functional competencies have majorly reached either on the first or second levels. Meanwhile, the research competencies have respective ratings of 4.20, 4.21, and 4.41 in scientific research competencies, project and team management skills, and personal aptitudes, which make a positive impact to the teachers. It was also revealed that instructional material development was extended up to the fifth level, wherein teachers even sought feedback from their students, peers, and administrators through observation, conservation, or written evaluations in developing and evaluating resources that can be taught in a certain course, which is a good indication of their engagement towards individuals. The study suggested that faculty members must continue their development through attending research seminars and conference trainings that may be applicable to their specific fields. Future researchers should conduct a correlation study regarding the functional and research competencies, as well as a qualitative approach for the opinions on the effectiveness of these competencies.

Keywords: Training needs assessment; Faculty; Functional competencies; Research competencies.

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Introduction

In the present generation, a competency is something to do with exploring a topic that requires inquiry and reasoning. This may be an enjoying yet overwhelming task but makes sure that everyone would discover a new topic in a much more unique way based on his or her own interests and abilities. Through continuous improvement, teachers including researchers and educational institutions collaborate in ways that allow them to get funds and produce research, as well as develop strategies that would identify and solve real-world problems; however, they do not result in significant changes in practice (Jorilla & Bual, 2021; Yurkofsky et al., 2020). Furthermore, the projects that they are making with the help of science funders and policy makers will help benefit the scope and structure of the topic itself that could shape to different academic fields such as computer science, healthcare, education, and psychology (Bernadas, 2021; Mohammadi & Karami, 2020; Yurkofsky et al., 2020; Zilcha-Mano & Ramseyer, 2020).

In the midst of pandemic, teachers do not stop in enhancing their functional and research competencies through the benefit of the different communities and organizations. Therefore, it is important that when a person research or does a topic, he or she helps the people to prove what the topic is all about and why it affects you, the community, and the environment. The information gathered from the topic should be appropriate and aligned to the current situation in our country. To acquire those skills, they must learn how to value in challenging themselves to adapt to new ways in the teaching and learning process and to show how they could increase their expertise in planning activities especially in the research field that can be useful for the academic community.

A training needs assessment is essential because it signifies identifying the performance requirements needed by the teachers in combination with the knowledge, skills, and abilities that are yet to be achieved. Through this survey, it evaluates the teachers to help in making good and informed decisions for the best ways to address the gaps among them. With the alignment of the competencies of the teachers, they seek not only to identify the concerns that have been arisen for the promotion of the research culture in varied areas, but also to help their colleagues as well as their students to acquire the skills needed for the enhancement of the academic literacy (Castillo-Martinez & Ramirez-Montoya, 2021). Hence, this assessment creates an integral part of teaching and learning and is a driving force in implementing the educational policies and practices in different organizations (Koloi-Keaikitse, 2016).

This study aims to assess the functional and research competencies that can determine faculty members' knowledge and skills. Furthermore, it answers the following research questions: (1) What is the frequency of the levels of functional competencies of the teachers (i.e., subject matter expertise, instructional materials development, effective instructional delivery, student evaluation, effective writing, research skills, technological skills, and community outreach)? (2) What is the rating of the research competencies of the faculty members?

Methodology

The study utilized the descriptive method which aims to determine the phenomenon and its characteristics of the given variable and is more concerned with what rather than how or why something has happened (Nassaji, 2015). The authors made and conducted a faculty training needs survey to determine the functional and research competencies of the teachers. The survey was done during the end of the second semester, Academic Year 2020-2021.

Thirty-five (35) faculty members of St. Dominic College of Asia from different schools in the Higher Education Department have responded to the faculty training needs survey. This includes teachers from the School of Arts, Sciences, and Education (SASE), School of Business and Computer Studies (SBCS), School of Health Science Professions (SHSP), and School of International Hospitality and Tourism Management (SIHTM). This assessment was done through a 5-level checklist and a 5-point Likert scale regarding the competencies that have been acquired by the faculty members. It includes the demographic profile of the respondents and the functional and research competency surveys adapted from Ulrich and Dash (2013) which aim to identify if a faculty member possesses some key competencies that are expected now and in the future through their self and the organization.

