**STAGE 3**

**IDSS02\_M\_Libya**

**REC: WS310342 (Recordings/Interview 3/International SS – documents)**

I Thank you for coming for the final session of the interview today

SS02 you’re welcome

I So, you’ve now successfully completed your foundation year and now you’re in your second semester of first year undergraduate programme

SS02 yeah

I so, what is your understanding of critical thinking skills for engineering now? what are critical thinking skills for you now?

SS02 critical thinking skill? I think the way I define it is it more related to all aspects of lives. It’s not only academic life, like it’s not only study. You could have some critical thinking skills and apply them in life as my colleague last week said in politics and…

I yeah

SS02 yeah, I use that. So, I think I have some skills critical thinking. I use them sometimes I don’t realise I’m using them.

I umm

SS02 When I read about critical thinking, ‘oh! That’s critical thinking’, I think I have some skills (laughs)

I okay, can you give an example where you’ve used it and later you realised it’s critical thinking skill?

SS02 in life or?

I may be in your studies

SS02 in my studies?

I umm

SS02 in mathematics

I yeah, okay

SS02 mathematics. Sometimes the module or our syllabus makes you think in a specific way and solve it in a specific way. But, I think mathematics could be, it depends how you approach a problem there isn’t like a single way. So, sometimes you go around from a different way and I go to the lecturer and ask her, ‘is that right?’, she tells me, ‘yeah that’s right’. You can’t just like disagree just because it’s not her method

I umm

SS02 I think that, I don’t know whether it’s critical thinking or not, but it’s thinking differently from what’s usual

I alright, so, what’s usual? does that mean in your previous learning?

SS02 yeah. Previous learning, I don’t know, like do you mean…

I like before you came here you went through a different education system, yeah?

SS02 yeah

I so, how is it different or is it the same?

SS02 in some modules, it depends on the topic

I yeah

SS02 how they introduce the topic, you know sometimes you have some background different from here

I umm

SS02 about, for example let’s say, ‘differentiation’ for example

I umm

SS02 here they introduce you more deeply. I understand the, ‘differentiation’, more but I can solve it in a different way more. (They?) have to write down some formulas but in my country we just do it by mine. We don’t like I don’t know if you’re familiar with the, ‘equations’, or not, but I realised that there are so many different of equations for, ‘differentiation’, but here so many different equations. It seems like a big topic, ‘differentiation’. But, my country just like you, it’s you just do straight away

I a single way of doing things…

SS02 single way of doing it. Yeah, that expanded my thinking of it

I right

SS02 you can go about it in a different way. It’s not this is specific way. Maybe there is a rule and it’s called ‘project rule’, but you can change it to, ‘caution rule’, just by putting the denominator down it becomes, ‘caution’, suddenly. So, you can deal with it you deal with the number to the power of minus one instead of (laughs) I don’t know…

I it’s problem solving isn’t it?

SS02 yeah, it’s problem solving. I t depends on how you go about it. Sometimes you take common pattern and make it changes another rule

I right

SS02 you can manipulate the rule

I okay

SS02 if you think this rule is hard you just change it to another rule by doing some simplifications to the problem

ATTITUDE

I so, what is your experience in doing this kind of things? How do you find yourself…

SS02 I enjoyed it. I can, I gained more knowledge and made me think like I can do that, apply that on all topics not a single topic. I can think about it in a different way. It’s not like, if I get stuck on the way the lecturer explain it I can just think it by my way, ask some others. Yeah, that (laughs)

I so you find very interesting, yeah?

SS02 Yeah, that’s interesting, yeah

I something different from your previous learning…

SS02 it encourages me think deeply independently, but I shouldn’t stick to the lecturer, I can come up with my way of solving the problems

I that’s interesting because you said, you mentioned the word independent, so it gives you some kind of freedom, yeah?

SS02 yeah, it makes me think independently I don’t have to go out and ask whether this way that I came up with is right because I seem to have the right answer to the final answer, is that the right method or not? I’ve done that in EP as well

I EP?

SS02 EP, yeah, and what topic? It was, ‘vibration’, I guess, yes. ‘vibration’, in one occasion this year there were some, the lecturer gave us a question, ‘parameters’, give you some information but I did not use all of them I came up with the right answer, yeah. I think that’s an achievement (laughs)

I yeah, of course! Good. So, can I say, when you first started the programme and now your perception towards critical thinking has changed? Or, has it not changed?

