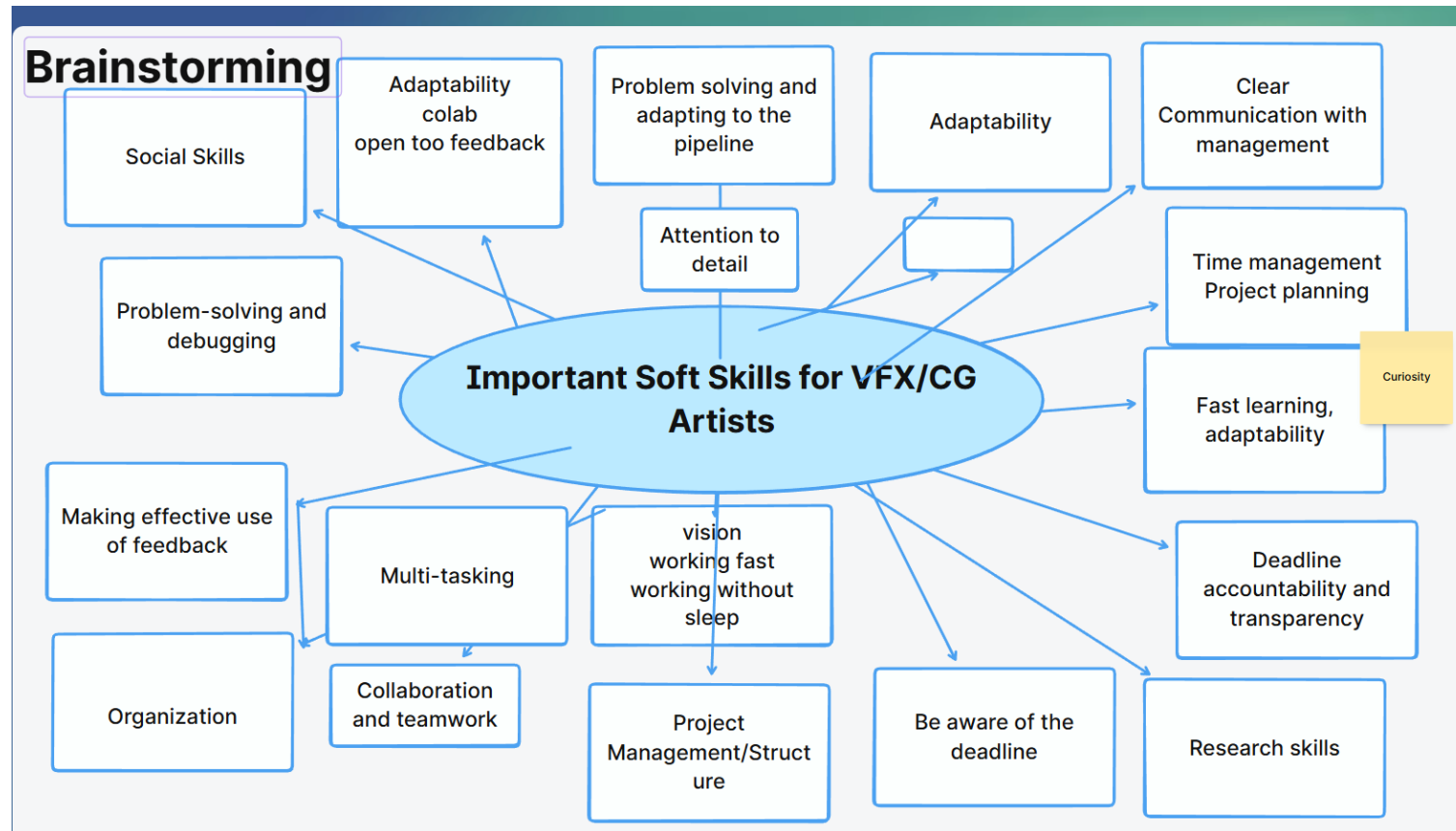


All data below were acquired from Padlet Journalling, Presentation slides, Class interactions, Soft Skills Passport and Introductory Workshop. The timeline I used to evaluate their soft skills usage matches with the in-class project production.

Padlet Sample below is a snapshot of 16 students showing their in-class project. I cropped out the top columns to hide they identities. This is one of my 2 sources of information. The other was the Blogs, which were used more towards the end of the in-class project.



Table 1- Introductory Workshop on Soft Skills Importance: during brainstorm, students needed to write soft skills in the Padlet below:



Unfortunately, I noticed some students flipping to my next slide with the list of soft skills and cheated, so I decided to ignore some of them with the same wording as my slide..). Below is the summary of soft skills they mentioned (STEM related is in red)

Social Skills	Adaptability	Collaboration	Open to feedback, making effective use of feedback	Problem solving	Clear Communication	Time Management
Project Planning, Project management/Structure	Fast Learning	Working fast without sleep	Accountability and Transparency	Research Skills	Be Aware of Deadline	Multi-tasking
Organization	Vision	Curiosity				

In another activity, I asked students to match the Soft Skills usage with their respective Soft Skills definition on the left. They did fine overall. This is the first time I noticed that some of the soft skills definitions were not very understandable to the students (items 2 and 3 below). In middle of the term, I changed the list of soft skills in the Passport so students can identify easily and accurately.

