
A TEACHER'S GUIDE TO MARINE ENVIRONMENTAL EDUCATION IN SAINT LUCIA

FINAL REPORT

Prepared by:

*Lavina Alexander
Sarita Williams-Peter*

May 2012



Publication prepared for the Caribbean Marine Protected Areas Management Network and Forum with support from the United Nations Environment Programme – Caribbean Environment Programme (UNEP-CEP)

Table of Contents

Background	1
Course Implementation	3
Module 1: The Marine Environment – An Introduction	5
Module 2: Ecology of Marine Ecosystems	8
Module 3: Benefits of and Threats to Marine Ecosystems	10
Module 4: Marine Resource Management	12
Module 5: Sample School Based Assessments	14
Appendix 1 – Participant List	A1
Appendix 2 – Participant Evaluation of Training	A2
Evaluation Summary – Module 1	A2
Evaluation Summary – Module 2	A4
Evaluation Summary – Module 3	A6
Evaluation Summary – Module 4	A8
Evaluation Summary – Module 5	A10

Background

As a small island developing state, the coastal resources of Saint Lucia serve many diverse interests, supporting environmental, economic, social and cultural development and aesthetic functions. It is therefore necessary to protect and conserve the natural resource base within the coastal zone, to ensure that the benefits being derived are maintained. Increasingly, marine protected areas (MPAs) are proving to be successful tools for the protection of natural resources, while providing numerous opportunities for the people who depend on the exploitation of these resources to benefit through the provision of sustainable livelihoods.

In order to effect change in the mindset of Saint Lucians on the significance of marine protected areas, and coastal resources in general, it is important to target the education sector. This will ensure the sustainability of the message by educating the youth, who may respond with a positive change in attitude towards marine resources. With more knowledge, these stakeholders may become motivated to support policies, make more informed decisions and become actively involved in resource conservation.

Successful implementation and sustainability of awareness activities targeting the youth will be based on the training of teachers in order that they educate their students on the marine environment. In so doing, the Saint Lucia National Trust and the Department of Fisheries partnered to deliver a five-day professional development course for teachers in Marine Environmental Education. This programme was funded by the United Nations Environment Programme Regional Coordinating Unit of the Caribbean Environment Programme, and sought to raise the awareness and understanding of the value of the marine environment and Marine Protected Areas among primary and secondary school teachers from across the island. The course also aimed to equip participants and other teachers with the knowledge, network, tools, activities, materials and other support to successfully transfer knowledge gained on the marine environment to their students.

This activity was a joint initiative of the Saint Lucia National Trust (SLNT) and the Department of Fisheries (DOF), working alongside participating teachers.

The SLNT is a non-profit, non-governmental membership organization established by an Act of Parliament to “conserve the natural and cultural heritage of Saint Lucia”. In fulfilling its mandate, the SLNT provides opportunities and resources that can help to raise awareness and understanding of the issues affecting the country’s patrimony.

The DOF has the legal mandate for the conservation and sustainable management of the fisheries resources of Saint Lucia. In meeting that objective, the DOF has, to date, designated twenty-four marine reserves. The effort of the Department has also led to the establishment of

the Soufriere Marine Management Area (SMMA), which itself comprises four marine reserves. Over the years, DOF has conducted numerous public awareness activities, many of which have been, and continue to be, ad hoc, unsustainable and incomprehensive. The inadequacy of the DOF's public awareness activities was one of the key weaknesses identified in the current strategic planning process, which is aimed at improving the Department's work efficiency.

The SLNT and DOF share responsibility as Country Coordinators for the Wider Caribbean Sea Turtle Conservation Network (WIDECAST).

In meeting the course objectives, the SLNT contracted Ms. Lavina Alexander, who worked in partnership with Mrs. Sarita Williams-Peter, to develop the training guide and to design the course delivery. This follows participation by the pair in the Caribbean MPA Managers Network and Forum's (CaMPAM) 2009 Training of Trainers Course in Marine Protected Areas Management, held in Trinidad and Tobago in 2009, and the required delivery of relevant training in Saint Lucia.

Following that training exercise, the Department of Fisheries conducted a needs assessment among seventeen (17) Life, Earth and Social Science Secondary School Teachers, revealing that training in and familiarity with marine resources and related issues was minimal. Surveyed teachers further agreed that they would be willing to incorporate relevant skills into lesson plans, if adequately trained in marine environmental education.

In designing the pilot Teacher's Training Course in Marine Environmental Education, the Consultant Team drew on the experiences and expertise of other local and regional resource management agencies, educational authorities, NGOs and publications, involved in marine resources conservation and management, outreach and education.

The "Guide to Marine Environmental Education" aimed at providing some direction to teachers in communicating the importance of marine resources management in the classroom. The Guide was designed to offer flexibility in lesson planning, and highlights a number of resources available to enhance lessons and learning. Linkages between content and the situation in the Caribbean Region, and more specifically in Saint Lucia, help to provide avenues for more active involvement in resource conservation through practical examples and exercises, enabling teachers to easily incorporate locally-relevant examples, case studies and activities related to the marine environment in their lesson plans, and to provide them with contacts to draw on from among local MPA managers and natural resource professionals. As such, the training was also seen as a means to address shortcomings in environmental education, while complementing other activities in Saint Lucia in relation to marine resources management.

It is envisioned that this Guide will be used in creating and implementing an annual teacher training course on marine resources. Workshops will be held to equip teachers with tools

which can be used to educate students and other teachers on the environmental value of coastal resources, and to stimulate their active involvement in resource conservation.

Course Implementation

The pilot Teacher Training programme in Marine Environmental Management was implemented over five days during January and February 2012. Participants included sixteen (16) primary and secondary school teachers selected by the Ministry of Education, Human Resource Development and Labour in Saint Lucia, and represented schools and districts across the island (see Appendix 1 for Participant List). The training was undertaken at various locations, with a focus on the ecological and economic importance of the island's marine resources.

Implementation of the course was based mainly on the "*Guide to Marine Environmental Education*", and included both theoretical and field/practical activities focusing on marine issues identified regionally and nationally. The training further made ample use of materials and activities focusing on locally-occurring marine biodiversity, as well as visits to the Pointe Sable Environmental Protection Area (PSEPA), and the Soufriere Marine Management Area (SMMA), as appropriate. A number of resource persons and agencies lent their expertise to the delivery of the teachers' training exercise and committed continued support of the initiative, both in its replication, and in the transfer of relevant material to the classroom.

