



What's STEM got to do with it? The role of community learning and development.

Over 100 practitioners attended this CLD STEM professional learning event held at the Glasgow Science Centre on February 19th 2019. The event oversubscribed within days of the invitation going out and a waiting list was required to accommodate the volume of people looking to sign up.

Background

The Scottish Government's [STEM Education and Training Strategy](#) includes a commitment to hold an annual learning conference for community learning and development (CLD) practitioners and managers from public and voluntary sector organisations, to be organised in collaboration with partners and showcasing inspirational lifelong learning STEM practice. The event was the first of these conferences and was organised by Education Scotland in collaboration with Glasgow Science Centre along with a range of partners from the CLD sector. The aims for the event included:

- to raise awareness of the important contribution that CLD does and can make to engaging young people, adult learners, families and communities in STEM related learning;
- to inform participants about the aims of the national STEM education and training strategy;
- to provide opportunities to experience STEM learning activities and workshops on building STEM learning into CLD practice; and
- to inform future STEM-related professional learning for CLD practitioners and managers.

Planning the Event Programme

A STEM steering group made up of Education Scotland, YouthLink Scotland, Community Learning and Development Managers Scotland and Learning Link Scotland worked together, alongside Glasgow Science Centre, in the months prior to the event to plan the programme for the day (See Annex A). The programme was developed collaboratively by the steering group which included a range of STEM



'taster' sessions in the morning and more developed workshops in the afternoon.

Ian Menzies, who leads on STEM within Education Scotland, provided a policy context for the day and highlighted CLD's contribution to the STEM agenda with his presentation. The presentation also touched on Education Scotland's grants programme to meet STEM professional learning needs, including CLD. The second round of the grant is to be announced soon and CLD organisations are encouraged to apply.

A film depicting learners talking about the impact of STEM learning on their lives was warmly received by delegates. Sam Langford from the Glasgow Science Centre was master of ceremonies on the day and kept the programme running smoothly.



The purpose of the morning taster sessions was to share practical ideas and activities that support STEM learning. The sessions were designed to be engaging and hands on and delegates were encouraged to move around the taster tables where they were offered bite-sized demonstrations from the various organisations delivering the sessions which included YMCA Paisley, North Ayrshire Youth

Services, YouthLink Scotland and Glasgow Kelvin College. The picture below shows some of the materials from Learning Link Scotland's Barbie Bungee taster activity. The

purpose of the afternoon workshop sessions was to explore CLD approaches to different aspects of STEM-related learning. Presenters were encouraged to make the sessions as participatory as possible and to encourage participants to reflect on how the workshop topic could impact on their own CLD practice. Presenters were asked to capture learning points that arose from the workshops (e.g. key opportunities/challenges; future learning needs etc.).



A graphic illustrator provided a pictorial representation of the day. The illustrator was asked to include the learning points from the workshops, the highlights and also the challenges that arose from the conference. Apart from providing an interesting depiction of the day, the graphic will also be used as a learning tool by Education Scotland to aid the planning of other STEM learning events. An electronic version of the graphic will be created which will provide an online version for others who were not at the event to see how

the day unfolded and some of the main points generated.

A view from one workshop

Around 30 participants contributed to the workshop discussions on STEM professional learning for CLD practitioners. The workshops looked at feedback from 150 CLD practitioners who responded to an Education Scotland online professional learning survey in autumn 2018 and discussed what their priorities were.



Participants were keen to see clear, properly funded, pathways for CLD professionals to be able to access STEM professional learning – both online and face-to-face training. They felt that the CLD sector would value

peer mentoring opportunities, easily accessible STEM learning resources, access to more good practice examples of existing STEM-related CLD activities. They wanted Education Scotland to continue to raise the profile of CLD's contribution to STEM

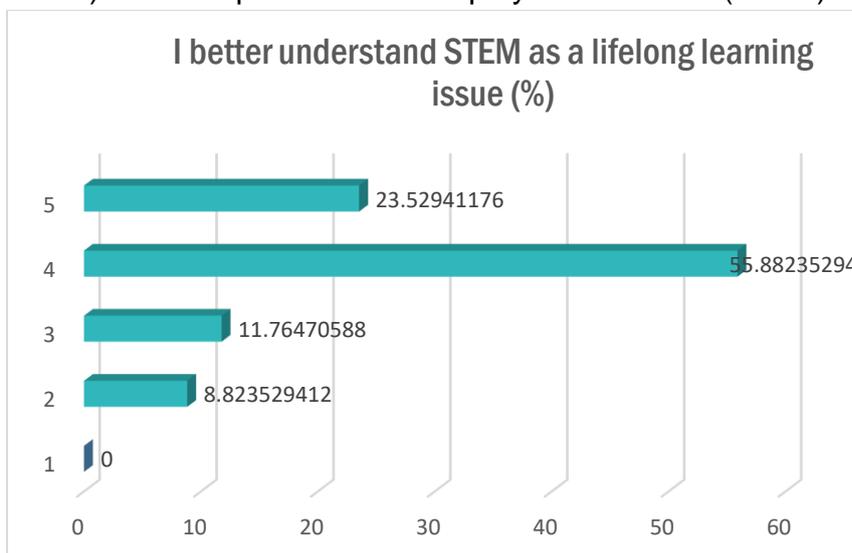
outcomes and help to build closer partnerships with science centres, STEM Ambassadors and local employers.