1- Problem-solving and debugging mindset	A VFX artist is working on a particle simulation for falling leaves, but the particles are clipping through geometry. They troubleshoot by adjusting collision settings, testing different solvers, and checking mesh normals until the issue is resolved.	✓
2- Critical thinking and analytical skills	While compositing a shot, the artist notices the lighting doesn't match the plate. Instead of just adjusting brightness, they analyze the light direction, color temperature, and shadow softness to make the CG elements integrate more convincingly.	✗
3- Logical reasoning and systems thinking	An artist builds a Houdini setup for procedural tree generation. They plan the node structure so that changes to trunk shape automatically update branches and leaves, showing an understanding of how each part of the system affects the whole.	✗
4- Attention to detail and precision	During rotoscoping, the artist carefully refines edge feathering and motion blur to ensure the mask blends seamlessly with the background, avoiding any flickering or unnatural edges in the final composite.	✓
5- Adaptability and continuous learning	Mid-project, the studio switches from Maya to Blender for asset creation. The artist quickly learns the new interface and workflow, adapting their pipeline without delaying the delivery schedule.	✓
6- Collaboration and teamwork across diverse backgrounds	In a team with artists from different countries and disciplines, the VFX artist shares feedback respectfully, attends daily syncs, and integrates suggestions from the lighting and animation departments to improve the final shot.	✓
7- Patience and perseverance	After multiple failed attempts to simulate realistic fire, the artist keeps iterating—tweaking parameters, testing render settings, and reviewing reference footage—until the effect meets the director's vision.	✓
8- Creative thinking and artistic vision	Instead of using a generic explosion effect, the artist designs a stylized burst that matches the film's surreal tone — using color grading, timing, and shape language to enhance the emotional impact of the scene.	✓

Table 2- Words of the students according to the type of document (my comments are in red):

Engaged with Soft Skills ?	Soft Skills Passport	Beginning of the Project on Padlet 8 interactions	End of the Project on Padlet, Blog or Slides 11 interactions
Student 1 YES	Old version: only filled once as the other weeks were mere duplicates with the same evidence. She ticks on: Problem-solving and debugging, Adaptability and continuous learning, Patience and perseverance, Creative Thinking and Artistic Vision	Because I tend to wait until the last moment to complete a task, I would like to use this project to work on my time management skills, as well as actively listen to any given feedback and take as much as I can from it.	Learnt that good time management is very important to avoid unnecessary stress. In this project, I made the mistake of leaving most of the work for the last minute; I will try to divide the process into smaller, tasks throughout a longer period next time. It seems that student tackled many other skills mentioned in the passport.
Student 2 partially	no	time management - i always think that i will do my work in a timely and manageable manner, but i always end up procrastinating thus leading to me doing everything at the last minute. Presentation of work - even if i somehow do complete my work in a timely manner i have a hard time presenting it in a appealing manner . so i would love to learn how to present my work in such a way that it engages the people seeing my work.	Nothing
Student 3 YES	The Only Student to fill it correctly... <ul style="list-style-type: none"> o W3: problem solving and debugging, creative thinking and artistic vision o W4: attention to detail and precision o W5: attention to detail and precision, creative thinking and artistic vision, o W6: Patience and Perseverance o W7 new version: attention to detail, creativity and vision o W8: attention to detail o W9: Attention to detail and time management o W10: problem solving and debugging, technical engagement, attention to detail, team working, creativity and vision, time management. 	I'm little bad at time management , and I want to improve that to make things more efficient, which I can keep VFX works in my mind can be realize well.	My comment: I can see student progressed and used the soft skills passport effectively. In the end, W 10, he realised he used more skills than anticipated. All evidence is clear in the Passport itself. <ul style="list-style-type: none"> o Problem Solving: solve sooooo many problems about UE5, like importing my one hundred million faces huge fbx to unreal, like 3 hours, find all the ways on internet, even I afraid I cant finish my projects, but finally found the way, and complete proj well I think. o Technical Engagement: the use of ue5 and modeling get better and better, now 7:14, I think, I can go ILM tomorrow. o Attention to Detail: so many detail for my cabin, the structure, the lighting, brilliant. o Team-working: ask sooo many questions about ue with my homies, I cant make it without them. o Creativity and Vision: tried the horror theme proj that never do before. o Time Management: finished proj before ddl 2 an half hours.
Student 4 YES	Soft Skills Passport: only week 3 <ul style="list-style-type: none"> o W3: Problem-solving: I decided to implement the method that Emily shared with us, which is to tackle tasks one small thing at a time so everything is less intimidating. This helped me work on my procrastination and I was able to start setting up my art blog as well as work on my projects across the week rather than just do it all in one day [seem like time management]. o Continuous Learning: I did some more practice on Maya and started a project on UE5. I learned more shortcuts on the keyboard and did the LinkedIn Learning lessons for the week. 	I definitely need to work on time management to increase my efficiency without sacrificing the quality of my work. I would also like to work on not procrastinating as much and become a morning person so I can savour the daylight during the winter.	<ul style="list-style-type: none"> o Creative Thinking and Artistic Vision: Conceptualizing my cabin in the woods in my moodboard. I wanted to make a creepy forest that is surrounded by fog and lit by the moon. o Problem-solving and debugging: identified issues with UV's, fixed them and kept troubleshooting as I went. o Critical Thinking and analytical skills: referencing cabins to see how they are built, following the references to make sure the proportions of my cabin are accurate. o Adaptability and Continuous Learning: combing everything I learned from the Unreal Engine lectures for the first time: Using height maps for the landscape, the water system for the river, importing an HDRI as my custom sky. I learned how to play around with volumetric fog to create the mood that I wanted to convey. Making my own water shader was also an