The training modules covered in the course included:

MODULE 1: The Marine Environment – An Introduction

- | | |
|------------|--|
| Theme 1.1: | <i>What's seawater made of?</i>
The Physical and Chemical Characteristics of Seawater |
| Theme 1.2: | <i>Movement of the Ocean and Seas</i>
Ocean Currents Circulation Patterns |
| Theme 1.3: | <i>Treasures of the Sea</i>
Fisheries Resources in Saint Lucia |

MODULE 2: Ecology of Marine Ecosystems

- | | |
|------------|--|
| Theme 2.1: | <i>Dynamic Ecosystems</i>
The Ecology of Mangrove Forests and Beaches |
| Theme 2.2: | <i>Under the Sea</i> |

The Ecology of Seagrass Beds and Coral reefs

Theme 2.3: *The Circle of Life*
Connections between Marine Ecosystems

MODULE 3: Benefits of and Threats to Marine Ecosystems

Theme 3.1: *Value Added*
Ecosystem and Socio-economic Services

Theme 3.2: *A Scary Situation*
Natural and Anthropogenic Threats

Theme 3.3: *National Interventions*
Minimizing the Threats, Maximizing the Services

MODULE 4: Marine Resource Management

Theme 4.1: *Managing People*
Community Based Co-Management

Theme 4.2: *From Ridge to Reef*
Watershed and Coastal Zone Management

Theme 4.3: *Extra Protection*
Marine Protected Areas

MODULE 5: Sample School Based Assessments

*by Motielall Singh, Curriculum Officer, Ministry of Education, Human
Resource Development and Labour, Saint Lucia*

Theme 5.1: *Importance of School Based Assessment (SBA)*

Theme 5.2: *School Based Assessment as a Form of Evaluation*

Theme 5.3: *School Based Assessment Activities*

After each session, participants were required to evaluate the Modules using a pre-designed instrument. The evaluation instrument and results are summarised in Appendix 2.

Module 1: The Marine Environment – An Introduction

Module 1 followed the Opening Ceremony for the workshop, at which the Director of the Saint Lucia National Trust, the Chief Fisheries Officer and the Curriculum Officer for Science and Technology from the Ministry of Education, Human Resource Development and Labour, delivered remarks. Participants then engaged in an icebreaking activity to get acquainted with each other and to create a comfortable learning environment.



Figure 1 Opening ceremony



Figure 2 Participants getting to know each other

The morning session began with lectures on Themes 1.1 and 1.2. The morning presentations generated a lot of discussion and questions from participants. It was clear from the presentations that participants were quite eager to learn about environmental issues. In the afternoon the participants engaged in a field activity to reinforce the concepts lectured and to deliver Theme 1.3. The group was split in two. They were rotated between a boat trip in the Gros Islet area to measure a variety of parameters of seawater, and a presentation at the Gros Islet Fish Landing site, where they also interacted with a fisher.



Figure 3 Presentation by Fisher at the Gros Islet Landing site



Figure 4 Participant taking measurement readings

After the field activity the participants returned to the conference room to get a debriefing and to complete the evaluation instrument. The majority of participants deemed Module 1 to be useful, with Theme 1.3 being of most interest due to the field activity. The evaluation of the module revealed that the participants believed that the module was delivered well to very good. The feedback from participants on information that was most and least valuable to them was spilt based on subjects the participants taught in their respective schools. Some participants indicated that Themes 1.1 and 1.2 provided a wealth of new information while some indicated that they already knew the information. The participants enjoyed the field activities because they found it provided an opportunity to learn by doing. The use of local examples in the module also was of value to the participants.

Highlights of comments are featured below:

"Both the theory and practical sessions gave great clarity to a topic (Ecology component of the CXC Biology Syllabus) I never really enjoyed teaching"

"I do intend to incorporate it (fisheries resources) into my lessons to create an awareness and appreciation of our ecosystems and resources and how to preserve and conserve them"

"For adults it is easy to understand"

"I obtained local information about St. Lucia's management of coastal resources"

"I am now able to impart some of this information confidently to my students when that aspect of the syllabus is reached"

"I learnt something of great value from every theme in the module"

Module 2: Ecology of Marine Ecosystems

Module 2 was delivered in the south of the island. During the morning session the teachers listened to an introductory lecture on the Module. Then the teachers went on a field activity to Maria Island Wildlife Reserve and the Maria Island coral reefs marine reserve.



Figure 5 Group photo at Savannes Bay Landing site before taking the boat to Maria Islands for the field trip



Figures 6 and 7 Participants on boat ride to Maria Islands

When at Maria Islands the participants got experience in measuring the profile of beaches and those who were comfortable swam over the Maria Island Marine Reserve and the adjacent Manatee seagrass bed. The participants then went back to the conference room to debrief before the afternoon field trip. For the afternoon field trip the participants were given a discovery activity in the Mankote mangrove forest. They formed groups and had to identify mangrove species and features of a mangrove forest. The majority of participants found all aspects of the module were important, only coral types and beach profiling was seen as the least useful.

Highlights of comments are featured below:

"It has made me more environmentally conscious and would love to become part of any organisation to help protect this area"

"Made me more aware of the mangrove and the problems this fragile ecosystem faces"

"I now have a better understanding of the Ecology of Mangroves and Seagrass beds. This will help in future when I have to deliver lessons and learning activities on the ecology of marine environments in integrated science"

"A lot of what we take for granted is actually very beneficial to the marine and also the terrestrial environment"

"Has made me better equipped in identifying corals and mangroves as well as teaching the interdependence of ecosystems"

"I can use this knowledge to organise field trip to tie in with objectives of the Biology syllabus for students of Form 5"

"The information presented will assist me greatly in my lesson delivery"

Module 3: Benefits of and Threats to Marine Ecosystems

While the content of Module 3 was built on that of preceding modules, implementation of the module was patterned with the field activity undertaken in the morning, and a group activity and presentation replacing afternoon lectures.