The researchers administered the questionnaire through Google Forms and notified different faculty members via e-mail and Messenger accounts. The authors assured that all answers of the respondents would be confidential and useful to create a Competency Training Plan that will enable the faculty members to promote service and plan for research projects and enhance their skills and competencies aligned to the vision and mission of this institution.

A descriptive statistics was utilized to describe the frequencies and percentages of the demographic profile and the levels of the functional competencies. Such functional competencies were classified according to subject matter expertise, instructional materials development, effective instructional delivery, student evaluation, effective writing, research skills, technological skills, and community outreach. Weighted mean was also used in the research competencies of the teachers according to their scientific research competencies, project and team management skills, and personal aptitudes or interpersonal skills. The legends for the weighted mean are as follows: 4.20-5.00 for strongly agree; 3.40-4.19 for agree; 2.60-3.39 for neutral; 1.80-2.59 for disagree; and 1.00-1.79 for strongly disagree.

Table 1. Demographic profile (n = 35)

Category	Variables	Frequency	Percentage
Gender	Male	8	22.86%
	Female	27	77.14%
Civil Status	Single	22	62.86%
	Married	12	34.29%
	Widowed	1	2.86%
	Separated / Divorced	0	0.00%
School	School of Arts, Sciences, and Education	14	40.00%
	School of Business and Computer Studies	5	14.29%
	School of Health Science Professions	13	37.15%
	School of International Hospitality and Tourism Management	3	8.57%
Employment Status	Full-time	22	62.86%
	Part-time	13	37.14%
Years of Teaching at SDCA	0-4 years	24	68.57%
	5-9 years	6	17.14%
	10-14 years	4	11.43%
	15-19 years	1	2.86%

Table 1 shows the demographic profile of the faculty members. Based on the data, most of the faculty members were females (77.14%) as compared with the males (22.86%). In terms of civil status, majority of the faculty members were single (62.86%), followed by those who are married (34.29%) and widowed (2.86%), while none of them are separated or divorced. In school, most of the faculty members came from the School of Arts, Sciences, and Education (40.00%) which made up about two-fourths of respondents who answered the survey. This is followed by the School of Health Science Professions (37.15%), the School of Business and Computer Studies (14.29%), and the School of International Hospitality and Tourism Management (8.57%). For employment status, majority of them were working as full-time faculty members (62.86%) than part-timers (37.14%). In terms of years of teaching, majority of them have taught for zero (0) to four (4) years at St. Dominic College of Asia with 68.57% of the total respondents, followed by five (5) to nine (9) years (17.14%), ten (10) to fourteen (14) years (11.43%), and fifteen (15) to nineteen (19) years (2.86%).

Results and Discussion

Table 2 determines the functional competencies of teachers in terms of subject matter expertise. On the first level, most of the respondents were aware of basic precepts of subject, current and appropriate methodologies, and topics (91.4%). On the second level, majority of the respondents were able to use knowledge of the discipline/subject area to facilitate student understanding of the fundamental concepts and their interrelationships (85.7%).

On the third level, most of the faculty members could apply consistent knowledge in their field and communicate their knowledge to students effectively (91.4%). On the fourth level, majority of the faculty members were able to develop students to critically examine accepted discipline or subject knowledge and practice (80.0%). On the fifth level, most of the teachers have identified issues, concerns and questions for the development of professional practice and have evaluated the subject matter in different formats to support the instructional program, which both got a percentage of 71.4. It can be seen that majority of the respondents have obtained their subject matter expertise in helping students and their colleagues to learn and understand what the topic intends to do and what skills should reflect on their professional development.