			<p>interesting experience, I was able to change the wave direction, speed, translucency etc.</p> <ul style="list-style-type: none"> o Collaboration and Teamwork: during this phase of my work, I asked around for a lot of feedback for my composition, whether the trees looked good or not if placed this way, how dense should I make my forest etc. I think it's very important to receive feedback to see how the project is doing and I will make it my goal to work on asking more people for feedback as well as receiving and translating the feedback into my own work. [feedback receptiveness]
Student 5 YES	no	<p>Tolerance with myself, thus enabling the ability to be patient with my process and learning curve [resilience]. Break free from perfectionism, and let myself be curious and persistent [adaptability ?] Main objective is to finish it and be not afraid to present it afterwards.</p>	<p>Main Soft Skills learned through:</p> <ol style="list-style-type: none"> 1. Troubleshooting [Problem Solving]; 2. Adopted the Pomodoro technique for focus. [time management] 3. Anger/Frustration Management [resilience] 4. Research skills; [project management] <p>Soft skills to learn/perfect:</p> <ol style="list-style-type: none"> 1. Time Management in terms of the pipeline; [project management] 2. Planning out the real scope of the project. [project management] <p>My comments: student needs more precise labelling as this facilitate better understanding and more optimistic labelling, so instead of anger management and patience and persistence, better label it resilience as the umbrella term.</p>
Student 6 NO	no	<p>Through this project, I hope to strengthen my technical proficiency and artistic sensibilities, allowing me to produce more polished and realistic 3D assets and environments.</p>	nothing
Student 7 YES	no	<p>Learn time management and scheduling. Set milestones/deadlines for each stage to ensure the project progresses on schedule [mislabelled as project management]. Most importantly, learn effective communication and timely feedback absorption. Clearly express your design intentions to mentors/peers, while openly listening to feedback, organizing useful suggestions, and making improvements; be able to clearly, effectively, and concisely explain why certain design choices were made.</p>	<p>The soft skill learned from this project is time management. In long-term projects like this, making long-term time plans and arranging tasks down to the day is very helpful.</p>
Student 8 NO (invalidated)	<p>random filling repeating every 2 weeks: disqualified...</p> <ul style="list-style-type: none"> o W1: Problem-solving and debugging, Logical reasoning and systems thinking, Adaptability and continuous learning, Patience and perseverance o W2: Critical thinking and analytical skills, Attention to detail and precision, Collaboration and teamwork, Creative Thinking and Artistic Vision, <p>student copy and pasted the same skills for 2 weeks to the next, until the end. Too robotic and automated without thorough understanding.</p>	Nothing	nothing
Student 9 YES	no	<p>I tend to procrastinate and often start without clear goals, which makes me lose time redoing tasks. I would like to</p>	<p>My soft skills did not improve much in terms of time management. However, I developed problem-solving skills when</p>

		improve my time management and project progress. By setting better objectives and following a more structured workflow. [project management]	Unreal Engine failed or crashed, and I learned to manage my emotions and frustration when foliage or textures did not work properly or caused the program to crash [resilience] .
Student 10 partially	no	nothing	I developed soft skills like problem-solving, time management, creativity, attention to detail, and organising my workflow across different software [planning and organizational]
Student 11 NO	no	nothing	nothing
Student 12 partially	no	I need to improve my time management skills and writing skills for my future work. [communication]	nothing
Student 13 YES	no	since I only have minimal experience with Unreal Engine I aim to work on myself and build up my skills by setting goals towards an organised work flow and structure. Soft Skills: I would like to organise my time better when it comes to projects and try my best to visualise and structure my ideas in a better manner [communication, project management]	Troubleshooting [problem solving] and working out issues that pop up in Unreal, I was able to solve most of my problems with Blueprints.
Student 14 partially	no	none	it helped me develop the ability to continuously try, analyze, and solve problems when facing challenges. [resilience and problem solving]
Student 15 partially	no	none	I became more organised in time management and learned to save multiple file versions to avoid losing progress [organizational] . This made my workflow more stable and helped me handle problems more calmly.
Student 16 partially	no	none	problem solving through testing and iteration, troubleshooting technical issues, working independently , researching and comparing different workflows (?), managing a large, long term creative process. [organizational]
final	YES: 7 / PARTIALLY: 7 / NO: 2 7 students evaluated and monitored reasonably well with soft skills throughout the project, 6 did it partially (either at the beginning or end) and 3 didn't monitor or evaluated their soft skills at all, remaining focused on hard skills only (of which one had the entry invalidated)		

Table 3- Interactions with the channels offered:

Engagement with Soft Skills with following materials:	Start Term	Middle Term	End Term
Blog (related to other classes)	no	no	no
Soft Skills Passport to be filled weekly	1/16	1/16	1/16
Padlet Journalling (used in Initial Presentation)	8/16	no	11/16
Final Presentation (Slide or Blog)			