During the morning, the participants visited various sites within the Pointe Sable Environmental Protection Area (PSEPA) to explore the myriad uses of and threats to the coastal resources of the south-east coast of Saint Lucia. The field activity included an overview of the extensive area and its resources from Moule a Chique, followed by stops at the Mankote Mangrove and Savannes Bay fishing complex. Resource persons and users were present at these locations to



Figure 8 Discussion at Mankote Mangrove caught the attention and held the interest of teachers



Figure 9 Presentation by Fisheries Representative, Hardin JnPierre, on site at the Savannes Bay fishing complex

give insight on the various uses of the coastal resources, along with the ongoing and potential threats faced by these resources.



Figure 10 Group session to determine possible solutions to threats observed during morning field trip

The afternoon activity included group assessment and presentation on the uses of and threats to the coastal resources as introduced during the field visit, along with possible solutions to ongoing and potential threats faced. Discussion on group presentations was strengthened by the provision of hand-outs reflecting uses, users, and threats identified during the management planning process for the PSEPA.

In evaluating the delivery of the module, teachers showed appreciation for the well-organised flow of the session, with the overall reaction being rated 'very well organised' by all participants. The written materials were also deemed adequate, with admiration being shown to the web links and Internet references provided in the Manual. Comments included:

"The visit to both Moule-a-Chique and Savannes Bay increased my awareness of our resources here in St. Lucia; the regulations put in place by different agencies (St. Lucia National Trust and Department of Fisheries) to protect it and our role in conserving it."

"Field trips are awesome. These trips model what we should include in our classrooms."

"First-hand interaction with the identification of mangrove species was of most value in the Module."

"The opportunity to gain information on the uses, threats and opportunities for the marine ecosystem will prove to be quite valuable for teaching in the classroom."

During the field sessions and other discussion, teachers made recommendations for improving education and advocacy initiatives to prevent loss of areas like Mankote Mangrove, use of volunteers and lobbyists to police the various sites, enhancement of environmental education programmes in schools (coupled with implementing site visits with students to enforce learning), and execution of activities to rally support for environmental management from the private sector.

Module 4: Marine Resource Management

Module 4 focused on Marine Protected areas (MPAs), with consideration of MPA establishment and management in the Caribbean, and more specifically in Saint Lucia. The module aimed to adequately do so by introducing the different methods and measures used for marine resource conservation, and the problems associated with effective management. This included, but was not limited to discussion on community-based co-management, and the interconnectivity of the coastal zone and land-based activities.

Implementation of this material included morning presentations and discussions on watersheds and their effective management by agencies, as well as required actions by individuals, and the linkages with coastal area management, the latter with some focus on the Soufriere Marine Management Area (SMMA). This last presentation shed light on the subjects of marine protected areas management, stakeholder analysis and involvement, and conflict resolution, which all formed part of the Teacher's Guide to Marine Environmental Education.

During the presentations, participants engaged in much discussion on options available for integrating resource management into the school programme in order to conserve natural resources, and to complement the work of resource management agencies. Other recommendations included the need for land use zoning in Saint Lucia, mass education on resource management and environmental issues, and a change in attitude being critical for an appreciation of environmental value.

In order to achieve same, the group recommended that activities such as the in progress training session and other types of education in general, must be effective, efficient and ongoing. There are myriad opportunities to involve the media in these initiatives, and teachers need to spread the knowledge gained among their students, peers, communities, and so on.

The afternoon session further enhanced the learning experience through a boat tour of the Soufriere Marine Management Area (SMMA), introduced during the earlier part of the day. During the tour, zones of the SMMA were pointed out, accompanied by discussion on the potential user conflicts and their management.



Figure 11 Participants on tour of the Soufriere Marine Management Area



Figure 12 Transfer of participants to glass-bottomed boat

In evaluating the module, teachers again highlighted the well-organised flow of the session, and showed particular appreciation for the coupling of in-class presentations with hands-on field exercises. Comments included:

"The lecture and field trip concerning the SMMA were very informative and would make an excellent lesson for my students. Their Biology syllabus requires the teaching of coral reefs, so this would serve to enlighten my students on the resources found in our back yard."

"The SMMA field trip was fun. I was actually able to see and appreciate the marine reserve and fishing priority areas."

"Most value for me was the discussion of problems facing marine reserves, the difficulty officers face in balancing environmental conservation and the need for locals to make a living."

"The field trips were awesome. This was the best workshop EVER!"

"The Module content and the SMMA tour gave me a greater appreciation for marine protected areas."

Recommendations made for improving the module and ensuring its transfer to the classroom focused on the need for networking among teachers and management agencies, and providing opportunities for direct interaction of resource managers with the students.

Module 5: Sample School Based Assessments

Module 5 was prepared and delivered by Mr. Motielal Singh, Curriculum Specialist/Natural Science and Technology of the Ministry of Education, Human Resource Development and Labour in Saint Lucia.

During the morning, the participants were introduced to the importance of School Based Assessment (SBA) and means of selecting appropriate activities for teaching and assessing the various practical skills required by each science syllabus through a presentation and handouts prepared by Mr. Singh. Attention was also given to the need for consistent and objective assessment with general criteria laid out for moderating each skill being evaluated.

The material and accompanying activities both provided information and encouraged major discussion on the overall needs of schools and teachers, and on the use of School Based Assessments (SBAs) as both an alternative form of educational assessment, and as a practical learning experience for students.



Figure 13 Attention paid to presentation on School Based Assessments in primary and secondary schools



Figure 14 Discussion during group activity on School Based Assessments



Figure 15 Group Presentation of School Based Assessment



Figure 16 Group Presentation of School Based Assessment

In evaluating the module, teachers showed gratitude for the guidance provided by Mr. Singh in his delivery and activities, and committed to ensuring that lessons learned were transferred to the classroom. Opportunities for improvement of the module focused on the addition of more SBA experiment options, along with the specific inclusion of extra planning and design experiments. Partnerships with the Ministry of Education will be enhanced in ensuring a successful outcome.

Comments included:

"Presentation of the sample SBA [was of most value to me] because it was an application of what was learnt during the lecture session."

"The entire presentation proved to be most helpful and beneficial."

"School Based Assessment activities increase awareness of possible lab activities that students may undertake."

"The part concerning the SBAs and their marking criteria was very beneficial as this relates to what I actually teach."