Table 2. Functional competencies of teachers in terms of subject matter expertise (n = 35)

Level	Objectives	Frequency	Percentage
Level 1	Is aware of basic precepts of subject, current and appropriate methodologies, and topics.	32	91.4%
	Describes own strengths and those of teaching faculty and other instructors in the subject matter being taught.	26	74.3%
	Identifies major print and electronic resources.	22	62.9%
Level 2	Uses knowledge of the discipline/subject area to facilitate student understanding of the fundamental concepts and their interrelationships.	30	85.7%
	Discusses the bounds and limitations of understanding of a discipline/subject.	25	71.4%
	Integrates information literacy into instruction and seeks opportunities for improvement and for excellent programs and services.	25	71.4%
Level 3	Applies consistent knowledge in his/her field/s and communicates his/her knowledge to students effectively.	32	91.4%
	Articulates strategy for maintaining knowledge in the discipline/subject.	23	65.7%
	Possesses expertise in the effective use of relevant print and electronic resources.	22	62.9%
Level 4	Develops students to critically examine accepted discipline/subject knowledge and practice.	28	80.0%
	Supports the professional development of colleagues through mentoring, collegial, and collaborative working relationship.	21	60.0%
	Solves problem/s in his/her discipline and in his/her approach to education.	26	74.3%
Level 5	Initiates projects designed to enhance the quality of learning.	21	60.0%
	Identifies issues, concerns and/or questions for the development of professional practice.	25	71.4%
	Evaluates the subject matter in different formats to support the instructional program.	25	71.4%

Table 3 determines the functional competencies of teachers in terms of instructional materials development. On the first level, most of the respondents were aware of the purpose for using learning materials to improve communication and understanding (88.6%). On the second level, majority of the respondents were able to identify appropriate instructional materials (82.9%). On the third level, most of the faculty members could select and use appropriate technology to develop instructional materials that will help students develop their skills and accomplish their goals (88.6%). On the fourth level, majority of the faculty members were able to analyze learning objectives to determine appropriate print and non-print resources to be introduced (82.9%). On the fifth level, most of the teachers have sought feedback through observation, conservation, or written evaluations from students, peers, and administrators in developing and evaluating instructional materials, which got a percentage of 88.6. This result revealed that most respondents have acquired the skills in developing instructional materials, although improvements on the portfolio must be implemented to the teachers.

Table 3. Functional competencies of teachers in terms of instructional materials development (n = 35)

Level	Objectives	Frequency	Percentage
Level 1	Is aware of the purpose for using learning materials to improve communication and understanding.	31	88.6%
	Assesses the factors to consider in choosing an appropriate material (e.g., learners' profile, content, purpose, situation) in which the materials will be used and availability of resources.	26	74.3%
	Facilitates the preparation of audio-visual aids and learning management modules.	26	74.3%
Level 2	Demonstrates appropriate use of instructional technology.	27	77.1%
	Identifies appropriate instructional materials.	29	82.9%
	Demonstrates appropriate use of professional vocabulary in developing learning materials.	25	71.4%
Level 3	Is fully prepared to deliver instructional materials when instruction occurs.	29	82.9%
	Selects and uses appropriate technology to develop instructional materials that will help students develop their skills and accomplish their goals.	31	88.6%
	Develops a portfolio of instructional materials.	15	42.9%
Level 4	Analyzes learning objectives to determine appropriate print and non-print resources to be introduced.	29	82.9%
	Guides others in instructional materials development competency.	24	68.6%
	Develops learning materials that incorporates the application of educational technology for adult learners (graduate programs).	18	51.4%
Level 5	Seeks feedback through observation, conservation, or written evaluations from students, peers, and administrators in developing and evaluating instructional materials.	31	88.6%
	Develops E-Learning materials to give students access inside and outside of classroom.	24	68.6%
	Manifests good character traits at all times, in and out of the school.	24	68.6%

Table 4. Functional competencies of teachers in terms of effective instructional delivery (n = 35)