Table 4a- Main Soft Skills explored by the students in both Padlet and Presentations slides:

	Soft Skills List	Frequency of identification	Details at the Beginning (Padlet)	Details at the End (Padlet, Slides)
1	Problem-Solving and debugging	8		<ul style="list-style-type: none"> • Student3: solve sooooo many problems about UE5, like importing my one hundred million faces huge fbx to unreal, like 3 hours, find all the ways on internet, even I afraid I cant finish my projects, but finally found the way, and complete proj well I think. • Student4: identified issues with UV's, fixed them and kept troubleshooting as I went. • Student5: Troubleshooting • Student9: I developed problem-solving skills when Unreal Engine failed or crashed. • Student10 • Student13: Troubleshooting and working out issues that pop up in Unreal, I was able to solve most of my problems with Blueprints. • Student14: [not labelled] it helped me develop the ability to continuously try, analyze, and solve problems when facing challenges. • Student16: problem solving through testing and iteration, troubleshooting technical issues.
2	Technical Engagement	1		Student3: the use of ue5 and modeling get better and better, now 7:14, I think, I can go ILM tomorrow.
3	Attention to Detail	2		<ul style="list-style-type: none"> • Student10 • Student3: the use of ue5 and modeling get better and better, now 7:14, I think, I can go ILM tomorrow.
4	Feedback receptiveness	3	<ul style="list-style-type: none"> • Student1: actively listen to any given feedback and take as much as I can from it. 	<ul style="list-style-type: none"> • Student1: Learnt that good time management is very important to avoid unnecessary stress. In this project, I made the mistake of leaving most of the work for the last minute; I will try to divide the process into smaller, tasks throughout a longer period next time. • Student4: [mislabelled as collaboration and teamwork] during this phase of my work, I asked around for a lot of feedback for my composition, whether the trees looked good or not if placed this way, how dense should I make my forest etc. I think it's very important to receive feedback to see how the project is doing and I will make it my goal to work on asking more people for feedback as well as receiving and translating the feedback into my own work • Student7: Most importantly, learn effective communication and timely feedback absorption. Clearly express your design intentions to mentors/peers, while openly listening to feedback, organizing useful suggestions, and making improvements; be able to clearly, effectively, and concisely explain why certain design choices were made.
5	Adaptability	2	Student5: [mislabelled] Break free from perfectionism, and let myself be curious and persistent	<ul style="list-style-type: none"> • Student4: combing everything I learned from the Unreal Engine lectures for the first time.

6	Communication	3	<ul style="list-style-type: none"> • Student12: I need to improve my writing skills. • Student13: [mislabelled] try my best to visualise and structure my ideas in a better manner 	Student7: Most importantly, learn effective communication and timely feedback absorption. Clearly express your design intentions to mentors/peers, while openly listening to feedback, organizing useful suggestions, and making improvements; be able to clearly, effectively, and concisely explain why certain design choices were made.
7	Team-working	1		Student3: ask sooo many questions about ue with my homies, I cant make it without them.
8	Initiative	0		
9	Proactivity	0		
10	Creativity and Artistic Vision	3		<ul style="list-style-type: none"> • Student3: tried the horror theme proj that never do before. • Student4: Conceptualizing my cabin in the woods in my moodboard. I wanted to make a creepy forest that is surrounded by fog and lit by the moon. • Student10
11	Time Management	10	<ul style="list-style-type: none"> • Student1: Because I tend to wait until the last moment to complete a task, I would like to use this project to work on my time management skills • Student2: I always think that i will do my work in a timely and manageable manner, but i always end up procrastinating thus leading to me doing everything at the last minute. • Student3: I'm little bad at time management, and I want to improve that to make things more efficient. • Student4: I definitely need to work on time management to increase my efficiency without sacrificing the quality of my work. I would also like to work on not procrastinating as much and become a morning person so I can savour the daylight during the winter. • Student12 	<ul style="list-style-type: none"> • Student3: finished proj before ddl 2 an half hours. • Student5: Adopted the Pomodoro technique for focus. • Student7: The soft skill learned from this project is time management. In long-term projects like this, making long-term time plans and arranging tasks down to the day is very helpful. • Student9: My soft skills did not improve much in terms of time management. • Student10 • Student15: I became more organised in time management
12	Resilience	3	Student5: [mislabelled] Tolerance with myself, thus enabling the ability to be patient with my process and learning curve	<ul style="list-style-type: none"> • Student5: [mislabelled] Anger/Frustration Management • Student9: I learned to manage my emotions and frustration when foliage or textures did not work properly or caused the program to crash. • Student14: [not labelled] it helped me develop the ability to continuously try, analyze, and solve problems when facing challenges.
13	Ability to Work Independently	1		<ul style="list-style-type: none"> • Student16
14	Self-Motivation	0		
15	Ability to Interpret Brief	0		

