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Female Entrepreneurship in STEAM: workshop results
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This technical report describes how Photovoice was used by the authors working with potential female entrepreneurs to identify challenges and opportunities in Entre-STEAM (see Hynes et al., 2023).

During a workshop on Female Entrepreneurship in STEAM, we used Photovoice (Wang & Burris, 1997) to identify challenges and opportunities, the K-J method (Scrupin, 1997) to derive themes from the challenges and opportunities, and group discussion to gather an in-depth understanding from the participants.

Photovoice, a qualitative research method, allows participant to express their ideas and thoughts visually through photographs, often supplementing the 'words' expressed by participants in qualitative research. There are interesting examples where photovoice has been used in healthcare including (Norris et al., 2020 and Campbell et al., 2021 and Quinlan, 2023). In our research project, participants were to consider the Challenges and Opportunities of Entre-STEAM, and we asked that they send us 10 photographs before the next workshop – 2 focusing on each of 'challenges', 'opportunities', 'entrepreneurship' and 'STEAM', with the remaining 2 to focus on any of these topics. We encouraged, but did not require, that each photograph could be accompanied by a caption, allowing the participants to express their thoughts in words as well as in photographs.

During the first workshop, we described how the participants should approach photovoice. Then, in pairs, we asked participants to walk around the campus for 20 minutes, working together to take photographs, thus having discussion which supports the generation of ideas. We have found this to be a powerful tool, particularly if participants are wary or nervous about the photography requirement, as, often, this is a very new experience for them. When participants returned, they discussed their photographs in groups of 6 (3 pairs), and a selection were discussed by the full group. Through this exercise, participants were now in a position to take the 10 photographs required for the project.

We encouraged participants to be imaginative, to view the world around them and to take pictures which they considered would reflect their thoughts. People could recognise their thoughts in what they do or see, or they could be creative and 'set-up' a scene which worked for them. We asked them to avoid taking photographs of people, which can be very powerful, but, because of General Data Protection Regulations[1] (GDPR), would add an extra layer of administration to the workshop which can be easily avoided. There are times when having photographs of others should be included, but, in our case, we did not believe this to be necessary. In addition, participants were asked not to include images which may have copyright attached.

Following the workshop, they took and returned their digital photographs within 5 days. We printed these, and when they returned to week 2 of the workshop, participants added their

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[1] See gov.ie - Data Protection and the General Data Protection Regulation (GDPR) (www.gov.ie)

captions. Additionally, they marked 3 of their own photographs which would definitely be used in the final exhibition.

During the second workshop, we used the K-J method to group the photographs into themes (REF). Participants had sufficient wall space to do this. Using all the photographs and their captions, they silently grouped the photographs. Silence is important, as it allows the less-vocal people to have an equal say in the grouping as those who are more-vocal. If two people disagree on where a photograph is to be placed, then it can be put on its own. Once all participants were happy with the grouping within which photographs were placed, group discussion was initiated. In there are lone photographs, these should be discussed – in our case there were none. During this discussion, participants wanted some clarification as to why particular photographs had been placed in the group and whether they understood the caption correctly. This led to a discussion on group titles, which we named as themes. Participants discussed themes, and by consensus, titles were decided upon. The themes were printed as posters which were displayed in the University of Limerick at International Women's Day, in the NEXUS Innovation Centre and in the Glucksman library. They are shown below.

Research into the next stage of the project is continuing.

We are in this together

Find your way and I will support you

The Team

You can bloom even in the most unlikely environments

One encouraging voice can get you back on your feet in changing seasons

The wood from the trees

support creates beauty

Think about Yourself

EntreSTEAM

There is always a sweet spot

Remember to Breathe

Open your eyes to the world around you

I need to cross the waves before finding the calm

Chasing the light

Individuality

EntreSTEAM

I feel like the odd one out

Finding a gem in the mess

I feel like the odd one out

Separating what is useful

Flying solo in a busy world

EntreSTEAM

The sky is the limit

In everyone's journey there will be always some slippery patches. Sing post them and these patches will be overcome.

Frozen

When water changes direction from its usual flow, it becomes an amazing art form for humans just as generating an Entre- Steam

Look at your shadow whenever you are stressed, and you will see that you are taller than what you think you are and more capable of dealing with the issue you are facing than you thought.

Behind closed doors lies the adventure

Keep your eye on the goal, your heart at peace
and the path will come to light for you.