Level	Objectives	Frequency	Percentage
Level 1	Understands learning theories and their applications.	27	77.1%
	Understands student needs and learning styles.	29	82.9%
	Recognizes that effective instruction services are crucial factors in training students to be successful learners.	25	71.4%
Level 2	Uses of appropriate evaluation techniques to measure the cognitive, the affective, and the behavioral skills of the students.	32	91.4%
	Constructs questions that develop high-order thinking skills (HOTS).	25	71.4%
	Uses active listening skills – boomerang, reflection, and paraphrasing.	22	62.9%
Level 3	Plans effective instruction and selects a variety of strategies based on learner's developmental level and individual needs.	27	77.1%
	Allows flexibility in the presentation of the lesson to achieve dynamic student participations to realize stated objectives.	25	71.4%
	Works creatively with students of varied motivational levels within the complex social environment of the classroom.	24	68.6%
Level 4	Encourages students to increasingly accept responsibility for their own learning by providing opportunities for them to progressively develop some control over the aspects of the teaching/learning process (formulating goals, designing learning experiences, controlling the pace of teaching episodes, and devising assessment procedures).	31	88.6%
	Empathizes with students by asking genuine questions and showing respect responses, listening to students' concerns and opinions, and raising students' expectations.	28	80.0%
	Encourages students to develop a critical perspective making use of their stocks knowledge and innate abilities to see themselves in relation to the world.	23	65.7%
Level 5	Develops and implements strategies to deal with instructional problems.	27	77.1%
	Assists colleagues in integrating policies on teaching and learning into their professional practices.	24	68.6%
	Supports academic colleagues in development and progress in their teaching.	24	68.6%

Table 4 describes the functional competencies of teachers in terms of effective instructional delivery. On the first level, most of the respondents were able to understand student needs and learning styles (82.9%). On the second level, majority of the respondents use appropriate evaluation techniques to measure the cognitive, the affective, and the behavioral skills of the students (91.4%). On the third level, most of the faculty members could plan effective instruction and select a variety of strategies based on learner's developmental level and individual needs (77.1%).

On the fourth level, majority of the faculty members were able to encourage students to increasingly accept responsibility for their own learning by providing opportunities for them to progressively develop some control over the aspects of the teaching / learning process (88.6%). On the fifth level, most of the teachers have developed and implemented strategies to deal with instructional problems, which got a percentage of 77.1. Based on the table, instructional delivery has been effective by most of the teachers in sharing their information and skills to the students.

Table 5. Functional competencies of teachers in terms of student evaluation (n = 35)

Level	Objectives	Frequency	Percentage
Level 1	Understands the principle involved in test construction and measurement.	33	94.3%
	Identifies the internal and external measures used to assess student's knowledge and skills.	22	62.9%
	Describes the system for giving formative feedback and for determining summative feedback.	27	77.1%
Level 2	Prepares the table of specifications that relate to the instructional objectives to the course content.	31	88.6%
	Constructs appropriate test questions and other instruments.	26	74.3%
	Effectively evaluates students' competencies.	27	77.1%
Level 3	Utilizes a variety of assessment tools and evaluation strategies.	28	80.0%
	Sets high but achievable or realistic expectations that are suitable for the students.	28	80.0%
	Uses performance-based evaluations, other than objective type of questions as observed performances, small group learning activities, oral, practical or essay examinations, and student thesis.	24	68.6%
Level 4	Uses assessment to improve student learning through item analysis.	27	77.1%
	Undertakes discussions with students and colleagues on the outcomes of the evaluation.	20	57.1%
	Uses a variety of summative evaluation techniques.	24	68.6%
Level 5	Carries out evaluation as an integral part of any initiative taken to enhance learning outcomes.	25	71.4%
	Uses a wide range of evaluative procedures as appropriate to the student group and discipline.	24	68.6%
	Gives feedback on what has happened during the implementation stage.	22	62.9%

Table 5 specifies the functional competencies of teachers in terms of student evaluation. On the first level, most of the respondents have understood the principle involved in test construction and measurement (94.3%). On the second level, majority of the respondents were able to prepare the table of specifications that relates to the instructional objectives to the course content (91.4%).

On the third level, most of the faculty members could utilize a variety of assessment tools and evaluation strategies and set high but achievable or realistic expectations that are suitable for the students, which both got a percentage of 80. On the fourth level, majority of the faculty members have utilized assessments to improve student learning through item analysis (77.1%). On the fifth level, most of the teachers were able to carry out evaluation as an integral part of any initiative taken to enhance learning outcomes (71.4%). From the given results, student evaluation was regarded as "positive" by teachers as they provide a feedback for the effectiveness of its teaching quality to the students.