"Each component of the module was of great value, including the pool of ideas shared to increase bank of activities I could use in my lessons."

"Creating the SBA experiment was valuable and helped build confidence in our ability to create actual SBA experiments based on given objectives."

"Though we did not go "out" for this module it was quite beneficial as it provided quality information in allowing us to use all the information gathered from the previous modules to ensure our students truly benefit from what we have learnt."

Closing Ceremony

The sessions came to a close early during the final day, with a closing ceremony hosted by the Saint Lucia National Trust during the afternoon. Senator James Fletcher, Minister for Public Service, Sustainable Development, Energy, Science and Technology, gave the feature address, commending the Saint Lucia National Trust and Department of Fisheries for spearheading such an initiative, and expressing the importance of the role of teachers in development of our nation's youth. Other remarks were provided by Mr Motielal Singh on behalf of the Ministry of Education, Human Resource Development and Labour, and by Ms. Lavina Alexander on behalf of the Consulting Team. Ms. Giannetti George, spoke on behalf of teachers present, expressing their delight in having participated in the training initiative, and pledging their commitment to share materials and knowledge with peers and students. Teachers were also presented with certificates of participation, following which refreshments were served.



Figure 17 Feature address delivered by Senator James Fletcher



Figure 18 Group photo of participants and training organisers

Recommendations

In ensuring the sustainability of such a training initiative, the following recommendations are being made by the Consulting Team:

1. The Saint Lucia National Trust will benefit from partnerships with the private sector in delivering such an initiative, particularly with regard to financing. This can assist with procurement of equipment and materials for use in the classroom, and for further capacity-building in marine environmental education and related fields.
2. Resource management agencies should be approached for assistance in delivering educational initiatives, and have been found to be willing to convey messages surrounding environmental conservation.
3. A network for communication among teachers should be established to encourage teachers to share experiences, and to allow for ease of contact by agencies for sharing information.
4. Teachers should be offered courses to encourage more interest in the marine environment.

Appendices

Appendix 1 – Participant List

Title	First Name	Last Name	School
Mrs	Lyrill	Arthur Stanislaus	Vide Bouteille Primary
Mrs	Valerie	Constantine Regis	Dennery Primary
Mr	Adrian	Vaudroque	Anglican Primary
Mrs	Jessica	Chalon	Banse La Grace
Ms	Giannetti	George	Micoud Secondary
Mr	Alan	Gabriel	Leon Hess Comprehensive
Ms	Elizabeth	Soomer	Castries Comprehensive
Mr	Charde	Desir	Choiseul Secondary
Mr	Sheraz	Thomas	Clendon Mason Secondary
Mr	Chad	Lafeuille	Piaye Secondary
Ms	Marie	Charles	Sir Ira Simmons
Ms	Nikita	Isaac	Soufriere Comprehensive
Ms	Nelva	Bruno	Entrepot Secondary
Ms	Kimma	Williams	Babonneau Secondary
Ms	Virgillia	James	Vieux Fort Comprehensive –Campus B
Mr	Jairaj	Mangar	Vieux Fort Comprehensive – Campus B

Appendix 2 – Participant Evaluation of Training

Evaluation Summary – Module 1

Question No.	Question	Responses			
		Strongly Agree	Agree	Disagree	Strongly Disagree
1	The objectives of the Module were attained	14	1	0	1
2	The content and skills learned are relevant to my job	8	7	1	0
3	The delivery exercises were adequate for the content of the Module	12	3	0	1
4	The delivery exercises emphasized necessary skills	11	4	1	0
5	The Trainer(s) was/were knowledgeable and well prepared	13	2	0	1
6	The Trainer(s) used the time well	12	3	0	1
7	The Trainer(s) gave space for Participant interaction	13	2	1	0
8	The Trainer(s) promoted a productive learning environment	15	0	0	1
9	The Trainer(s) used instructional materials adequate to the topic	12	3	0	1
10	The Trainer(s) presentation was clear and understandable	15	0	0	1
		Too Fast	Too Slow	Well organized	
11	Was the flow of the session:	0	0	16	
		Adequate	Requires additional content	Inadequate	
12	Written materials in the Manual for this Module are	16	0	0	
		Excellent = 1	2	3	Very poor = 4
13	How would you rate your overall reaction to the Module?	12	4	0	1

Figure A1 Responses for questions 1 to 13 for Module 1

Figure A1 shows the type of response and number of respondents for questions 1 to 13 for Module 1. Twelve (12) and over respondents provided strongly agree response to questions 1, 3 and 5 to 10. All respondents agreed the flow of the session was well organized and the written material was adequate and twelve (12) rated Module 1 as Excellent. The total number of respondents for each question was 16.

As illustrated in Figure A2, over 70% of respondents strongly agreed with eight (8) questions posed. For question 2 only 50% of respondents indicated that they strongly agreed that the skills learned are relevant to their job; however, an additional 40% who agreed. Only 20% of respondents for each question either disagreed or strongly disagreed, yet it should be noted that this response was inconsistent with the positive responses received for other questions in the evaluation tool and as such it is believed that respondent mistook the numbering codes for strongly disagree and disagree for strongly agree and agree.