Resources at the ready

Bridge supporting
the journey

Opportunities that I have that others did not

By providing a safe path for pedestrians,
the amber light signifies the positive
impact of STEAM on human well being

Heart & Soul

Believe in yourself

EntreSTEAM

The beauty that looks so realistic

There is a lot that goes on under the hood

Seeing the different perspectives

We all need direction in life

When you can't go left go right

Believe in yourself

EntreSTEAM

Don't die with your music still inside you

I believe a tree without a leaf can bear an exquisite flower in the same way a woman can bear a flower in STEAM

Entre-STEAM opportunities are like the horizon without an end

Don't toss away ideas, they can always be recycled to serve better purposes

Bridging the divide

Lifelong learning

Choose the direction that suits you and find peace in the chaotic journey

Support helps

My origin and culture are
constitutive parts of me

Desk 33 Fernanda Zamboni

Family and the wider circle

Work life balance

The Journey

EntreSTEAM
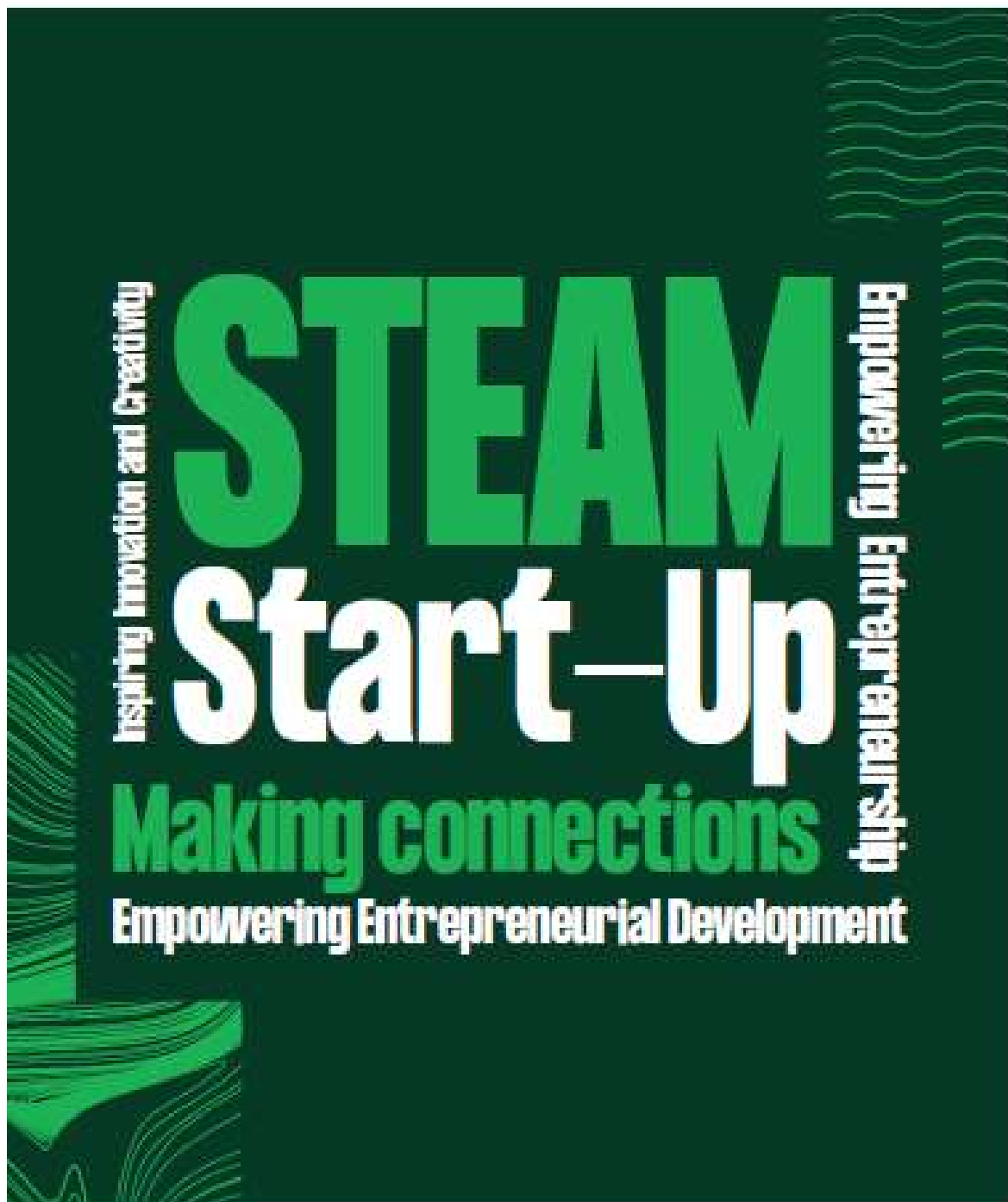

Go! Go! Go!

Innovation by grouping

Progress

Whenever you encounter challenges or obstacles, such as a rock in the way of the flow. Remember to go with the flow

The journey of EntreSTEAM entails many challenges such as overcoming a challenging cloud crossing. Once crossed the path becomes clear.

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