16	Project Management	4	<ul style="list-style-type: none"> • Student9: [mislabelled] I tend to procrastinate and often start without clear goals, which makes me lose time redoing tasks. I would like to improve my time management and project progress. By setting better objectives and following a more structured workflow. • Student13: [not labelled] since I only have minimal experience with Unreal Engine I aim to work on myself and build up my skills by setting goals towards an organised work flow and structure. I would like to organise my time better when it comes to projects 	<ul style="list-style-type: none"> • Student5: [mislabelled] Learned research skill. Need to learn: Time Management in terms of the pipeline; Planning out the real scope of the project. • Student7: [mislabelled] Learn time management and scheduling. Set milestones/deadlines for each stage to ensure the project progresses on schedule
17	Presentation and Negotiation	2	<ul style="list-style-type: none"> • Student2: even if i somehow do complete my work in a timely manner i have a hard time presenting it in a appealing manner. So i would love to learn how to present my work in such a way that it engages the people seeing my work. • Student5: Main objective is to finish it and be not afraid to present it afterwards. 	
18	Planning and Organizational	3		<ul style="list-style-type: none"> • Student10: [mislabelled] organising my workflow across different software. • Student15: [not labelled] learned to save multiple file versions to avoid losing progress. This made my workflow more stable and helped me handle problems more calmly. • Student16: [not labelled] managing a large, long term creative process.

Table 4b - Conclusion: below is a table listing soft skills used by minimum of 3 students. In red are Soft Skills related to STEM:

Soft Skills	Start Project	End Project
Time Management	5	6 (1 student also at the start)
Problem-Solving and debugging	0	8
Project Management (normally considered as hard skills and mislabelled as time management, scheduling)	2	2
Feedback Receptiveness	1	3 (1 also used at the start)
Communication	2	1
Creativity and Artistic Vision	0	3
Resilience	1	3 (1 student also at the start)
Planning and Organizational		3

Table 5: Evaluating Student Background related to Visual Effects

Student	Directly related	Indirectly related	No relation	Unreal Engine Basic Knowledge ?
1- AC	2 years postproduction		BA Architecture	no
2- AS	BA 3d animation and design Diploma VFX			
3- GW		BA Graphic Designer		no
4- KH		BA Film and TV Production / work as production designer and freelance editor including AE.		no
5- LK	Game development, 2d art and animation	?		yes
6- SS	BA animation and motion graphics / VFX work			yes
7- YH		BA Digital Media Art		no
8- TS	YES			yes
9- IM		BA Multimedia Engineer / multimedia designer, 2d design and animation, C++		no
10- AS			BA Electronics and Communication Engineering	no
11- QM	BA Animation			no
12- ML	BA VFX	3d compositor at Midjourney (?)		no
13- RA		BA in film television and digital production / worked as cinematographer, gaffer, sound recordist and production design		minimal
14- XL			BA Fashion Design	minimal
15- XZ	BA Digital Media Art (3d modeling and animation)			no
16- NB		Working with 3d interior design	BA Interior Design	no
total	8/16	5/16	3/16	3/16

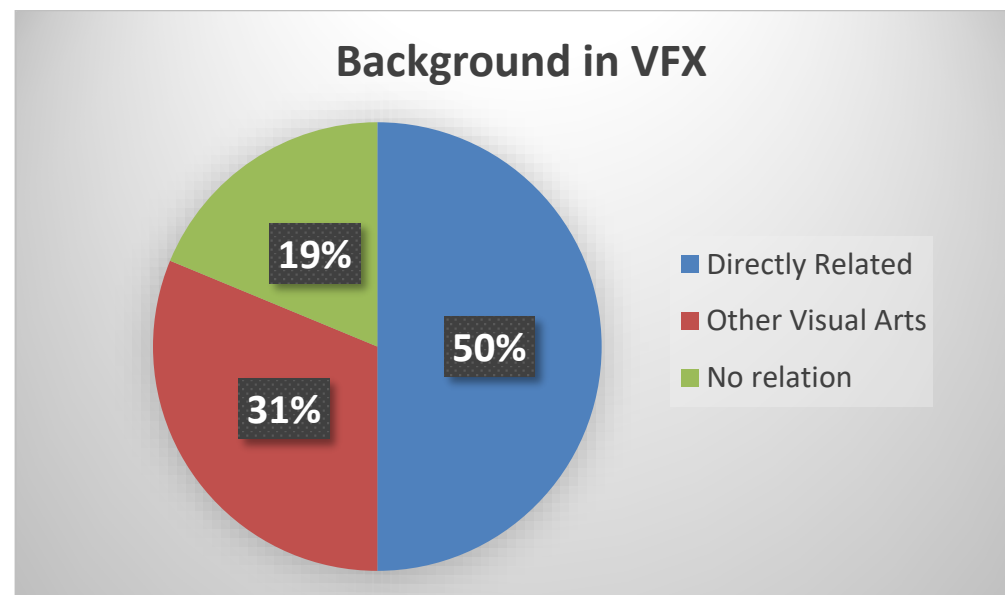
D- Findings

Question 1: Will it be effective to implement soft skills development gradually across three stages in the first term by:

a) Using a scaffolded flipped classroom model as the delivery methodology ?

Final Answer: No, teaching technique didn't work for the following reasons:

- My class was planned for more advanced learners who already knew basic Unreal Engine software (free to download) and had a stronger VFX-related background, as I wrongly assumed this year would follow the same pattern as the previous MA cohort. Unfortunately, I did not participate in student admissions, so I was unaware of their actual level. Only 3 out of 16 students had basic Unreal Engine knowledge, and half of the students came from directly related industries such as games, VR, animation, or post-production. I later adapted the content to their level, but overall, I consider this a failed attempt. This resulted in less time on task and, therefore, less time using and improving soft skills.