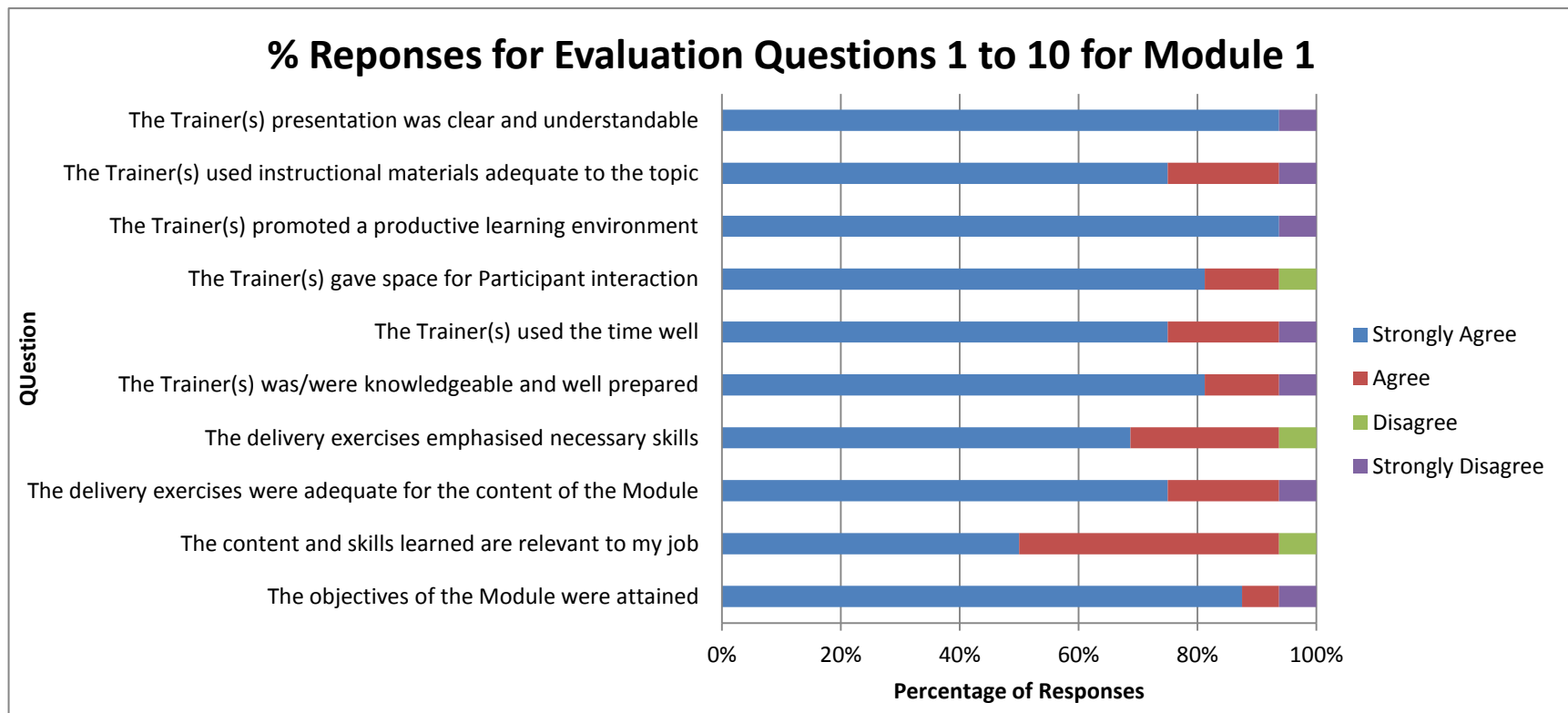


Figure A2 Percentage of responses for evaluation question 1 to 10 for Module 1

Evaluation Summary – Module 2

Question No.	Question	Responses			
		Strongly Agree	Agree	Disagree	Strongly Disagree
1	The objectives of the Module were attained	9	0	1	2
2	The content and skills learned are relevant to my job	7	2	1	2
3	The delivery exercises were adequate for the content of the Module	8	1	1	2
4	The delivery exercises emphasized necessary skills	8	1	0	3
5	The Trainer(s) was/were knowledgeable and well prepared	8	1	0	3
6	The Trainer(s) used the time well	7	2	1	2
7	The Trainer(s) gave space for Participant interaction	9	0	0	3
8	The Trainer(s) promoted a productive learning environment	9	0	0	3
9	The Trainer(s) used instructional materials adequate to the topic	9	0	0	3
10	The Trainer(s) presentation was clear and understandable	9	0	0	3
		Too Fast	Too Slow	Well organized	
11	Was the flow of the session:	0	0	12	
		Adequate	Requires additional content	Inadequate	
12	Written materials in the Manual for this Module are	10	0	0	
		Excellent = 1	2	3	Very poor = 4
13	How would you rate your overall reaction to the Module?	7	3	1	1

Figure A3 Responses for questions 1 to 13 for Module 2

Figure A3 shows the type of response and number of respondents for questions 1 to 13 for Module 2. Seven (7) and over respondents provided a strongly agreed response to for questions 1 to 10. All respondents found the flow of session well organized and the written material adequate. Seven (7) respondents indicated that their overall reaction to Module 2 was Excellent. There was 12 respondents for questions 1 to 10, 11 and 12, and 10 respondents for question 10 for question 12.

Figure A4 (below) shows that, for eight (8) questions over 60% of respondents strongly agreed. For question 2, over 50% of respondents indicated that they strongly agreed that the skills learned are relevant to their job; however, an additional 20% agreeing. It should be noted that the responses indicating disagreement or strong disagreement was inconsistent with the positive responses received for other questions in the evaluation tool and as such it is believed that respondents mistook the numbering codes for strongly disagree and disagree for strongly agree and agree.