Table 6. Functional competencies of teachers in terms of effective writing (n = 35)

Level	Objectives	Frequency	Percentage
Level 1	Manifests knowledge of English vocabulary and grammar for teachers.	30	85.7%
	Is aware of the different modes or rhetorical patterns to express thoughts.	24	68.6%
	Organizes thoughts and ideas in writing language effectively.	24	68.6%
Level 2	Writes correspondence and communications using readily available information data.	29	82.9%
	Writes narrative and descriptive reports and other related writing assessments.	24	68.6%
	Edits and corrects various correspondence and reports.	25	71.4%
Level 3	Demonstrates clarity, fluency, impact, conciseness, and effectiveness in written communication.	30	85.7%
	Writes technical reports and related writing assignments on the analysis of various interrelated data or activities.	19	54.3%
	Writes a research paper or a related project proposal based on current trends and development affecting the School.	22	62.9%
Level 4	Teaches and guides others in writing technical reports and related assignments.	29	82.9%
	Writes a variety of business letters, reports, circulars, documents, policies and operating procedures, and technical and feasibility studies, using generally accepted format and style.	21	60.0%
	Writes literary compositions and poetry and other compositions for specific purposes.	19	54.3%
Level 5	Communicates clearly with diverse audiences using a variety of print strategies.	26	74.3%
	Develops written communication strategies which meet the information requirement of a diverse workforce which is customer-based.	26	74.3%
	Communicates effectively with the media in print.	21	60.0%

Table 6 denotes the functional competencies of teachers in terms of effective writing. On the first level, most of the respondents have manifested their knowledge of English vocabulary and grammar (85.7%).

On the second level, majority of the respondents were able to write correspondence and communications using readily available information data (82.9%). On the third level, most of the faculty members could demonstrate clarity, fluency, impact, conciseness, and effectiveness in written communication (85.7%). On the fourth level, majority of the faculty members were able to teach and guide others in writing technical reports and related assignments (82.9%). On the fifth level, most of the teachers were able to communicate clearly with diverse audiences using a variety of print strategies and develop written communication strategies which meet the information requirement of a diverse workforce which is customer-based, which both got a percentage of 74.3. Based on the result, it implies that writing skills are shown as "effective" to the teachers, as they help students and their colleagues to create clear connections towards others and ensure that writing can be visible and possible.

Table 7. Functional competencies of teachers in terms of research skills (n = 35)

Level	Objectives	Frequency	Percentage
Level 1	Follows correct research format most applicable to the problem being pursued.	30	85.7%
	Complies with the accepted standards of technical writing.	24	68.6%
	Relates learned research skills in the actual preparation of the paper.	25	71.4%
Level 2	Conducts research undertaking as part of the academic practice in the College.	26	74.3%
	Applies knowledge gained from research experience in teaching.	26	74.3%
	Bases practice on established principles of research.	23	65.7%
Level 3	Assures other research that theories and findings of current research may be expanded and used in other research settings.	29	82.9%
	Serves as a lead researcher or proponent.	12	34.3%
	Demonstrates the ability to report competently the research findings.	23	65.7%
Level 4	Assists neophyte-researchers on the basic skills necessary in conducting research.	19	54.3%
	Supervises other researchers and scholars.	17	48.6%
	Explains to other researchers the significance of research in raising the level of instruction.	27	77.1%
Level 5	Continuous engagement in scholarly research activities.	28	80.0%
	Receives grants and funding for research from external agencies both from local and international.	11	31.4%
	Publishes research papers in leading professional and educational journals.	13	37.1%

Table 7 identifies the functional competencies of teachers in terms of research skills. On the first level, most of the respondents have followed correct research format most applicable to the problem being pursued (85.7%). On the second level, majority of the respondents were able to conduct research undertaking as part of the academic practice in the College and apply knowledge gained from research experience in teaching, which both got a percentage of 74.3.