Evaluation of the day

The consensus of the STEM Steering group in planning the day was that the evaluation at the plenary session should be light touch and provide a bit of fun after a busy day. The Science Centre provided the opportunity to include a VoxVote evaluation which allows participants to access the voting tool on their smartphones and where the entire audience can view all responses together on a large screen.

Delegates were asked to answer a number of evaluative questions/statements including:

- I better understand STEM as a lifelong learning issue. (1= not at all 5=very much so). The responses were displayed as a chart (below)



- I am more aware of the contribution CLD practitioners make to engage young people, adults, families and communities in STEM related learning;
- I am more confident in using resources and approaches to build STEM learning into CLD practice; and
- What were the best aspects of the day? (Use 3 words to describe how you feel). The responses were displayed as a word cloud and included the words: 'interactive', 'learning together' 'practical'



VoxVote overview

- ❖ Less than half of the delegates (48%) were fully aware of the STEM Education and Training Strategy; 21% were not at all aware;
- ❖ The overall programme was rated excellent by 23% and good by 65%;
- ❖ Best aspects included the taster sessions, workshops and the opportunity for working together;
- ❖ Aspects that could be improve included:
 - more practical sessions;
 - specific areas such as early learning;
 - teenager focussed learning; and
 - more workshops.

Summary

The response from the VoxVote and the anecdotal feedback on the day suggests that it was a really positive experience for delegates and one which provided the opportunity for lots of connections, discussions and sharing. In particular, the aims of the event were met. Practitioners found the day useful and helpful with regard to their own practice and offered improvement suggestions for future events.

What next?

The STEM Steering group will consider the learning points and challenges from the event and in particular Education Scotland's role with regard to STEM learning for the CLD sector. The Steering group will focus on the following areas:

1. What are the key learning points from the event that we want to highlight?

2. How should Education Scotland share the learning from the event?
3. What lessons can we learn for future STEM professional learning sessions?
4. How do we ensure that CLD partners are kept fully informed about ongoing STEM professional learning progress and improvements?
5. What methods should we use to continue to gather feedback from CLD practitioners about their STEM learning requirements and about the impact of learning on their practice?

Annex A



STEM CLD Event 19th February 2019 Glasgow Science Centre

Programme

10:30	Registration & Refreshments
11:00	Welcome - Sam Langford, Glasgow Science Centre (MC/STEM Communicator)
11:15	STEM strategy overview - Where does CLD fit? - Ian Menzies, Education Scotland Learner stories: the impact of STEM learning. Film of learners (children, young people and adults) speaking about their STEM learning experiences
11:30	Taster activities: <ul style="list-style-type: none"> ▪ YMCA Paisley - Maker Space ▪ Glasgow Kelvin College - virtual reality in youth outreach ▪ Learning Link Scotland - Barbie Bungee and/or other family learning activities ▪ North Ayrshire Youth Services (DigiDabble) ▪ Glasgow Science Centre ▪ STEM Ambassadors ▪ Digital youth work project - short films ▪ Cyber resilience guidance project ▪ CoderDojo Glasgow Life ▪ Royal Society of Chemistry, Fife Council CLD and the Rio Community Centre in Newport on Tay
12:15	Lunch
13:00	STEM in the Community: What does it look like? - Sally Pritchard, Glasgow Science Centre

13:15	Workshop Session 1
14:00	Workshop Session 2
14:45	Close & Evaluation - Sam Langford
15:15 onwards	Delegates will have the opportunity to explore the exhibitions of the Science Centre until 17:00

Workshops

A. Inspire & Challenge: simple strategies to engage your audience: Using their 'Inspire and Challenge' ethos, Glasgow Science Centre will share their tried and tested methods to engage young people and build them as scientific thinkers.

B. Approaches and resources to develop family numeracy: This workshop will look at different ways to engage families around improving number skills including an overview of the *It's All About Maths* resource used in Edinburgh and the 'Pizza Maths' work delivered in Renfrewshire.

C. Using STEM resources in community learning settings: This session will consider resources used to support STEM learning with community learners including looking at numeracy within the context of Scotland's environment: *Counting on a Greener Scotland* and embedding STEM subjects in community learning practice using *Science for a Successful Scotland*.

D. Getting it right for you: STEM professional learning with CLD practitioners. Education Scotland leads on the professional learning commitments in the STEM strategy and is gathering feedback from across the learning sector (including CLD) on what is needed. This workshop will include the feedback so far, followed by a discussion on what kinds of STEM professional learning have the greatest impact for CLD practitioners.

E. STEM Toolkit, 50 fun activities for young people: Youth Scotland will offer an introduction to their new [STEM Tool-kit](#) (with over 50 STEM-themed activities for young people) which can be delivered in a youth work setting and used to support attainment of the SCQF-levelled Hi5 Award.

F. Moving forward with the Young STEM Leader (YSL) Programme: Derived from the Scottish Government's STEM Strategy, an overview of the YSL programme.