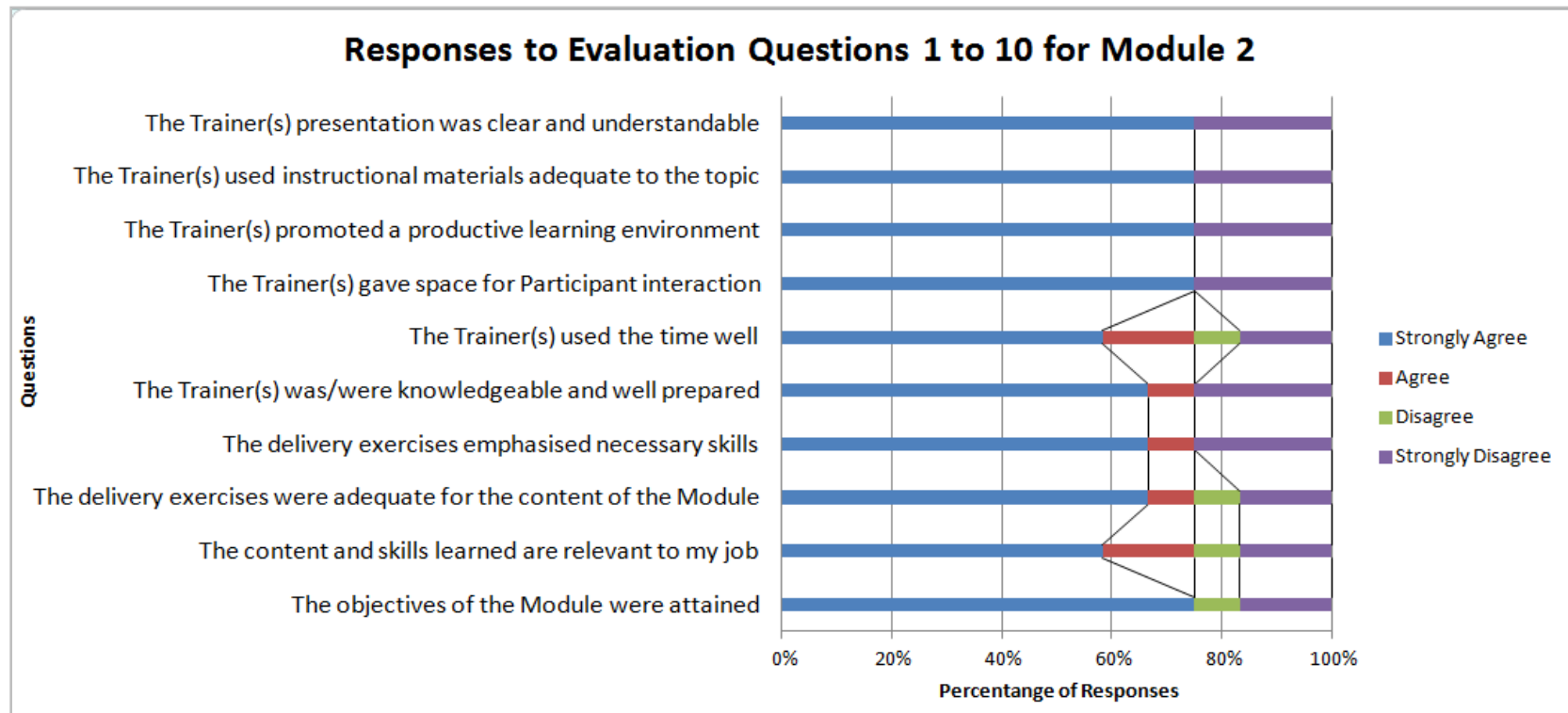


Figure A4 Percentage of responses for evaluation question 1 to 10 for Module 2

Evaluation Summary – Module 3

Question	Responses			
	Strongly Agree	Agree	Disagree	Strongly Disagree
The objectives of the Module were attained	4	6	1	0
The content and skills learned are relevant to my job	9	2	0	0
The delivery exercises were adequate for the content of the Module	6	4	1	0
The delivery exercises emphasised necessary skills	5	6	0	0
The Trainer(s) was/were knowledgeable and well prepared	7	3	1	0
The Trainer(s) used the time well	6	4	1	0
The Trainer(s) gave space for Participant interaction	6	4	1	0
The Trainer(s) promoted a productive learning environment	8	1	1	0
The Trainer(s) used instructional materials adequate to the topic	5	6	0	0
The Trainer(s) presentation was clear and understandable	8	2	1	0
	Too Fast	Too Slow	Well organised	
Was the flow of the session:	0	0	11	
	Adequate	Requires additional content	Inadequate	
Written materials in the Manual for this Module are	11	0	0	
	Excellent = 1	2	3	Very poor = 4
How would you rate your overall reaction to the Module?	7	4	0	0

Figure A5 Responses for questions 1 to 13 for Module 3

With respect to Module 3, all participants agreed that the flow of the session was well organised, and the materials included in delivering the module were adequate. The majority of respondents strongly agreed that the content and skills learned in Module 3 were relevant to their jobs, with less agreeing that instructional materials used were adequate to the topic. only 4 participants

strongly agreed that the objectives of the Module were attained, but teachers showed great enthusiasm for the content and its potential delivery in the classroom.

It must be noted that only eleven (11) of the sixteen (16) registered participants were present at this session.