SS02 I don’t remember exactly what it was but I have no idea. I have no idea about critical thinking

I do you want to know what you said on your first interview?

SS02 yes, please

I Okay.

SS02 yeah, I think I said about critising or something (laughs)

I first you said you’ve no idea, then you said everyone is entitle for their own opinion but then when you criticize others you must have evidence before you could criticize someone, that’s what you said

SS02 yeah

I so, what’s your perception towards critical thinking skills now?

ATTITUDE ON CT developed

SS02 my perception I think has changed because I think it’s more about like, I’m gonna talk about the skills, it made me like, consider there might be some other points of view, and most of them are right, and there isn’t a single way about going to specific problem. You can generate some other ways of solution just by trying to analyse the results and you come up with your own way of solving it if it’s in your study, may be, and may be, yeah

I umm. So, can I say that critical thinking for you now is like realising there is no single way of solving an problem that there are lots of approaches that you can employ

SS02 yeah, that’s what I mostly learnt like

I so, it has changed?

SS02 it has changed I guess, it’s not to do with criticism. No, it’s not constructive criticism no

I so, you’re more aware of the critical skills now?

SS02 I think, yeah I’ll be more aware the next years (laughs)

I okay, through the course, yeah?

ATTITUDE

SS02 yeah, throughout the course you apply them you realised that is critical thinking. The way the system works here, the education system in this university makes you like come up with your own answers, come up with your own work doesn’t make you rely on the lecturer’s way because sometimes even the lecturer’s way there’s some puzzle there. You think like it doesn't make logical sense, you come up with your own way. It makes you go out and research, and go out to internet and look for something and ask some others for this topic to get some knowledge. That will gain you by time some critical thinking skills because you start generating new solutions and analysing data, yeah (laughs)

I that’s good. So, you’re enjoying the experience, yes?

SS02 yeah, I think, yeah (laughs)

PRACTICE

I in your opinion what would be an effective way for student learn and acquire the critical thinking skills? For example, do you prefer it to be taught as a single module for engineering, or do you prefer them to be incorporated in all the modules and you know you’re learning them? Or, do you want the lecturers to actually teach you explicitly, you know? It’s up to you…

SS02 I think I rather that you make it in all modules like not in specific modules, don’t like put critical thinking in small corner, that’s the module, that’s critical you can’t apply in other way, you can just apply in this module, no. I think in all modules, even in your life. You can’t like say that this is the module of critical thinking. So, you put it in only in academic life when you say it’s a module. It’s not like it could be in your life maybe apply critical thinking you come up with as I say new ways of solving things. Maybe if you are working in a company there are some meetings you recognised that there are some other valid points of views and they are right, so it’s, yes and in all the modules I guess

I in all the modules

SS02 yes, in all the modules

I right, and how you prefer them to be taught? You want the lecturers to tell you that now were’re doing the skills now, or you want, you’ll pick up the skills somehow? You want the lecturers to clearly tell you, show you how to do it?

SS02 I’m not sure which one is better, but I’ve no idea. May be…

I if you’re a student how would you prefer?

SS02 if he or she doesn’t tell me I think

I you want…

SS02 that’s critical thinking. I just, it requires may be the problem requires critical thinking skills and the module itself requires some critical thinking to learn it, but I prefer that rather than saying specifically this is critical thinking

Classroom practice

I right, okay. Do you think you had enough practice in the classroom context?

SS02 this year?

I no, in your foundation year?

SS02 yeah, I think. We worked in computer apps groups, we worked in groups to generate a software programme to help, it meant to help the new computer students of foundation year of the following year, to help them may be a make specific topic like, ‘vibrations’, ‘velocity’, the topic that you choose, yeah. We split the work to four or three depends on group members and we have to do like slides work on power points and deliver it every two weeks to deliver some works. On some stage we sometimes get stuck and try to ask and meet together, and that gain you some skills when everyone say his point of view. Yeah, I think this is where I apply it last year and gain some skills from working in groups

I computer application module

SS02 computer apps, yeah

I so, do you think you had enough practice, not only apps, but other modules?

SS02 yeah, last year I think, yeah

I is it enough to help you now?

SS02 I think you always have to learn. I think it’s enough, yeah

I sufficient?

SS02 yeah, sufficient

I right. So, do you wish you had more practice on other modules apart from computer application? Okay, you said you applied in Maths, which is good, yeah?