On the third level, most of the faculty members have assured other research that theories and findings of current research may be expanded and used in other research settings (82.9%). On the fourth level, majority of the faculty members were able to explain to other researchers the significance of research in raising the level of instruction (77.1%). On the fifth level, most of the teachers have continuous engagement in scholarly research activities (80.0%). The table shows that teachers have contributed much when it comes to improving their research skills; however, in some areas, they were reluctant to publish or contribute to an action research due to the lack of institutional support and limited teacher / researcher initiatives (Sato & Loewen, 2019). This kind of skill is necessary to be addressed in such concerns, wherein they can not only open the positive outcomes in the educational environment, but also offer a positive change to this higher education institution.

Table 8. Functional competencies of teachers in terms of technological skills (n = 35)

Level	Objectives	Frequency	Percentage
Level 1	Possesses knowledge of technology.	28	80.0%
	Understands the basics of Microsoft Word, Excel, and PowerPoint.	31	88.6%
	Is aware of the existence of available technology resources in the school.	28	80.0%
Level 2	Manifest skills in the use of available technological platforms in the school (e.g., Blackboard, Google Meet, Zoom).	35	100.0%
	Demonstrates continual growth in technology and skills to keep abreast of current and emerging technologies.	27	77.1%
	Uses multimedia, hypermedia, and telecommunications to support effective activities for lessons, presentations, demonstrations, and student projects.	25	71.4%
Level 3	Designs developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of students.	31	88.6%
	Plans for the management of technology resources within the context of learning activities and goals.	23	65.7%
	Plans strategies to manage student learning in a technology-enhanced environment.	26	74.3%
Level 4	Facilitates technology-enhanced experiences that address content standards and student technology standards.	29	82.9%
	Selects and implement appropriate hardware, software, and peripherals for the teaching and learning tasks.	24	68.6%
	Utilizes technologies to access information to enhance professional productivity, conduct research, and communicate through local and global professional networks.	25	71.4%
Level 5	Uses appropriate and up-to-date technology and e-learning to enhance productivity and professional practice.	31	88.6%
	Monitors how the utilization of technology enhances student achievements.	24	68.6%
	Uses technology to communicate and collaborate with peers, parents, and families in order to nurture student learning.	25	71.4%

Table 8 shows the functional competencies of teachers in terms of technological skills. On the first level, most of the respondents have understood the basics of Microsoft Word, Excel, and PowerPoint (88.6%). On the second level, all of the respondents were able to manifest skills in the use of available technological platforms in the school such as Blackboard, Google Meet, and Zoom (100.0%). On the third level, most of the faculty members could design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of students (88.6%). On the fourth level, majority of the faculty members were able to facilitate technology-enhanced experiences that address content standards and student technology standards (82.9%). On the fifth level, most of the teachers used appropriate and up-to-date technologies and e-learning to enhance productivity and professional practice (88.6%). This shows that teacher respondents have demonstrated much of the technological skills, which can be beneficial in using technologies for their lesson plans and monitoring of activities.

Table 9. Functional competencies of teachers in terms of community outreach (n = 35)

Level	Objectives	Frequency	Percentage
Level 1	Understands the vital role of community outreach/extension in the philosophy, vision, and mission of the school.	33	94.3%
	Is aware of his/her role in the community outreach.	18	51.4%
	Is cognizant of the characteristics and resources of the college.	19	54.3%
Level 2	Participates in the community outreach activities.	25	71.4%
	Attends meetings and accomplishes what is necessary or in the agenda.	23	65.7%
	Coordinates with internal organizations.	19	54.3%
Level 3	Communicates with external constituents.	23	65.7%
	Participates in planning of community development programs.	23	65.7%
	Utilizes available resources of the community to concretize planned activities.	23	65.7%
Level 4	Monitors the progress of activities being implemented in the partner community.	28	80.0%
	Is able to train volunteers regarding the conduct of community outreach activities.	19	54.3%
	Solicits grants/funds for community outreach activities/community extension program.	10	28.6%
Level 5	Promotes active involvement of clients/ beneficiaries to work collectively on community needs.	27	77.1%
	Establishes linkages/networking with non-government and government organizations, and other funding agencies.	14	40.0%
	Explore other areas for community development.	20	57.1%