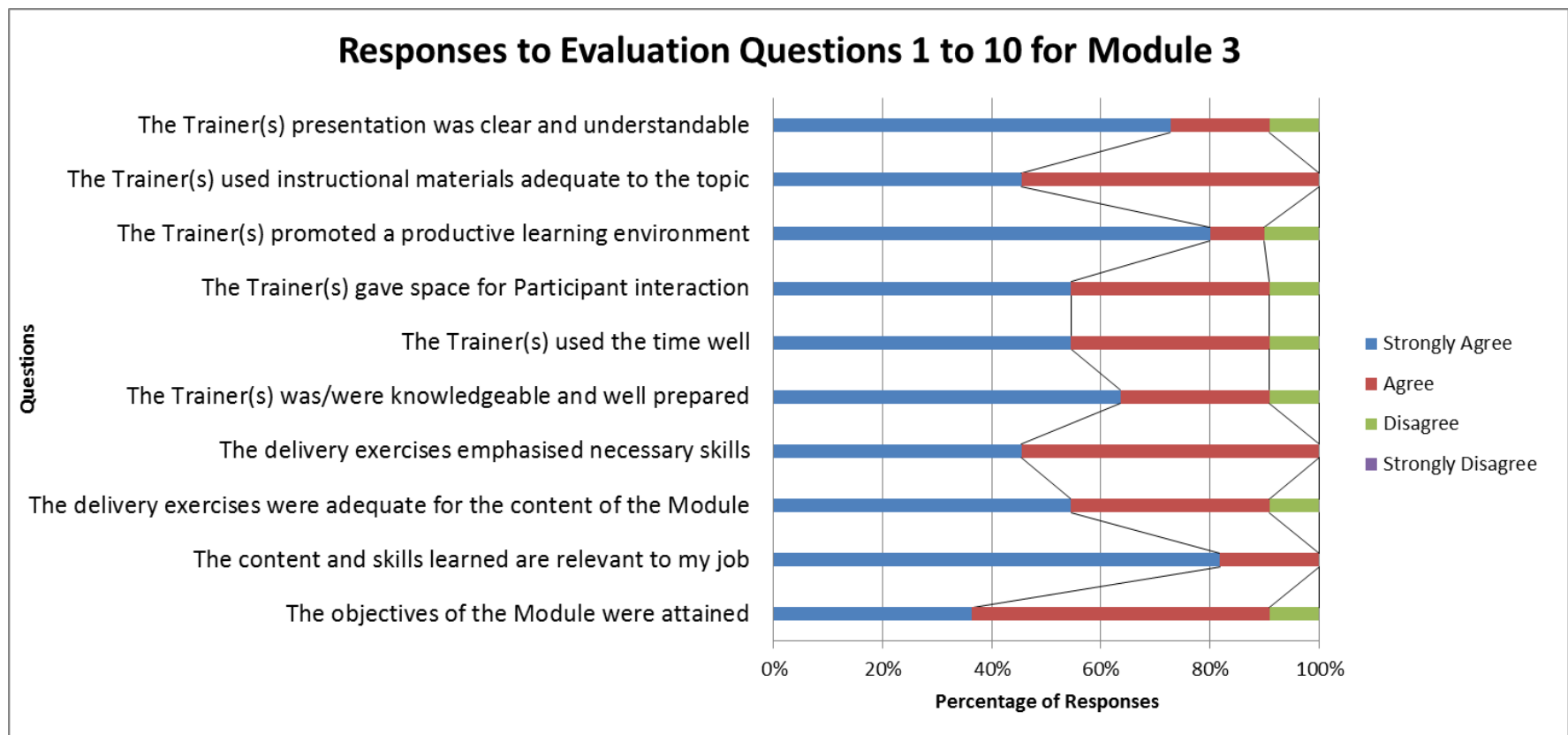


Figure A6 Percentage of responses for evaluation question 1 to 10 for Module 3

Evaluation Summary – Module 4

Question	Responses			
	Strongly Agree	Agree	Disagree	Strongly Disagree
The objectives of the Module were attained	14	0	0	0
The content and skills learned are relevant to my job	11	3	0	0
The delivery exercises were adequate for the content of the Module	12	2	0	0
The delivery exercises emphasised necessary skills	10	4	0	0
The Trainer(s) was/were knowledgeable and well prepared	13	1	0	0
The Trainer(s) used the time well	11	3	0	0
The Trainer(s) gave space for Participant interaction	13	1	0	0
The Trainer(s) promoted a productive learning environment	13	1	0	0
The Trainer(s) used instructional materials adequate to the topic	12	2	0	0
The Trainer(s) presentation was clear and understandable	14	0	0	0
	Too Fast (1)	Too Slow (2)	Well organised (3)	
Was the flow of the session:	0	1	13	
	Adequate (1)	Requires additional content (2)	Inadequate (3)	
Written materials in the Manual for this Module are	14	0	0	
	Excellent (1)	2	3	Very poor (4)
How would you rate your overall reaction to the Module?	11	2	0	1

Figure A7 Responses for questions 1 to 13 for Module 4

All respondents to questions 1 to 10 for Module 4 strongly agreed that the objectives of the Module were attained, and that the trainers' presentation was clear and understandable. Module 4 was very well received by participants, with only one (1) of fourteen (14) recording an overall reaction of 'Very Poor'. Thirteen (13) participants responded that the flow of the session was well organised, and all respondents (100%) were satisfied with the content of the written materials contained within the Manual, and provided during the training session.