SS02 yeah

I you started to apply in EP as well

SS02 in EP yeah in, ‘vibrations’. Not in all the topics, some topics are just like this specific way. You can’t go about it in a different way. May be some other students have done it, but I didn’t like find the way of doing it. I just stick to the lectures. I don’t like I could do anything different about it

I okay

SS02 it’s just like single way

I okay, right

LANGUAGE

I this is an interesting question I have it here. Do you think students especially non-native students need to have good command of English to learn academic critical thinking skills? If yes why and if no why?

SS02 I think of course they have to, because they come from different background. Some of time may be haven’t done much, haven’t learnt much about critical thinking, and so they have to learn now and some of them have done them may be. So, yeah

I do you think English is important, academic English is important?

SS02 academic English?

I yeah. Let me repeat the question. Do you think students especially non-native students need to have good command of English to learn academic critical thinking skills? If yes why and if no why?

SS02 No, I think it’s no, it doesn’t require English language, you don’t have to be good in English, like some native speakers failed last year and like some international students pass with very high grades. So, it seems like they can manage to go through the topics without difficulties, because engineering is more about numbers and diagrams and sometimes, yeah we need some English we need some specific level of English like you can understand the lecturer. But, you no need to be really good at English. Sometimes you can get away with it by translating some words on google (laughs) of something, yeah

I Okay

SS02 you can learn English language from here, you don’t need to get a very high grade in specific test they will accept you here. I think, yeah, once you, I’ve done the others when I was in my country I got like, ‘5’, and when I came here in two months I got, ‘7’. I don’t know but you can improve here. So, I don’t think you really need good English, it’s gonna improve by the time. The more you study, the more you get better on reading, you come across new vocabulary and new phrases

I oh! That’s very interesting (laughs)

SS02 (laughs)

FIRST LANGUAGE, PREVIOUS LEARNING

I right now. This is another interesting question I hope, in your opinion to what extent does student’s different first language, different cultural background and previous schooling affect his or her understanding of critical thinking skills?

SS02 I think it does affect

I does affect?

SS02 of course, it does affect. I would say it depends on where you’re come from, what’s your background is, and whether or not you’ve been encouraged by your family or your environment to practise critical thinking. Yeah, of course if some people have gained some critical thinking skills and some haven’t, yeah

I umm

SS02 like in my high school I don’t think like you had any idea about critical thinking. The schooling system doesn’t like teach us, it just you gives you a specific way of solving thing, so yeah. It doesn’t encourage you to think independently, just makes you to stick to the teacher and write what’s on the board, I think

I right

SS02 may be some of them, like some teachers encourage you, but overall I wouldn’t say like we have gain some knowledge or we have been aware of something that is called critical thinking skills in my country.

I personally …

SS02 personally yeah, I don’t think. I learn critical thinking may be from here the first time I heard critical thinking, even if I translate it and ask any speakers of Arabic they would say, ‘oh, I don’t know that’, unless they study had abroad they might say, yeah I know what is critical thinking

I now, talking about assessment, assessing critical skills, what is your personal opinion on assessing students on critical thinking skills? Do you think there’s a need to assess students

Defining CTS

I finally can you define critical thinking in your own words for me?

SS02 my own words? (laughs)

I yeah, to put it simply this is Malik’s definition of critical thinking skills. I mean, let’s say someone asks you

SS02 yeah

I do you think you have the confident to explain? If yes, how would you explain?

SS02 No, I don’t have the confident to explain it but I just explain it. I think as I said this interview was focusing about going different way not just sticking to specific way. Trying some other sources, trying to coming up with the problem differently

I umm

SS02 and, you can make up or look up in the internet, like the sheets that you have on the Blackboard you can just look up everywhere, think about different sources, different ways of solving things. Thinking independently and come up with solutions that you think is better than the other. Could be different point of view when comes to critical thinking. When you like working in groups someone might say something and you either criticise it or you like it or you constructively criticise it, or it’s okay but you just she move this and not this

I okay

SS02 so, you work in groups you learn some new things, it gives you some idea makes you built on it

I so, give constructive feedback, yeah?

SS02 yeah

I rather than just criticising?

SS02 yeah. It could be criticising without giving constructive feedback I think it’s not healthy. Yeah, if you just criticising I think it’s bad, you don’t know how to improve it. So, I think that’s my definition of critical thinking (laughs)

I that’s a good one. Thank you very much

SS02 you’re welcome