Table 9 describes the functional competencies of teachers in terms of community outreach. On the first level, most of the respondents have understood the vital role of community outreach and extension in the philosophy, vision, and mission of the school (94.3%). On the second level, majority of the respondents have participated in the community outreach activities (71.4%). On the third level, most of the faculty members were able to communicate with external constituents, participate in planning of community development programs, and utilize available resources of the community to concretize planned activities, which all got a percentage of 65.7. On the fourth level, majority of the faculty members have monitored the progress of activities being implemented in the partner community (80.0%). On the fifth level, most of the teachers actively promote involvement of clients and beneficiaries to work collectively on community needs (77.1%). Community outreach activities play an effective role for teachers in getting involved into different programs for the people and the organization, but limited efforts for the institutional support and partnership including funding were revealed according to its result. This is similar with the findings of the studies of Nuncio et al. (2020) and Teufel-Shone et al. (2019), as partnership initiatives need to undergo a long process aside from getting the sufficient local resources for its community.

Table 10. Scientific research competencies of the teachers

Scientific research competencies	Mean	Interpretation
Scientific knowledge	4.34	Strongly Agree
Ability to learn and adapt	4.43	Strongly Agree
Ability to formulate a research issue	4.26	Strongly Agree
Capacity for analysis and grasp of sophisticated IT tools	3.83	Agree
Ability to work in an interdisciplinary environment	4.06	Agree
Ability to incorporate existing knowledge	4.26	Strongly Agree
AVERAGE WEIGHTED MEAN	**4.20**	**Strongly Agree**

Legend: 4.20-5.00 for strongly agree; 3.40-4.19 for agree; 2.60-3.39 for neutral; 1.80-2.59 for disagree; and 1.00-1.79 for strongly disagree.

Table 10 determines the scientific research competencies of the teachers. Based on the data, most teachers 'strongly agree' that they have scientific knowledge (Mean = 4.34), are able to learn and adapt (Mean = 4.43), are able to formulate a research issue (Mean = 4.26) and are able to incorporate existing knowledge (Mean = 4.26). Meanwhile, most teachers 'agree' that they are capable for analysis and grasp of sophisticated information technology (IT) tools (Mean = 3.83), and are able to work in an interdisciplinary environment (Mean = 4.06).

Of all the scientific competencies, the ability to learn and adapt has the highest-ranked scientific research competency of the teachers. It is also revealed that teachers got a 'strongly agree' rating which implies that the scientific research competencies have a high positive rating for them. This finding confirms the study of Cortes (2019) as it suggests that each competency has to be aligned and recalibrated based on what teachers need during trainings, especially in research. This can also help teachers to enhance their skills in providing innovation and discovery through their respective fields.

Table 11. Project and team management skills of the teachers

Project and team management skills	Mean	Interpretation
Ability to work in a team	4.34	Strongly Agree
Ability to develop a network	4.06	Agree
Communication skills	4.31	Strongly Agree
Ability to assess	4.34	Strongly Agree
Language skills	4.37	Strongly Agree
Business culture and management skills	4.03	Agree
Project management skills	4.03	Agree
Ability to manage and steer teams	4.09	Agree
Awareness of the pertinence of the research and its impact on the environment	4.29	Strongly Agree
AVERAGE WEIGHTED MEAN	**4.21**	**Strongly Agree**

Legend: 4.20-5.00 for strongly agree; 3.40-4.19 for agree; 2.60-3.39 for neutral; 1.80-2.59 for disagree; and 1.00-1.79 for strongly disagree.

Table 11 describes the project and team management skills of the teachers. According to the data, it shows that most of the respondents 'strongly agree' that they are able to work in a team (Mean = 4.34), have improved communication skills (Mean = 4.31), the ability to assess (Mean = 4.34), language skills (Mean = 4.37), and are aware of the pertinence of the research and its impact on the environment (Mean = 4.29). Meanwhile, majority of the teachers 'agree' that they are able to develop a network (Mean = 4.06), have improved business culture and management skills (Mean = 4.03), project management skills (Mean = 4.03), and are able to manage and steer teams (Mean = 4.09).

