Focus Group Discussions

On September 1st, 2018, Al Alfi Foundation for Human and Social Development has conducted Focus Groups Discussion at the Greek Campus, with STEM teachers as well as Science and Math teachers from Official Schools to assess the curriculum and the related teaching, learning, and assessment practices. The reason behind choosing FGDs as a method to assess the diploma that they allow for additional probing and follow-up questions and also offer the opportunity to seek clarifications when needed.

In addition to assessing the newly developed diploma from the teachers' viewpoints, the FGDs measured the possible gap between the needs of teachers in STEM-related subject and the contents of the diploma which resulted in educated suggestions of further reinforcement techniques to close this gap and to enhance teaching, learning, and curriculum planning and course management.

The questions of the FGDs were carefully predetermined and sequenced from engagement questions – Topic Introduction to the participants to get them comfortable with the discussion to Exploration questions – designed to get to the heart of the discussion and typically are open-ended to Exit questions – designed to see if any angle was missed during the discussion.

The FGDs Objectives were as follows:

- To identify how the new diploma is perceived and evaluated by teachers in STEM and regular schools and what can be introduced/ modified as suggested by them.
- To detect possible gap between the Intended learning Outcomes of the Diploma and the actual needs of teachers in STEM-related subjects to be skilful.
- To pinpoint the reasons some teachers would not apply for this diploma: Is it related to the education background? Is it related to their personal circumstances?

Methodology

Four groups of teachers were invited to the FGDs in three categories. The first two sessions were divided into two groups, one for the math teachers and the other one for the science teachers (9 attendees) from Egyptian official language schools. The following two sessions grouped the STEM teachers from Egyptian STEM high schools, to investigate with the concerned group of teachers who are in direct contact with the students.
Focus group discussions (FGDs) were conducted for three different categories as follows:
Category 1: Math Teachers from national schools

Category 2: Science Teachers from national schools

Category 3: STEM Schools Teachers

Each session of the four FGDs lasted for one hour. FGDs were structured around pre-determined questions, but not restrictive to allow teachers to express their opinions freely. All leading questions were avoided.

FGDs Process

FGDs were moderated by a professional STEM trainer/ mentor, currently working at Discovery Education and responsible for executing STEM professional development programs for educators, in terms of training and mentoring. The moderator was accompanied by a note-taker so that all responses can be recorded for reporting.

The moderator:

- Led a productive conversation in a friendly environment to help focus group participants feel comfortable
- Conducted Ice-Breakers to make participants more comfortable with each other and more willing to provide in-depth answers during the discussions.
- Included a variety of exercises to maintain interest and enthusiastic engagement among the participants.
- Avoided leading questions that might influence participant's answers
- Watched the body language of participants while answering to derive informative understandings of the responses

Session Structure

A session typically started with an introduction to the attending organisers, the eSTEM developers, the moderator, and the purpose of the meeting.
After the introduction, icebreaker followed (Paper Tent with name and key interests & expertise): Folding an A4 paper, writing the name on one side and answers to 3 questions on the other side. Answers included one favourite thing, a hobby, and an area of expertise.
First activity:

(Filling a T-chart with areas of strength and areas of development in terms of knowledge and skills as STEM teacher)
Participating teachers get to document their knowledge and skills that qualify them to be STEM teachers, while also pointing out knowledge and skills that they need to develop to increase their qualifications as STEM teachers. The activity helps in indirectly capturing teachers' opinions on knowledge and skills that need to be covered in the diploma to qualify teachers to work in STEM environment based educational facilities, thus help in capturing their opinion on what to add to the current design, and shedding light on the gap between teachers' needs, and content of eSTEM diploma.
Providing an overview upon core courses of eSTEM diploma for participating teachers' consideration in the following activity

Second activity

(Selecting core courses according to 2 different parameters, interest of participants, and importance/relevance to teaching in STEM learning environment)

The activity basically allows teachers to express their interests that are derived by their needs, while making sure that they also tackle the core subjects in an objective manner to dictate which core courses are of higher significance within the diploma from their point of view, and according to their expertise.

Third activity

(Simple placemat where participating teachers express their reasons for pursuing eSTEM diploma)

Simple directed task where participating teachers get to answer the question of (What can be your reasons for pursuing eSTEM diploma?). Responses are initially individual responses in allocated writing areas then, typically in groups of four; a consensus among the group is documented in the allocated writing area to be shared with the whole group of attendees.

Participating teachers were then introduced to the resource centre for their information. Eng. Mahmoud Yehia from Ain Shams briefed attendees about the e-resources available on the project website for students and showed them how it worked.

Finally, an open discussion was held for participating teachers to share their questions and get answers for them. Dr. Said Al Shamy from Alexandria University participated in answering the questions of teachers concerning the diploma.

Recommendations

The moderator developed his recommendations based on the responses of the participants, observation of the discussions and a study of eSTEM portal concerning three main pillars: core courses content, possible communication/outreach channels and the Resource centre.

The FGDs also offered an insight on the possible reasons that would hinder the teachers from enrolling in the diploma; like the lack of direct official need for the diploma as teachers are not required to enrol in specific diplomas to be nominated to work in STEM schools