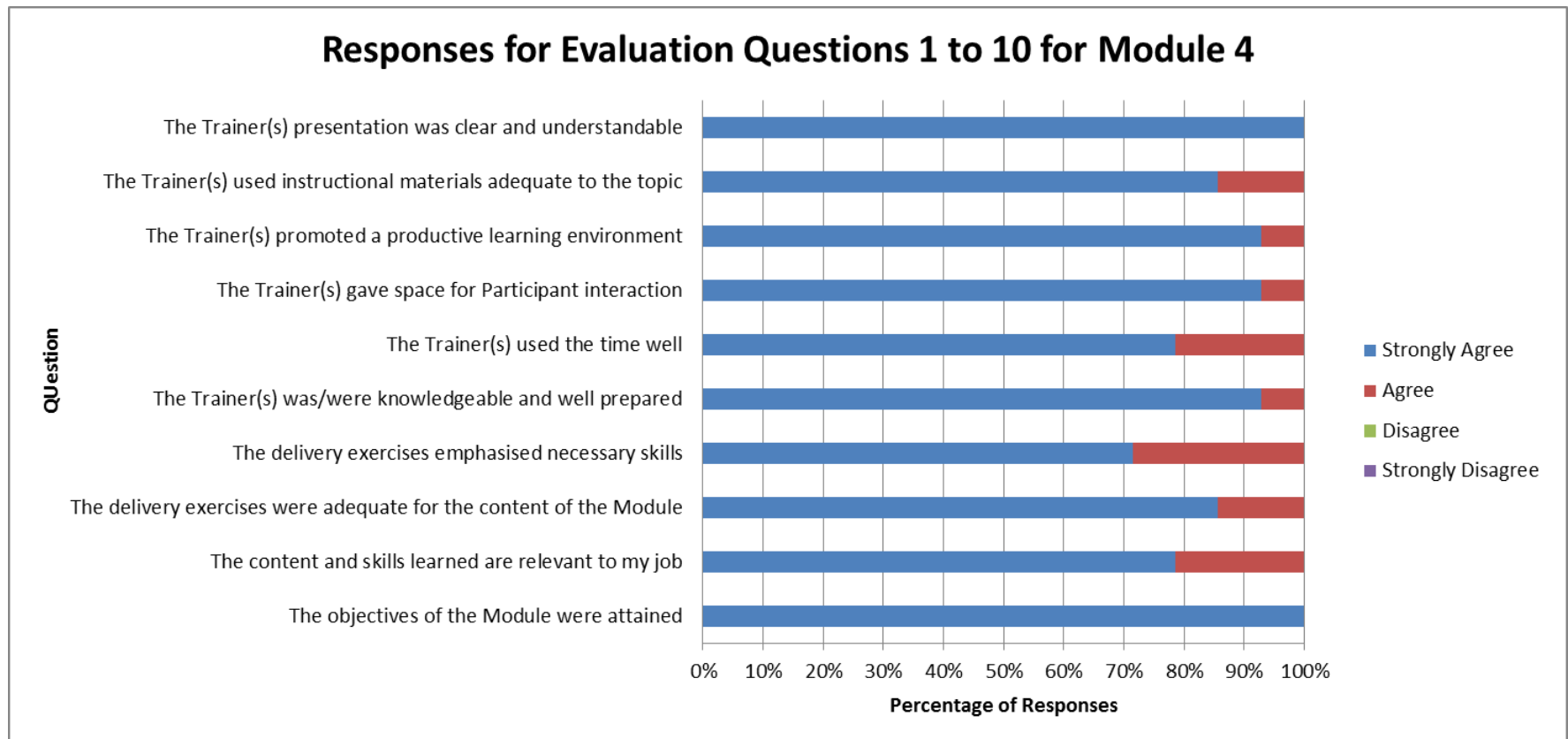


Figure A8 Percentage of responses for evaluation question 1 to 10 for Module 4

Evaluation Summary – Module 5

Question No.	Question	Responses			
		Strongly Agree	Agree	Disagree	Strongly Disagree
1	The objectives of the Module were attained	14	0	1	0
2	The content and skills learned are relevant to my job	14	0	1	0
3	The delivery exercises were adequate for the content of the Module	14	0	1	0
4	The delivery exercises emphasised necessary skills	14	0	0	1
5	The Trainer(s) was/were knowledgeable and well prepared	14	0	0	1
6	The Trainer(s) used the time well	13	1	0	1
7	The Trainer(s) gave space for Participant interaction	13	1	0	1
8	The Trainer(s) promoted a productive learning environment	12	2	0	1
9	The Trainer(s) used instructional materials adequate to the topic	13	1	0	1
10	The Trainer(s) presentation was clear and understandable	13	1	0	1
		Too Fast (1)	Too Slow (2)	Well organised (3)	
11	Was the flow of the session:	0		14	
		Adequate (1)	Requires additional content (2)	Inadequate (3)	
12	Written materials in the Manual for this Module are	14	0	0	
		Excellent (1)	2	3	Very poor (4)
13	How would you rate your overall reaction to the Module?	13	1	0	0

Figure A9 Responses for questions 1 to 13 for Module 5

The overall rating for Module 5 was excellent, with thirteen (13) such responses. All participants, 100%, agreed that the session was well organised, and that materials included in the Manual were adequate.

While most respondents strongly agreed to all evaluation questions (over 80%), a few disagreed on the time allotted to various activities during delivery of the module, level of participant interaction and, most significantly, the productivity of the learning environment created during the delivery of the module.

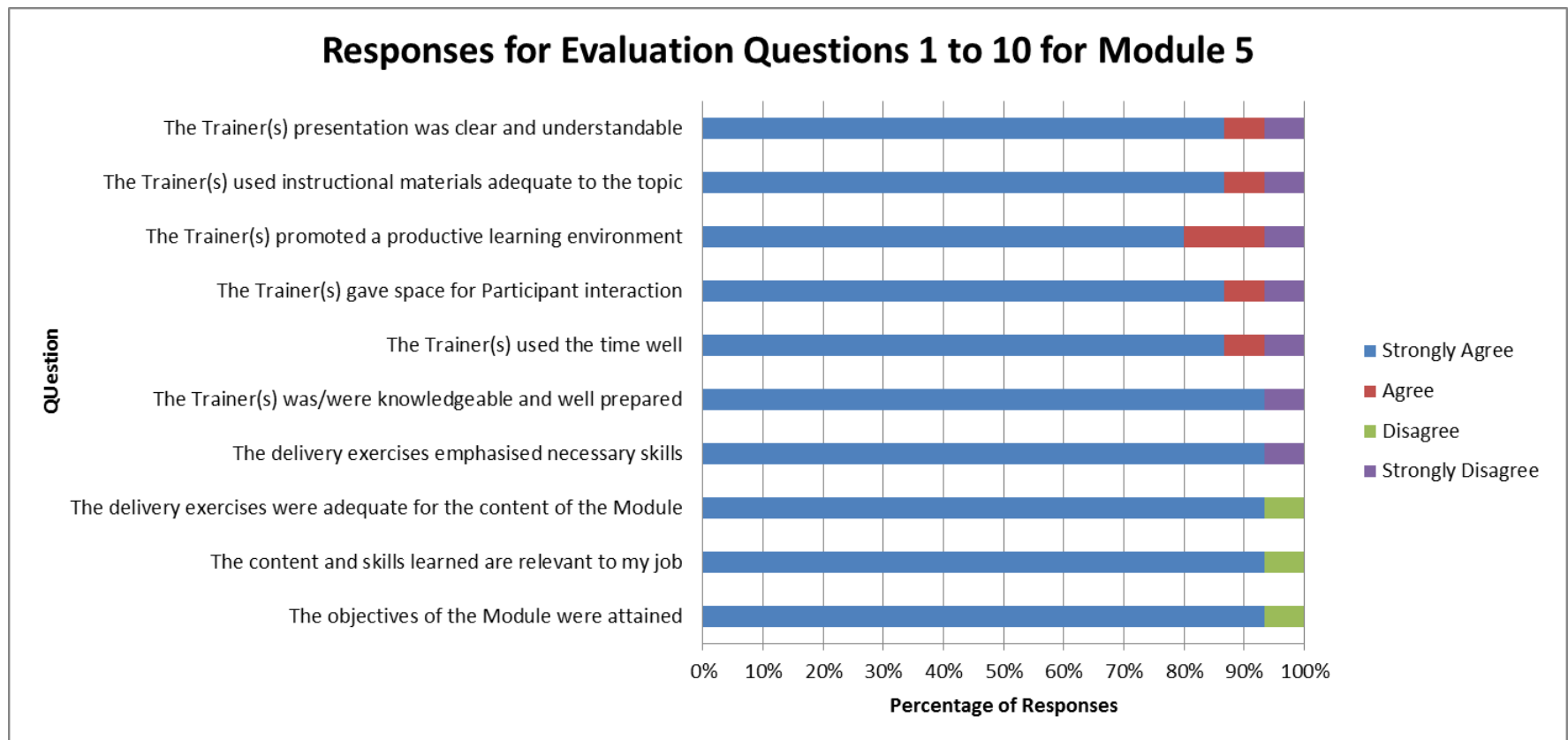


Figure A10 Percentage of responses for evaluation question 1 to 10 for Module 5