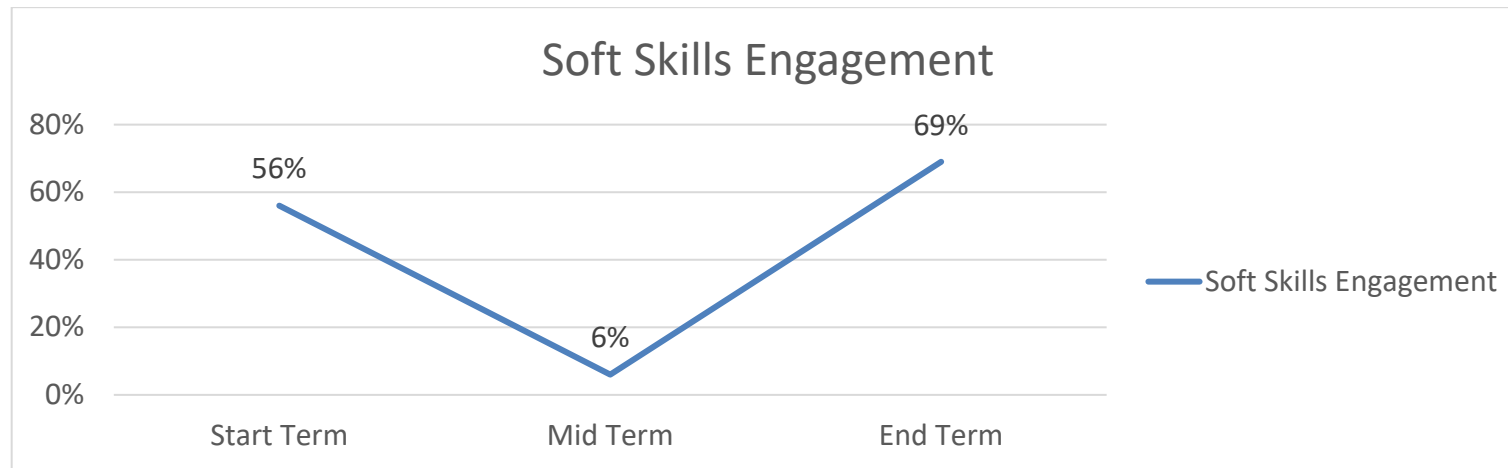
- One entry-level student stated that studying before class was “useless and unfair” and that all content should be taught in class only.
- When I asked each class whether they had prepared for the session, only a handful of students (around 5 out of 16) had done so. These numbers decreased drastically over time, and eventually, no one studied before class.

b) Offering six channels to support students' reflection and application of soft skills ? (Padlet Journaling, Soft Skills Passport, Final Project Presentations and Blog).

- **Introductory Workshop:** Introductory Workshop: This was very useful, and students participated well. However, some soft skills were still difficult for them to understand. I observed that non-native English speakers had more tough time identifying and understanding soft skills.
- **Soft Skills Passport:**
 - Only 1 out of 16 students actively interacted with the Soft Skills Passport in the intended manner. Two students copied and pasted content throughout the weeks, which invalidated their entries.
 - It was mainly used by students to understand soft skill definitions and check which ones they could mention during final presentations.
 - It was not used as a tool for weekly self-reflection and growth.
- **Padlet Journaling:**
 - 8 out of 16 students engaged with soft skills reflection at the beginning of the course, which was also used for the pre-production presentation.
 - It worked well for the initial pre-production presentation, which followed the introductory workshop on soft skills
 - By mid-course (November), no one interacted with Padlet for journaling or soft skills reflection.
- **Final Presentation using Padlet or slides (PPT or Canvas):**
 - 11 out of 16 students engaged with soft skills.
- **Blog:** It was mainly used for documentation for other classes, so there was almost no mention of soft skills. Students often pasted Padlet links or content directly into the blog. Even with summative evaluation, blogs were poorly written, with little or no reflective writing and mostly images uploaded with minimal descriptions.
- **Final in-depth (optional) workshop:** This was intended to explain why and how VFX and related industries demand soft skills, what STEM soft skills are, and how UAL evaluates them. It did not happen for reasons stated earlier in this document.

Other Findings:

- a. 3 out of 16 students did not engage with the soft skills topic in either Padlet or presentations. Their documentation and presentations focused on hard skills.
- b. 6 out of 16 students engaged partially, either at the beginning or at the end (mostly at the end).
- c. Engagement at the end of the project was greater (11 out of 16) compared to the beginning (8 out of 16). Students also showed more detailed evidence and reflection at the end. I speculate this happened because they finally understood what soft skills are due to the pressure of finalising their projects. They were mostly procrastinating at the beginning. This suggests they spent more time working and analysing their performance regarding soft skills.



Final Answer:

It is effective to implement soft skills gradually across not only the first term but all four terms, to allow these concepts to settle in students' minds.

- The scaffolded flipped classroom approach is not effective for increasing time-on-task. Most students do not study beforehand, and when they do, it is random and inconsistent.
- Padlet journalling and the two presentations are very effective, as they seem to create pressure and accountability.
- I expected students to use the blog to evaluate their soft skills usage in other classes, but they failed to do so. It seems they only self-reflect when explicitly asked.