Based on the findings, it is revealed that the language skills are one of the project and team management skills which are highly regarded from the teachers. It is also shown that more teachers strongly agreed on the project and team management skills which indicates a positive rating. Based on Martinez and Tinoca's (2022) study, they found that focusing on pedagogy, curriculum, and skill acquisition is important in helping their co-teachers and students to increase their 21st-century teaching skills, particularly in the project management. It encourages them to motivate individuals in promoting learning by recognizing their strengths and weaknesses, including working together in a certain project to achieve that goal.

Table 12. Personal aptitudes of the teachers

Personal aptitudes	Mean	Interpretation
Creativity	4.31	Strongly Agree
Open-minded approach	4.40	Strongly Agree
Motivation/Involvement	4.46	Strongly Agree
Adaptability	4.43	Strongly Agree
Ability to self-assess	4.43	Strongly Agree
AVERAGE WEIGHTED MEAN	**4.41**	**Strongly Agree**

Legend: 4.20-5.00 for strongly agree; 3.40-4.19 for agree; 2.60-3.39 for neutral; 1.80-2.59 for disagree; and 1.00-1.79 for strongly disagree.

Table 12 reveals the personal aptitudes and interpersonal skills of the teachers. From the given data, it is shown that most of the respondents 'strongly agree' that they have creativity (Mean = 4.31), open-minded approach (Mean = 4.40), motivation and involvement (Mean = 4.46), adaptability (Mean = 4.43), and ability to self-assess (Mean = 4.43). Therefore, it is determined that the motivation and involvement has the highest personal aptitude for teachers and is implied that all skills have been improved for them to enhance their interpersonal skills.

It is revealed that teachers have positively acquired their personal aptitudes and interpersonal skills towards students. Similar to the study of Theelen et al. (2019), it is reported that positive learning experiences relied on the realism and authenticity when using in classroom simulations. Though it can be seen as a support among teachers, it is important to get to know students with one another for them to create a better motivation and achievement in all aspects of knowledge and other skills (Ayllón et al., 2019). This helps teachers to build their confidence and self-esteem in getting involved inside and outside the classrooms.

Conclusions

Functional and research competencies are indeed fundamental to the teachers in today's generation. Therefore, in various disciplines, it enables teachers to acquire the necessary skills for their self-development, as well as the knowledge and values provided in what they should do. Based on the findings, most of the teachers have manifested the functional and research competencies required for their teaching and practice, although their functional competencies have majorly reached either on the first or second levels. It is revealed that instructional material development was extended up to the fifth level, wherein teachers even sought feedback from their students, peers, and administrators through observation, conservation, or written evaluations in developing and evaluating resources that can be taught in a certain course, which is a good indication of their engagement towards individuals. On the other hand, research competencies have a positive impact to the teachers with regards to their scientific research competencies, project and team management skills, and personal aptitudes. However, a strong positive relationship shall be developed in the future among these variables to correlate with the demographic profiles of the respondents.

Recommendations

Based on the abovementioned conclusions, recommendations were suggested to improve the training needs of the faculty members in their functional and research competencies:

1. Faculty members must continue their development through attending research seminars and conference trainings that may be applicable to their specific fields. At the same time, they should also participate in different workshops that help them in becoming proficient as suitable for coming up with their organization or project such as virtual or in-person instructor-led sessions, audio-visual programs, and computer-based simulations.

2. The institution should implement a policy in which research grants can be available once they submit or present a paper into local and international research conferences as a support. Likewise, teachers should create an action research that will be of great impact to the community and the school. Furthermore, the school should come up with a plan for community outreach funds that might be helpful to the adapted communities like in Barangays Sineguelasan and Talaba II in Bacoor, Cavite.

3. Faculty members and researchers should organize a virtual portfolio such as in Google Drive and other educational resources such as Blackboard Learn, Google Classroom, and Moodle for their instructional materials so that they can use it easily for their improvement and reflection. This shall include the title of the folder and the files included in order of submission and upload.

4. Future researchers should conduct a correlation study regarding the functional and research competencies. Consequently, they should also conduct a qualitative approach for the opinions of teachers on being effective of these competencies.

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