Question 2. Does this intervention—focused on the identification and application of STEM soft skills—actually improve students' professional growth ? Specifically, does it lead to improvements in the quality of their work, engagement, performance, and final unit assignment submissions (e.g., reflective writing in blogs, critical appraisals, collaborative work, and final videos showcasing hard skills)?

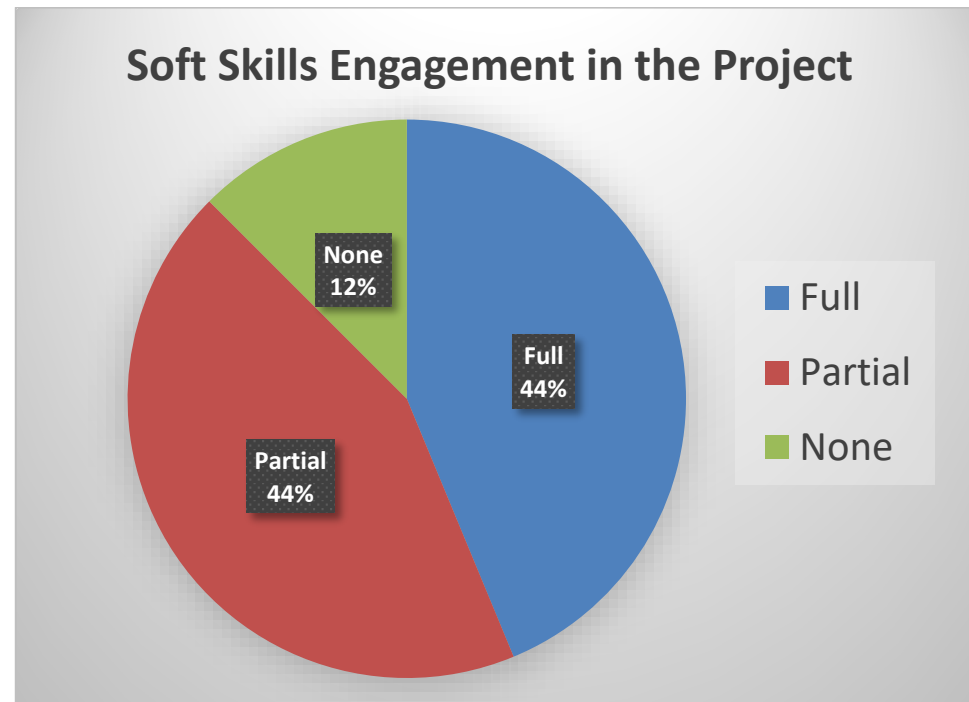
My original intention was to evaluate this across three terms, but for the purposes of this ARP, I had to focus on the first term only—and even before their final term submission, which occurred during the week of our PG Certificate final presentations.

Final Answer:

Yes, but only when embedded over the long term, across the entire MA course.

- One term alone is not sufficient because students are still trying to understand what soft skills are—their definitions, how and when to use them, how to monitor their usage, and how to identify them correctly in their activities and tasks.

- Many students still failed to correctly identify and label soft skills. In addition, they seemed to explore soft skills only when explicitly requested for their presentations.
- They did not mention soft skills in their blogs for other classes. This may be due to the cognitive effort required and the need for high levels of self-knowledge and self-awareness.
- By the time of the final project presentations, students interacted more with the list of soft skills I provided and analysed them against their work. Based on this, I would say that the majority—14 out of 16 students—showed increased acknowledgement and usage of soft skills, either fully or partially, within the first term. I now need to focus on helping the remaining three students embrace and adopt soft skills recognition and monitoring.



Question 3. What do students think about soft skills?

a) Metacognitive Knowledge: What students know about soft skills and their importance.

- At the beginning of the workshop introducing soft skills, many students (especially non-native English speakers) did not know what soft and hard skills were. After explaining their definitions, during the brainstorming session (see Table 1), students were finally able to list a few soft skills. I do not think every student wrote them down in Padlet, but overall, I believe they understood what soft skills were. In this workshop, I introduced a list of soft skills and the Soft Skills Passport so they could identify which ones to focus on for the in-class project.

- Most students decided to focus on 0–2 soft skills at the beginning, but by the end, they acknowledged more soft skills (see Table 4).
- There are more than eight soft skills students could work on, but the most popular one—time management—was mentioned repeatedly throughout project production.
- By the end of the term, it is clear that students enumerated many more soft skills (see Tables 4a and 4b). This may be because it is easier to recognise various soft skills only after work begins. It is therefore easier to understand which ones are most important or relevant.
- Four out of sixteen students did not state any soft skills at the start of the project and are labelled as partially engaging with soft skills (students 10, 14, 15, and 16). However, they were able to enumerate important soft skills they employed and need to develop further by the end (see Table 2). This may be due to the reason mentioned above.
- In Table 2, it is evident that students were unable to identify soft skills correctly and precisely. They either wrote long phrases to describe one or two soft skills or misidentified them. Sometimes, their definitions were so vague that I found it difficult to determine which soft skills they were referring to. Below are a few examples:
 - Stating problem-solving but it was actually time management.
 - Collaboration and teamwork but it was actually feedback receptiveness.
 - “Tolerance with myself, thus enabling the ability to be patient with my process and learning curve; Anger management.” → This is actually resilience.
 - “Break free from perfectionism and let myself be curious and persistent.” → This seems to be adaptability.
 - “Set milestones/deadlines for each stage to ensure the project progresses on schedule; research skills; time management in terms of pipeline; planning out the real scope of the project; setting better objectives and following a more structured workflow.” → This is actually project management (and not time management), and is more of a hard skill.
 - “It helped me develop the ability to continuously try, analyse, and solve problems when facing challenges.” → This is resilience and problem-solving skills.
 - “I would like to organise my time better when it comes to projects and try my best to visualise and structure my ideas in a better manner.” → These are communication and project management.

Final Answer:

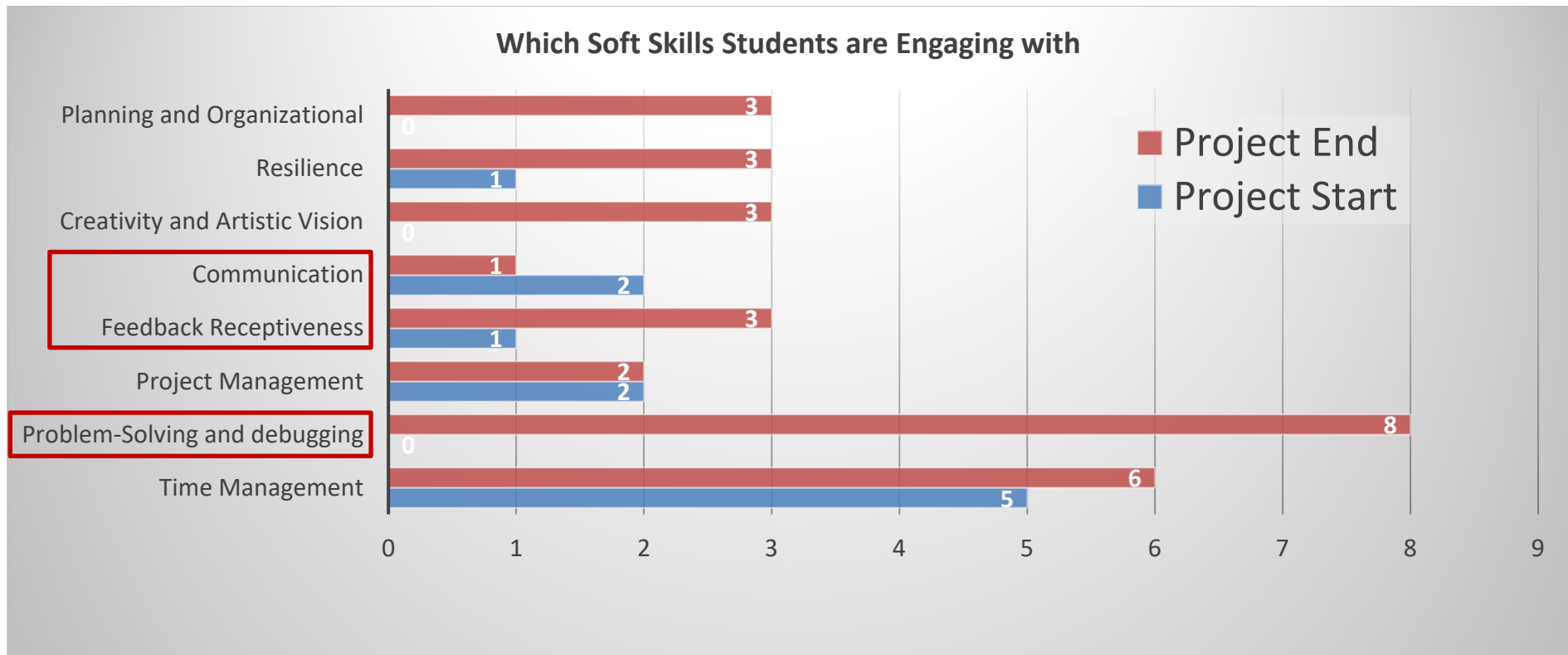
Generally speaking, students know what soft skills are, and the majority (14 out of 16) understand their importance alongside hard skills. However, many students cannot precisely identify them in their activities and work, many mislabel the soft skills they are using, and most were only able to enumerate them at the end of the project. It seems that students are still learning how to identify soft skills in their work.

b) Metacognitive Regulation: How students plan, monitor, and evaluate their use of soft skills in learning and collaboration.

- Only three students (students 1, 3, and 5 in Table 2) were able to monitor the initial soft skills from start to finish. The rest stated different soft skills at the start and at the end.
- Two students (students 2 and 12 in Table 2) stated which soft skills they wanted to improve at the start but ignored any soft skills development at the end of the project, focusing instead on hard skills. I suspect that as the submission deadline approached, they forgot about the initial soft skills they aimed to improve.

- Students mostly did not plan or monitor their soft skills. Because they tend to procrastinate until the end—when stress kicks in—they mostly “discover” different soft skills they happened to use at the end of the project. It feels more like a box-ticking exercise.
- Students only stated soft skills because it was a requirement for my class project presentations.

Final Answer: their monitoring is still random and inconsistent because they are new to metacognitive regulation strategies for soft skills.



Above: Chart listing soft skills used by minimum of 3 students. Squared soft skills are related to STEM.